Tionscadal Soláthair Uisce
Water Supply Project

Environmental Impact Assessment Report (EIAR)

Volume 6 of 6: Appendices

(Appendix A9.2) Pipeline Assessment

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Annex A. Water Body Crossings and Washout Valves – Detailed Assessment

Acronyms and Abbreviations

Acronym	Meaning
BOD	Biochemical oxygen demand
BPS	Booster Pumping Station
BPT	Break Pressure Tank
CC	Construction Compound
CEMP	Construction Environmental Management Plan
COD	Chemical oxygen demand
DW	Drinking Water
DWPA	Drinking Water Protected Area
ECSR	European Communities Environmental Objectives (Surface Waters) (Amendment) Regulations 2021 (S.I. No. 659/2021)
EIAR	Environmental Impact Assessment Report
EPA	Environmental Protection Agency
EQS	Environmental Quality Standard
HLPS	High Lift Pumping Station
HMWB	Heavily Modified Water Body
IFI	Inland Fisheries Ireland
NBS	Nature Based Solutions
NPWS	National Parks and Wildlife Service
OPW	Office of Public Works
PSD	Pipe Storage Depots
RWI&PS	Raw Water Intake & Pumping Station
RWRMs	Raw Water Rising Mains
SAC	Special Area of Conservation
SC	Sub Catchment
SPA	Special Protection Area
SuDS	Sustainable Drainage System
SWMP	Surface Water Management Plan
TPR	Termination Point Reservoir
UKTAG	UK Technical Advisory Group
UV	Ultraviolet
UWWT	Urban Waste Water Treatment (Amendment) Regulations 2010
W-SC	Water Specific Construction Mitigation Item
W-SO	Water Specific Operation Mitigation Item
WFD	Water Framework Directive
WTP	Water Treatment Plant
WwTP	Wastewater Treatment Plant

1 Introduction

1. This appendix assesses the likely significant effects on the surface water environment (including consideration of hydrology, water quality and hydromorphology) relating to the construction and operation of the Raw Water Rising Mains (RWRMs) and Treated Water Pipeline elements of the Proposed Project. It is intended to be read alongside Chapter 9 (Water) of the EIAR, which provides an overview of the assessment methodology as well as likely significant effects of all elements of the Proposed Project on the surface water environment. For a full description of the Proposed Project, the reader is directed to Chapter 4 (Proposed Project Description) of the EIAR.

2. The RWRMs and Treated Water Pipelines comprise three separate sections in this assessment:
    - RWRMs from the Raw Water Intake & Pumping Station (RWI&PS) to the Water Treatment Plant (WTP)
    - Treated Water Pipeline from the WTP to the Break Pressure Tank (BPT)
    - Treated Water Pipeline from the BPT to the Termination Point Reservoir (TPR).

3. The key interactions of these with the surface water environment are as a result of water body crossings, road crossings, drainage and dewatering along the RWRMs and Treated Water Pipelines (including draindown, Line Valves, Washout Valves and their associated outfalls where required), Construction Compounds and Pipe Storage Depots. The Proposed Project components associated with this appendix are outlined in Section 3.

4. The structure of this appendix is as follows:
    - Description of works, outlining the range and likely significant effects on the surface water environment (Sections 2 and 3)
    - Summary of the baseline environment (Section 4)
    - Outline of the assessment methodology (Section 5)
    - Overview of design embedded mitigation and generic mitigation measures (Section 6)
    - Impact assessment on the surface water environment (for Construction, Testing and Commissioning and Operational Phases), prior to mitigation (Sections 7 and 8)
    - Summary of residual effects on the surface water environment (Construction, Testing and Commissioning and Operational Phases) following mitigation (Section 9).

2 Study Area

5. This assessment is limited to surface waters only. For the purposes of this assessment, these are defined as any surface water body (including drainage ditches) potentially affected by construction and operation of the RWRMs and Treated Water Pipelines.

6. The following study area has been defined:

   - Any water receptor crossed by the RWRMs and Treated Water Pipelines (see A9.2 Figures 1 to 76)
   - Any water receptors, regardless of designation, within 50m of the Construction Working Width[1]
   - Any water body within 50m of Construction Compounds and Pipe Storage Depots, unless already identified
   - Any water body within 50m of a road crossed by the RWRMs and Treated Water Pipelines, Construction Compounds and Pipe Storage Depots or associated Temporary Construction Roads.

7. All water bodies within the study area crossed by the pipeline, along with the nomenclature (i.e. WCX, WBX and WBP), are identified as follows:

   - WFD designated Water Bodies – water bodies designated by the EPA as river water bodies under the WFD
     - Watercourse crossing ID WCX is applied for crossings of these water bodies by the pipeline
   - Other Waterbodies - water bodies not designated by the EPA as river water bodies under the WFD
     - Watercourse crossing ID WBX is applied for crossings of larger rivers not designated by the EPA under the WFD by the pipeline. However, it should be noted that WBX water bodies can include water bodies identified by the EPA as artificial water bodies under the WFD (such as canals)
     - Watercourse crossing ID WBP is applied for crossings of field drains or ditches not designated by the EPA under the WFD by the pipeline. These drains and ditches are likely to be intermittent (may not flow during dry conditions).

[1] The land temporarily fenced for the period of construction of the pipeline and its subsequent restoration. It is normally 50m in width, but may be locally widened near features such as crossings, or storage areas.

3 Project Components

3.1 Raw Water Rising Mains (RWRMs)

8. Abstracted raw water would be pumped from the RWI&PS approximately 2km to the WTP through twin 1,500mm nominal[2] diameter parallel RWRMs.

3.2 Treated Water Pipeline from the WTP to BPT

9. Treated water would be pumped from the High Lift Pumping Station (HLPS) at the WTP to the BPT via a 1,600mm nominal diameter Treated Water Pipeline, approximately 37km long.

3.3 Treated Water Pipeline from the BPT to the TPR

10. Flows from the BPT would be conveyed through the Eastern and Midlands region via a 1,600mm nominal diameter gravity main, approximately 133km long. It would facilitate the transfer via gravity of flows up to 165 megalitres per day (Mld) to the TPR. When demand for water increases above 165Mld, there is insufficient pressure to deliver water to the TPR by gravity alone and a Booster Pumping Station (BPS) is required.

11. There are potential future connections proposed to supply zones in the Midlands area which will include two gate valves and a blank flange. The connection to these will be delivered through potential future projects assessed and designed by others when these future projects are brought forward.

3.4 Inline Features

12. A series of valves would be required along the RWRMs and Treated Water Pipelines to facilitate proper operation. There would be:

    - 51 Line Valves to facilitate the isolation of elements of the RWRMs and Treated Water Pipelines for operation and maintenance purposes at approximately 5km intervals to facilitate sectioning off elements of the RWRMs and Treated Water Pipelines. A total of 20 of these Line Valves along the treated water pipeline will have a washout which will be used during the Testing and Commissioning phase
    - 187 Washout Valves located at low points in the system to facilitate the draindown of water from sections of the RWRMs and Treated Water Pipelines. Draindown may be required on very rare occasions, such as for emptying sections of the pipeline where necessary for emergency repairs or possibly for cleaning programmes every 20 to 30 years
    - 321 Air Valves to control air in the RWRMs and Treated Water Pipeline, located at approximately 500m intervals. Thirty-two of these are incorporated with a number of Line Valve installations.

13. Air Valves do not require assessment as part of this appendix as they are incorporated into the pipeline itself. However, the construction, testing and commissioning and operational impacts of Washout Valves on nearby water bodies have been assessed. Furthermore, while Line Valves themselves are not required to be assessed as part of this appendix, the 20 with washouts have been assessed.

[2] Nominal diameter refers to the assumed nearest commercially available internal diameter of the pipe. External diameter includes wall thickness and depends on pipe material.

3.4.1 Washout Valves

14. Washout Valves are located at low points along Treated Water Pipelines. The number of Washout Valves included in this assessment is 187 (not including those that are part of Line Valves – see Section 3.4.2) - the total proposed along the pipeline. Of these, 39 would have a permanent outfall structure to a water body; 57 would discharge to water bodies by a temporary flexible hose; and the remaining 91 would discharge locally (either to land or a nearby watercourse). These 91 local discharges have been assessed in relation to proximity to nearby watercourses (including field drains and ditches) and it has been determined that 51 would discharge to a watercourse while the remaining 40 would need to discharge to land.

15. These Washout Valves would be utilised when sub-sections of the pipeline are undergoing hydraulic testing, prior to commissioning, to empty sections of the pipeline of test water which cannot be pumped to adjoining test sections. During pipeline operation, it is very rare that these valves would be used as sections would only infrequently need to be drained down. They would generally only be required for emptying sections of the pipeline where necessary for emergency repairs or possibly for cleaning programmes every 20 to 30 years. Even then, the Washout Valves would only be used to drain short sections of pipeline, which cannot otherwise be drained to either end of the pipeline section due to the topography.

16. Further details on the design and operation of the washouts is provided in Section 6.3.

3.4.2 Washout Valves at Line Valves

17. There are a total of 51 Line Valves along the pipeline route. Two of these are located on the RWRM and the other 49 are located along the Treated Water Pipeline. The two Line Valves on the RWRM do not have washouts. Forty nine Line Valves along the treated water pipeline will have washouts, however, of these only 20 would be used to discharge water (therefore only these 20 have been assessed). Washouts at Line Valves would only be used to discharge the sweetening flows during final filling in the Commissioning Phase and the washout design flow will vary between 1l/s and 4l/s. The Washouts at Line Valves will not have permanent outfall infrastructure. The water used to test the pipeline will be released via one of these 20 Line Valve Washouts.

18. These Line Valve washouts would be utilised in a similar regard as Washout Valves (as described in Section 3.4.1), but only during the Testing and Commissioning Phase.

4 Baseline Conditions

4.1 Overview of Water Bodies

19. The major water bodies within the study area are shown on A9.2 Figures 1 to 76 and described in this section. Appendix A9.5 (Baseline) provides further details of each, including their WFD name, WFD status, Risk status and any identified significant pressures, as well as the sensitivity of the water body to change.

20. The Proposed Project crosses seven catchments, including four Lower Shannon catchments; the northernmost part of the Barrow catchment; the south-east tip of the Boyne catchment and the western edge of the Liffey and Dublin Bay Catchment (see A9.2 Figures 1 to 76). Descriptions of the extent of these catchments have been drawn from Catchments.ie (EPA 2024a) and are provided in the following sections along with the key water bodies considered in the assessment. A full list of all water bodies is provided in Table 4.1.

4.1.1 Lower Shannon Catchments

21. The Lower Shannon catchments within the study area are the Lower Shannon 25A, 25B, 25C and 25D. These catchments cover an area of 5,091km² and include the Little Brosna River, Derg TN and its tributaries, Derg Heavily Modified Water Body (HMWB) and its tributaries, and the lower reaches of the River Shannon to Limerick City and the catchment of the Mulkear River. Details of the extent of these catchments have been drawn from Catchments.ie and are provided in the following sections.

4.1.1.1 Lower Shannon 25A

22. The 25A Lower Shannon Catchment Report (EPA 2024b) describes it as being characterised by relatively flat topography with extensive areas of bogland in low-lying areas. Most of the catchment is underlain by impure limestones with some purer karstified limestones between Tyrrellspass and Kilcormac. The southern tip of the catchment comprising part of the Slieve Bloom Mountains is underlain by red sandstones. The Lower Shannon 25A consists of the following sub-catchments (SC) and their water bodies:

- **25A_11 Brosna_SC_070:** Kyleboher_010 rises in the Slieve Bloom Mountains, County Offaly and flows in a north-westerly direction until its confluence with the Silver (Kilcormac)_040 in County Offaly
- **25A_12 Silver[Kilcormac]_SC_010:** Silver (Kilcormac)_030 and _020 rises in the Slieve Bloom Mountains, County Offaly and flows in a north-westerly direction through the village of Kilcormac, County Offaly until its confluence with the Brosna_120 in County Offaly which flows into the Shannon (Lower)_010 at Shannonbridge just upstream of Meelick Weir
- **25A_6 Clodiagh[Tullamore]_SC_010:** Clodiagh (Tullamore)_030 and _020 rises near the Slieve Bloom Mountains, County Laois south of Tullamore Town and flows in a northerly direction through the villages of Clonaslee, County Laois and Rahan, County Offaly until its confluence with the Brosna_100
- **25A_4 Tullamore_SC_010:** Tullamore_020 and _010 drains the lands to the east of Tullamore before flowing through Tullamore Town, County Offaly until its confluence with the Clodiagh (Tullamore)_050. Tullamore _020 is joined by other tributaries including the Mellaghans_010.

4.1.1.2 Lower Shannon 25B

23. The 25B Lower Shannon Catchment Report (EPA 2024c) describes it as being characterised by a wide flat limestone plain with an upland region in the east comprising the western slopes of the Slieve Bloom mountains. The Lower Shannon 25B consists of the following sub-catchments (SC) and their water bodies:

- **25B_1 Shannon [Lower]_SC_040:** Shannon (Lower)_020 runs from just outside Banagher town heading west as far as Incherky. This water body is shared with an adjacent sub-catchment (25B_4 as described below). Other water bodies in this catchment include the Rapemills_010 and _020
- **25B_4 Shannon[Lower]_SC_050:** Shannon (Lower)_010 commences at Shannonbridge and flows along the County Galway/County Offaly border south-east through Shannon (Lower)_020 and Shannon (Lower)_030 along the County Galway/County Offaly border, being joined by several tributaries (including Rapemills_020) before entering the northern end of Derg TN at Portumna
- **25B_3 Camcor_SC_010:** Camcor_030 rises in the Slieve Bloom Mountains, County Offaly and flows in a north-westerly direction towards Birr, County Offaly, becoming the Camcor_040 and then the Camcor_050. At the confluence of Camcor_050 with the Little Brosna_050, which flows into the Shannon (Lower)_030 at Friars Island. A number of water bodies flow into Camcor_050 including Clareen Stream/Faurawn_020
- **25B_6 LittleBrosna_SC_010**: Kilcomin Stream_010 rises in County Offaly, near the village of Dunkerrin and flows in a north-westerly direction towards the town of Shinrone, County Offaly until the confluence of Kilcomin Stream_030 with the Little Brosna_010. Little Brosna_010 is joined by a number of other tributaries including the Shinrone Stream_010
- **25B_7 LittleBrosna_SC_020:** Little Brosna_030 continues on from Little Brosna_020 at Liffey Mills in County Offaly, and flows in a north-westerly direction towards the town of Birr, County Offaly until its confluence with the Camcor_050. Little Brosna_030 is joined by a number of other tributaries such as the Rock (Birr)_010 and _020.

4.1.1.3 Lower Shannon 25C

24. The 25C Lower Shannon Catchment Report (EPA 2024d) describes it as being characterised by flat limestone plains to the east of Derg TN, the uplands of the Devil's Bit Hills in the south-east, the Slieve Aughty Mountains in the west and the Slieve Bearnagh and Arra Mountains in the south, between which the River Shannon flows south from Derg TN. The Water Action Plan 2024 divides the Lower Shannon 25C catchment into two distinct regions: areas draining the western and eastern sides of Derg TN.

    - **Derg TN (Lough Derg)** covers an area approximately 117km^2. The entirety of Derg TN is classified as a Drinking Water Protected Area (DWPA) and a Nutrient Sensitive Area, with a number of salmonid water bodies of interest. However, none are designated under the Salmonid Regulations (SI 293/1988 - European Communities (Quality of Salmonid Waters) Regulations, 1988). The Derg TN has four bathing water areas including at Ballycuggeran, Mountshannon, Dromineer Beach and Portumna. In addition, Derg TN falls within the Lough Derg (Shannon) Special Protection Area (SPA) [004058]. Derg TN has a number of large settlements along its shores, most notably: Portumna, Dromineer, Mount Shannon, Ballina and Killaloe. Much of the land use surrounding Derg TN is agricultural, typically improved grassland. There are limited modifications to the shoreline of Derg TN, predominantly consisting of narrow strips of woodland; however, the southernmost extent of the Derg TN is heavily managed particularly at Parteen Weir.

25. Seventy water bodies of varying sizes feed into Derg TN. The western region tributaries of Derg TN are not within the study area for the Pipeline Assessment; as the Proposed Project is being constructed to the east of Derg TN only the eastern region tributaries have the potential to be impacted and are therefore included in the assessment. The tributaries, which have been grouped by WFD sub-catchments, are as follows:

    - **25C_10 Shannon[Lower]_SC_070**: Shannon (Lower)_040 is made up of various streams which flow into Derg TN from the northern limits near Portumna Castle Harbour, along the eastern and western boundary to the southern limit at Ballina, north of Killaloe Bridge. It's tributary, Ardcrony Stream_010 joins with the Ballyfinboy_040 west of Borrisokane
    - **25C_9 Ballyfinboy_SC_010:** Ballyfinboy_040 rises in County Offaly, near the village of Moneygall and flows in a north-westerly direction into Derg TN at Drominagh, County Tipperary. Ballyfinboy_050 is joined by other tributaries including the Ardcrony Stream_010

- **25C_11 Nenagh_SC_020:** Nenagh_070 rises in the Silvermines Mountains, County Tipperary and flows in a north-easterly direction past Nenagh town eventually draining into Derg TN, just North of Dromineer, County Tipperary. Nenagh_070 has a number of tributaries including the Nenagh Tributary_010. Clonmakilladuff_010 rises close to Coolbaun to the east of Borrisokane and drains into Derg TN just north of the Nenagh_070. Nenagh_070 is joined by other tributaries including the Nenagh Tributary_010
- **25C_1 Youghal[Tipperary]_SC_010:** Youghal (Tipperary)_010 drains the flat land to the west of Nenagh and flows into Derg TN south-west of the Nenagh in close proximity to the Newtown_010 and Ardgregane Stream_010 and _020 which drain the northern slopes of the Arra Mountains
- **25C_2 LorrhaStream_SC_010:** Lorrha Stream_010 and Lorrha Stream_020 flow into Derg TN from the north-east. Carrigahorig Stream_010 is joined by the Kilfadda Castle Stream_010, which similarly to Lorrha Stream_010 partially rises in Kilcarren-Firville Bog SAC. Terryglass_010 also flows into Derg TN near Terryglass.

4.1.1.4 Lower Shannon 25D

26. The 25D Lower Shannon and Mulkear Catchment Report (EPA 2024e) describes it as including the lower reaches of the River Shannon to Limerick City and the catchment of the Mulkear River. Derg TN (Lower Shannon 25C) narrows and flows into Derg HMWB (Lower Shannon 25D) between Slieve Bearnagh and the Arra Mountains, dividing the towns of Ballina and Killaloe which are located to the east and west banks of the water bodies respectively.

27. Derg HMWB (Parteen Basin) lies immediately downstream of Derg TN and is also known locally as the 'Lower Lake'. It was constructed under the River Shannon Hydro-Electric Scheme in the late 1920s. It floods an area through which the River Shannon once flowed as a river and the old channel is still recognisable in bathymetric/depth surveys of the bed of the flooded basin (see Appendix A9.1: Abstraction Assessment). Derg HMWB and the Kilmastulla_050 form part of the Lower River Shannon Special Area of Conservation (SAC) [002165]. Most of the water which flows through Derg HMWB is directed to Ardnacrusha Generating Station via the Ardnacrusha 'Headrace' canal. For most of the year, a statutory compensation flow of 10m^3/s is directed to the 'Old River Shannon', now identified as the Shannon (Lower)_050 and Shannon (Lower)_060 WFD designated water bodies. During times of high flows, when Ardnacrusha is operating at capacity, additional water will be released to the Shannon (Lower)_050. Further details of this are provided in Appendix A9.1 (Abstraction Assessment). Water used at Ardnacrusha Generating Station is passed downstream via the Ardnacrusha Tailrace (North Ballycannan_010) before discharging to Limerick Dock, the transitional downstream stretch of the Old River Shannon.

4.1.2 Tributaries to Derg HMWB

- **25D_6 Shannon[Lower]_SC_080:** Kilmastulla_050, _040 _030 and _020 rises in the Silvermines Mountains, County Tipperary. Kilmastalla_050 forms part of the Lower River Shannon SAC [002165] (National Parks and Wildlife Service (NPWS)). The Kilmastulla_050 flows towards Derg HMWB before turning sharply southwards when it meets the Fort Henry embankment, and it enters the Shannon (Lower)_050 (Old River Shannon) just downstream of Parteen Weir
- **25D_6 Shannon[Lower]_SC_080:** Ardcloony_010 rises in Slieve Bernagh and flows into Derg HMWB at Garranroe.

4.1.3 Onward Flow from Derg HMWB

- **25D_6 Shannon[Lower]_SC_080:** Shannon (Lower)_050 flows from Parteen Weir south towards Castleconnell
- **25D_3 Shannon[Lower]_SC_100:** A short distance upstream of Castleconnell it becomes the Shannon (Lower)_060 and flows into Limerick Dock after converging with various tributary streams including the Mulkear (Limerick)_050, the Blackwater (Clare)_020 and Groody_010

- Limerick Dock is a transitional water body where North Ballycannan_010 (Tailrace) and Shannon (Lower)_060 converge at Saint Thomas Island south of Parteen Bridge; Limerick Dock then flows through Limerick and then into the Upper Shannon Estuary.

4.1.4 Barrow Catchment

28. Information on the Barrow catchment is drawn from Catchments.ie (EPA 2024a) and Barrow Catchment Summary (EPA 2024f). The catchment includes the River Barrow upstream of the River Nore confluence and its tributaries to the tidal waters north of Waterford. The Proposed Project will cross water bodies only in the northernmost reaches of the Barrow catchment:

    - **14_3 Figile_SC_010**: Figile_010 rises near the village of Derrinturn and flows in an overall south direction towards the town of Monasterevin, County Kildare until its confluence of Figile_080 with the Barrow_090. Figile_030, _20 and _010 are joined by a number of other tributaries including the Abbeylough_010. The Grand Canal Main Line East (Barrow) is also crossed in the 14_3 Figile_SC_010
    - **14_14 Figile_SC_020:** Daingean_030 and Esker Stream_010 both rise from the slopes north-west of Killaderry and flow south-east to the confluence of Esker Stream_020 and Figile_040 which continues south towards the town of Monasterevin, County Kildare until its confluence of Figile_080 with the Barrow_090. The Daingean_010 is also part of this catchment which eventually becomes the Esker Stream_040.

4.1.5 Boyne Catchment

29. The Boyne Catchment Summary (EPA 2024g) describes the catchment as being the area drained by the River Boyne and its tributaries to the estuary in Drogheda:

    - **07_6 Blackwater[Longwood]_SC_010**: Blackwater (Longwood)_010 is the only tributary of the Boyne that will be crossed by the Proposed Project. It drains in a north-westerly direction to join the Boyne approximately 4km north of Longwood town. The Blackwater (Longwood)_020 is also included in this catchment.

4.1.6 Liffey and Dublin Bay Catchment

30. The Liffey and Dublin Bay Catchment Summary (EPA 2024h) describes this catchment as including the area drained by the River Liffey and by all streams entering tidal water between Sea Mount and Sorrento Point, County Dublin, draining a total area of 1,616km^2. The largest urban centre in the catchment is Dublin City. The other main urban centres are Dun Laoghaire, Lucan, Clonee, Dunboyne, Leixlip, Maynooth, Kilcock, Celbridge, Newcastle, Rathcoole, Clane, Kill, Sallins, Johnstown, Naas, Newbridge, Athgarvan, Kilcullen and Blessington. The total population of the catchment is approximately 1,255,000. The River Liffey catchment contains the largest population of any catchment in Ireland and is characterised by a sparsely populated, upland south-eastern area and a densely populated, flat, low lying limestone area over the remainder of the catchment basin:

    - **09_7 Liffey_SC_050:** Liffey_130 and _140 rise (as Liffey_010) in the Wicklow Mountains, from where it flows west before being joined by the Brittas River, Ballylow Brook and Goldenhill River and flowing into the northern end of the Poulaphuca Reservoir, created by Electricity Supply Board in the 1930s. The Liffey flows out of the reservoir via the Poulaphuca generating station and into the lower reservoir and second generating station at Golden Falls, upstream of Ballymore Eustace. The river then flows through Newbridge, around Naas and Celbridge after joining with Kilmurry_010, Morell_030 and Morell_040. Liffey_140 then flows on towards Leixlip Reservoir and generating station. From here it enters a steep-sided valley and flows past Islandbridge at which point it becomes tidal. It is then joined by the outflow from the Royal and Grand Canals, the Dodder from the south and Tolka from the north, and flows past Dublin Port into Dublin Bay
    - **09_14 Liffey_SC_070**: Reeves_010 rises south of Ardclough and flows north toward its confluence with the Liffey_140. The Grand Canal Main Line (Liffey and Dublin Bay) is also crossed in the 09_14 Liffey_SC_070

- **09_9 Lyreen_SC_010**: Lyreen_010 and _020 is the only significant tributary of the Liffey to be crossed by the Proposed Project and is joined by the Clonshanbo_010 and 020 which is crossed by the pipeline. This river rises in westernmost part of the catchment and flows north-east to Maynooth, where it joins the Rye Water_040, shortly upstream of the Rye Water Valley/Carton SAC [NPWS 001398]. The Rye Water_040 joins the Liffey_150 downstream of the Leixlip Reservoir
- **09_15 Liffey_SC_090**: There are a total of ten river waterbodies in this sub-catchment. It includes the Castletown (Dublin-Kildare)_010 tributary, which feeds the Liffey_150 waterbody, which in turn proceeds downstream to Liffey_160 and _170.

4.2 Water Bodies Baseline Details

4.2.1 WFD Designated Water Bodies in the Study Area

31. A summary of WFD designated water bodies with potential to be impacted by the Treated Water Pipelines are provided in Table 4.1 for ease of reference. A number of drains and ditches feeding into these WFD designated water bodies also have the potential to be impacted. Full details on each of the water bodies potentially affected by the Proposed Project are provided in Appendix A9.5 (Baseline).

Table 4.1: WFD Designated Water Bodies Within the Study Area

WFD Designated Water Body Name	WFD Status	Risk Status[3]
Blackwater (Clare)_020	Good	At Risk
Shannon (Lower)_050	Poor	At Risk
Derg HMWB	Good	Not at Risk
Derg TN	Moderate	At Risk
Kilmastulla_050	Moderate	At Risk
Kilmastulla_040	Moderate	Not at Risk
Kilmastulla_030	Poor	At Risk
Kilmastulla_020	Moderate	Not at Risk
Ardgregane Stream_010	Poor	At Risk
Ardgregane Stream_020	Moderate	At Risk
Nenagh_070	Moderate	At Risk
Nenagh Tributary_010	Moderate	Review
Ardcrony Stream_010	Moderate	At Risk
Ballyfinboy_040	Moderate	At Risk
Kilcomin Stream_030	Moderate	At Risk
Shinrone Stream_010	Poor	At Risk
Little Brosna_030	Good	Not at Risk
Rock (Birr)_010	Poor	At Risk
Clareen Stream/Fuarawn_020	Moderate	At Risk
Camcor_030	Good	Not at Risk
Kyleboher_010	Moderate	Review
Silver (Kilcormac)_030	Moderate	At Risk
Silver (Kilcormac)_020	Good	At Risk
Clodiagh (Tullamore)_020	Good	Not at Risk
Clodiagh (Tullamore)_030	Moderate	Not at Risk
Meelaghans_010	Moderate	Review

[3] "Risk Status" outlines whether a WFD designated water body is "At Risk" or "Not at Risk" of achieving its environmental objectives

WFD Designated Water Body Name	WFD Status	Risk Status[3]
Tullamore_020	Poor	At Risk
Tullamore_010	Poor	At Risk
Daingean_010	Poor	At Risk
Daingean_030	Poor	At Risk
Esker Stream_010	Moderate	Review
Esker Stream_020	Moderate	At Risk
Figile_030	Moderate	At Risk
Figile_020	Moderate	At Risk
Figile_010	Poor	At Risk
Abbeylough_010	Moderate	At Risk
Grand Canal Main Line East (Barrow)	Good	Not at Risk
Blackwater (Longwood)_010	Poor	At Risk
Clonshanbo_010	Poor	At Risk
Clonshanbo_020	Poor	At Risk
Grand Canal Main Line (Liffey and Dublin Bay)	Good	Not at Risk
Lyreen_010	Poor	At Risk
Liffey_130	Good	Not at Risk
Liffey_140	Good	Not at Risk
Reeves_010	Good	Review
Liffey_170	Poor	At Risk

32. Full details of the water bodies in the study area can be found in Appendix A9.5 (Baseline).

4.2.2 Testing and Commissioning Phase Abstraction Locations

33. There would be abstractions from eight different WFD designated water bodies across the study area to commission the pipeline. Baseline details for these are presented in Table 4.2.

- Kilmastulla_040
- Nenagh_070
- Little Brosna_030
- Camcor_030
- Silver (Kilcormac)_020
- Clodiagh (Tullamore)_020
- Figile_030
- Liffey_140.

34. A review of existing surface water abstractions for DWPAs upstream and downstream of the proposed abstraction locations was carried out to determine the potential for cumulative effects. Uisce Éireann drinking water abstractions located downstream of the proposed abstractions were identified in two locations only: on the Liffey (Leixlip Reservoir); and on the Camcor_030.

35. Birr WTP is located in the south of Birr and is approximately 6.9km downstream of the proposed abstraction point on the Camcor_030. Uisce Éireann have confirmed that Birr WTP is being expanded with a planned increased abstraction rate from 2.3Mld to 4.5Mld.

36. Leixlip Reservoir is located to the west of Dublin and is approximately 8.4km downstream of the proposed abstraction point on the Liffey_140. The Regional Water Resources Plan - Eastern and Midlands Study Area 9 Technical Report (2022) has identified the Liffey as being over abstracted, with the potential for existing abstractions on the Liffey being reduced to allow for greater compensation flows downstream, in order to meet WFD objectives.

4.2.2.1 Existing Water Quality Trends

37. Water quality monitoring, conducted through the Ireland Monitoring Programme, by the EPA has been analysed in determining the baseline of each of the abstraction points. Full details of the sample data available are provided in Appendix A9.7 (EPA Monitoring Information). No data were available for the Camcor_030 and only one sampling round was available for the Silver (Kilcormac)_020 which was insufficient to determine existing trends. Baseline water quality data were also not available for Kilmastulla_040. Consultation with the EPA has confirmed that the Kilmastulla_040 is not monitored for WFD physico-chemical parameters or supporting chemical parameters under the Ireland Monitoring Programme. As such, baseline water quality data have been presented for Kilmastulla_050, of which Kilmastulla_040 is a tributary and therefore, these water bodies are hydrologically connected. The confluence of the Kilmastulla_040 and Kilmastulla_050 is approximately 2.55km downstream of the proposed abstraction point from the Kilmastulla_040.

38. A desk-top review of aerial imagery, EPA Data Maps and National Parks and Wildlife Service data in conjunction with the Water Action Plan 2024 have allowed for the identification of potential sources of contamination in the WFD designated water bodies upstream of the proposed abstraction points. Key findings are provided in Table 4.2 below. Potential sources of contamination and significant baseline pressures reported in this table have helped inform preliminary assessments of treatment requirements for commissioning water, both before and after use. Further monitoring will be undertaken in the lead up to commissioning to identify specific treatment requirements (see Appendix 5.2 for further detail).

Table 4.2: Summary Baseline Conditions of Abstraction Locations for Testing and Commissioning Phase

Abstraction Chainage	Water Body Source	Sensitivity	Q95 Flow (l/s)	Abstractions Upstream or Downstream	Potential Sources of Contamination
TW – 2300	Kilmastulla_040	High	196	None identified	Water Action Plan (WFD Cycle 3) Pressure Category: N/A Pressure Sub Category: N/A Desk-top review Presence of heavy metals (zinc and lead) above Environmental Quality Standard (EQS) - see Appendix 9.7 EPA Monitoring Information).
TW – 19450	Nenagh_070	Very high	994	Industrial/commercial use upstream	Water Action Plan (WFD Cycle 3) Pressure Category: Hydromorphological Pressure Sub Category: Hydromorphology Desk-top review Nenagh WwTP 4km upstream
TWA – 12900	Little Brosna_030	High	477	Agricultural; Private Drinking Water (DW) upstream	Water Action Plan (WFD Cycle 3) Pressure Category: N/A Pressure Sub Category: N/A Desk-top review Fish farm 6km upstream

Abstraction Chainage	Water Body Source	Sensitivity	Q95 Flow (l/s)	Abstractions Upstream or Downstream	Potential Sources of Contamination
TWA – 27600	Camcor_030	High	168	Upstream Private DW, Kinnitty River abstraction. Downstream Birr WTP - expanding. Camcor_050 DWPA downstream and Glenfelly Stream_010 DWPA upstream	Water Action Plan (WFD Cycle 3) Pressure Category: N/A Pressure Sub Category: N/A Desk-top review None identified
TWB – 12550	Silver (Kilcormac)_020	High	256	Downstream Private DW	Water Action Plan (WFD Cycle 3) Pressure Category: Morphological, Nutrients, Organic Pressure Sub Category: Agriculture, Hydromorphology Desk-top review None identified
TWB – 24800	Clodiagh (Tullamore)_020	High	139	Clonaslee WTP upstream. Clodiagh (Tullamore)_010 DWPA upstream	Water Action Plan (WFD Cycle 3) Pressure Category: N/A Pressure Sub Category: N/A Desk-top review Commercial peat abstraction 2km upstream
TWD – 4150	Figile_030	High	216	Some industrial abstractions.	Water Action Plan (WFD Cycle 3) Pressure Category: Sediment, Hydrological, Organic Pressure Sub Category: Peat Desk-top review Drains extensive areas of commercially extracted peat.
TWE – 11200	Liffey_140	Very high	2,509	Ballymore Eustace upstream Leixlip Reservoir downstream	Water Action Plan (WFD Cycle 3) Pressure Category: N/A Pressure Sub Category: N/A Desk-top review Straffan WwTP 5km upstream, Storm water overflows upstream

4.2.2.2 Discharge Locations (Via Washouts)

39. Water abstracted from the eight different WFD designated water bodies noted above would be discharged across the study area via each Washout Valve (187 No.) along the pipeline. These are detailed in Appendix A9.5 (Baseline).

4.2.3 Baseline Water Surveys

40. Fifty water bodies along the RWRMs and Treated Water Pipelines were visually inspected during field surveys in June 2021; 17 of these were visual inspections only, related to locations of proposed outfalls for permanent washouts; 33 locations were chosen for sampling as a result of being representative of a group of water body types, locations of proposed abstractions or locations of higher risks of impacts, e.g. some Construction Compound locations. The sampling locations were revisited in November 2021, November 2022, June 2023, November 2024 and June 2025 for sampling only as further visual inspection were not considered necessary at all locations initially surveyed. The locations are detailed in A9.2 Figures 1 to 76. The findings of these inspections were used to:

    - Determine the baseline of these water bodies (and their sensitivity to change)
    - Support the analysis of likely significant effects

- Determine suitability of water quality at abstraction locations for testing and commissioning of the pipeline
- Determine suitability of physical features of a water body for supporting infrastructure for permanent Washout Valves.

41. All of the samples taken were analysed for parameters which form part of the 'General Conditions' of water bodies European Union Environmental Objectives (Surface Waters) (Amendment) Regulations 2019), (the "Surface Water Regulations") such as pH, dissolved oxygen, biochemical oxygen demand (BOD) and nutrients. At ten locations, an extended sampling suite was deployed and included chloride, chlorine, pesticides and heavy metals. These locations are those which have been identified as potential abstraction points for water to be used in testing and commissioning of the pipeline. Further details of these are provided at Section 7.2. The majority of samples taken were within Environmental Water Quality Standards (outlined in the Surface Water Regulations), and UK Technical Advisory Group (UKTAG) WFD Environmental Standards and Conditions Report, 2008. Therefore, only exceedances to Environmental Quality Standards (EQS) are illustrated in Table 4.3. Results of the full sampling suite are provided in Appendix A9.6 (Laboratory Analysis and In Situ Results).

Table 4.3: Surface Water Monitoring 'Exceedances' Results

WFD Designated Water Body Name	WFD Status	Water Body Crossing ID	Figure	Date	Result*
Parameter: Biochemical oxygen demand (BOD) (mg/l) Standard: ≤ 1.5 (ECSR)					
KILMASTULLA_050	Moderate	WCX002	A9.2 Figure 6	November 2024	2
KILMASTULLA_050	Moderate	WCX003 and 004 Combined	A9.2 Figure 7	November 2024	2
KILMASTULLA_020	Moderate	WCX006	A9.2 Figure 9	November 2021	3
KILMASTULLA_020	Moderate	WCX009	A9.2 Figure 9	November 2021	4
KILMASTULLA_020	Moderate	WCX010	A9.2 Figure 9	November 2024	2
ARDGREGANE STREAM_010	Poor	WCX011	A9.2 Figure 10	November 2024	4
ARDGREGANE STREAM_010	Poor	WCX011	A9.2 Figure 10	June 2025	2
NENAGH_070	Moderate	WCX016	A9.2 Figure 12	November 2024	3
BALLYFINBOY_040	Moderate	WCX020	A9.2 Figure 17	June 2021	34.7
BALLYFINBOY_040	Moderate	WCX020	A9.2 Figure 17	November 2021	3
BALLYFINBOY_040	Moderate	WCX020	A9.2 Figure 17	June 2025	2
SHINRONE STREAM_010	Poor	WCX024	A9.2 Figure 20	November 2021	15
SHINRONE STREAM_010	Poor	WCX025	A9.2 Figure 20	November 2024	2
DAINGEAN_010	Poor	WCX046	A9.2 Figure 41	June 2021	6.07
DAINGEAN_010	Poor	WCX046	A9.2 Figure 41	November 2021	28
ESKER STREAM_020	Moderate	WCX054	A9.2 Figure 43	June 2023	4
FIGILE_030	Moderate	WCX056	A9.2 Figure 45	November 2021	3
FIGILE_030	Moderate	WCX056	A9.2 Figure 45	June 2023	2

WFD Designated Water Body Name	WFD Status	Water Body Crossing ID	Figure	Date	Result*
FIGILE_020	Moderate	WCX058	A9.2 Figure 46	June 2021	2.2
FIGILE_010	Poor	WCX060	A9.2 Figure 49	November 2021	5
FIGILE_010	Poor	WCX060	A9.2 Figure 49	June 2025	9
BLACKWATER (LONGWOOD)_010	Poor	WCX062	A9.2 Figure 52	June 2021	2.03
BLACKWATER (LONGWOOD)_010	Poor	WCX062	A9.2 Figure 52	June 2023	2
BLACKWATER (LONGWOOD)_010	Poor	WCX062	A9.2 Figure 52	June 2025	2
CLONSHANBO_020	Poor	WCX069	A9.2 Figure 55	June 2021	6.41
CLONSHANBO_020	Poor	WCX069	A9.2 Figure 55	June 2023	2
LIFFEY_140	Good	WCX072	A9.2 Figure 57	November 2022	2
LIFFEY_140	Good	WCX072	A9.2 Figure 57	June 2025	2
LIFFEY_140	Good	WCX073	A9.2 Figure 57	November 2021	5
KILMASTULLA_050	Moderate	WCX077	A9.2 Figure 6	November 2021	4
KILMASTULLA_050	Moderate	WCX077	A9.2 Figure 6	November 2024	2
Parameter: Ammoniacal nitrogen as N (mg/l) **Standard: ≤ 0.065 (ECSR)**					
KILMASTULLA_020	Moderate	WCX009	A9.2 Figure 9	November 2024	0.17
BALLYFINBOY_040	Moderate	WCX020	A9.2 Figure 17	November 2022	0.2
KILCOMIN STREAM_030	Moderate	WCX022	A9.2 Figure 19	November 2022	0.19
SHINRONE STREAM_010	Poor	WCX024	A9.2 Figure 20	November 2021	0.37
LITTLE BROSNA_030	Good	WCX026	A9.2 Figure 21	November 2021	0.09
CLODIAGH (TULLAMORE)_020	Good	WCX039	A9.2 Figure 36	June 2025	0.1
DAINGEAN_010	Poor	WCX046	A9.2 Figure 41	June 2021	4.68
DAINGEAN_010	Poor	WCX046	A9.2 Figure 41	November 2021	0.56
DAINGEAN_010	Poor	WCX046	A9.2 Figure 41	November 2022	0.15
DAINGEAN_030	Poor	WCX047	A9.2 Figure 42	November 2022	0.094
ESKER STREAM_010	Moderate	WCX049 Upstream	A9.2 Figure 42	November 2024	0.12
ESKER STREAM_020	Moderate	WCX054	A9.2 Figure 43	November 2022	0.12
ESKER STREAM_020	Moderate	WCX054	A9.2 Figure 43	November 2024	0.37
FIGILE_030	Moderate	WCX056	A9.2 Figure 45	November 2024	0.18
FIGILE_030	Moderate	WCX056	A9.2 Figure 45	June 2025	0.22
FIGILE_020	Moderate	WCX058	A9.2 Figure 46	November 2024	0.24

WFD Designated Water Body Name	WFD Status	Water Body Crossing ID	Figure	Date	Result*
FIGILE_010	Poor	WCX060	A9.2 Figure 49	November 2024	0.48
FIGILE_010	Poor	WCX060	A9.2 Figure 49	June 2025	10
BLACKWATER (LONGWOOD)_010	Poor	WCX062	A9.2 Figure 52	June 2023	0.15
BLACKWATER (LONGWOOD)_010	Poor	WCX062	A9.2 Figure 52	November 2024	0.39
BLACKWATER (LONGWOOD)_010	Poor	WCX062	A9.2 Figure 52	June 2025	0.099
CLONSHANBO_010	Poor	WCX066	A9.2 Figure 54	November 2024	0.21
LYREEN_010	Poor	WCX070	A9.2 Figure 55	November 2021	0.09
Parameter: Total suspended solids (mg/l) Standard: ≤ 25 (ECQSW)					
KILMASTULLA_020	Moderate	WCX006	A9.2 Figure 9	June 2023	28
ARDGREGANE STREAM_010	Poor	WCX011	A9.2 Figure 10	November 2024	31
NENAGH_070	Moderate	WCX016	A9.2 Figure 12	November 2022	26
BALLYFINBOY_040	Moderate	WCX020	A9.2 Figure 17	June 2021	944
BALLYFINBOY_040	Moderate	WCX020	A9.2 Figure 17	June 2025	45
SHINRONE STREAM_010	Poor	WCX024	A9.2 Figure 20	November 2021	40
SHINRONE STREAM_010	Poor	WCX025	A9.2 Figure 20	November 2021	27
SILVER (KILCORMAC)_020	Good	WCX036	A9.2 Figure 32	November 2022	36
DAINGEAN_010	Poor	WCX046	A9.2 Figure 41	June 2021	47.4
DAINGEAN_010	Poor	WCX046	A9.2 Figure 41	November 2021	236
FIGILE_020	Moderate	WCX058	A9.2 Figure 46	November 2021	534
FIGILE_010	Poor	WCX060	A9.2 Figure 49	November 2021	75
FIGILE_010	Poor	WCX060	A9.2 Figure 49	November 2022	132
FIGILE_010	Poor	WCX060	A9.2 Figure 49	June 2025	206
CLONSHANBO_020	Poor	WCX069	A9.2 Figure 55	June 2023	57
KILMASTULLA_050	Moderate	WCX077	A9.2 Figure 6	November 2021	84
Parameter: Chlorine Total (Residual) (mg/l) Standard ≤ 0.005 (ECQSW)					
FIGILE_030	Moderate	WCX056	A9.2 Figure 45	June 2023	0.2
Parameter: COD, Unfiltered (mg/l) Standard: 125 (UWWT)					
DAINGEAN_010	Poor	WCX046	A9.2 Figure 41	November 2021	201
FIGILE_020	Moderate	WCX058	A9.2 Figure 46	November 2021	273

WFD Designated Water Body Name	WFD Status	Water Body Crossing ID	Figure	Date	Result*
FIGILE_010	Poor	WCX060	A9.2 Figure 49	November 2022	144
Parameter: Cadmium (diss. filt) (µg/l) **Standard: 0.08 (≤ 50 mg/l CaCO3)** **0.09 (>50 and ≤ 100 mg/l CaC03)** **0.15 (>100 and ≤ 200 mg/l CaC03)** **0.25 (>=200 mg/l CaC03) (ECSR)**					
KILMASTULLA_050	Moderate	WCX003 and 004 Combined	A9.2 Figure 7	November 2024	0.2
Parameter: Nickel (diss. filt) (µg/l) **Standard: 4 (ECSR)**					
SHINRONE STREAM_010	Poor	WCX024	A9.2 Figure 20	November 2021	16
LITTLE BROSNA_030	Good	WCX026	A9.2 Figure 21	November 2021	4.1
CLODIAGH (TULLAMORE)_020	Good	WCX039	A9.2 Figure 36	November 2022	4.1
FIGILE_030	Moderate	WCX056	A9.2 Figure 45	June 2023	15.3
FIGILE_020	Moderate	WCX058	A9.2 Figure 46	November 2024	4.4
FIGILE_010	Poor	WCX060	A9.2 Figure 49	November 2024	4.5
Parameter: Lead (diss. filt) (µg/l) **Standard: 1.2 (ECSR)**					
KILMASTULLA_050	Moderate	WCX003 and 004 Combined	A9.2 Figure 7	November 2024	6.3
Parameter: Zinc (diss. filt) (µg/l) **Standard: 8 (≤10 mg/l CaCO3)** **50 (>10 and ≤100 mg/l CaC03)** **100 (>100 mg/l CaC03) (ECSR)**					
KILMASTULLA_050	Moderate	WCX003 and 004 Combined	A9.2 Figure 7	November 2024	103.7

*The unit of measurement is noted under each parameters' subheading.

42. In summary, most of the water bodies sampled were within Environmental Quality Standards at the time of sampling.

43. A number of the water bodies showed elevated levels of more than one of the parameters being assessed, these are the Kilmastulla_050, Kilmastulla_020, Ardgregane Stream_010, Nenagh_070, Ballyfinboy_040, Shinrone Stream_010, Daingean_010, Esker Stream_020, Figile_030, Figile_020, Figile_010, Blackwater (Longwood)_010, Clonshanbo_020 and Little Brosna_030. The remaining water bodies have minor exceedances of the standards and are not considered significant as these are one off spot samples at a single point in time. It is difficult to assume long-term trends using spot samples as there can be large variations in the quality of water from one survey to the next depending on weather conditions and/or upstream activities and so they are not considered to represent a comprehensive baseline situation for the water bodies and should instead be viewed alongside the EPA data to provide supporting intelligence regarding the baseline environment. Further monitoring should be undertaken in the lead up to commissioning to identify specific treatment requirements (see Appendix 5.2 for further detail).

4.2.3.1 Proposed Testing and Commissioning Abstraction Locations

44. At these locations a wider suite of parameters were analysed to inform the potential likely treatment requirements for the abstracted water. In summary, the majority of water bodies registered sample results within the Environmental Quality Standards, with a few exceptions.

- Kilmastulla_050, Figile_030, Liffey_140 and Negagh_070 had exceedances for BOD (Unfiltered)
- Figile_030 and Little Brosna_030 had exceedances for ammoniacal nitrogen
- Kilmastulla_050, Nenagh_070 and Silver (Kilcormac)_020 had exceedances for total suspended solids
- Figile_030 had exceedances for chlorine
- Clodiagh (Tullamore)_020, Figile_030 and Little Brosna_030 had exceedances for nickel
- Kilmastulla_050 had exceedances for cadmium, lead and zinc.

4.3 Land and Soils

45. The nature of the soils and underlying geology along the length of the pipeline is relevant to the water quality assessment. This is because these factors can determine the likelihood of silty water runoff and the effectiveness of mitigation measures. Full detail of soil, subsoils and bedrock geology is included Chapter 10 (Soils, Geology & Hydrogeology).

46. This assessment considers in further detail the pipeline crossings where peat is the subsoil material. This is due to the likely significant effects that unmitigated construction activities in peat soils can have on the water environment. Crossings in other soil and subsoil types are not considered individually within this chapter because the effects are likely to be similar to pipeline crossings in peat areas.

4.3.1 Peat

4.3.1.1 Peat Crossings – Overview of Water Bodies

47. The Treated Water Pipeline would cross a number of peatland sites managed by Bord na Móna. Additionally, private peat operations and individual peat harvesting operations are located along the Treated Water Pipeline in County Offaly. The pipeline would also cross directly within areas of peat identified by Teagasc (Agriculture and Food Development Authority).

48. Crossings within peat areas have been given a specific focus in this assessment because surface water drains in peat extraction areas have the potential to have elevated concentrations of ammonia. Peat sites within the construction footprint and crossed by the pipeline have been included in the assessment for likely significant effects.

49. There are a total of 216 water body crossings along the pipeline route (24 WCX, 46 WBX and 146 WBP) directly within areas of peatland identified by Teagasc. Of these, 50 water body crossings are directly within sites managed by Bord na Móna. Details of the Bord na Móna peatlands crossed and the corresponding crossings are provided in Table 4.4.

Table 4.4: Treated Water Pipeline Bord na Móna Peatland Crossings

Peatland	Chainage	WFD River Sub Basins	WFD Status	Water Body Crossing ID	Description and Current Land Use
Clonad Bog	TWC – 11900 to TWC – 13400	Daingean_010	Poor	WBP026	Clonad Bog has been in industrial production since 1962. The drains are oriented north-south. Cutover peat - all peat harvesting ceased in 2020. Pipeline crosses directly through the peatland and water body crossings are within the boundary of the Bord na Móna site.
				WBP156	
				WBP157	
				WBP158	
Mount Lucas	TWC – 13400 to TWC – 17200	Daingean_010 Daingean_030 Figile_040	Poor Poor Poor	WBP342	Peat production at Mount Lucas bog commenced in the mid-1970s and finished in 2018. Cutover peat and windfarm - active peat harvesting, private peat cutting and windfarm. Pipeline crosses directly through the peatland and water body crossings are within and along the boundary of the Bord na Móna site.
				WBP160	
				WBP159	
				WBP300	
				WBP299	
				WBP301	
				WBP116	
				WBP161	
				WBP027	
				WBP343	
Esker Bog	TWC – 20300 to TWC – 23500	Esker Stream_010 Esker Stream_020	Moderate Moderate	WCX049	Esker Bog covers an area of 5.71km^2. Drains are orientated north-east/south-west and average 3km in length. The pipeline and water body crossings are aligned along the southern boundary of the site. Cutover peat - peat harvesting ceased in 2020. Private turf continuing to the east of Bord na Móna lands.
				WCX050	
				WBP090	
				WBP165	
				WCX051	
				WBP346	
				WCX053	
				WBP029	
				WBP170	
Cloncreen	TWD – 2200 to TWD – 2950	Figile_030	Moderate	WBX099	A windfarm was developed at Cloncreen in 2021/2022. Industrial milled peat production ceased at Cloncreen in 2018 with ongoing rehabilitation of the peatlands. Cutover peat - peat harvesting ceased in 2020.
				WBP178	
				WBP179	

Peatland	Chainage	WFD River Sub Basins	WFD Status	Water Body Crossing ID	Description and Current Land Use
Ballydermot	TWD – 6500 to TWD – 15000	Figile_030 Figile_020 Abbeylough_010	Moderate Moderate Moderate	WBP365 WBP032 WBP303 WBP302 WBX104 WBX105 WBP356 WBP316 WCX059 WBP357 WBP094	Codd North Bog is made up of 93 fields with drains running north-south. Cutover peat - peat harvesting ceased in 2020. Codd South Bog is bordered to the north by an area of private bog and also Codd North Bog. Cutover peat - peat harvesting ceased in 2020. Glashabaun North Bog consists of 79 fields with the drains running east-west. Cutover peat - peat harvesting ceased in 2020. Glashabaun South Bog consists of 84 drains oriented north-east/south-west. There is production in places but the bog is considerably overgrown. Cutover peat - harvesting has ceased, predominantly forestry at present.
Timahoe (South)	TWD – 17200 to TWD – 21550	Abbeylough_010 Figile_010 Blackwater (Longwood)_020	Moderate Poor Moderate	WBP360 WBX105 WBP292	Timahoe South - the bog was used primarily for the industrial exploitation of peat. Industrial production ceased in 1990. Small scale production for domestic purposes continued at the margins of the commercially cutaway bog until 2020. Natural regeneration with some forestry.
Timahoe (North)	TWD – 21550 to TWD – 24300	Blackwater (Longwood)_020 Blackwater (Longwood)_010	Moderate Poor	WBP039 WBP296 WBP297 WBP248 WBP247 WBP317	Timahoe North - the bog was used primarily for the industrial exploitation of peat. Industrial production ceased in 1990. Small scale production for domestic purposes continued at the margins of the commercially cut away bog until 2020. A solar farm is currently under construction. Natural regeneration with some forestry and private peat cutting.
Gilltown	TWD – 26500 to TWD – 27300	Blackwater (Longwood)_010	Poor	WBP245 WBP121 WBP042 WBP244	Gilltown Bog is surrounded by farmland, with some private turf plots to the north-east. The bog consists of 111 fields running north-south, all of which are in production, with the exception of a small area to the north-east of the bog that was out of production and overgrown with scrub. The bog was used primarily for the industrial exploitation of peat. Industrial production ceased in 2020. Natural regeneration with some forestry, peat harvesting and private peat cutting.

50. The National Peatland Strategy (NPS 2015) provides a framework for peatland conservation and management. The strategy sets out the following actions for peatland activities in relation to the water environment:

    - It should be demonstrated that activities do not, either individually or in-combination with other activities, adversely impact on the environmental objectives of the WFD, the Habitats Directive (EU Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora) and national regulations such as the Wildlife Acts
    - Peatland related activities should not significantly alter the environmental supporting conditions for designated habitats such that these cause a failure of the conservation objective for that designated habitat and by inference cause a risk to the WFD environmental objectives relating to protected areas not being met.

4.3.1.2 Peat Crossings – Methods of Working in Peat

51. Construction of the pipeline would occur within areas of peat along the pipeline route. There are four methods for working in peat proposed for the Project, full details of which can be found in Appendix A5.3 (Methods of Working in Peat). Appendix A5.3 also outlines the appropriateness of the four methods. Appendix 5.1 Annex A (Surface Water Management Plan) details a variety of mitigation measures to minimise likely significant effects of construction in peat areas. They are:

    - **ID W-SC9: Monitoring of water quality:** Water quality will be monitored for seven parameters – PH, total suspended solids, total phosphorous, ammonia, colour, and chemical oxygen demand (COD) – at key working locations:
        - Before and after crossing water bodies in peat areas
        - Settlement ponds storing surface water runoff from construction works

      This programme will comprise 12-months of pre-construction, baseline monitoring to capture seasonal variability and 3-months of post-construction restoration monitoring. Monitoring locaions will be assigned in agreement with Bord na Móna.

      While standards set by the EPA for Bord na Móna's Integrated Pollution Control (IPC) licence require quarterly monitoring, the nature of the Proposed Project warrants an increased monitoring frequency. Therefore, during active work phases in these pear areas, monthly monitoring will be conducted – except in the following cases:
        - Where a work site is near a protected water body
        - Where a work site crosses through a sensitive area
        - In these cases, weekly monitoring is proposed
    - **ID W-SC10:** Daily visual inspection of the waterbody downstream of the crossing will be undertaken to monitor colour and turbidity; pH readings will also be taken to give an indication of excessive ammonia in the water. The Environmental manager can take handheld readings if they observe a change in waterbody colour
    - **ID W-SC11:** Where reasonably practicable, works will be carried out in dry conditions to reduce the potential for peat laden runoff to impact the downstream waterbody. Provision will be made to halt work during heavy rainfall / storm events. The extent of exposed peat areas and duration of exposure will be limited due to the temporary nature of the works
    - **ID W-SC12: Silt management using settlement ponds and silt fences** (as set out in Section 4.3.2 of the SWMP): These new temporary proposed settlement ponds and their silt fences will be managed and maintained regularly in line with a pollution prevention plan. Water from the settlement ponds will flow onwards to the appropriate active Bord na Móna silt pond at a rate that follows the standards set by the EPA for Bord na Móna to meet its Integrated Pollution Control license requirements

- **ID W-SC13: Appropriate handling of excavated material:** Temporary storage of excavated peat will be accommodated parallel to the trench and within the Construction Working Width but out with the buffer extents surrounding drains and watercourses. Buffers will be maximised where possible and designed to consider site topography. Note that excavated peat will be re-wet whilst stored in order avoid it drying out. and as the settlement lagoons are temporary in nature, they will be decommissioned once active works have ceased in their vicinity and the land made good
- **ID W-SC14: Appropriate Peat Storage:** Elevated ground close to the construction working width will be kept free from excessive loose peat to reduce the likelihood of runoff to the downstream waterbody. Furthermore, no materials will be stored in areas of deep peat
- **ID W-SC15: Managing surface water through peat areas:** The approach to managing surface water during the construction of the Treated Water Pipeline in all peat areas will follow the standards set by the EPA for Bord na Móna to meet its Integrated Pollution Control licence requirements with a focus on good construction management practices and techniques. The licence requirements stipulate flows and water quality as follows:
    a. Maximum flow velocity: <10cm/s
    b. Silt pond design capacity: minimum 50m^3 per net ha of bog serviced
    c. Emission Limits Values for water (monitored quarterly):
        i. Total Suspended solids (TSS): 35mg/l
    d. Trigger Level values for water:
        i. Total ammonia: 3mg/l
        ii. Chemical oxygen demand (COD): 100mg/l.

52. Sampling of Total Suspended Solids, Total Ammonia and COD (among other standards) is carried out quarterly by Bord na Móna with each outlet being sampled at least once every two to three years. A number of the peatland sites / bogs which the Treated Water Pipeline will cross are sampled more frequently (in order to support the PCAS project). It should be noted that the PCAS monthly sampling will cease in August 2026 with these areas returning to standard sampling at least once every 2-3 years per Bord na Móna license conditions. A summary of Bord na Móna sampling results is presented in Table 4.5 below.

Table 4.5: Summary of Bord na Móna sampling results

Bog Name	Sampling Frequency	Total Suspended Solids (mg/l)			Ammonia as N (mg/l)			COD (mg/l) (Chemical Oxygen Demand)		
		Mean value	Standard Deviation	Median	Mean value	Standard Deviation	Median	Mean value	Standard Deviation	Median
Ballydermot	Quarterly	3	2	2	0.165	0.175	0.089	70	36	64
Clonad	Monthly	4	5	2	0.300	0.198	0.279	55	24	50
Cloncreen	Monthly	5	7	2	0.258	0.199	0.212	36	18	35
Esker Bog	Monthly	5	5	3	0.534	0.734	0.209	52	22	53
Gilltown	Quarterly	3	3	2	1.258	1.012	1.139	71	26	77
Mount Lucas	Monthly	4	3	3	0.209	0.134	0.211	46	15	46
Timahoe North	No sampling as no silt ponds	-	-	-	-	-	-	-	-	-
Timahoe South	Monthly	5	3	3	0.180	0.166	0.118	73	27	74

53. Baseline mean value data for each bog (presented above) demonstrates the presence of significant headroom to the Total Suspended Solids Emission Limit Value (ELV) of 35mg/l. Monitoring will be undertaken to determine any potential exceedances of the ELV in discharge water. For Bord na Móna monitoring, 75% of samples for each monitored discharge cannot exceed the ELV and no sample can exceed 3 times the ELV for Total Suspended Solids - 105mg/l. The Project will use a blanket 35mg/l and monitoring data will be made available to the EPA to support Bord na Móna in meeting its Integrated Pollution Control licence requirements.

54. Baseline mean value data for each bog (presented above) demonstrates the presence of significant headroom to the Ammonia Trigger level value of 3mg/l and COD Trigger level value of 100mg/l. The risk of exceeding these Trigger level values is considered low with the implementation of the mitigation measures listed in this document. The Trigger level values for Ammonia and COD will be used to monitor potential exceedances in discharge water. Note that for Trigger level values (Ammonia and COD), any exceedance is not reportable as an incident, but it must be included in an update to the EPA at the end of each quarter. This data can be used to support Bord na Móna in meeting its Integrated Pollution Control licence requirements.

55. Should the Project be at risk of exceeding the ELV for TSS or Trigger level values for Ammonia and COD, the Project Environmental Manager will implement suitable adaptive management measures to mitigate the likelihood of potential exceedances in discharge water. This will include adjustments to the programme of excavations; methods of stockpiling and control of discharges from settlement ponds. Any exceedances of ELV for TSS or Trigger level values for Ammonia / COD would be investigated by the Project Environmental Manager. Prior to construction, the appointed contractors will discuss the specific requirements for any discharges with the relevant authorities. As a result, in addition to the sampling proposed under ID W-SC9, weekly sampling of the effluent from silt ponds will be undertaken to ensure compliance with any emission limits set.

56. Ditches on Bord na Móna lands, currently used by that organisation to manage its their own discharges, will not be used for the settlement of solids. Silty water and runoff from any excavations will be settled in the temporary settlement lagoons and treated before any being discharged to Bord na Móna ditches. All water will be discharged at a controlled rate to ensure there is no resuspension of settled solids arising from the Proposed Project in Bord na Móna ditches and will be done in collaboration and agreement with Bord Na Móna.

57. Chapter 5 (Construction & Commissioning) and Appendix A5.3 (Methods of Working in Peat) define four methods for working in peat, based on the depth of peat (or alluvium) that would likely be encountered. Method 1 is proposed to be used where the peat is less than 1m deep and it is not expected that there would be any deviation from this methodology. For sections of peat greater than 1m in depth it is uncertain which method may be adopted, and therefore Method 2, 3 or 4 could apply. Methods 3 and 4 would result in additional permanent infrastructure in the form of stone pillars / pile supports below the pipeline. This would not result in additional operational effects for water.

58. Method 4 would have a slightly greater impact that the other methods; however the difference in the Methods is not expected to be significantly different in terms of overall impacts on the water environment. Methods 1, 2 and 3 are still expected to have the same overall potential impacts as Method 4 including increasing fine-grained sediments, changing the pH, elevating the levels of ammonia/phosphorous and causing physical alteration to the drainage or river network. Therefore, the overall likely significant effects reported in this appendix would not change regardless of the working in peat method used.

4.4 Amenity Areas

59. The River Shannon is the longest river in Ireland. It is navigable for over 200km, from Lough Allen in the north to Limerick in the south, passing through Lough Ree, Derg TN (Lough Derg) and Derg HMWB (Parteen Basin). The marked navigation channel in Derg HMWB is approximately 280m from the RWI&PS. The navigation channel continues through a series of locks from Derg HMWB (Parteen Basin) into the Headrace and into the Lower River Shannon following the confluence with the Tailrace (North Ballycannon_010).

60. Derg TN (Lough Derg) has 179km of shoreline, stretching over 40km from Portumna, County Galway in the north to Killaloe, County Clare and Ballina, County Tipperary in the south. Water-related recreational options on Derg TN include boating, canoeing, water skiing, kayaking, surfing and sub-aqua diving. There are also walking trails associated with the lough, such as the East Clare Way and the Lough Derg Way. There are a number of historic sites surrounding Derg TN. The lake is also an important fishing location, and is especially famous for brown trout, roach, salmon and bream.

61. The Grand Canal connects Dublin in the east to the River Shannon at Shannon (Lower)_010 near Banagher in the west, through the midland towns of Tullamore, Edenderry and Naas. It is an important amenity used by both tourists and visitors for walking, fishing, boating (barges) and bird watching in areas in close proximity to public transport links. The Treated Water Pipeline from the BPT to the TPR would cross beneath the Grand Canal, using trenchless construction techniques, north-west of Allenwood in County Kildare, approximately 700m west of the Bord na Móna Bridge, Kilpatrick. It would also cross beneath the Grand Canal a second time, again using trenchless techniques, approximately 700m south-west of Straleek, in South Dublin County.

5 Appraisal Method

5.1 Sensitivity and Assessment of Effects

62. The method for the assessment of likely significant effects has been undertaken in accordance with Section 9.2.5 of Chapter 9 (Water) whereby the sensitivity of surface water 'attributes' to changes as a result of the Proposed Project are determined by a set of criteria including their relative sensitivity or 'value' (e.g. whether features are of national, regional or local value). Table 9.5 of Chapter 9 outlines the criteria for estimating the sensitivity of receptors and their attributes.

63. In other assessments, each receptor is assigned a sensitivity for three separate water environment attributes:

- Hydrology and surface water quality
- Hydromorphology
- Surface water supply.

64. The sensitivity categories are: negligible, low, medium, high and very high.

65. Through scrutiny of Uisce Éireann's interim Surface Water Abstraction Catchments GIS data as well as publicly available data through the EPA maps portal (EPA 2025), it was established that there are no known rivers or lakes within DWPA designations within 50m of the proposed works or within 2km of any water body crossings. Therefore surface water supply has not been assessed for water body crossings.

66. For the purposes of this Pipeline Assessment, sensitivity has been assigned to all water bodies by combining the water environment attributes into one sensitivity, magnitude of impact and significance of effect for each receptor. The highest sensitivity of each water environment attribute has been used and the magnitude of impact has been determined as the overall highest magnitude of the impacts to the receptor.

67. This approach has been taken for two reasons:

- Impacts on hydrology and surface water quality, hydromorphology and surface water supply are less discrete and there is a lot of overlap in terms of impacts and mitigation measures
- As there are numerous water body crossings, Washout Valves and Washouts at Line Valves, conducting three individual assessments on each crossing, Washout and Washout at Line Valve was not considered to be necessary or proportionate to the likely significant effects, and range of impacts anticipated. It should be noted that this has been determined based on professional judgement and with reference to other projects of a similar scale and nature.

68. Once the magnitude is determined, the significance of an effect on water bodies (for the overall sensitivity) is then assigned by combining the sensitivity of the receptor with the predicted magnitude of impact, as shown in Table 9.6 of Chapter 9, and as replicated in Table 5.1 below.

Table 5.1: Significance of Environmental Effect (EPA Guidelines 2022)

Magnitude of Impacts	Sensitivity of Receptor				
	Negligible	Low	Medium	High	Very high
Negligible	Imperceptible	Not Significant	Not Significant	Not Significant	Not Significant
Low	Not Significant	Slight (not significant)	Slight (not significant)	Moderate (significant)	Significant
Medium	Not Significant	Slight (not significant)	Moderate (significant)	Significant	Very Significant
High	Not Significant	Moderate (significant)	Significant	Very Significant	Profound

5.2 Mitigation

69. In general, a hierarchical approach to mitigation has been adopted for the Proposed Project, seeking to avoid adverse effects in the first instance through site selection and through an iterative approach to design. This is 'embedded mitigation' and is assumed to be in place during the assessment of likely significant effects. These are described in Section 6. Where avoidance is not feasible, and where likely significant effects are identified during the impact assessment, mitigation measures are proposed to prevent or reduce those effects. As discussed in Chapter 9 (Water) Section 9.5.1, there are two types of mitigation: generic mitigation measures and 'site-specific' mitigation measures. Each potentially significant adverse effect requires mitigation; however, many effects can and will be addressed using generic mitigation including the application of best practice in the construction of the Proposed Project. 'Site-specific' mitigation measures and generic mitigation measures are detailed in Annex A – Surface Water Management Plan (SWMP) of Appendix A5.1 (Construction Environmental Management Plan (CEMP)). Site specific mitigation has been developed where generic mitigation will be inappropriate, ineffective, or insufficient to avoid or minimise likely significant effects from a specific Proposed Project element. These generic mitigation measures follow industry best practice, and will be implemented in accordance with the contractors' overall CEMP for the works. This control methodology has been proven to work on other similar projects and is utilised across the construction industry. Measures have been selected to ensure suitability for the Proposed Project and the types of construction methods that would be employed.

6 Embedded Mitigation or 'Mitigation by Design'

6.1 Overview

70. Embedded mitigation is a term used to describe mitigation which has been 'designed in' to the Proposed Project and is either a technique being employed in construction or testing and commissioning, specifically designed to minimise likely significant effects, or is a permanent feature built into the design and operation of the Proposed Project, to minimise likely significant effects. These measures are taken into account at the outset of the assessment.

71. Mitigation applied during construction is not considered in this assessment as 'embedded mitigation' if it is a control measure required to reduce temporary effects, for example, silty water control. As a result, assessment of likely significant effects during construction is largely carried out in the absence of control and mitigation measures. Mitigation is then proposed, and residual effects post-mitigation described.

72. Embedded mitigation measures generally fall into two categories which are listed below and described under subsequent headings:

- Avoidance
- Design and Operation.

6.2 Avoidance

6.2.1 Routing/Siting

73. The potential for likely significant effects on water bodies within the study area has been reduced as far as is reasonably practicable by careful selection of the route of the proposed pipeline and location of associated infrastructure. Further information on the selection of the pipeline routes and the siting of infrastructure is available in Chapter 3 (Consideration of Reasonable Alternatives).

6.2.2 Construction Phase

74. In construction, likely significant effects to a number of surface water bodies will be avoided by the use of specific trenchless crossing techniques at particularly sensitive or complex crossings. This avoids the need to have direct interaction with the water body and reduces the pollution risk to water bodies that could occur whilst also preventing damage to the riverbanks themselves.

75. General pipe drainage and dewatering will be required where excavation works are undertaken, or on trenchless sections of the pipeline where there is ingress of water into launch or receptor pits. During construction of the pipeline, shallow toe, or cut off drains will be installed along the edges of the construction corridor to prevent overland flows from adjacent land; they will also collect runoff from the stockpiles of topsoil and subsoils resulting from the excavation of the trenches, directing the runoff away from receptors and towards treatment.

76. A number of attenuation ponds are proposed along the length of the pipeline at naturally low points. These are in place to manage surface water runoff and to settle suspended solids. Attenuation ponds will be designed to follow a hierarchy of treatment options, for example, wherever and whenever possible the ponds will act as a soakaway and no discharge will be required. However, in other cases, a discharge to land or to a water body may be required; for example, during periods of heavy rainfall, the attenuation ponds have potential to become inundated and overflow, and therefore a discharge is required to prevent untreated water from overspilling. Any discharges will not exceed 25mg/l suspended solids from construction works to fisheries waters or 35/mg/l suspended solids from construction works to water bodies in peatland. These methods are described in more detail in the Appendix A5.1 Annex A (Surface Water Management Plan). The impact of any discharges from these temporary infrastructure elements is

considered in the Construction Phase impact assessment and any additional control measures outlined in Section 7.3.

6.2.3 Testing and Commissioning Phase

77. In testing and commissioning the proposed pipeline, it is proposed to abstract water from eight water bodies along the route and use the abstracted 'test water' to pressure test the pipeline. The water bodies chosen for the abstractions are those considered to have sufficient annual average flows such that, with careful design in terms of abstraction rates and other measures (see Section 6.3) no significant effects are anticipated.

78. The Construction and Commissioning Strategy in Chapter 5 details the methodology and principles for the abstractions for pipeline testing and commissioning in order to reduce environmental impacts. In the absence of Irish guidelines or standards, the strategy is designed in line with the UKTAG UK Environmental Standards and Conditions (2008).

79. These standards set out restrictions on abstractions for different seasons and for different WFD designated water bodies. Despite some of the abstractions being from "Moderate" status water bodies and temporary in nature, the Commissioning Strategy uses the principles for "Good" status water bodies so as not to prevent any water body from achieving "Good" status in the short- or longer-term future.

80. The water bodies along the length of the pipeline were evaluated and smaller water bodies with Q95 flow of less than 100l/s were discounted. The eight water bodies selected are as follows:

- Kilmastulla_040
- Nenagh_070
- Little Brosna_030
- Camcor_030
- Silver (Kilcormac)_020
- Clodiagh (Tullamore)_020
- Figile_030
- Liffey_140.

81. The design for carrying out the abstractions during testing and commissioning is detailed in Section 6.3 (Design and Operation). It is an objective of the design and operation to ensure that there is no likely significant effect on the water environment.

6.2.4 Operational Phase

82. In operation, the only potential for impacts from the proposed pipeline will be during the operation of the washouts. The design and operation of the washouts are discussed in Section 6.3.

83. In terms of avoidance, the volume of water that will be discharged by some of the washouts is sufficiently large to warrant a permanent outfall being constructed, to minimise scour and damage to riverbanks. The location of the permanent washouts has been determined by the calculated capacity of the water body to receive such large volumes so as not to be hydrologically or morphologically impacted. Out of 187 washouts, 39 have permanent outfalls. This way likely significant effects on other water bodies along the route are avoided (See Chapter 3 (Consideration of Reasonable Alternatives) for more details).

6.3 Design and Operation

6.3.1 Testing and Commissioning Phase

84. The testing and commissioning of the pipeline would follow a set sequence of tests with each subsequent test assessing pipeline integrity to a higher degree than the last. At a high level these tests will be as follows:

    a) Initial clean and internal inspection

    b) Low pressure 'air test' - using compressed air

    c) Hydrostatic pressure testing with filtered raw water

    d) Final swabbing and cleaning

    e) Disinfection

    f) Filling with potable water

    g) Water quality sampling.

85. Note the first four items A) to D) would be undertaken as each sub-section of up to 7km is completed. Items E) to G) would be undertaken once the entire pipeline is complete and the HLPS, BPT and TPR are also ready for 'wet' commissioning.

86. Of relevance to this appendix are Items C) to G) as these will require 'test water' (abstracted from the water bodies identified in Section 6.2.3) to be discharged to the surface water environment via the Washout Valves (including Washouts at Line Valves) following completion of the pressure testing. In some cases, once testing is complete, this water will be discharged to a different water body from which it was abstracted and therefore there is the potential for likely significant effects on the baseline water quality as a result of discharges and any contamination of water from the testing process. The principles governing the selection of sites for the abstractions and the design measures are set out in Annex C of Appendix A5.2 (Commissioning Strategy), which also details how the abstractions will be undertaken. These measures are provided to ensure that biological (including invasive species) or chemical cross-contamination between water bodies does not occur and to protect the integrity of the water bodies which the pipeline will discharge to.

87. The source of abstracted water will be monitored for physical, biological and chemical parameters for a period leading up to the Testing and Commissioning Phase. Where required, mobile treatment facilities will be employed to remove any contaminants prior to the filling of the pipeline; this will include:

    - Mobile water treatment plant
    - Filtration pumps (abstraction velocities will be kept below 0.15m/s through a fine mesh, not greater than 3mm aperture)
    - Disinfection (Ultraviolet (UV) or chlorination).

88. All abstraction rates will be controlled as follows (provided by the WSP Commissioning Strategy – Abstractions from Camcor and Liffey, December 2022):

    - <Qn95 take nothing (this is stricter than the WFD standard)
    - >Qn95 <Qn80 take 10% (of Qn95) up to a maximum of 2,000m^3/day (25 l/s)
    - >Qn80 (unless identified as a sensitive water body in terms of hydrology):
        - >Qn80 <Qn70, this remains as take no more than 10% (of Q95) or 2,000m^3/day (25 l/s) whichever is the smaller

  - >Qn70 and >Qn60, the appointed Contractor can take more, in accordance with the numbers below - with a maximum of 25% of Qn95 during April to October or 2,000m^3/day (25 l/s) whichever is the smaller
  - >Qn50 - the Qn60 limits apply
- >Qn80 (sensitive water bodies for hydrology, e.g. Liffey) - the maximum remains at 10% Qn95 or 2,000m^3/day (25 l/s) whichever is the smaller.

89. Annex A of Appendix A5.2 identifies specific risks associated with the proposed abstraction sources from Kilmastulla_040 and the Liffey_140 which have particular water quality sensitivities identified including Heavy Metals at Kilmastulla_040 and significant pressures associated with Bord na Móna land at Liffey_140.

90. Additionally, there is potential for cumulative effects on water flows and levels within the Camcor_030 due to the existing Uisce Éireann abstraction at Birr WTW located 6.9km downstream of the proposed testing and commissioning abstraction point. There is also potential for cumulative effects on the Liffey_140 as the proposed abstraction is located 8.4km upstream of Uisce Éireann's existing abstraction at Leixlip Reservoir. These potential effects would be more pronounced if the hydrostatic test abstractions were to occur over summer when the rivers are more susceptible to drought.

91. To avoid these likely significant effects, existing abstractions will be reduced as required for the temporary abstraction periods. In-principle agreements are in place with the Operational Management Teams at Birr WTP and Leixlip Reservoir to reduce their abstractions by the amounts being abstracted by the Proposed Project, for the short times required to test the pipeline (in the worst-case approximately 36 days and 10 days respectively for the Liffey and Camcor).

92. Further discussion on the timing and duration of the abstractions will be agreed in advance of testing and commissioning to ensure there is no significant effect on river flows and no risk to the water supplies at these locations.

93. The management of the discharge of treated water via the washouts or Washouts at Line Valves is not considered to be embedded mitigation and is described in Section 7.8.3 following the identification of likely significant effects.

6.3.2 Operational Phase

6.3.2.1 Washouts Overview

94. The need to 'draindown' a section of the pipeline in operation is a rare event, which will typically occur less than every 20-30 years. Washout at all low points along the Treated Water Pipelines will facilitate the draindown of sub-sections of the pipeline if/when required. There will be no routine discharges to surface water out with required draindown cycles. The design has carefully considered and provided for the circumstances where draindown could arise.

95. Line Valves along the pipelines allow sections ranging from 1km to 7km to be isolated such that they can be drained without the need to drain the entire pipeline. Furthermore, the design of the Line Valves is such that up to 60% of the water from one pipeline section can be pumped forward or backward via the bypass pipework to the adjacent sections thus saving water and reducing discharges to the environment. In many cases this will be sufficient to undertake the required maintenance. Where this is not the case the pipeline section can be drained further via the Washout Valves.

6.3.2.2 Operation of Washouts

96. The location and number of Washout Valves presented are assessed based on the worst case scenario, whereby any Washout Valve within 250m of a water body may discharge to that water body during operation. This allows for optimisation of the valve locations, to minimise the volumes of water that would be discharged during draindown, and to determine appropriate discharge rates and draindown locations. The final number and locations of Washout Valves will be confirmed during the detailed design phase of the Proposed Project.

97. The draindown strategy is predicated on the following discharge rates:

- Field washouts would be limited to a maximum of 15l/s
- Minor water courses would be limited to a maximum of 25l/s
- Major water bodies would be limited to a maximum of 20% of QMED, (the median flow) and also to an overarching maximum value of 150l/s, as detailed in Annex A of Appendix A4.1 (Operational Strategy).

98. In operation, this draindown would be undertaken using one of the following techniques:

- Discharge via permanent outfall
- Discharge via temporary hose to nearby water body (temporary washouts)
- Discharge to land (local washouts) when there is no water body close enough to discharge to. Where there is risk of local flooding from discharging to land, discharges will be collected and tankered off site.

99. The number of washouts is a function of the topography and the capacity of the receiving streams to accept the discharges. An initial assessment of this capacity restricted any single discharge from the permanent washouts to 20% of the associated stream's median annual flood (QMED). This is engineered by a combination of strategic Line Valves to isolate sections of RWRMs and Treated Water Pipelines and by limiting the draindown in any given section. For the temporary washouts, draindown rates will be no greater than 25l/s. Details of each of the washouts is provided in Annex A of Appendix A4.1 (Operational Strategy).

100. Where there is a necessary draindown in an emergency, the same procedures would apply. Only short sections of pipeline will be drained down at any one time, to conduct emergency repairs. Water will be disposed of in the same manner as described above. Discharges would not take place immediately following the spreading of silage by farmers in order to reduce potential pollution to nearby water bodies.

101. The location of Washout Valves are shown on A9.2 Figure 1 to 76. The basis of the draindown strategy and the operational management of draindown is described in Section 3.10 of Appendix A4.1 (Operational Strategy) of the EIAR.

102. In addition to restrictions on discharge rates, the following principles will also be applied where practicable:

- Discharges will occur during periods when river flows are lower than the mean flow (typically July to September)
- Discharges will only occur to receiving water bodies that have sufficient capacity to receive flows from the pipeline without increasing flood risk
- Discharges will be controlled in accordance with EPA, Inland Fisheries Ireland (IFI) and Office of Public Works (OPW) requirements and will be subject to the applicable permitting regime at the time of release.

103. Any discharges from the pipeline will be dechlorinated prior to discharge to the environment to provide a residual chlorine of <0.005mg/l as required by the Salmonid Regulations. This will be achieved by using sodium sulphite dechlorination tablets inserted into perforated wire mesh baskets at the washout chamber or permanent outfall structure. Dechlorination is achieved almost immediately on contact with the tablets. This method provides the most flexible approach for the removal of low chlorine residual and is suited to the infrequent operation of the washouts.

6.3.2.3 Permanent Outfalls Design

104. For the permanent discharge locations, a buried pipeline will connect the water supply pipeline to a fixed permanent outfall structure on the bankside of the water body. The connecting pipeline diameter will be determined during the detailed design for each specific location and the specific required maximum discharge rate at that location. However, it is anticipated that the pipe will be less than 500mm nominal diameter.

105. The outfall design will be to the following design principles, to ensure no likely significant effects occur during their operation:

- Outfalls will be at a 45-degree angle and in line and at a level with the water body bed
- Minimum bankside structure, in accordance with Construction Industry Research and information Association (CIRIA), IFI requirements and Transport Infrastructure Ireland (2015) Design of Outfall and Culvert Details, DN-DNG-03071
- The headwall will be set back into the channel banks so it is flush
- The headwall adjacent to the riverbank will be kept free of vegetation and debris and the riverbank will be checked for scour damage and erosion regularly and defects remedied early.

106. Further information on the design and operation of outfalls is available in Chapter 4 (Project Description) and Appendix A4.1 (Operational Strategy).

7 Likely Significant Effects of the Proposed Project and Mitigation – Construction and Testing and Commissioning Phase

7.1 Overview

107. This section considers and assesses likely significant effects of the construction of the RWRMs, and Treated Water Pipelines prior to mitigation and identifies the control and mitigation measures which will be implemented to avoid or minimise effects.

108. Chapter 5 (Construction & Commissioning) of the EIAR outlines the principal construction activities required to complete the proposed works and includes details of the temporary infrastructure required to undertake the construction such as Construction Compounds, Pipe Storage Depots, temporary access roads and water body crossing techniques. Only likely significant effects during construction are considered in this section; likely significant effects from testing and commissioning works are considered in Section 7.9 of this appendix.

109. Temporary works will be in place for as long as it is required to complete the activity, or task, under construction. In the case of Construction Compounds this will be for the duration of the Construction Phase which will be for approximately five years; Pipe Storage Depots will be removed following completion of the extent of pipeline works they support.

110. There are a number of generic effects which could occur during the Construction Phase. These are described in Section 7.2 and followed by project-element-specific assessments.

111. Of particular note are the following activities:

- Corridor preparation and trenching, including drainage and dewatering
- Topsoil and general soil management
- Excavations required for the pipeline corridor
- Pipe installation: water body crossings and road crossings
- The layout and use of Construction Compounds and Pipe Storage Depots.

7.2 Summary of Likely Significant Construction Effects

112. There are differing likely significant effects on the hydrology, water quality and hydromorphology of water bodies which would be common to the construction of any major pipeline project. An introduction to these is provided here, with further detail relating to specific project elements following in later sections.

7.2.1 Surface Water Quality and Hydrology

113. There is potential for direct impacts on surface water flows both on land and within water bodies as a result of channelisation and/or diversions of flow, for example through the diversion or ‘cutting’ of land drains or ditches. Impacts may result in a change in flows: increased flows could increase flood risk (for the Proposed Project, and these are considered in Appendix A9.4: Flood Risk Assessment); reduced flows could lead to ecological impacts and may also impact abstractions downstream.

114. There is potential for indirect impacts from the dewatering of excavations; in dry weather, this could result in decreased groundwater levels, consequently reducing recharge to local rivers and streams, leading to a ‘drought effect’. Further details and an assessment of the likely significant effects on groundwater is provided in Chapter 10 (Soils, Geology & Hydrogeology) of the EIAR.

115. There are a number of likely surface water quality effects, which would be common to most construction sites in the absence of control measures or mitigation. Risks of water quality effects are highest where construction activity takes place on or near to a water body, where there is potential for overland or in-stream inputs of pollutants such as silt, hydrocarbons and chemicals. These include:

- Increased sediment loads due to cutting through, or construction on riverbanks, or in a river channel, mobilising sediments in the banks or bed, etc
- Silt-laden surface water runoff, leading to increased sediment loading in nearby water bodies because of activities such as topsoil stripping during site preparation, the construction of local access roads, the dewatering of excavations and the storage of excavated material
- Spillages of miscible (capable of being mixed in water in this case) substances (e.g. pesticides), immiscible substances (e.g. oil), and concrete and other cements, have the potential to impact water quality even in small quantities
- Construction Compounds and Pipe Storage Depots: there are a number of other likely significant effects common to most construction works associated with Construction Compounds and Pipe Storage Depots. The Construction Compounds will house welfare cabins, store materials (including oil and construction materials), and have car parking and vehicle washing. In the absence of mitigation, in addition to the impacts already listed, there are likely impacts on water quality from vehicle washing, oil dripping from plant and machinery and wastewater from welfare facilities.

116. These impacts could be exacerbated in areas of peat soils:

- Increased flow rate and runoff volume: peat extraction and associated drainage activities may result in a slight increase in the rate of water draining the catchment, both baseflow and stormflow. Peat accumulates water and the removal of peat could impact the hydrological regime of receiving water bodies. Downstream flood risk could be slightly exacerbated as the water previously retained in the peat will enter receiving water bodies sooner and increase runoff volumes. Physical alteration to the landscape and channel morphology from increased sediment may change the flow, and increase the rate and amount of erosion to river banks
- Increased flooding: flooding events may worsen in winter where peat soils are already waterlogged and in response to climate change as more frequent and perhaps more severe events are anticipated
- Increased pollutants: excavations in peat areas can release a variety of pollutants leading to likely significant effects on water quality such as:
  - Increased fine grained sediments; suspended solids, total solids, dissolved organic matter and turbidity
  - Colour change
  - Changes in pH levels (more acidic)
  - Elevated levels of total ammonia or phosphorus
- These contaminants can be present in high concentrations in peat drainage channels as a result of lowered water tables and reduced flows; interactions with the drainage channels can create preferential pathways to water bodies leading to their contamination
- Following construction areas of peat may be more susceptible to erosion which may lead to contaminants entering local water bodies and water bodies leading to localised water quality and habitat degradation as a result. Further information on this can be found in Chapter 8 (Biodiversity).

117. As outlined in Section 6.2.2, embedded mitigation in the form of shallow toe or cut off drains will reduce the likelihood of significant effects. These will intercept overland flow and runoff from construction of the pipeline and stockpiles of topsoils and subsoils. These drains will direct runoff away from water bodies and towards treatment.

118. Methods for the construction of the Proposed Project within peat areas are detailed in Appendix A5.3 (Methods of Working in Peat). Specific mitigation measures identified for working in peat areas are presented in W-SC9 to W-SC15 in the SWMP and are specifically designed to prevent likely significant effects from disturbed peat.

7.2.2 Hydromorphology

119. Likely significant effects on the hydromorphology of water bodies during the construction of linear infrastructure relate to excavation of the banks or beds, working within the channel, and additional fine sediment input arising from bare earth surfaces.

120. Construction activities, including excavation in and around the channel, storage of excavated materials, vegetation clearance and topsoil stripping will all have the potential to create bare earth surfaces providing a source of fine sediment. With changes in overland flow pathways and in-channel working, the potential for this sediment to enter the water bodies will be increased. The additional fine sediment will lead to localised changes in the flow and sediment processes within the channel, potentially leading to smothering of bed substrate and changes to existing morphological features. This will have a greater impact on the medium and high sensitivity water bodies, or other small water bodies that could become choked by fine sediment.

121. Likely significant effects on hydromorphology as a consequence of in-channel working or works adjacent also include:

- Loss of vegetated riparian corridor potentially leading to destabilisation of the banks
- Removal of the natural bed and banks leading to changes in the channel width and depth
- Changes to overland runoff due to cleared working areas leading to changes in the flows within the channel
- Changes to morphological features and sediment processes resulting in erosion and deposition due to the temporary diversion and/or damming of the water bodies to create a dry working area
- Changes to longitudinal and lateral connectivity
- Changes to the extent of modification within a channel.

122. Likely significant effects on hydromorphology will be exacerbated as a consequence of working in peat areas. Exacerbated effects include:

- Increased sediment: peat extraction and drainage can result in changes to the sediment regime of nearby and downstream water bodies. The release of fine grained particles and suspended solids results in an increased sediment load, which in large quantities could alter a water body's hydromorphological condition by modifying the channel bed, clogging stream gravels and riparian areas
- Physical alteration: altering the river network and drainage activities may increase the connectivity of land drains to the river network. Physical alteration to the landscape may change the flow and sediment regime, increasing the rate and amount of erosion to river banks.

7.3 Summary of Generic Mitigation for Construction

123. Generic mitigation measures for use across the Proposed Project are detailed in Annex A (SWMP) of Appendix A5.1 (CEMP) in relation to:

- Control of silt laden water runoff and dewatering of silty water
- Stockpiling and storage of materials
- Prevention of spills

- Vehicles and plant (traffic management, careful selection of plant for the task and environs of the site)
- Working in or near watercourses
- Use of concrete
- Construction Compounds: typical Construction Compound site establishment measures.

124. These generic mitigation measures follow industry best practice, and will be implemented in accordance with the contractors' overall CEMP for the works. This control methodology has been proven to work on other similar projects and is utilised across the construction industry. Measures have been selected to ensure suitability for the Proposed Project and the types of construction methods that would be employed.

7.4 Pipeline Trench (Drainage, Dewatering and Surface Water Runoff)

7.4.1 Overview of Corridor Preparation and Trenching

125. Topsoil will be stripped to its full depth across the required works area; this would typically be across the full Construction Working Width, although where practicable this would be reduced to minimise disturbance and runoff impacts.

126. Subsoil will be removed as required during the earthworks. The topsoil and subsoil will be retained in stockpiles, for future use in reinstating the trench and working width.

127. The proposed pipeline will be installed mainly via excavating an open cut trench. Spoil from the trench will be stored adjacent to the excavation (at least 10m from it) on the opposite side of the trench to the stockpiled topsoil and subsoil reserved for reinstatement. Care will be taken to ensure that gaps are left in the stockpiled excavated material to permit the maintenance of landowner corridors, surface water management and beneath overhead cables.

128. In poor ground conditions, excavation of the trench will involve removal of the poor ground material over the trench and disposal off site. In the case of peat, it will be stored adjacent to the site for subsequent reuse. Any subsoil and/or weathered rock will be removed to foundation level and a dewatering system installed to prevent the trench filling with surface water and groundwater.

129. A Temporary Construction Road will run the length of the Construction Working Width and will be the route that construction traffic will use. Where the ground material is particularly deep or the underlying soils are weak, such as very soft silts, a variation to the access road is required, known as a 'floating road'[4].

7.4.2 Drainage and Dewatering

7.4.2.1 Likely Significant Effects Associated with Drainage and Dewatering

130. The drainage and dewatering of the pipeline trench have the potential to impact water bodies through:

- Changing local runoff patterns and rates associated with flow interception leading to changes in stream flow and velocity or inflows to adjacent pond or wetland habitats
- Localised lowering of the water table or loss of river flows or reduction in level in adjacent pond or wetland habitats
- Pollutant (silt, oil or chemical) entry to water bodies from runoff, dewatering and spillages

[4] A 'floating road' is an engineering solution used where it is impracticable to remove the underlying soft material. The 'floating road' is a raised stone platform, or embankment, where stability is provided by interlocking geogrids and provides a stable surface for the trafficking of construction plant and machinery. The 'floating road' does not require any excavation of the poor ground material and is laid directly on top of it at ground level. This limits the impact on the underlying vegetation.

- Creating a large, exposed area which could provide a significant new source of fine sediment into receiving water bodies, particularly if a large rainfall event occurs
- Input of fine sediment from local runoff or dewatering may discharge to water bodies, leading to changes in sediment regime and riverbed substrate locally
- Changes to flow regime, which could impact river processes, in-channel sediment movement, channel morphology and stability locally and downstream
- A change in runoff entry points, which could cause localised scour of banks.

131. Effects associated with the trench as a result of runoff will occur where there is a pathway to water bodies; this is the case where there are open cut crossings in particular. Effects associated with crossings are detailed in Section 7.5 (Water Body Crossings) and Section 7.6 (Road Crossings).

132. Dewatering of trenches will involve the pumping and discharge of water, via attenuation ponds to either land or nearby water bodies. Effects associated with these discharges are described in Section 7.4.2.2.

133. The stripping of soil across the entire working width presents risks of silty water runoff to nearby water bodies. In many locations, this will be addressed through filter drains or dewatering; however, there are some locations where there are water bodies adjacent to the proposed pipeline corridor rather than directly crossed by it, where silty water could runoff to them instead of towards the trench, depending on the topography.

134. There are four WFD designated water bodies within 50m of the proposed pipeline, in addition to those crossed by the RWRMs and Treated Water Pipelines. In addition to likely significant effects associated with runoff from construction activities, there is also potential for accidental leakage of oil and/or chemicals from machinery impacting water quality and hydromorphology (bed and bank composition), followed by longer-term pollution of the water column as oil degrades. Impacts on water bodies close to the pipeline are anticipated to have a magnitude of medium adverse. The assessment of pre-mitigation effects for these water bodies is summarised in Table 7.1.

Table 7.1: Summary of Pre-Mitigation Construction Phase Impact Assessment of WFD Designated Water Bodies in Proximity (<50m) to the Pipeline

Approximate Chainage	Water Body Name	Sensitivity	Magnitude	Significance of Effect
RW – 0	Derg HMWB	Very high	Medium adverse	Very Significant
TW – 2300 to TW – 3700, TW – 6100 to TW – 6500	Kilmastulla_040	High	Medium adverse	Significant
TWC – 13800	Daingean_010	High	Medium adverse	Significant
TWE – 7100	Liffey_130	High	Medium adverse	Significant

7.4.2.2 Likely Significant Effects Associated with Attenuation Ponds

135. The approach to dewatering via attenuation ponds and settlement lagoons is described in Section 6.2.2. It is anticipated there will be a large number of local settlement lagoons along the proposed pipeline and an assessment of the requirement for temporary water storage for settlement has been calculated, taking into account local topography and rainfall patterns. A hierarchy is proposed in Appendix 5.1 Annex A (Surface Water Management Plan) whereby management of the water in these ponds will be in the following order of preference:

- Soakaway '*in situ*' - there is no discharge point from the lagoon or pond; the water naturally soaks away into the ground as it settles
- Discharge to land - where land conditions permit, settled water will be discharged onto land within the Construction Working Width and allowed to soakaway naturally across grassed areas

- Discharge to water bodies - where it is not feasible to soakaway, discharges to local water bodies will be made.

136. It should be noted that Nature Based Solutions (NBS) will be used where practicable and green engineering solutions will be used in favour of grey based solutions if appropriate to do so. The use of these measures will depend on local site characteristics, accessibility and space, and the types of infrastructure or construction being proposed. Where there is a residual risk to infrastructure from erosion and/or bank failures for example, grey engineering solutions may be more appropriate. Professional judgement and best practice will be used in the decision-making surrounding the implementation of NBS.

137. Attenuation ponds will be located in natural low points along the pipeline route. Following the design principles set out in Section 6.2.2, where discharge to water bodies is required, all of the attenuation ponds will be designed, constructed and operated with weekly sampling, so discharges do not exceed 25mg/l suspended solids from construction works to fisheries waters or 35mg/l suspended solids from construction works to water bodies in peatland. Rates of discharge will also be controlled so there is no scour of the bed and banks of the receiving water bodies. In normal operating conditions, therefore, any impacts, pre-mitigation, as a result of discharges from the attenuation ponds will be short term, adverse and of negligible magnitude. There is a range of sensitivities for the receiving water bodies, from medium to very high. This would result in a significance of effect of Not Significant.

138. In conditions of increased rainfall, where increased volumes of water will need to be managed, there is potential for the attenuation ponds to become inundated and not be able to operate in their correct manner, for example, with reduced settling time which could result in increased levels of suspended solids in discharges. In this situation, the magnitude of any impacts could increase to medium; it is unlikely to be higher than this as it is anticipated the receiving water would also have received additional rainfall and be able to provide an increased level of dilution to the discharge. Notwithstanding this, the significance of likely effects would range from Not Significant to Very Significant depending on the sensitivity of the receiving water body and/or the proximity to WFD designated water bodies or feeding tributaries.

139. Discharges to land also have the potential to impact water bodies. From a surface water quality perspective, the main risk from discharges to land is that of silty water runoff across the land to a local water body. To avoid this, rates of discharge and the locations will be controlled so there is no pathway to local water bodies. In normal operating conditions, therefore, any impacts because of discharges from the attenuation ponds will be short term, adverse and of negligible magnitude. This would result in a significance of effects of Not Significant.

140. In addition to the potential for attenuation ponds to become inundated, the land to which the pond will discharge may be saturated and unable to provide a soakaway process to manage the water. In this instance, there is potential for any discharge to find a pathway to a water body, collecting additional suspended solids en-route, potentially leading to high suspended solids entering the water body.

141. Construction of the attenuation ponds may lead to impacts from uncontrolled discharge of sediment, oils and chemicals from plant machinery, accidental spillages, and plant tracking on adjacent or nearby water bodies. These may lead to impacts to water bodies directly adjacent to (right beside) attenuation ponds and a low adverse impact to water bodies near the ponds. Where water bodies are smaller or in close proximity to attenuation ponds, dilution effects and interception of sediment would be less. The proximity of the working area in these locations could mean there is a high likelihood that silty water could reach the water body. Without a vegetated buffer between the pond and the water body, there is potential for overland flows during inundation. For further information on this please refer to the Water Status Impact Assessment Report.

7.4.3 Mitigation and Residual Effects

7.4.3.1 Generic Mitigation Measures

142. Generic mitigation measures for use across the Proposed Project in relation to water bodies during construction are detailed in Section 7.3 and the SWMP.

143. Details on the drainage strategy and generic mitigation measures for drainage, dewatering and attenuation are provided in the SWMP.

7.4.3.2 Location Specific Additional Mitigation Measures

144. Specific mitigation measures relating to attenuation ponds are detailed in W-SC2 in the SWMP.

7.4.3.3 Construction Phase Residual Effects

145. Owing to the avoidance or minimising of likely significant effects through design, and additional generic and specific mitigation measures, likely significant effects from the construction of the pipeline and the attenuation ponds will be reduced to Not Significant. As a result, no further mitigation is required and there are no significant residual effects as shown in Table 7.2.

Table 7.2: Residual Effects on WFD Designated Water Bodies in Proximity (<50m) to the Pipeline

Approximate Chainage	Water Body Name	Sensitivity	Magnitude	Significance of Effect	Residual Magnitude	Residual Significance
RW – 0	Derg HMWB	Very high	Medium adverse	Very Significant	Negligible	Not Significant
TW – 2300 to TW – 3700, TW – 6100 to TW – 6500	Kilmastulla_040	High	Medium adverse	Significant	Negligible	Not Significant
TWC – 13800	Daingean_010	High	Medium adverse	Significant	Negligible	Not Significant
TWE – 7100	Liffey_130	High	Medium adverse	Significant	Negligible	Not Significant

7.5 Water Body Crossings

146. There are 512 crossings of water bodies by the RWRMs and Treated Water Pipelines (see A9.2 Figures 1 to 76): 481 open cut and 31 trenchless. In addition, there are 19 crossings of water bodies by Construction Compounds (CC) and Pipe Storage Depots (PSD). Water body crossings within the footprint of Pipe Storage Depots and within temporary Construction Compounds (CC2, CC5 and CC6) are covered in Section 7.7 (Compounds and Pipe Storage Depots). Water body crossings within the footprint of permanent infrastructure are assessed in Appendix A9.3 (Non-Linear Infrastructure and 38 kV Uprate Works Assessment). Chapter 5 (Construction & Commissioning) of the EIAR includes a list of all proposed crossings with full details of their locations and the width of the channel to be crossed. Any watercourse crossings that are made would be laid beneath the watercourse bed level, so they would not impact in-channel or floodplain flow conveyance. The detailed assessments for each crossing from a water perspective are provided later in this section. Likely significant effects have been assessed initially with embedded mitigation as described in Section 6 then assessed for residual effects accounting for any additional mitigation. Likely significant effects in relation to Land and Soils are discussed in Chapter 10 (Soils, Geology & Hydrogeology).

7.5.1 Overview of Water Body Crossing Methods

7.5.1.1 Trenchless (Micro-Tunnelling)

147. Trenchless technology will be employed to enable a number of major crossings. In particular, crossings of physical, natural and man-made obstructions, such as significant water bodies, roads, railways, canals and the Electricity Supply Board Network can require trenchless crossing techniques. Table 7.3 indicates the locations of the water body trenchless crossing points for the RWRMs and Treated Water Pipelines.

Table 7.3: Pipeline Water Body Crossings by Trenchless Construction Techniques

Crossing ID	Chainage	Infrastructure Element	WFD Designated Water Body Name	Sensitivity
WCX (and WFD WBX) Water Bodies				
WCX016	TW – 19500	Treated Water Pipeline WTP to BPT	Nenagh_070	Very high
WCX026	TWA – 13000	Treated Water Pipeline BPT to TPR	Little Brosna_030	High
WCX031	TWA – 26000	Treated Water Pipeline BPT to TPR	Camcor_030	High
WCX032	TWA – 27600	Treated Water Pipeline BPT to TPR	Camcor_030	High
WCX036	TWB – 12600	Treated Water Pipeline BPT to TPR	Silver (Kilcormac)_020	High
WCX039	TWB – 24900	Treated Water Pipeline BPT to TPR	Clodiagh (Tullamore)_020	High
WCX056	TWD – 4100	Treated Water Pipeline BPT to TPR	Figile_030	High
WCX057	TWD – 6400	Treated Water Pipeline BPT to TPR	Figile_030	High
WBX078	TWD – 15100	Treated Water Pipeline BPT to TPR	Grand Canal Main Line East (Barrow)	Very high
WCX076	TWE – 9700	Treated Water Pipeline BPT to TPR	Liffey_140	Very high
WCX073	TWE – 9800	Treated Water Pipeline BPT to TPR	Liffey_140	Very high
WBX088	TWE – 14200	Treated Water Pipeline BPT to TPR	Grand Canal Main Line (Liffey and Dublin Bay)	Very high

Crossing ID	Chainage	Infrastructure Element	WFD Designated Water Body Name	Sensitivity
WBX Water Bodies				
WBX003	RW – 1100	RWRM	Derg HMWB	High
WBX008	TW – 3600	Treated Water Pipeline WTP to BPT	Kilmastulla_040	Medium
WBX009	TW – 3900	Treated Water Pipeline WTP to BPT	Kilmastulla_040	Medium
WBX036	TWA – 27800	Treated Water Pipeline BPT to TPR	Kilmastulla_040	High
WBX035	TWA – 27900	Treated Water Pipeline BPT to TPR	Camcor_030	High
WBX096	TWC – 100	Treated Water Pipeline BPT to TPR	Clodiagh (Tullamore)_030	Medium
WBP Water Bodies				
WBP227	TW – 5500	Treated Water Pipeline WTP to BPT	Kilmastulla_040	Medium
WBP126	TW – 12700	Treated Water Pipeline WTP to BPT	Kilmastulla_020	Medium
WBP234	TW – 12700	Treated Water Pipeline WTP to BPT	Kilmastulla_020	Medium
WBP257	TWA – 27600	Treated Water Pipeline BPT to TPR	Camcor_030	High
WBP210	TWA – 27700	Treated Water Pipeline BPT to TPR	Camcor_030	High
WBP258	TWA – 27800	Treated Water Pipeline BPT to TPR	Camcor_030	High
WBP259	TWA – 27700	Treated Water Pipeline BPT to TPR	Camcor_030	High
WBP147	TWC – 4800	Treated Water Pipeline BPT to TPR	Meelaghans_010	Medium
WBP094	TWD – 15000	Treated Water Pipeline BPT to TPR	Abbeylough_010	Medium
WBP095	TWD – 15100	Treated Water Pipeline BPT to TPR	Abbeylough_010	Medium
WBP212	TWE – 14200	Treated Water Pipeline BPT to TPR	Castletown (Dublin-Kildare)_010	Very high
WBP216	TWE – 15500	Treated Water Pipeline BPT to TPR	Liffey_170	Low
WBP254	TWE – 15600	Treated Water Pipeline BPT to TPR	Liffey_170	Low

148. Trenchless crossing techniques are not considered to be ‘in-river’ working, therefore, the potential for water environmental effects as a result of trenchless techniques are not significant when compared to open cut.

149. Trenchless construction avoids cutting and reinstating an asset or amenity by conventional open cut trenching and pipeline installation, and does not inhibit the function of key infrastructure. It is used in situations where conventional methods would cause environmental impacts, and can provide impact mitigation to ecologically sensitive habitats. Trenchless techniques will be used at major crossings and is an excavation method that installs the pipe behind the tunnel face shield by pushing, or ‘jacking’, pipes from a drive shaft or jacking platform. In some locations the shafts and tunnel drive will be below the natural water level and a system of water management (utilising a settlement pond and discharge to land drain) will be installed to provide a suitable safe and relatively dry working environment within the excavation.

150. Trenchless techniques has the potential to result in water quality impacts from working in close proximity to the river channel, or from construction dewatering. In particular, dewatering of trenches and shafts during tunnel construction works could require large volumes of water to be removed. Without adequate mitigation to remove fine or contaminated sediment, directly discharging into the river could lead to a significant amount of sediment being inputted into the river channel.

7.5.1.2 Open Cut

151. Open cut techniques involve topsoil and vegetation clearance around the river bank, with the potential to destabilise channel banks, increase the likelihood of erosion, and mobilise increased volumes of fine sediment causing water quality and/or hydromorphological effects.

152. Crossing and reinstatement of the land for the RWRMs and Treated Water Pipelines have the potential to cause further pollution and/or disturbance to the riverbed from improperly laying the pipe or incorrectly reinstating the bed and banks. This could result in impacts to river condition, including increased river water levels, input of contaminants and suspended sediments.

153. In the case of 'open cut' crossings, there are two approaches identified: fluming and over-pumping. The approach for each individual water body will not be confirmed until the Construction Phase, however the likely significant effects for both methods have been assessed. Either approach could result in changes to in-channel water levels, erosion of banks, input of fine sediments, direct pollution by machinery and/or vehicles, and indirect pollution by increased fine sediment loads. These approaches could also result in a loss of riparian vegetation and integrity and introduce a temporary barrier to aquatic species movement up and downstream. Both techniques require water bodies to be dammed and then either fluming or pumping the water downstream to the other side of the excavation. These techniques are outlined in more detail below.

7.5.1.2.1 Open Cut (Damming and Pumping)

154. The crossing of the water body will be facilitated by a dam (sand bags and suitable clay material) of the existing stream/river upstream of the proposed crossing point. Temporary pump sump(s) will convey the water downstream of the open excavation crossing point. Pumps will be suitably sized in order to convey the water from the stream/river either side of the excavation. The SWMP in Annex A of Appendix A5.1 (CEMP) illustrates a typical layout of this approach.

7.5.1.2.2 Open Cut (Damming and Fluming)

155. In this case, the crossing of the water body is facilitated by channelling the existing stream/river through a conduit, or 'fluming'. The conduit can comprise one or more pipes depending on the volume of discharge to be controlled. Typically, conduits will traverse the length of the works area with diameters suitably sized to accommodate existing flows.

156. The flume is used to divert the river temporarily. A dam of sandbags and suitable clay material is constructed across the existing stream/riverbed to ensure all flow is diverted through the conduit(s).

157. Whilst the purpose of the flume is to create a dry stream/riverbed for the open excavation it may be necessary to use a temporary pump sump to remove any additional water. Pumped discharge will be via a settlement tank to remove any solids from the dewatering.

158. The SWMP in Annex A of Appendix A5.1 (CEMP) illustrates a typical layout for this approach.

7.5.1.2.3 Temporary Bridges

159. Once a water body crossing has been completed it will be necessary to maintain the movement of construction traffic along the Construction Working Width. This will be achieved by the use of temporary bridges as illustrated in Image 7.1.

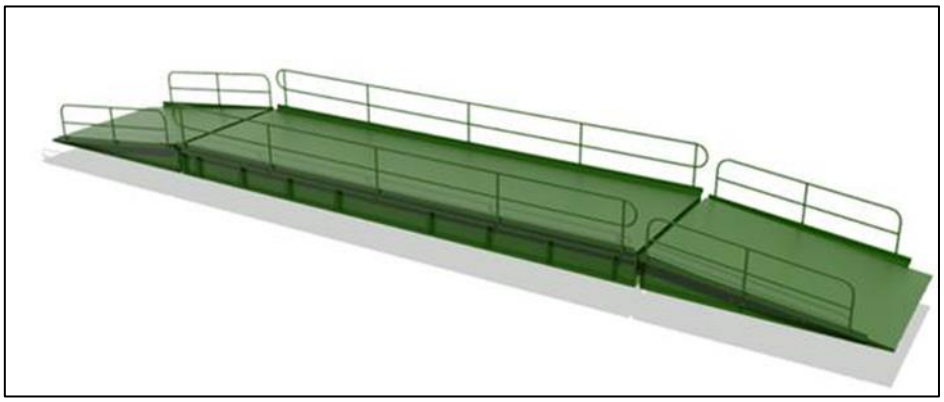


Image 7.1: Temporary Bridge Crossing for Water Bodies

7.5.2 Trenchless Pipeline Crossings Likely Significant Effects

160. Trenchless crossings would be non-intrusive to the water bodies as they involve no in-stream works. However, there is still some potential for water quality and hydromorphology impacts. The trenchless crossings, as discussed in Section 7.5.1.1, require shafts to be excavated on either side of the crossing and this has potential to result in runoff of sediment to nearby receptors impacting water quality and hydromorphology. However, these impacts, pre-mitigation would be anticipated to be of medium adverse magnitude.

161. The trenchless crossing points are shown for the Treated Water Pipelines in A9.2 Figures 60 to 76. To enable trenchless construction a greater extent of Construction Working Width is required to facilitate the plant and appointed Contractor's temporary works. In general, a minimum Construction Working Width varies from 50m to 80m. This 'additional required area' is referred to as a 'box out'. However, in many instances the shape of the land holding will dictate the extent.

162. There is also potential for accidental leakage of oil and/or chemicals from machinery impacting water quality and channel morphology (including bed and bank composition), followed by pollution of the water column as oil degrades. These impacts have a low likelihood of occurrence.

163. Since trenchless techniques do not require in-channel workings, it is unlikely that there will be any direct impacts on riverine water levels/flow rates, although there could be some medium adverse magnitude impacts as a result of slight changes to water levels due to dewatering of shaft excavations.

164. The greatest risk from trenchless crossings is the potential for a 'breakout' of bentonite drilling fluid, which is a slurry of very fine suspended solids. Where a slurry system is used to extract spoil during micro-tunnelling, a mix of bentonite and water is used to suspend the excavated spoil which is then pumped out of the excavation to a solids separation system on the surface where the spoil is filtered and separated from the slurry. The liquid sludge remaining in the tanks is placed under a soil separator and dewatered with a centrifuge or filter press.

165. In the absence of control measures, breakouts could occur spilling bentonite slurry onto the ground and/or into local water bodies. If these were to occur, there could be impacts to water quality as a result of the release of fine sediments to the receptor, including change to pH, as bentonite grout is alkaline. Although this is unlikely to occur, should such a breakout occur, the magnitude of impact would be medium adverse, resulting in effects ranging from Slight (not significant) to Very Significant in the water bodies listed below.

7.5.2.1 Likely Significant Effects on WFD Designated Water Bodies (WCX Crossings)

166. There are 12 trenchless crossings of nine different WFD designated water bodies with high to very high overall sensitivity. Given the medium adverse magnitude of impacts discussed above, the significance of effects is Significant to Very Significant for WCX trenchless crossings (see Table 7.4).

Table 7.4: Summary of Pre-Mitigation Construction Phase Impact Assessment of Trenchless Water Body Crossings at WFD Designated Water Bodies (WCX and WFD WBX)

Crossing ID	Chainage	Water Body Name	Sensitivity	Magnitude	Significance of Effect
WCX016	TW – 19500	Nenagh_070	Very high	Medium adverse	Very Significant
WCX026	TWA – 13000	Little Brosna_030	High		Significant
WCX031	TWA – 26000	Camcor_030			
WCX032	TWA – 27600	Camcor_030			
WCX036	TWB – 12600	Silver (Kilcormac)_020			
WCX039	TWB – 24900	Clodiagh (Tullamore)_020			
WCX056	TWD – 4100	Figile_030			
WCX057	TWD – 6400	Figile_030			
WBX078	TWD – 15100	Grand Canal Main Line East (Barrow)	Very high		Very Significant
WCX076	TWE – 9700	Liffey_140			
WCX073	TWE – 9800	Liffey_140			
WBX088	TWE – 14200	Grand Canal Main Line (Liffey and Dublin Bay)			

7.5.2.2 Summary of Assessment on Other Waterbodies (WBX and WBP)

167. The remaining 19 trenchless pipeline crossings are of Other Waterbodies. These range from low to very high sensitivity.

168. This section presents a summary of the assessment of impacts on remaining Other Waterbodies, summarised in Table 7.5. As is set out for WFD designated water bodies, the methods employed to cross these Other Waterbodies as well as the scale, nature and duration of impacts are all likely to be the same. All magnitudes will be medium or high adverse, and significances will differ according to the sensitivities of the Other Waterbodies. A detailed assessment is provided in Annex A (Water Body Crossings and Washout Valves – Detailed Assessment) of this appendix.

Table 7.5: Summary of Pre-Mitigation Construction Phase Impact Assessment of Trenchless Crossings for Other Waterbodies

Crossing ID	Chainage	Nearest WFD Designated Water Body	Sensitivity	Magnitude	Significance of Effect
WBX Water Bodies					
WBX003	RW – 1100	Derg HMWB	High	Medium adverse	Significant
WBX008	TW – 3600	Kilmastulla_040	Medium	Medium adverse	Moderate (significant)
WBX009	TW – 3900				
WBX036	TWA – 27800	Camcor_030	High	Medium adverse	Significant
WBX035	TWA – 27900	Camcor_030	High	Medium adverse	Significant
WBX096	TWC – 100	Clodiagh (Tullamore)_030	Medium		Moderate (significant)

Crossing ID	Chainage	Nearest WFD Designated Water Body	Sensitivity	Magnitude	Significance of Effect
WBP Water Bodies					
WBP227	TW – 5500	Kilmastulla_040	Medium	Medium adverse	Moderate (significant)
WBP126	TW – 12700	Kilmastulla_020			
WBP234	TW – 12700	Kilmastulla_020			
WBP257	TWA – 27600	Camcor_030	High	Medium adverse	Significant
WBP210	TWA – 27700	Camcor_030			
WBP258	TWA – 27700	Camcor_030			
WBP259	TWA – 27700	Camcor_030			
WBP147	TWC – 4800	Meelaghans_010	Medium	Medium adverse	Moderate (significant)
WBP094	TWD – 15000	Abbeylough_010			
WBP095	TWD – 15100	Abbeylough_010			
WBP212	TWE – 14100	Castletown (Dublin-Kildare)_010	Very high	Medium adverse	Very Significant
WBP216	TWE – 15500	Liffey_170	Low	Medium adverse	Slight (not significant)
WBP254	TWE – 15600	Liffey_170			

7.5.3 Open Cut Pipeline Crossings Likely Significant Effects

169. Open cut crossing techniques have the potential for short- to long-term impacts depending on the duration of the works. In addition to the direct impacts, there are indirect impacts associated with the dewatering of the excavations and the potential to divert or cut off flow from other drains or ditches flowing into the water bodies being crossed.

170. It is proposed that 481 water bodies will be crossed by the RWRMs and Treated Water Pipelines using open cut techniques. Of these, 59 are WFD designated water bodies (WCX crossing ID); the remaining 422 crossings will be crossings of drains and ditches, of varying sizes (WBX and WBP crossing ID).

171. Types of impacts include:

- Hydrology: disruption to flow and water levels as a result of over-pumping or diversions; dewatering leading to a change in groundwater and subsequent recharge levels
- Water Quality: accidental releases of hydrocarbons; silty water runoff; silty water in dewatering; the potential for the trench to be a pathway for pollutants to reach water bodies, build-up of silt behind dam structures which, on removal could lead to a release of sediments to the water body
- Hydromorphology: channelisation; impacts on the riparian zone; increased sediment-loading in-channel, potentially smothering substrate.

172. As a means of maintaining movement of construction traffic along the Construction Working Width, a temporary bridge will also be required at each water body crossing. The temporary bridge will remove a localised length of riparian vegetation and potentially impact longitudinal connectivity during high flow events. The movement of machinery and vehicles across the bridges could result in accidental spillage of oils/chemicals and construction sediments.

173. In considering the potential magnitude of impacts for the water body crossings as a result of crossing via open cut techniques, since the nature, duration and scale is likely to be similar at each crossing point, a similar magnitude of impact is likely. The criteria outlined in Section 9.2.5 of Chapter 9 (Water) indicate that a high adverse magnitude of impact, pre-mitigation, would be anticipated for all water body crossings. Levels of significance will vary depending upon the sensitivity of the water body.

174. A detailed assessment of the impacts of all water bodies crossed is provided in Annex A (Water Body Crossings and Washout Valves – Detailed Assessment) of this appendix. Summaries of impacts on WFD designated and Other Waterbodies assessments are provided here in the following sections.

7.5.3.1 Likely Significant Effects on WFD Designated Water Bodies (WCX Crossings)

175. There are 59 open cut crossings of 33 different WFD designated water bodies with high overall sensitivity. Given the high adverse magnitude of impacts, pre-mitigation, discussed above, the significance of effects is Very Significant for all WCX open cut crossings (see Table 7.6).

176. Open cut crossings in peat soils bring additional risks to water quality and hydromorphology. Water quality issues associated with peat include elevated levels of suspended solids, ammonia, phosphorus and dissolved organic carbon. In water bodies draining excavated peat areas, these elevations have been observed and been compared to lowered levels following the rewetting of peatlands (An Fóram Uisce 2021).

177. There are 21 open cut crossings directly in peat areas which have the potential to impact 12 high sensitivity WFD designated water bodies. It is anticipated the magnitude of the impact will be high adverse, resulting in a Very Significant effect.

Table 7.6: Summary of Pre-Mitigation Construction Phase Impact Assessment of Open Cut Crossings at WFD Designated Water Bodies (WCX)

Crossing ID	Chainage	WFD Designated Water Body Name	Sensitivity	Magnitude	Significance of Effect
WCX003, WCX004	TW – 700, TW – 1000	Kilmastulla_050	High	High adverse	Very Significant
WCX005	TW – 7500	Kilmastulla_030			
WCX006, WCX007, WCX008, WCX009, WCX010	TW – 8500, TW – 9000, TW – 10200, TW – 10500, TW – 11400	Kilmastulla_020			
WCX011	TW – 13500	Ardgregane Stream_010			
WCX012, WCX013, WCX014	TW – 15000, TW – 16500, TW – 17200	Ardgregane Stream_020			
WCX015	TW – 17900	Nenagh_070			
WCX017	TW – 20700	Nenagh Tributary_010			
WCX018, WCX019	TW – 26500, TW – 30800	Ardcrony Stream_010			
WCX020, WCX021	TW – 34800, TW – 35000	Ballyfinboy_040			
WCX022, WCX023	TW – 4800, TW – 5600	Kilcomin Stream_030			
WCX024, WCX025	TWA – 8000, TWA – 9400	Shinrone Stream_010			
WCX027	TWA – 17500	Rock (Birr)_010			
WCX028, WCX029	TWA – 23800, TWA – 24800	Clareen Stream/Fuarawn_020			
WCX033	TWB – 1400	Camcor_030			
WCX034	TWB – 6600	Kyleboher_010			
WCX035	TWD – 7800	Silver (Kilcormac)_030			
WCX038	TWB – 14800	Silver (Kilcormac)_020			

Crossing ID	Chainage	WFD Designated Water Body Name	Sensitivity	Magnitude	Significance of Effect
WBP309	TWC – 700	Clodiagh (Tullamore)_020	High	High adverse	Very Significant
WCX041, WCX042	TWC – 3300, TWC – 5000	Meelaghans_010			
WCX043, WCX045	TWC – 5600, TWC – 9700	Tullamore_010			
WCX047, WCX048	TWC – 17700, TWC – 18900	Daingean_030			
WCX049	TWC – 20300	Esker Stream_010			
WCX050, WCX051, WCX053, WCX054	TWC – 20300, TWC – 21100, TWC – 21300, TWC – 22800	Esker Stream_020			
WCX055	TWD – 3500	Figile_030			
WCX058	TWD – 9000	Figile_020			
WCX059	TWD – 14400	Abbeylough_010			
WCX060	TWD – 18100	Figile_010			
WCX061, WCX062, WCX063, WCX064, WCX065	TWD – 24300, TWD – 26400, TWD – 28100, TWD – 28500, TWD – 29200	Blackwater (Longwood)_010			
WCX066	TWD – 32800	Clonshanbo_010			
WCX067, WCX068, WCX070	TWE – 700, TWE – 1800, TWE – 3600	Lyreen_010			
WCX069	TWE – 2500	Clonshanbo_020			
WCX071, WCX072, WCX075	TWE – 9000, TWE – 9100, TWE – 10100	Liffey_140			
WCX074	TWE – 11400	Reeves_010			

7.5.3.2 Summary of Assessment on Other Waterbody Crossings (WBX and WBP)

178. The remaining 422 open cut pipeline crossings are of Other Waterbodies. These range from low to high sensitivity.

179. Impacts for Other Waterbodies are similar to WFD designated water bodies; the magnitude of impacts, pre-mitigation, are expected to be high adverse. Therefore, as above, the differentiation in significance of effects comes from the sensitivity of each water body to change and ranges from Moderate (significant) to Very Significant. A detailed assessment is provided in Annex A (Water Body Crossings and Washout Valves – Detailed Assessment) of this appendix and summarised in Table 7.7.

Table 7.7: Summary of Pre-Mitigation Construction Phase Impact Assessment of Open Cut Crossings for Other Waterbodies

Crossing ID	Chainage	Nearest WFD Designated Water Body	Sensitivity	Magnitude	Significance of Effect
WBX Water Bodies					
WBX001	RW – 300	Derg HMWB	High	High adverse	Very Significant
WBX090	TW – 0	Kilmastulla_050			
WBX091	TW – 300	Kilmastulla_050			
WBX005, WBX006, WBX007, WBX010, WBX011, WBX012	TW – 2800 to TW – 4900	Kilmastulla_040	Medium		Significant
WBX013, WBX014	TW – 11200 to TW – 12400	Kilmastulla_020			
WBX015, WBX016	TW – 15300 to TW – 17000	Ardgregane Stream_020			
WBX017	TW – 19200	Nenagh_070	High		Very Significant
WBX018	TW – 20400	Nenagh Tributary_010			
WBX019	TW – 31600	Ardcrony Stream_010	Medium		Significant
WBX020	TW – 34200	Ballyfinboy_040			
WBX021, WBX022	TWA – 4300 to TWA – 5800	Kilcomin Stream_030			
WBX023, WBX024	TWA – 7800 to TWA – 8700	Shinrone Stream_010	High		Very Significant
WBX025, WBX026	TWA – 12100 to TWA – 13200	Little Brosna_030			
WBX027	TWA – 14800		Medium		Significant
WBX028, WBX029	TWA – 19400 to TWA – 19500	Rock (Birr)_020	High		Very Significant
WBX030, WBX031	TWA – 21100 to TWA – 21200		Medium		Significant
WBX032, WBX033	TWA – 21300 to TWA – 21300	Camcor_050			
WCX030	TWA – 25700	Camcor_040	High		Very Significant
WBX034, WBX037	TWA – 27200 to TWA – 27800, TWB – 300	Camcor_030			
WBX108	TWB – 4400	Kilmastulla_040	Medium		Significant
WBX038, WBX039, WBX107	TWB – 4600 to TWB – 4800	Rapemills_010	Medium		Significant
WBX040, WBX041, WBX042, WBX043, WBX092, WBX093	TWB – 9100 to TWB – 14800	Silver (Kilcormac)_020	High		Very Significant
WBX045, WBX046, WBX047, WBX048, WBX049, WBX050, WBX051, WBX052, WBX094, WBX095	TWB – 18900 to TWB – 23900	Clodiagh (Tullamore)_020			
WCX040	TWC – 01000	Clodiagh (Tullamore)_030			

Crossing ID	Chainage	Nearest WFD Designated Water Body	Sensitivity	Magnitude	Significance of Effect
WBX053	TWC – 01200	Clodiagh (Tullamore)_030	Medium	High adverse	Significant
WBX054, WBX055, WBX056	TWC – 03800 to TWC – 04700	Meelaghans_010	Medium		Significant
WBX057	TWC – 06900	Tullamore_020			
WCX044, WBX058, WBX059, WBX060, WBX061, WBX062, WBX097	TWC – 08900 to TWC – 11100	Tullamore_010			
WBX063	TWC – 11900	Daingean_010			
WBX098, WBX064, WBX066	TWC – 17600 to TWC – 19600	Daingean_030			
WBX067, WBX068, WBX069, WBX071, WBX072, WBX073	TWC – 22400 to TWC – 24500	Esker Stream_020			
WBX074	TWD – 500		Low		Moderate (significant)
WBX075, WBX076	TWD – 1700 to TWD – 1800	Figile_030			
WBX077, WBX099, WBX100, WBX103	TWD – 2000 to TWD – 7800		Medium		Significant
WBX104	TWD – 10900	Figile_020			
WBX079, WBX105	TWD – 12400 to TWD – 16000	Abbeylough_010			
WBX106	TWD – 21100	Blackwater (Longwood)_010	Low		Moderate (significant)
WBX080, WBX081	TWD – 26000 to TWD – 28800		Medium		Significant
WBX082, WBX083	TWD – 31200 to TWD – 31700	Clonshanbo_010			
WBX084	TWE – 4400	Lyreen_020	Low		Moderate (significant)
WBX085, WBX086	TWE – 5200 to TWE – 7300	Liffey_130	High		Very Significant
WBX087	TWE – 11100	Liffey_140			
WBP Water Bodies					
WBP001, WBP062, WBP063, WBP220, WBP320	RW – 00800 to RW – 2200	Kilmastulla_050	High	High adverse	Very Significant
WBP175, WBP321, WBP322	TW – 100 to TW – 600				
WBP222	TW – 2200		Medium		Significant
WBP003, WBP058, WBP066, WBP067, WBP068, WBP223, WBP224, WBP226, WBP264, WBP265, WBP282, WBP312	TW – 02400 to TW – 5300	Kilmastulla_040			
WBP004, WBP228	TW – 6600 to TW – 07000	Kilmastulla_030			

Crossing ID	Chainage	Nearest WFD Designated Water Body	Sensitivity	Magnitude	Significance of Effect
WBP005, WBP059, WBP069, WBP070, WBP071, WBP072, WBP073, WBP107, WBP229, WBP230, WBP231, WBP232, WBP233, WBP287, WBP288, WBP289, WBP290, WBP291, WBP318, WBP328, WBP390	TW – 9200 to TW12600	Kilmastulla_020	Medium	High adverse	Significant
WBP235, WBP236, WBP239, WBP240, WBP272, WBP274, WBP401	TW – 13400 to TW – 14400	Ardgregane Stream_010			
WBP074, WBP075, WBP108, WBP241, WBP323, WBP324, WBP325	TW – 14800 to TW – 17500	Ardgregane Stream_020			
WBP076, WBP242, WBP243	TW – 17700 to TW – 18100	Nenagh_070			
WBP077, WBP078, WBP079, WBP273, WBP329	TW – 18300 to TW – 19300		High		Very Significant
WBP330, WBP331	TW – 20300 to TW – 22700	Nenagh Tributary_010	High		Very Significant
WBP206	TW – 33100	Ardcrony Stream_010	Medium		Significant
WBP332, WBP333, WBP397	TW – 33300 to TW – 33900	Ballyfinboy_040			
WBP006, WBP334, WBP335	TWA – 3600 to TWA – 5800	Kilcomin Stream_030			
WBP336	TWA – 7600	Shinrone Stream_010	High		Very Significant
WBP009	TWA – 12800	Little Brosna_030			
WBP010, WBP011	TWA – 15300 to TWA – 15300		Low		Moderate (significant)
WBP080, WBP109	TWA – 16000 to TWA – 16600	Rock (Birr)_010	Medium		Significant
WBP110, WBP284, WBP286	TWA – 18800 to TWA – 19200	Rock (Birr)_020	High		Very Significant
WBP012, WBP225, WBP267, WBP319, WBP399, WBP400	TWA – 20100 to TWA – 20750		Medium		Significant
WBP251	TWA – 21500	Camcor_050			
WBP013, WBP278, WBP281, WBP283	TWA – 23000 to TWA – 24300	Clareen Stream/Fuarawn_020			
WBP014, WBP081, WBP082, WBP083, WBP256, WBP260, WBP266, WBP269	TWA – 25600 to TWB – 1000	Camcor_030	High		Very Significant
WBP111	TWB – 4700	Kyleboher_010	Medium		Significant
WBP084	TWB – 5100	Rapemills_010			
WBP016, WBP017, WBP018, WBP019, WBP020, WBP021, WBP261, WBP262, WBP275, WBP276, WBP277, WBP337	TWB – 5800 to TWB	Kyleboher_010			
WBP106, WBP112, WBP113, WBP263	TWB – 7500 to TWB – 8100	Silver[Kilcormac]__030			

Crossing ID	Chainage	Nearest WFD Designated Water Body	Sensitivity	Magnitude	Significance of Effect
WBP022, WBP061, WBP085, WBP087, WBP123, WBP124, WBP125, WBP128, WBP129, WBP130, WBP131, WBP132, WBP133, WBP134, WBP136, WBP137, WBP338	TWB – 8800 to TWB – 15400	Silver[Kilcormac]__020	High	High adverse	Very Significant
WBP115, WBP139, WBP140, WBP142, WBP143, WBP145, WBP298, WBP339, WBP340, WBP406	TWB – 18700 to TWB – 23800	Clodiagh (Tullamore)_020			
WBP089, WBP146, WBP314	TWB – 25000 to TWB – 25200	Clodiagh (Tullamore)_030	Medium		Significant
WBP023, WBP148	TWC – 5200 to TWC – 5300	Meelaghans_010	Medium		Significant
WBP024, WBP025, WBP341	TWC – 6700 to TWC – 7200	Tullamore_020	Low		Moderate (significant)
WBP150, WBP151, WBP152, WBP153, WBP154, WBP155	TWC – 7500 to TWC – 11200	Tullamore_010	Medium		Significant
WBP026, WBP156, WBP157, WBP158, WBP159, WBP160, WBP342	TWC – 11900 to TWC – 13700	Daingean_010			
WBP299, WBP300, WBP301	TWC – 14800 to TWC – 15100	Figile_040	Low		Moderate (significant)
WBP027, WBP116, WBP161, WBP162, WBP163, WBP164, WBP326, WBP327, WBP343, WBP344, WBP345	TWC – 15700 to TWC – 19600	Daingean_030	Medium		Significant
WBP028, WBP090	TWC – 20000 to TWC – 20400	Esker Stream_010			
WBP029, WBP091, WBP117, WBP165, WBP166, WBP167, WBP168, WBP169, WBP170, WBP172, WBP173, WBP174, WBP294, WBP346, WBP347, WBP348, WBP349, WBP391	TWC – 22100 to TWC – 23800, TWD – 400	Esker Stream_020			
WBP030, WBP031, WBP032, WBP092, WBP176, WBP177, WBP178, WBP179, WBP180, WBP302, WBP303, WBP305, WBP350, WBP351, WBP352, WBP353, WBP354, WBP365	TWD – 2000 to TWD – 8100	Figile_030			
WBP033, WBP034, WBP035, WBP036, WBP093, WBP304, WBP306, WBP355, WBP356	TWD – 8200 to TWD – 13100	Figile_020			
WBP096, WBP253, WBP316, WBP357	TWD – 14300 to TWD – 15300	Abbeylough_010			
WBP118, WBP252	TWD – 15700 to TWD – 15800	Figile_010	High		Very Significant
WBP038, WBP097, WBP098, WBP099, WBP100, WBP249, WBP359	TWD – 18000 to TWD – 18200	Figile_010	Medium		Significant
WBP039, WBP292, WBP296, WBP297, WBP248, WBP360	TWD – 20000 to TWD – 22200	Blackwater (Longwood)_020			
WBP040, WBP041, WBP042, WBP043, WBP044, WBP045, WBP046, WBP121, WBP182, WBP183, WBP184, WBP244, WBP245, WBP246, WBP247, WBP280, WBP285, WBP293, WBP361, WBP362, WBP392	TWD – 22800 to TWD – 30400	Blackwater (Longwood)_010			

Crossing ID	Chainage	Nearest WFD Designated Water Body	Sensitivity	Magnitude	Significance of Effect
WBP185, WBP271	TWD – 30600 to TWD – 30800	Clonshanbo_010	Low	High adverse	Moderate (significant)
WBP046, WBP047, WBP048, WBP102, WBP186, WBP187, WBP188, WBP189, WBP190, WBP191, WBP279	TWD – 31400 to TWD – 34000	Clonshanbo_010	Medium		Significant
WBP050, WBP051, WBP192, WBP194, WBP195, WBP196, WBP197, WBP363, WBP364, WBP405	TWE – 0 to TWE – 4650	Lyreen_010			
WBP052, WBP103, WBP122, WBP198, WBP199, WBP200, WBP201, WBP202, WBP203, WBP310, WBP311, WBP366	TWE – 4800 to TWE – 7400	Liffey_130	High		Very Significant
WBP119, WBP205, WBP207, WBP268	TWE – 7800 to TWE – 9200,	Liffey_140			
WBP055, WBP056, WBP104, WBP208	TWE – 11500 to TWE – 12000	Reeves_010			
WBP057, WBP209	TWE – 12600	Liffey_140			
WBP120, WBP211, WBP213, WBP214, WBP215, WBP367, WBP368	TWE – 13900 to TWE – 15000	Castletown (Dublin-Kildare)_010			
WBP217, WBP218, WBP307	TWE – 15900 to TWE – 16100	Liffey_170	Low		Moderate (significant)
WBP219, WBP255	TWE – 16300 to TWE – 16600		Medium		Significant

7.5.4 Mitigation and Residual Effects

7.5.4.1 Generic Mitigation Measures

180. Generic mitigation measures for use across the Proposed Project in relation to water bodies during construction are detailed in Section 7.3.

181. Details on the generic mitigation measures for water body crossings are also detailed in Appendix A5.1 (CEMP) and the associated Annex A (SWMP).

182. These generic mitigation measures follow industry best practice, and will be implemented in accordance with the contractors' overall CEMP for the works. This control methodology has been proven to work on other similar projects and is utilised across the construction industry. Measures have been selected to ensure suitability for the Proposed Project and the types of construction methods that would be employed.

7.5.4.2 Location Specific Additional Mitigation Measures

183. Specific mitigation for watercourse crossings is detailed in W-SC3 to W-SC8 in the SWMP.

184. Specific measures are identified for working in peat areas in W-SC9 to W-SC15 in the SWMP. These are also detailed in Appendix A5.3 (Methods of Working in Peat) and are specifically designed to prevent likely significant effects from disturbed peat.

7.5.4.3 Construction Phase Residual Effects

185. Owing to the avoidance or minimising of effects through design and additional generic and specific mitigation, the impacts identified in Table 7.4, Table 7.5, Table 7.6 and Table 7.7 will be reduced to negligible and have a residual significance of Not Significant. As a result, no further mitigation is required. Residual effects for WCX (WFD designated water bodies) are shown in Table 7.8. A detailed assessment of residual effects for all water body crossings is provided in Annex A (Water Body Crossings and Washout Valves – Detailed Assessment) of this appendix.

Table 7.8: Residual Effects on WFD Designated Water Bodies (WCX) as a Result of Construction of Water Body Crossings

Crossing ID	WFD Designated Water Body	Sensitivity	Magnitude (Pre-mitigation)	Significance of Effect (Pre-mitigation)	Residual Magnitude (Post-mitigation)	Residual Significance (Post-mitigation)
Trenchless crossings						
WCX016	Nenagh_070	Very high	Medium adverse	Very Significant	Negligible	Not Significant
WCX026	Little Brosna_030	High		Significant		
WCX031	Camcor_030					
WCX032	Camcor_030					
WCX036	Silver (Kilcormac)_020					
WCX039	Clodiagh (Tullamore)_020					
WCX056	Figile_030					
WCX057	Figile_030					
WBX078	Grand Canal Main Line East (Barrow)	Very high		Very Significant		
WCX076	Liffey_140					
WCX073	Liffey_140					
WBX088	Grand Canal Main Line (Liffey and Dublin Bay)					
Open cut crossings						
WCX003, WCX004	Kilmastulla_050	High	High adverse	Very Significant	Negligible	Not Significant
WCX005	Kilmastulla_030					
WCX006, WCX007, WCX008, WCX009, WCX010	Kilmastulla_020					
WCX011	Ardgregane Stream_010					
WCX012, WCX013, WCX014	Ardgregane Stream_020					
WCX015	Nenagh_070					
WCX017	Nenagh Tributary_010					
WCX018, WCX019	Ardcrony Stream_010					
WCX020, WCX021	Ballyfinboy_040					

Crossing ID	WFD Designated Water Body	Sensitivity	Magnitude (Pre-mitigation)	Significance of Effect (Pre-mitigation)	Residual Magnitude (Post-mitigation)	Residual Significance (Post-mitigation)
WCX022, WCX023	Kilcomin Stream_030	High	High adverse	Very Significant	Negligible	Not Significant
WCX024, WCX025	Shinrone Stream_010					
WCX027	Rock (Birr)_010					
WCX028, WCX029	Clareen Stream/Fuarawn_020					
WCX033	Camcor_030					
WCX034	Kyleboher_010					
WCX035	Silver (Kilcormac)_030					
WCX038	Silver (Kilcormac)_020					
WBP309	Clodiagh (Tullamore)_020					
WCX041, WCX042	Meelaghans_010					
WCX043, WCX045	Tullamore_010					
WCX047, WCX048	Daingean_030					
WCX049	Esker Stream_010					
WCX050, WCX051, WCX053, WCX054	Esker Stream_020					
WCX055	Figile_030					
WCX058	Figile_020					
WCX059	Abbeylough_010					
WCX060	Figile_010					
WCX061, WCX062, WCX063, WCX064, WCX065	Blackwater (Longwood)_010					
WCX066	Clonshanbo_010					
WCX067, WCX068, WCX070	Lyreen_010					
WCX069	Clonshanbo_020					
WCX071, WCX072, WCX075	Liffey_140					
WCX074	Reeves_010					

7.6 Road Crossings

186. A Temporary Construction Road is proposed to run the length of the Construction Working Width for construction traffic.

7.6.1 Overview of Road Crossing Methods

187. There are 127 crossings of roads by the RWRMs and Treated Water Pipelines (see A9.2 Figure 1 to 76 in Appendix A9.2): 107 open cut and 20 trenchless. Chapter 5 (Construction & Commissioning) of the EIAR, Appendix A5.4 (Schedule of Crossings) Section 3 details all proposed road crossings, with full details of their locations. The impacts associated with these road crossings are similar to open cut and trenchless water body crossings. The impacts associated with these water body crossings are covered in Section 7.5.

188. In addition to water body crossings at the road crossings at risk of impacts, there are 13 WFD designated water bodies within 50m of the road crossings. The impacts associated with these nearby water bodies are described in Section 7.4.

189. Water body crossings and nearby water bodies associated with road crossings for the permanent infrastructure elements and access roads are assessed in Appendix A9.3 (Non-linear Principal Infrastructure and 38 kV Uprate Works Assessment).

7.6.2 Mitigation and Residual Effects

7.6.2.1 Generic Mitigation Measures

190. Generic mitigation measures for use across the Proposed Project in relation to water bodies during construction are detailed in Section 7.3.

191. Details on the generic mitigation measures for road crossings are also detailed in Appendix A5.1 (CEMP) and the associated Annex A (SWMP).

7.6.2.2 Construction Phase Residual Effects

192. There are no additional impacts identified in relation to the road crossings. The potential effects associated with water body crossings were assessed in Table 7.4, Table 7.5, Table 7.6 and Table 7.7. Owing to the avoidance or minimising of impacts through design, and additional generic and specific mitigation, likely significant effects identified in Table 7.4, Table 7.5, Table 7.6 and Table 7.7 will be reduced to Not Significant. As a result, no further mitigation is required for water body crossings. Likely significant effects associated with water bodies within proximity to the pipeline (and associated road crossings) were assessed in Table 7.1. Owing to the avoidance or minimising of impacts through design, likely effects will be reduced to Not Significant, as presented in Table 7.2. As a result, no further mitigation is required for water bodies in proximity to the pipeline and road crossings.

7.7 Compounds and Pipe Storage Depots

7.7.1 Overview

193. Given the extent of the Proposed Project, a number of Construction Compounds are required to facilitate the works, and are directly related to the number of contractors to be employed. Eight Construction Compounds are identified in Chapter 5 (Construction & Commissioning) of the EIAR. Five of these are located within the boundaries of the Infrastructure Sites (RWI&PS, WTP, BPT, BPS and TPR). There are no Construction Compounds located within Bord na Móna peatland areas but there is one Construction

Compound located within areas of peat identified by Teagasc. The impacts from these sites are considered in Appendix A9.3 (Non-linear Principal Infrastructure and 38 kV Uprate Works Assessment). This section considers the Construction Compounds along the pipeline route and outside of the Infrastructure Sites as detailed in Table 7.9. Impacts have been assessed initially with embedded mitigation as described in Section 6 then assessed for residual effects after the application of any additional mitigation.

194. Pipe Storage Depots will take direct delivery of the pipe sections. Within these areas the pipe sections will be prepared and stored for onward journey to the required install location. Given the volume of pipe material to be delivered it is not considered feasible or practical for pipe material to be delivered directly to the point of installation.

195. Nine Pipe Storage Depots have been identified as being suitable and these are detailed in Table 7.9.

196. These Construction Compounds and Pipe Storage Depots are shown in A9.2 Figures 1 to 76.

Table 7.9: Proposed Construction Compounds and Pipe Storage Depots

ID Reference	Chainage	Location	Infrastructure Element	Water Bodies Within 50m	Proximity to Water Body	Proposed Crossing Technique Within CC or PSD
PSD1	TW – 12600 to TW – 12900	Carrigatogher, County Tipperary	Treated Water Pipeline WTP to BPT	Kilmastulla_020	0m – adjacent	N/A
				WBP126	Directly crossed by pipeline in PSD1	Trenchless / Culvert
				WBP232	Directly crossed by PSD1	Open cut / Culvert
				WBP234	Directly crossed by pipeline in PSD1	Trenchless / Culvert
				WBP233	Directly crossed by PSD1	Open cut / Culvert
				WBP274	Directly crossed by pipeline in PSD1	Open cut / Culvert
				Ardgregane Stream_010	0m – adjacent	N/A
CC2	TW – 29100 to TW – 29800	Lisgarriff, County Tipperary	Treated Water Pipeline WTP to BPT	None within 50m.	300m to nearest water body – Field Drain to Ardcrony Stream_010.	N/A
PSD2	TWA – 6100 to TWA – 6300	Toora, County Offaly	Treated Water Pipeline BPT to TPR	None within 50m.	120m to nearest water body – Field Drain to Kilcomin Stream_030.	N/A
PSD3	TWA – 14100 to TWA – 14350	Boveen, County Offaly	Treated Water Pipeline BPT to TPR	None within 50m.	90m to nearest water body – Field Drain to Little Brosna_030.	N/A
PSD4	TWA – 23200 to TWA – 23550	Fortel, County Offaly	Treated Water Pipeline BPT to TPR	WBP281 – Field Drain to Clareen Stream/Faurawn_020	0m – adjacent	N/A
PSD5	TWB – 7050 to TWB – 7400	Derrinboy, County Offaly	Treated Water Pipeline BPT to TPR	WBP262 – Field Drain to Kyleboher_010	0m – adjacent	N/A

ID Reference	Chainage	Location	Infrastructure Element	Water Bodies Within 50m	Proximity to Water Body	Proposed Crossing Technique Within CC or PSD
CC5	TWB – 18500 to TWB – 18950	Killananny, County Offaly	Treated Water Pipeline BPT to TPR	WBP139	Directly crossed by pipeline in CC5	Open cut / Culvert
				WBP140	Directly crossed by pipeline in CC5	Open cut / Culvert
				WBX094	Directly crossed by CC5	Open cut / Culvert
				WBP115	Directly crossed by pipeline in CC5	Open cut / Culvert
				WBX046 – Field Drain to Clodiagh (Tullamore)_020	0m – adjacent	N/A
PSD6	TWC – 7200 to TWC – 7400	Derryweelan, County Offaly	Treated Water Pipeline BPT to TPR	WBP150 – Field Drain to Tullamore_010	Directly crossed by PSD6	Open cut
PSD8	TWC – 24550 to TWC – 24750	Rathlumber, County Offaly	Treated Water Pipeline BPT to TPR	WBX073 – Field Drain to Esker Stream_020	40m	N/A
CC6	TWD – 16200 to TWD – 16700	Drummond, County Kildare	Treated Water Pipeline BPT to TPR	WBP097	Directly crossed by pipeline in CC6	Open cut / Culvert
				WBP098	Directly crossed by pipeline	Open cut / Culvert
				WBP099	Directly crossed by CC6	Open cut
				WBP100	0m – adjacent	N/A
PSD9	TWE – 100 to TWE – 300	Graiguepottle, County Kildare	Treated Water Pipeline BPT to TPR	WBP193 – Field Drain to Lyreen_010	Directly crossed by PSD9	Open cut / Culvert
PSD10	TWE – 7250 to TWE – 7750	Barberstown Upper, County Kildare	Treated Water Pipeline BPT to TPR	WBX086	Directly crossed by pipeline, and adjacent	Open cut
				WBP203 – Field Drain to Liffey_130	Directly crossed by pipeline in PSD10	Open cut / Culvert
				WBP205 – Field Drain to Liffey_140	10m	N/A

197. Chapter 5 (Construction & Commissioning) of the EIAR, provides a description of how compounds will typically be established and describes the requirements for Pipe Storage Depots to augment those Construction Compounds which will serve the installation of the pipeline between the WTP and the TPR.

198. Typically, the compound areas will be temporarily skimmed of topsoil, levelled and overlain with stone to maintain percolation into the underlying subsoil so as not to increase existing greenfield runoff rates. Where impervious pavement is required in a compound, runoff will be attenuated by a detention pond or similar Sustainable Drainage Systems (SuDS) technique to maintain existing greenfield runoff rates.

199. Of particular importance to the surface water assessment are the proposals for site clearance, drainage, foul water, materials storage and impermeable areas including welfare cabins and access roads. From these activities there are likely impacts on water quality and flood risk (to and from the site) and on hydromorphology where access roads would be required to cross water bodies These impacts are discussed in more detail in Section 7.7.2.

7.7.2 Generic Impacts

200. Establishment of Construction Compounds and Pipe Storage Depots during enabling and construction works has the potential to expose bare ground and create sources and pathways for fine sediment pollution from plant machinery to water bodies. These impacts could be exacerbated for Construction Compound 5 (CC5), which is partially located within an area of peatland.

201. Without adequate mitigation to control site drainage and runoff this has the potential to lead to water quality and hydromorphological impacts on downstream receptors, if present. Furthermore, without appropriate mitigation, the storage of excavated ground adjacent to the Construction Compounds and Pipe Storage Depots could provide a significant new source of fine sediment to the channel downstream, particularly if a large rainfall event occurs during the Construction Phase. This could lead to changes in sediment regime and riverbed substrate locally. In the absence of control or mitigation measures, there would be a potential for the spillage of oil and chemicals to ground and the production of a large amount of silt-laden water as a result of dewatering or surface water runoff from stripped land.

- In the case of CC5, these impacts could be exacerbated as it is located in an area of peatland soil. This could include increased runoff, due to stripping of topsoil, increases in impervious areas and overlaying the compound in stone. This may result in a slight increase in the rate of water draining the catchment, both baseflow and stormflow. Peat accumulates water and any removal of peat could impact the hydrological regime of receiving water bodies. Physical alteration to the landscape and channel morphology from increased sediment may change the flow, and increase the rate and amount of erosion to river banks
- Increased pollutants: disturbance of peat can release a variety of pollutants leading to impacts on water quality such as:
  - Increased fine grained sediments; suspended solids, total solids, dissolved organic matter and turbidity
  - Colour change
  - Changes in pH levels (more acidic)
  - Elevated levels of total ammonia or phosphorus.

202. These contaminants can be present in high concentrations in peat drainage channels as a result of lowered water tables and reduced flows; interactions with the drainage channels could potentially create preferential pathways to water bodies leading to their contamination.

203. Impacts on hydromorphology could be exacerbated as a consequence of working in peat areas, including:

- Increased sediment: peat disturbance and drainage could result in changes to the sediment regime of nearby and downstream water bodies. The release of fine grained particles and suspended solids results in an increased sediment load, which in large quantities could alter a water body's hydromorphological condition by modifying the channel bed, clogging stream gravels and riparian areas
- Physical alteration: altering drainage may increase the connectivity of land drains to the river network. Physical alteration to the landscape may change the flow and sediment regime, increasing the rate and amount of erosion to river banks.

204. Methods for the construction of the Proposed Project within peat areas are detailed in Appendix A5.3 (Methods of Working in Peat). Specific mitigation measures identified for working in peat areas are presented in W-SC9 to 15 in the SWMP.

7.7.2.1 Other Waterbody Crossings

205. Other Waterbodies directly crossed by the Construction Compounds and Pipe Storage Depots are presented in Table 7.9. All these water bodies are identified as field drains. In line with Chapter 5

(Construction & Commissioning), where water bodies are within the compound or depot footprint but not crossed by the pipeline they will be recorded and temporarily culverted during the Construction Phase. For water bodies within the compound or depot footprint and crossed by the pipeline, it is unclear at this stage if the water body will be temporarily culverted under the compound during construction or crossed using open cut techniques for the pipeline; therefore the likely significant effects on these water bodies have been assessed for both techniques. Likely significant effects associated with open cut crossings are detailed in Section 7.5.3.

206. In addition to the impacts associated with open cut crossings, temporary culverting would likely be carried out by temporarily damming the water body and over-pumping or fluming flow, to create a dry area in which work can be carried out. Working in-stream in this manner has the potential for the following impacts on the hydromorphology of the water body:

- Release of silty runoff
- Damage and modifications to the bed and banks
- Changes to flow regime as a result of over-pumping/fluming.

207. Installation of the culverts will require some excavation of the banks and channel bed. This will cause a release of fine sediments that could cause smothering of downstream bed substrate and hydromorphological features. There will also be a loss of morphological features (if present) over the footprint of the excavation location.

208. The impacts as a result of changes to the flow regime of the water body will include the potential for a build-up of sediment at the dam, leading to localised changes in the stream bed and localised scouring at the point at which the pump discharges into the water body. Such impacts would be temporary, limited to the construction period and localised to the works footprint and for a small distance upstream and downstream, although impact could propagate upstream and or downstream.

209. Temporary culverts have the potential to impact the hydromorphology of the water bodies during the construction period through the following:

- Increased flow velocities through the culvert leading to increased erosion downstream
- Removal of morphological features and natural bed and bank material below the culvert footprint
- Loss of lateral and longitudinal connectivity with subsequent impact on sediment and ecological continuity.

210. As such, the magnitude of impact, pre-mitigation, is assessed as high adverse for open cut crossings and medium adverse for trenchless. The significance of effects of site compound and pipe storage areas will vary based on the sensitivity of the receptor. The impact assessment is summarised in Table 7.10.

7.7.2.2 Other Waterbodies in Proximity to Construction Compounds and Pipe Storage Depots

211. Where Other Waterbodies adjacent to the compound or depot footprint are directly crossed by the pipeline, the impacts of the crossing are assessed in the water body crossing impact assessment in Section 7.5.

212. For water bodies within proximity to the Construction Compounds and Pipe Storage Depots, there would be no construction works undertaken within the channels which would remove the natural bed and banks, alter connectivity of the channel or potentially alter or remove existing morphological features. Therefore, impacts would be limited to potential indirect impacts which could arise as a consequence of topsoil stripping or any earthworks required to set up compounds which may result in the diversion or ‘cut-off’ of land drains and ditches.

213. Where Construction Compounds and Pipe Storage Depots are in proximity to water bodies, works could result in changes to local runoff patterns and rates associated with compounds, storage areas, stockpiles and temporary drainage leading to changes in stream flow impacting on flows of receiving water bodies, with potential consequent impacts on hydromorphological processes.

214. Changes to flow regime could impact river processes, in-channel sediment movement, channel morphology, and stability both locally and downstream.

215. There would be the potential for local removal of some riparian vegetation potentially destabilising the channel banks and resulting in potential release of sediment and/or silt-laden runoff. However, this would be unlikely to significantly impact on the channel of the water body affected due to the localised nature of the impact.

216. The magnitude of impacts of site compound and pipe storage areas will vary based on the proximity of the site to the receptor. The impact assessment is summarised in Table 7.11.

7.7.3 Overview of Likely Significant Effects as a Result of Construction Compounds and Pipe Storage Depots

7.7.3.1 Other Waterbody Crossings

217. This section presents a summary of the assessment of likely significant effects, pre-mitigation, on the Other Waterbodies, directly crossed by Construction Compounds and Pipe Storage Depots summarised in Table 7.10.

Table 7.10: Summary of Pre-Mitigation Construction Phase Impact Assessment for Other Waterbodies Directly Crossed by Construction Compounds and Pipe Storage Depots

ID Reference	Crossing ID	Chainage	Nearest WFD Designated Water Body	Crossing technique	Sensitivity	Magnitude	Significance of Effect
PSD1	WBP126	TW – 12700	Kilmastulla_020	Trenchless / Culvert	Medium	Medium adverse	Moderate (significant)
	WBP232	TW – 12700		Open cut / Culvert	Medium	High adverse	Significant
	WBP234	TW – 12700		Trenchless / Culvert	Medium	Medium adverse	Moderate (significant)
	WBP233	TW – 12800		Open cut / Culvert	Medium	High adverse	Significant
	WBP274	TW – 12900	Ardgregane Stream_010	Open cut / Culvert	Medium	High adverse	Significant
CC5	WBP139	TWB – 18700	Clodiagh (Tullamore)_020	Open cut / Culvert	High	High adverse	Very Significant
	WBP140	TWB – 18700		Open cut / Culvert	High	High adverse	Very Significant
	WBX094	TWB – 19000		Open cut / Culvert	High	High adverse	Very Significant
	WBP115	TWB – 18900		Open cut / Culvert	High	High adverse	Very Significant
PSD6	WBP150 – Field Drain to Tullamore_010	TWC – 7500	Tullamore_010	Open cut	Medium	High adverse	Significant
CC6	WBP097	TWD – 16300	Figile_010	Open cut / Culvert	Medium	High adverse	Significant
	WBP098	TWD – 16600		Open cut / Culvert	Medium	High adverse	Significant
	WBP099	TWD – 16600		Open cut	Medium	High adverse	Significant
PSD9	WBP193 – Field Drain to Lyreen_010	TWE – 200	Lyreen_010	Open cut / Culvert	Medium	High adverse	Significant
PSD10	WBX086	TWE – 7300	Liffey_130	Open cut	High	High adverse	Very Significant
	WBP203	TWE – 7400		Open cut / Culvert	High	High adverse	Very Significant

7.7.3.2 WFD Designated Water Bodies in Proximity to Construction Compounds and Pipe Storage Depots

218. Where these sites are located further than 50m from the nearest WFD designated water body, effects are anticipated to be negligible as they will have no measurable impact on integrity of the attribute. Where there is a water body in close proximity (<50m) to the construction activities at a site then, in the absence of control measures or mitigation, there is a reasonably high likelihood of a pollution pathway being established. As a result, an impact, pre-mitigation, of medium magnitude is predicted. A summary of the assessment is illustrated in Table 7.11. The significance of effect will vary depending upon the sensitivity of the water body.

Table 7.11: Summary of Pre-Mitigation Assessment of Likely Significant Effects on WFD-Designated Water Bodies and Other Waterbodies in Proximity of the Construction Compounds and Pipe Storage Depots

ID Reference	Chainage	Location	Infrastructure Element	WFD Designated Water Bodies within 50m	Proximity to Water Body	Sensitivity	Magnitude	Significance of Effect
PSD1	TW – 12600 to TW – 12900	Carrigatogher, County Tipperary	Treated Water Pipeline WTP to BPT	Kilmastulla_020	0m – adjacent	High	Medium adverse	Significant
				Ardgregane Stream_010	0m – adjacent	High	Medium adverse	Significant
CC2	TW – 29100 to TW – 29800	Lisgarriff, County Tipperary	Treated Water Pipeline WTP to BPT	None within 50m.	300m to nearest surface water body – Field Drain to Ardcrony Stream_010.	Medium	Negligible	Not Significant
PSD2	TWA – 6100 to TWA – 6300	Toora, County Offaly	Treated Water Pipeline BPT to TPR	None within 50m.	120m to nearest water body – Field Drain to Kilcomin Stream_030.	Medium	Negligible	Not Significant
PSD3	TWA – 14100 to TWA – 14350	Boveen, County Offaly	Treated Water Pipeline BPT to TPR	None within 50m.	90m to nearest water body – Field Drain to Little Brosna_030.	High	Negligible	Not Significant
PSD4	TWA – 23200 to TWA – 23550	Fortel, County Offaly	Treated Water Pipeline BPT to TPR	WBP281 – Field Drain to Clareen Stream/Faurawn_020	0m – adjacent	Medium	Medium adverse	Moderate (significant)
PSD5	TWB – 7050 to TWB – 7400	Derrinboy, County Offaly	Treated Water Pipeline BPT to TPR	WBP262 – Field Drain to Kyleboher_010	0m – adjacent	Medium	Medium adverse	Moderate (significant)
CC5	TWB – 18500 to TWB – 18950	Killananny, County Offaly	Treated Water Pipeline BPT to TPR	WBX046 – Field Drain to Clodiagh (Tullamore)_020	0m – adjacent	High	Medium adverse	Significant
PSD8	TWC – 24550 to TWC – 24750	Rathlumber, County Offaly	Treated Water Pipeline BPT to TPR	WBX073 – Field Drain to Esker Stream_020	40m	Medium	Medium adverse	Moderate (significant)
CC6	TWD – 16200 to TWD – 16700	Drummond, County Kildare	Treated Water Pipeline BPT to TPR	WBP100 – Field Drain to Figile_010	0m – adjacent	Medium	Medium adverse	Moderate (significant)
PSD10	TWE – 7250 to TWE – 7750	Barberstown Lower, County Kildare	Treated Water Pipeline BPT to TPR	WBP205 – Field Drain to Liffey_140	10m	High	Medium adverse	Significant

7.7.4 Mitigation and Residual Effects

7.7.4.1 Generic Mitigation Measures

219. Generic mitigation measures for use across the Proposed Project in relation to water bodies during construction are detailed in Section 7.3.

220. Details on the generic mitigation measures for Construction Compounds and Pipe Storage Depots are also detailed in Appendix A5.1 (CEMP) and the associated Annex A (SWMP).

7.7.4.2 Location Specific Additional Mitigation

221. Specific mitigation for Construction Compounds and Pipe Storage Depots is detailed in W-SC17 in the SWMP. Specific mitigation measures identified for working in peat areas are presented in W-SC9 to 15 in the SWMP.

7.7.4.3 Construction Phase Residual Effects

222. Owing to the avoidance or minimising of impacts through design, and additional generic and specific mitigation, likely significant effects identified in Table 7.10 and Table 7.11 will be reduced to Not Significant. As a result, no further mitigation is required for these sites. For more detail on the reasoning for this, please refer to Annex A (Water Body Crossings and Washout Valves – Detailed Assessment). Residual effects post the application of mitigation measures for those receptors identified as having likely significant effects prior to mitigation are shown in Table 7.12 and Table 7.13.

Table 7.12: Residual Effects of Water Bodies Directly Crossed by Construction of Compounds and Pipe Storage Depots

ID Reference	Crossing ID	Nearest WFD Designated Water Body	Sensitivity	Magnitude	Significance of Effect	Residual Magnitude	Residual Significance
PSD1	WBP126	Kilmastulla_020	Medium	Medium adverse	Moderate (significant)	Negligible	Not Significant
	WBP232			High adverse	Significant		
	WBP234						
	WBP233						
	WBP274	Ardgregane Stream_010					
CC5	WBP139	Clodiagh (Tullamore)_020	High		Very Significant		
	WBP140						
	WBX094						
	WBP115						
PSD6	WBP150 – Field Drain to Tullamore_010	Tullamore_010	Medium		Significant		
CC6	WBP097	Figile_010					
	WBP098						
	WBP099						
PSD9	WBP193 – Field Drain to Lyreen_010	Lyreen_010					
PSD10	WBX086	Liffey_130	High		Very Significant		
	WBP203						

Table 7.13: Residual Effects of Water Bodies in Proximity to Construction of Compounds and Pipe Storage Depots

ID Reference	Chainage	Water Bodies within 50m	Proximity to Water Body Receptor	Sensitivity	Magnitude	Significance Of Effect	Residual Magnitude	Residual Significance
PSD1	TW – 12600 to TW – 12900	Kilmastulla_020	0m – adjacent	High	Medium Adverse	Significant	Negligible	Not Significant
		Ardgregane Stream_010	0m – adjacent					
PSD4	TWA – 23200 to TWA – 23550	WBP281 – Field Drain to Clareen Stream/Faurawn_020	0m – adjacent	Medium		Moderate (significant)		
PSD5	TWB – 7050 to TWB – 7400	WBP262 – Field Drain to Kyleboher_010	0m – adjacent					
CC5	TWB – 18500 to TWB – 18950	WBX046 – Field Drain to Clodiagh (Tullamore)_020	0m – adjacent	High		Significant		
PSD8	TWC – 24550 to TWC – 24750	WBX073 – Field Drain to Esker Stream_020	40m	Medium		Moderate (significant)		
CC6	TWD – 16200 to TWD – 16700	WBP100	0m – adjacent					
PSD10	TWE – 7250 to TWE – 7750	WBP205 – Field Drain to Liffey_140	10m	High		Significant		

7.8 Washout Valves

7.8.1 Overview

223. Washout Valves, which are used very infrequently to release the pressure from the pipeline to enable maintenance on, for example, Air Valves, or even more rarely to drain (for cleaning) an entire section of pipeline, will be provided at low points along the pipeline. There are 187 Washout Valves in total (excluding the 20 that are part of Line Valves, as none of these would have permanent infrastructure). The majority of these will be temporary Washout Valves, which will be buried within concrete chambers with locked manhole covers. The location and number of Washout Valves presented within this appendix are assessed based on the worst case scenario, which assumes that any Washout Valve within 250m of a water body may discharge to that water body during operation.

224. In 39 locations, washouts will have additional permanent infrastructure and discharge water to a water body. For naming purposes these are named WA valves. WA valves will consist of a suitable length of pipeline, valving to control discharge of drain water, a washout chamber and permanent outfall structure. Of greatest relevance to this assessment, the outfall structure will have three sides and be formed of precast concrete. No concrete mixing will be carried out at the washout location. All materials will be brought to site along the Construction Working Width and manoeuvred into position, or placed, with cranes and excavators.

225. Impacts have been assessed initially with embedded mitigation as described in Section 6, then assessed for residual effects accounting for any additional mitigation.

7.8.2 Likely Significant Effects (Construction)

226. Construction of the outfall structures has the potential to result in impacts on the water bodies on which they are required. Working on the banks of the water body to install the outfall headwall structure, including excavation of the channel bed and banks, is likely to result in localised changes to the morphological characteristics of the water body, altering the bed and bank.

227. There is potential for changes in flow and/or water levels due to dewatering of excavations or changes in drainage. There is also the potential for silt-laden runoff during excavations for the outfall structure and potential for accidental spillage of oils/chemicals from machinery during the construction process. These could result in reduction in baseline water quality.

228. The majority of water bodies which will have permanent Washout Valves installed are within the location of open cut crossings for construction of the pipeline, therefore the Washout Valve will be constructed in a dry area and there will be limited additional potential for silt-laden runoff, runoff containing pollutants within peat, or any additional impacts in relation to drainage. There is potential for some additional impacts in relation to hydromorphology as an additional area of river bank (particularly where composed of peat, and peat subsoils) will need to be excavated. The impacts to the water bodies at these locations associated with the open cut crossings are presented in Section 7.5.

229. Due to the existing dry working area for the open cut crossings, impacts are anticipated to be temporary and at a local scale; therefore, it is anticipated that all Washout Valves constructed at open cut crossings will have a low magnitude of impact. Therefore, the significance of effect will only vary as a result of the sensitivity of the water bodies.

230. For washouts constructed at water bodies which are crossed by trenchless techniques or where there is no crossing of the discharge water body for the pipeline, additional activities will involve isolating and drying the area to construct the Washout Valve outfall. As result of the additional requirement to make a dry working area, the potential for adverse impacts to bed and bank and a moderate shift in baseline water quality, it is anticipated that all Washout Valves constructed in water bodies crossed using trenchless technique will have a medium magnitude of impact.

231. All permanent outfalls are located on relatively large water bodies, large enough to install the outfall structure, which would be sized in proportion to the water body banks. All WA washouts and WCW (Watercourse Washout Location ID) outfalls are on WFD designated water bodies with the exception of WA-023 (WCW023) and WA-025 (WCW025) which are on drains discharging to Rock (Birr)_020 and Silver (Kilcormac)_020 respectively. Construction Phase impact magnitudes and significances of effect, pre-mitigation, for all permanent WA washouts and WCW outfalls are provided in Table 7.14. A full assessment of all washouts is provided in Annex A (Water Body Crossings and Washout Valves – Detailed Assessment) of this appendix.

232. Note: Of WCW001 and WCW002, only one will be required to be constructed. This will be confirmed at detailed design; however, to assess potential environmental impacts both are assessed.

Table 7.14: Pre-Mitigation Likely Significant Effects from Construction of WA Washouts and Associated WCW Outfalls

Washout Valve ID	Washout ID	Chainage	Outfall Construction on WFD Designated Water Body	Water Body Crossing ID (if crossed)	WFD Designated Water Body Status	Sensitivity	Magnitude	Significance of Effect
WA-001	WCW001	TW – 740	Kilmastulla_050	WCX003	Moderate	High	Low adverse	Moderate (significant)
WA-002	WCW002	TW – 960		WCX004				
WA-003	WCW003	TW – 2620	Kilmastulla_040	Not crossed	Moderate	High	Medium adverse	Significant
WA-004	WCW004	TW – 3415						
WA-005	WCW005	TW – 7520	Kilmastulla_030	WCX005	Poor	High	Low adverse	Moderate (significant)
WA-007	WCW007	TW – 10560	Kilmastulla_020	WCX009	Moderate	High	Low adverse	Moderate (significant)
WA-008	WCW008	TW – 11450		WCX010				
WA-009	WCW009	TW – 13490	Ardgregane Stream_010	WCX011	Poor	High	Low adverse	Moderate (significant)
WA-010	WCW010	TW – 15665	Ardgregane Stream_020	Not crossed	Moderate	High	Medium adverse	Significant
WA-011	WCW011	TW – 16455		WCX013			Low adverse	Moderate (significant)
WA-013	WCW013	TW – 19500	Nenagh_070	WCX016	Moderate	Very high	Medium adverse	Very Significant
WA-014	WCW014	TW – 26465	Ardcrony Stream_010	WCX018	Moderate	High	Low adverse	Moderate (significant)
WA-015	WCW015	TW – 31300		WCX019				
WA-017	WCW017	TW – 34970	Ballyfinboy_040	WCX021	Moderate	High	Low adverse	Moderate (significant)
WA-018	WCW018	TWA – 4820	Kilcomin Stream_030	WCX022	Moderate	High	Low adverse	Moderate (significant)
WA-019	WCW019	TWA – 5575		WCX023				
WA-020	WCW020	TWA – 7945	Shinrone Stream_010	WCX024	Poor	High	Low adverse	Moderate (significant)
WA-021	WCW021	TWA – 9380		WCX025				
WA-022	WCW022	TWA – 12930	Little Brosna_030	WCX026	Good	High	Medium adverse	Significant
WA-023	WCW023	TWA – 21315	Local drain	WBX032	N/A	Medium	Low adverse	Slight (not significant)
WA-024	WCW024	TWA – 27595	Camcor_030	WCX032	Good	High	Medium adverse	Significant
WA-025	WCW025	TWB – 10160	Ditch	WBP061	N/A	High	Low adverse	Moderate (significant)
WA-026	WCW026	TWB – 12630	Silver (Kilcormac)_020	WCX036	Good		Medium adverse	Significant
WA-027	WCW027	TWB – 24900	Clodiagh (Tullamore)_020	WCX039	Good	High	Medium adverse	Significant
WA-028	WCW028	TWC – 4950	Meelaghans_010	WCX042	Moderate	High	Low adverse	Moderate (significant)

Washout Valve ID	Washout ID	Chainage	Outfall Construction on WFD Designated Water Body	Water Body Crossing ID (if crossed)	WFD Designated Water Body Status	Sensitivity	Magnitude	Significance of Effect
WA-029	WCW029	TWC – 18915	Daingean_030	WCX048	Poor	High	Low adverse	Moderate (significant)
WA-030	WCW030	TWC – 20240	Esker Stream_010	WCX049	Moderate	High	Low adverse	Moderate (significant)
WA-031	WCW031	TWD – 4185	Figile_030	WCX056	Moderate	High	Medium adverse	Significant
WA-032	WCW032	TWD – 8925	Figile_020	WCX058	Moderate	High	Low adverse	Moderate (significant)
WA-033	WCW033	TWD – 18145	Figile_010	WCX060	Poor	High	Low adverse	Moderate (significant)
WA-034	WCW034	TWD – 26415	Blackwater (Longwood)_010	WCX062	Poor	High	Low adverse	Moderate (significant)
WA-041	WCW041	TWD – 28520		WCX064				
WA-042	WCW042	TWD – 29115		WCX065				
WA-035	WCW035	TWD – 32725	Clonshanbo_010	WCX066	Poor	High	Low adverse	Moderate (significant)
WA-036	WCW036	TWE – 2430	Clonshanbo_020	WCX069	Poor	High	Low adverse	Moderate (significant)
WA-037	WCW037	TWE – 3585	Lyreen_010	WCX070	Poor	High	Low adverse	Moderate (significant)
WA-038	WCW038	TWE – 9105	Liffey_140	WCX072	Good	High	Low adverse	Moderate (significant)
WA-039	WCW039	TWE – 9825		WCX073		Very high	Medium adverse	Very Significant
WA-040	WCW040	TWE – 11425	Reeves_010	WCX074	Good	High	Low adverse	Moderate (significant)

7.8.3 Mitigation and Residual Effects

7.8.3.1 Generic Mitigation Measures

233. Generic mitigation measures for use across the Proposed Project in relation to water bodies during construction are detailed in Section 7.3.

234. Details on the generic mitigation measures for the construction of Washout Valves are also detailed in Appendix A5.1 (CEMP) and the associated Annex A (SWMP).

7.8.3.2 Location Specific Additional Mitigation

235. Specific mitigation for the construction of Washout Valves is detailed in W-SC16 in the SWMP.

7.8.3.3 Construction Phase Residual Effects

236. Owing to the avoidance or minimising of impacts through design, impacts identified in Table 7.14 will be reduced to negligible magnitude resulting in a residual significance of effect of Not Significant. For more detail on the reasoning for this, please refer to Annex A (Water Body Crossings and Washout Valves – Detailed Assessment). As a result, no further mitigation is required. A full assessment of all washouts, including residual effects, is provided in Annex A of this appendix.

7.9 Testing and Commissioning the Pipeline

7.9.1 Overview of Testing and Commissioning Phase Activities

237. Following the construction of the Proposed Project, final testing and commissioning of the whole works is undertaken to confirm that the system responds in accordance with its specified requirements.

238. The sequence for pipeline testing & commissioning is as follows:

- Initial clean and internal inspection
- Low pressure ‘air test’ - using compressed air
- Hydrostatic pressure testing with filtered raw water
- Final swabbing and cleaning
- Disinfection
- Filling with potable water
- Water quality sampling.

239. There are two aspects to the Testing and Commissioning Phase which have the potential to give rise to impacts on water bodies:

- The abstraction of river water
- The discharge of water following hydrostatic testing of the pipeline.

7.9.2 Testing and Commissioning Abstractions

7.9.2.1 Overview and Baseline Conditions

240. As stated in Section 4.2.2, there will be abstractions from eight different WFD designated water bodies across the study area. Details of the current conditions of these water bodies, in the specific context of them being proposed to be used for abstractions, are provided in Table 7.15.

Table 7.15: Baseline Conditions for Proposed Abstraction Points

Abstraction Chainage	Water Body Source	WFD Status	Significant Pressures	Existing Abstractions	Potential Issues for Abstraction	Sensitivity
TW – 2300	Kilmastulla_040	Moderate	Extractive Industry	None identified	Presence of heavy metals (zinc and lead) above EQS	High
TW – 19450	Nenagh_070	Moderate	Hydromorphology and Urban Waste Water	Upstream industrial/commercial use. None downstream.	Nenagh WwTP 4km upstream	Very high
TWA – 12900	Little Brosna_030	Good	N/A	Upstream Agricultural; Private Drinking Water (DW). None downstream.	Fish farm 6km upstream	High
TWA – 27600	Camcor_030	Good	N/A	Upstream Private Drinking Water, Kinnitty River abstraction. Downstream Birr WTP - expanding.	Potential for cumulative effects from abstractions, particularly for Birr WTP downstream, Camcor_050 DWPA downstream and Glenfelly Stream_010 DWPA upstream	High
TWB – 12550	Silver (Kilcormac)_020	Good	Hydromorphology, Forestry and Agriculture,	Upstream none. Downstream Private Drinking Water.	None identified	High
TWB – 24800	Clodiagh (Tullamore)_020	Good	N/A	Clonaslee WTP upstream. None downstream.	Immediately upstream large peat extraction area - ammonia possible issue, Clodiagh (Tullamore)_010 DWPA upstream	High
TWD – 4150	Figile_030	Moderate	Extractive Industry and Hydromorphology	Some industrial abstractions.	Drains extensive areas of commercially extracted peat - ammonia possible issue	High
TWE – 11200	Liffey_140	Good	N/A	Ballymore Eustace upstream. Leixlip Reservoir downstream.	Potential for cumulative effects with existing downstream abstraction at Leixlip Reservoir. Over-abstraction already identified for Liffey, Straffan WwTP 5km upstream,	Very high

7.9.2.2 Likely Significant Effects as a Result of Testing and Commissioning Abstractions

241. Section 6.2.3 and Section 6.3.1 provide an overview of the procedures which will be in place to control the abstractions from these water bodies.

242. Two of the water bodies are considered to be more sensitive to change with respect to abstractions than for other impacts: the Camcor_030 and the Liffey_140, due to existing WTPs downstream.

243. Downstream of the Camcor_030 abstraction point is the Birr WTP intake at Springfield Bridge, approximately 6.9km downstream. Birr WTP is being expanded with a planned increased abstraction rate from 2.3Mld to 4.5Mld. The temporary abstraction on the Camcor_030 during testing and commissioning has the potential to impact water supply to the Birr WTP, and water levels in the river, particularly if the hydrostatic test abstraction is to occur over summer when the river is more susceptible to drought.

244. The River Liffey has been identified in the Regional Water Resources Plan for Eastern and Midlands Region as being under pressure as a result of abstractions. Approximately 8.4km downstream of the proposed temporary abstraction point on the Liffey_140 is the Leixlip Drinking WTP and Leixlip Hydro Station. Based on current WTP abstractions the proposed hydrostatic test abstraction is considered feasible. However, there may be the potential for impacts should the hydrostatic test abstraction occur during drought or when asset maintenance is occurring and Leixlip Reservoir is required to supplement flows.

245. Following the implementation of embedded mitigation measures outlined in Section 6.2.3 and Section 6.3.1, the magnitude of impacts on all of the water bodies is anticipated to be negligible. This would result in effects which are Not Significant.

7.9.2.3 Testing and Commissioning Phase Abstraction Mitigation Measures and Residual Effects

246. Given the potential for cumulative effects on the Camcor and Liffey, it is proposed that Birr WTP and Leixlip WTP reduce their abstractions for the short period of time required to abstract water for the testing of the pipeline in these locations if necessary. In the worst case, for Birr WTP this will be approximately 10 days, and for Leixlip WTP this will be approximately 36 days.

247. In principle this has been agreed with the Uisce Éireann Operational teams at Birr WTP and Leixlip WTP. Further discussion on the timing and duration of the abstractions can be agreed in advance of testing and commissioning to ensure there is no significant effect on river flows and no risk to the water supplies at these locations.

248. Following the implementation of embedded mitigation in Section 6.2.3 and Section 6.3.1 and additional specific mitigation, impacts would be reduced to negligible magnitude with a significance of effect of Not Significant.

7.9.3 Testing and Commissioning Phase Discharges Via Washout Valves

7.9.3.1 Likely Significant Effects as a Result of Testing and Commissioning Phase Discharges

249. The water used to pressure test the pipeline will be released via each one of the 187 Washout Valves once the testing is completed. The approach to the discharge of this water is outlined in Appendix A5.2 (Commissioning Strategy – Annex E). This includes a ‘Decision Tree’ for discharges and outlines a hierarchical approach, with discharge to land being first preference and only if this is not achievable, will discharge to a water body be considered.

250. From a water quality perspective, as a result of the measures outlined in Section 6.3.1, the water in the pipeline will be treated river water and will not include any potential contaminants from the water body from which it was abstracted. In addition, sampling of pipeline water would be undertaken to ensure that no environmental impacts would be caused. Treatment will include de-chlorination (using recommended products during discharge into settlement ponds), pH adjustment (within the settlement ponds) and oxygenation (on discharge from the settlement ponds). There is, however, potential for a reduction in the quality of this water from its time in the pipeline. In particular, as the pipeline will not have been cleaned up to this point, it may contain residues of fine suspended solids. Also, the time spent in the pipeline may result in the water becoming deoxygenated; however, a sweetening flow (minimum base flow) will be used to avoid this. If water were to be discharged to a water body, potential impacts would include an increase in sediment loading of the receiving water.

251. There is also the potential for scouring of the beds and banks of the water bodies to occur if discharge rates are too high and/or set in the wrong location, including bank at destabilisation and sediment mobilisation influencing water quality and downstream hydromorphology. This would not be the case where discharges are occurring at permanent outfall locations; these are already designed to avoid such impacts (see Section 6.3.1).

252. Annex A of this appendix includes a list of all of the washouts and an assessment of impacts should all of those within 250m of a water body, discharge to them. This is a worst case scenario since the Decision Tree approach will ensure that the majority of discharges will be to land or tankered off if absolutely necessary.

253. The receiving water bodies of the 39 permanent washouts (WA) and 148 temporary washouts to water bodies (WB) or land range from low to very high sensitivity. All impacts at the Testing and Commissioning Phase described above are anticipated to be low adverse. Therefore, the differentiation in effects comes from the sensitivity of each water body to change and ranges from Slight (not significant) to Significant.

7.9.4 Testing and Commissioning Phase Discharges Via Washouts at Line Valves

254. There are a total of 51 Line Valves along the pipeline route. Two of these are located on the RWRM and the other 49 are located along the treated water pipeline. The two Line Valves on the RWRM do not have washouts however, 49 Line Valves along the treated water pipeline will have washouts, of which 20 will discharge water. These 20 washouts at Line Valves would only be used to discharge the sweetening flows during final filling in the Commissioning Phase and the washout design flow will vary between 1l/s and 4l/s. The Washouts at Line Valves will not have permanent outfall infrastructure. The water used to test the pipeline will be released via one of these 20 Line Valve Washouts. The approach to the discharge of this water is outlined in Appendix A5.2 (Commissioning Strategy – Annex E).

255. The impacts associated with these Line Valve washouts will be similar to those described for the Washout Valves (see Section 7.9.3.1).

256. Annex A of this appendix includes a list of all 20 of the Washouts at Line Valves and an assessment of impacts should all of those within 250m of a water body, discharge to them.

257. The receiving waterbodies of the 20 Washouts at Line Valves range from Medium to High sensitivity. All impacts at the Testing and Commissioning Phase as described in Section 7.9.3.1 are anticipated to be low adverse. Therefore, the differentiation in effects comes from the sensitivity of each water body to change and ranges from Slight (not significant) to Moderate (significant).

7.9.4.1 Testing and Commissioning Phase Discharges Mitigation Measures and Residual Effects

258. Annex C (Table C.2) and Annex D of Appendix A5.2 (Commissioning Strategy) include generic and specific mitigation measures to avoid or reduce the impacts as a result of the discharge of testing/commissioning water. These are also covered in W-SC20 in the SWMP.

259. Following the implementation of these measures, all impacts at the Testing and Commissioning Phase will reduce to negligible and the significance of effects will reduce to Not Significant. Details are provided in Annex A of this appendix.

8 Likely Significant Effects of the Proposed Project and Mitigation – Operational Phase

8.1 Overview of Washouts

260. During pipeline operation, washouts are only required for emptying sections of pipeline if required for emergency repairs or for routine maintenance, which is typically every 20 to 30 years. These are planned events and will be scheduled to suit landowner constraints and weather conditions with adequate advance notice provided to the landowner. Even then - the washouts are only used to drain short sections of pipe that cannot be drained to either end of the pipeline section due to the topography.

261. As noted in Section 3.4.1, the Washout Valves are divided into four types, namely

- Washouts at permanent discharge locations with permanent outfall (39 valves)
- Washouts at temporary discharge locations where water can be discharged into a nearby water body at a controlled rate through temporary pipework (flexible hose) (57 valves)
- Washouts at temporary local discharge locations where water can be discharged into a nearby water body (including field drains or small ditches within 250m) (51 valves)
- Washouts with local discharge to adjacent land, where there are no field drains or small ditches within 250m of the Washout Valve. In this rare instance a local temporary soakaway will need to be formed using sandbags or equivalent (40 valves). Consideration of any localised flood risk concerns at these locations will be required.

262. The design of the permanent washout outfalls is described in Section 6.3.2.3 and the draindown strategy is described in Section 6.3.2.2.

263. Washouts that are part of Line Valves are not covered in this section, as they would only be used during the Testing and Commissioning Stage.

8.2 Likely Significant Effects as a Result of Discharges During the Operational Phase

264. The main impacts as a result of discharge of water during the Operational Phase are similar to those in the Testing and Commissioning Phase, discussed in Section 7.9.3. There is the addition of low levels of residual chlorine; however, this will be treated by dechlorination tablets.

265. Water within the pipeline during the Operational Phase will have been treated to potable water standards and there is not considered to be a risk of suspended sediment in the pipeline. Washout discharges could cause scour of the channel bed and banks at the discharge point, potentially altering morphological process leading to erosion of the channel and/or morphological features and to destabilisation of the water body as a result of excessive discharge velocities.

266. Washout Valves with a permanent outfall have been designed to minimise the impact of the discharge (should it be required) through the suitable orientation and appropriate engineering design of the outfall structure to dissipate the energy from the discharge.

267. It should be noted that during the Operational Phase, these events would be very rare (likely occurring once in decades) and thus, impacts would be short term and temporary.

268. The receiving water bodies of the 39 permanent washouts (WA) and 148 temporary washouts to watercourses (WB) or land range from low to very high sensitivity. As a result of the design embedded measures it is anticipated there will be no impacts at the permanent washouts (WA) from the discharge of water and at the temporary washouts (WB) the impacts from the discharge of water will be low adverse. Therefore, the differentiation in impacts for temporary washouts comes from the sensitivity of each water body to change and effects range from Slight (not significant) to Moderate (significant).

269. The 40 temporary washouts with local discharge to land may have impacts associated with increased local flood risk depending on local topography and ground conditions.

270. A detailed assessment of all Washout Valves is provided in Annex A (Water Body Crossings and Washout Valves – Detailed Assessment) of this appendix.

271. Impacts in relation to land and soils as a result of the 38 discharges of washouts to land are assessed in Chapter 10 (Soils, Geology & Hydrogeology).

8.3 Operational Phase Mitigation Measures and Residual Effects

272. Following the implementation of embedded mitigation, set out in Section 6.3.2, and the specific mitigation in W-SO1 in the SWMP, no significant effects are identified during the Operational Phase.

273. Dechlorination using dechlorination tablets will be required for discharges during the Operational Phase. For permanent washouts, tablets are placed within a perforated basket in the stilling basin allowing water to pass through. Dechlorination is achieved almost immediately on contact with the tablets. This method provides the most flexible approach for the removal of low chlorine residual and is suited to the infrequent operation of the washouts. Washouts where there is no permanent outfall will require dechlorination equipment to be brought to site as part of the operational procedure.

274. As with the potential discharges during the Construction Phase, it is anticipated that the levels of contaminants (suspended solids and chlorine) in any discharge will be within limits likely to be set and flows will be controlled to levels appropriate to the receiving water.

275. The discharges to land will require assessment of local topography and ground conditions. Where there is potential for an increase in local flood risk, discharges will require collection in tanks and transport off site.

276. It should be noted that Nature Based Solutions (NBS) will be used where practicable and green engineering solutions will be used in favour of grey based solutions if it appropriate to do so. The use of these measures will depend on local site characteristics, accessibility and space, and the types of infrastructure or construction being proposed. Where there is a residual risk to infrastructure from erosion and/or bank failures for example, grey engineering solutions may be more appropriate. Professional judgement and best practice will be used in the decision-making surrounding the implementation of NBS.

277. Given the above, the magnitude of impact reported for all washout locations is reported as negligible. This results in a significance of effect of Not Significant for all receptors.

278. A detailed assessment of all Washout Valves is provided in Annex A (Water Body Crossings and Washout Valves – Detailed Assessment) of this appendix.

9 Residual Effects

9.1 Construction

9.1.1 Pipeline Trench (Drainage, Dewatering and Surface Water Runoff)

9.1.1.1 Water Bodies in Proximity to the Pipeline

279. The assessment of the construction of the pipeline within 50m of water bodies is provided in Section 7.4. Prior to mitigation, the significance of effect ranges from Significant to Very Significant. Following implementation of the mitigation outlined in the SWMP, residual effects will be Not Significant for all water bodies.

9.1.1.2 Attenuation Ponds

280. The assessment of dewatering via attenuation ponds during the construction of the pipeline and construction of the ponds is provided in Section 7.4. Prior to mitigation, the significance of effect ranges from Not Significant to Very Significant. Following implementation of the mitigation outlined in the SWMP, residual effects will be Not Significant for all water bodies.

9.1.2 Water Body Crossings

9.1.2.1 Trenchless Pipeline Crossings

281. The assessment of the 31 water bodies crossed by the pipeline using trenchless crossing techniques is provided in Section 7.5 and Annex A of this appendix. Prior to mitigation, the significance of effect ranges from Slight (not significant) to Very Significant. Following implementation of the mitigation outlined in the SWMP, residual effects will be Not Significant for all water bodies.

9.1.2.2 Open Cut Pipeline Crossings

282. The assessment of the 481 water bodies crossed by the pipeline using open cut crossing techniques is provided in Section 7.5 and Annex A of this appendix. Prior to mitigation, the significance of effect ranges from Moderate (significant) to Very Significant. Following implementation of the mitigation outlined in the SWMP, residual effects will be Not Significant for all water bodies.

9.1.3 Road Crossings

283. The assessment of water bodies within 50m of the construction of road crossings and the Temporary Construction Road along the pipeline is covered under the assessment of water bodies within 50m of the pipeline in Section 7.4 and water body crossings in Section 7.5. Prior to mitigation, the significance of effect ranges from Slight (not significant) to Very Significant. Following implementation of the mitigation outlined in Annex A (SWMP) of Appendix A5.1 (CEMP) and Section 7.4 and Section 7.5, residual effects will be Not Significant for all water bodies.

9.1.4 Compounds and Pipe Storage Depots

9.1.4.1 Water Body Crossings

284. The assessment of the construction of Construction Compounds and Pipe Storage Depots directly crossing water bodies is provided in Section 7.7. Prior to mitigation, the significance of effect ranges from Not Significant to Very Significant. Following implementation of the mitigation outlined in the SWMP, residual effects will be Not Significant for all water bodies.

9.1.4.2 Water Bodies in Proximity to Construction Compounds and Pipe Storage Depots

285. The assessment of the construction of Construction Compounds and Pipe Storage Depots within 50m of water bodies is provided in Section 7.7. Prior to mitigation, the significance of effect ranges from Not Significant to Significant. Following implementation of the mitigation outlined in the SWMP, residual effects will be Not Significant for all water bodies.

9.1.5 Washout Valves

286. The assessment of the construction of permanent outfalls for 39 Washout Valves to water bodies is provided in Section 7.8 and Annex A of this appendix. Prior to mitigation, the significance of effect ranges from Slight (not significant) to Very Significant. Following implementation of the mitigation outlined in the SWMP, residual effects will be Not Significant for all water bodies.

9.2 Residual Effects – Testing and Commissioning

9.2.1 Abstractions

287. The assessment of abstractions from eight water bodies is provided in Section 7.9.2. Prior to mitigation, the significance of effect is Not Significant. Following implementation of the embedded mitigation outlined in Section 6.2.3 and Section 6.3.1 and additional mitigation outlined in the SWMP, residual effects will be Not Significant for all water bodies.

9.2.2 Washouts

288. The assessment of discharges from all 187 Washout Valves to water bodies is provided in Annex A of this appendix. Prior to mitigation, the significance of effect ranges from Slight (not significant) to Significant. Following implementation of the embedded mitigation outlined in Section 6.2.3 and Section 6.3.1 and the mitigation measures outlined in the SWMP, residual effects will be Not Significant for all water bodies.

9.2.3 Washouts at Line Valves

289. The assessment of discharges from all 20 Washouts at Line Valves to water bodies is provided in Annex A of this appendix. Prior to mitigation, the significance of effect ranges from Medium to High. Following implementation of the embedded mitigation outlined in Section 6.2.3 and Section 6.3.1 and the mitigation measures outlined in the SWMP, residual effects will be Not Significant for all water bodies.

9.3 Residual Effects – Operation

9.3.1 Washouts

290. The assessment of discharges from all 187 Washout Valves to water bodies is provided in Annex A of this appendix. Prior to mitigation, the significance of effect ranges from Slight (not significant) to Significant. Following implementation of the embedded mitigation outlined in Section 6.3.2 and the SWMP, residual effects will be Not Significant for all water bodies.

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11 Figures

A9.2 Figure 1 to Figure 59: Pipeline Crossings

A9.2 Figure 60 to Figure 76: Trenchless Water Body and Surface Water Receptor Crossings

N

North Ballycannan_010

PSN-RDX004

PSNWCX002

PSN-RDX003

BLACKWATER (CLARE)_020

PSNWCX001

PSN-RDX002

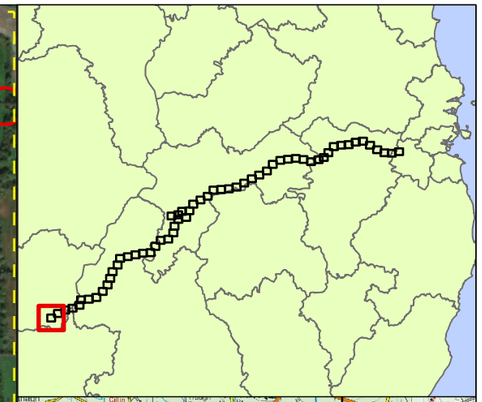
North Ballyvennan_010

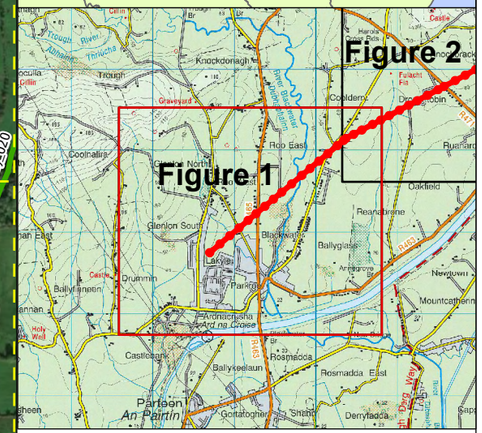
BLACKWATER (CLARE)_020

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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'





Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Road Crossing
- Watercourse Crossing (EPA)(WCX)
- Potential Waterbody Crossing (WBP)
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Good

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 1
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

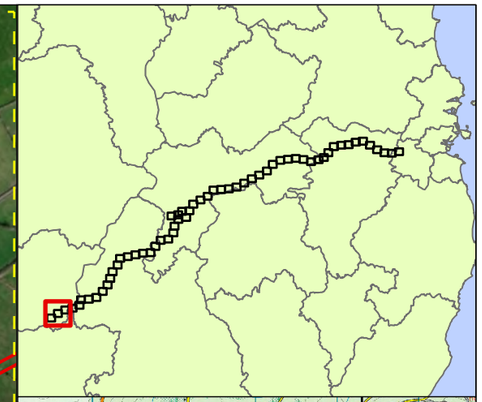
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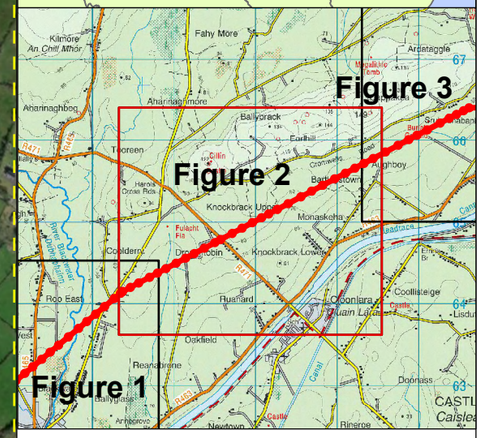
Drawing No.
32105801/700/12183

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Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'





Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Road Crossing
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Good

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 2
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
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Drawing No. 32105801/700/12184

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

N

PSNWBX004

PSN-RDX007

PSNWBX005

PSNWCX004

PSN-RDX009

PSN-RDX006

PSN-RDX008

SHANNON (LOWER)_050

SHANNON (LOWER)_050

LIMERICK CLARE

Figure 2

Figure 3

Figure 4

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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'

Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Road Crossing
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Special Area of Conservation
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Moderate
- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

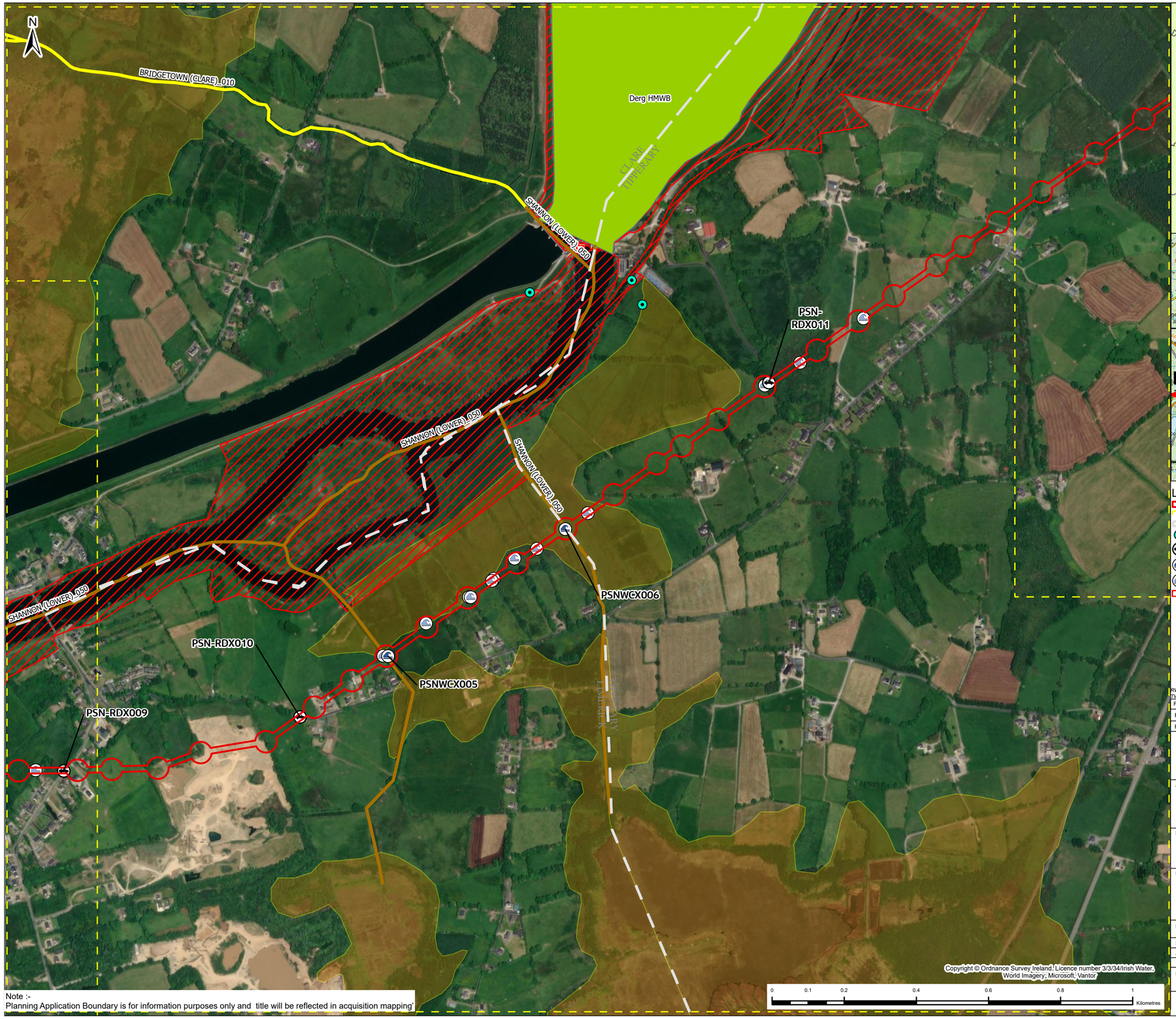
Drawing Title: A9.2 Figure 3
Pipeline Crossings

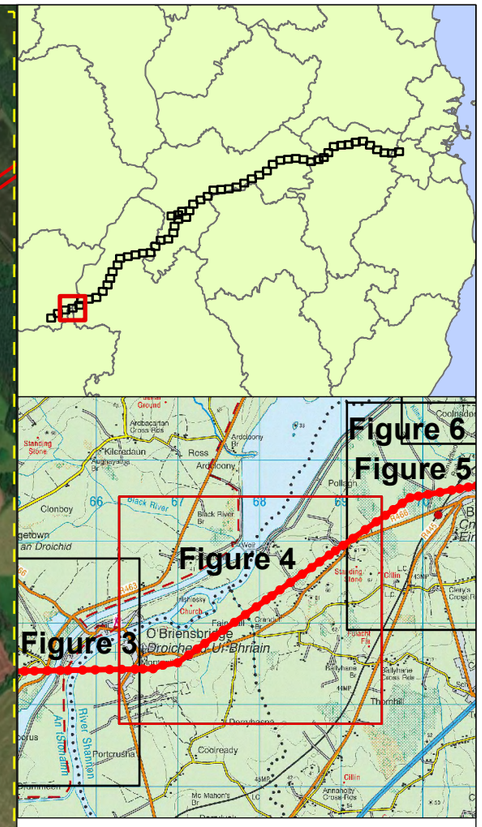
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Drawing No. 32105801/700/12185

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Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'

Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Road Crossing
- Watercourse Crossing (EPA)(WCX)
- Potential Waterbody Crossing (WBP)
- Special Area of Conservation
- WFD Nutrient Sensitive lakes
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024
WFD Ecological Status
- Moderate
- Poor

Lake Waterbody WFD Status 2019-2024
WFD Ecological Status
- Good

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW
Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

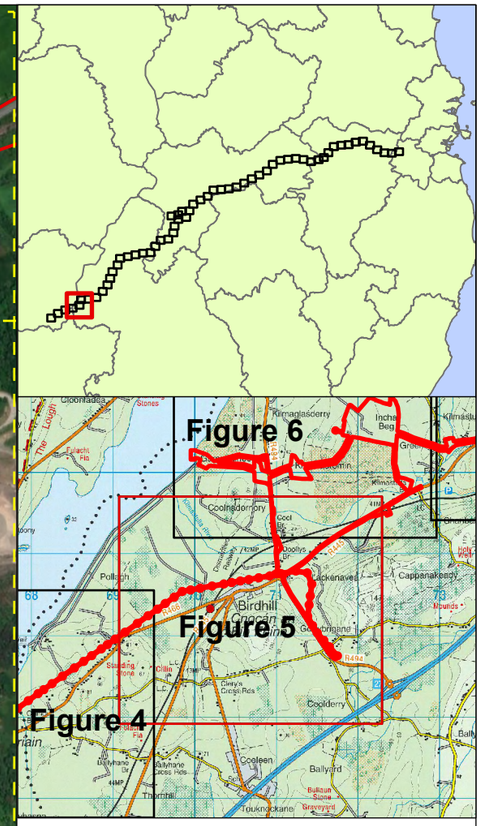
Drawing Title
A9.2 Figure 4
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

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Drawing No.	32105801/700/12186		

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Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'

Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Road Crossing
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Special Area of Conservation
- WFD Nutrient Sensitive lakes
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024
WFD Ecological Status
- Good
- Moderate

Lake Waterbody WFD Status 2019-2024
WFD Ecological Status
- Good

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 5
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
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Drawing No.	32105801/700/12187		

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N

Derg HMWB

CLARE
TIPPERARY

SHANNON (LOWER)_050

KILMASTULLA_050

WBX090

RW-2000

TW-500

WBX091

RW-500

RDX120

RW-1000

WBX003

RW-1500

CC1
Water
Treatment Plant

WBX002

WBX004

CC0

WBX001

Raw Water Intake
and Pumping Station

RDX001

WCX002

KILMASTULLA_050

WCX077

KILMASTULLA_050

RDX121

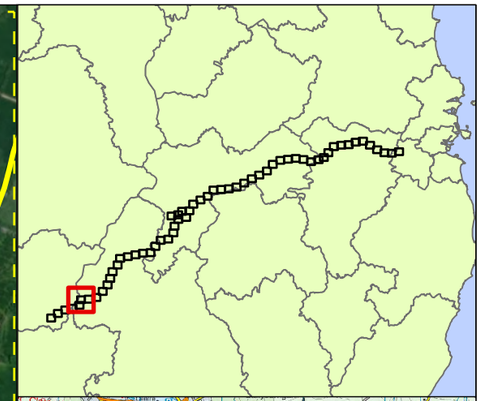
WCX001

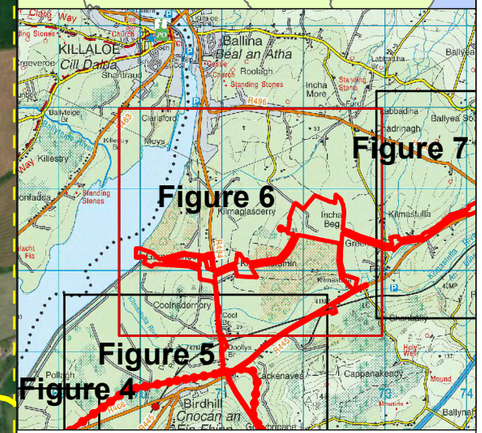
KILMASTULLA_050

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World Imagery, Microsoft, Vantor

0 0.1 0.2 0.4 0.6 0.8 1 Kilometres





Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Road Crossing
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Construction Compound (CC)
- Special Area of Conservation
- WFD Nutrient Sensitive lakes

River Waterbody WFD Status 2019-2024
WFD Ecological Status
- Moderate
- Poor

Lake Waterbody WFD Status 2019-2024
WFD Ecological Status
- Good

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 6
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

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Drawing No.	32105801/700/12188		

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N

KILMASTULLA 050

KILMASTULLA 040

TW-1500

TW-2000

TW-2500

TW-3000

TW-3500

TW-1000

TW-500

RDX002

RDX003

RDX004

RDX005

WBX005

WBX006

WBX007

WBX008

WBX009

WCX003

WCX004

Figure 5

Figure 6

Figure 7

Figure 8

Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Washout Valve (WA) - Temporary Washout to Watercourse/Drain
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Washout Location (WCW)
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Moderate

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 7
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
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Filepath	\\global\ie\DTG\SPs\32105801_WSP_DRArcGIS\DATA\Ch. 09 - Water\Appendix\A9.2 Pipeline Crossings.aprx		

Drawing No.: 32105801/700/12189

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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

Note :-
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N

KILMASTULLA_030

KILMASTULLA_040

KILMASTULLA_049

TW-4000

TW-4500

TW-5000

TW-5500

TW-6000

TW-6500

TW-7000

TW

WCX005

RDX009

RDX008

RDX007

WBX012

WBX011

WBX108

WBX009

RDX006

WBX010

Figure 7

Figure 8

Figure 9

Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Washout Valve (WA) - Temporary Washout to Watercourse/Drain
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Washout Location (WCW)
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Special Protection Areas

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Moderate
- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 8
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
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Drawing No.: 32105801/700/12190

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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

Note :-
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N

KILMASTULLA_020

KILMASTULLA_030

TW-11000

TW-10500

TW-10000

TW-9500

TW-9000

TW-8500

TW-8000

TW-7500

WCX008

WCX009

WCX007

WCX006

WCX005

RDX011

RDX010

Figure 10

Figure 9

Figure 8

Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Washout Valve (WA) - Temporary Washout to Watercourse/Drain
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Washout Location (WCW)
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Moderate
- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 9
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
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Drawing No.: 32105801/700/12191

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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

Note :-
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N

ARDGREGANE STREAM_010

TW-13500

RDX016

TW-13000

WCX011

RDX015

RDX014

PSD1

TW-12500

RDX129

WBX014

TW-12000

RDX013

KILMASTULLA_020

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WCX010

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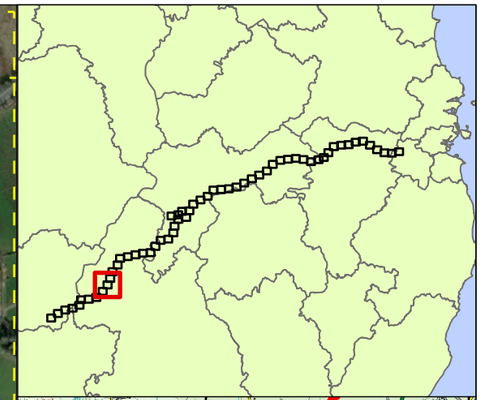
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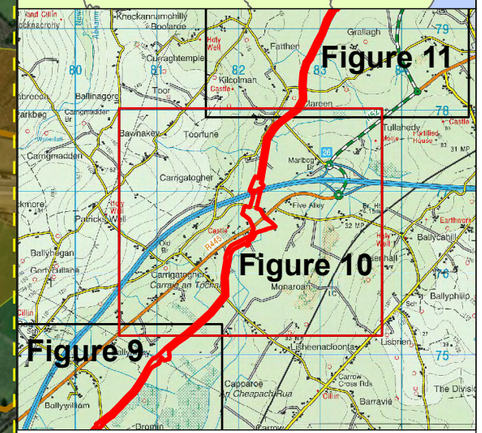
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Note :-
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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres





Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Washout Valve (WA) - Temporary Washout to Watercourse/Drain
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Washout Location (WCW)
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Pipe Storage Depot (PSD)
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024
WFD Ecological Status
- Moderate
- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 10
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
Jacobs No.	32105801	Client No.	9318
Filepath	Igiland\vol1\GIS\fm\32105801_WSP_DRAn\GIS\DATA\Cs. ISI - Water\Appendix\A9.2 Pipeline Crossings.aprx		
Drawing No.	32105801/700/12187		

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

N

WCX014
WBX016
RDX019
WCX013
RDX018
WBX015
WCX012
RDX017

ARDGREGANE STREAM 020
ARDGREGANE STREAM 020
ARDGREGANE STREAM 020
ARDGREGANE STREAM 010
ARDGREGANE STREAM 010
ARDGREGANE STREAM 010

TW-16500
TW-16000
TW-15500
TW-15000
TW-14500

Figure 12
Figure 11
Figure 10

Note :-
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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Washout Valve (WA) - Temporary Washout to Watercourse/Drain
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Washout Location (WCW)
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)

River Waterbody WFD Status 2019-2024
WFD Ecological Status
- Moderate
- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 11
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
Jacobs No.	32105801	Client No.	9318
Filepath	\\global\ie\DTG\SPs\32105801_WSP_DRAs\GIS\DWFCh. 09 - Water\Appendix\A9.2 Pipeline Crossings.aprx		
Drawing No.	32105801/700/12193		

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N

NENAGH_070

NENAGH TRIBUTARY_010

WBX018

TW-20500

TW-20000

RDX022

WCX017

TW-19500

WCX016

TW-19000

RDX021

WBX017

NENAGH_070

NENAGH_070

TW-18500

RDX020

TW-18000

WCX015

TW-17500

NENAGH_070

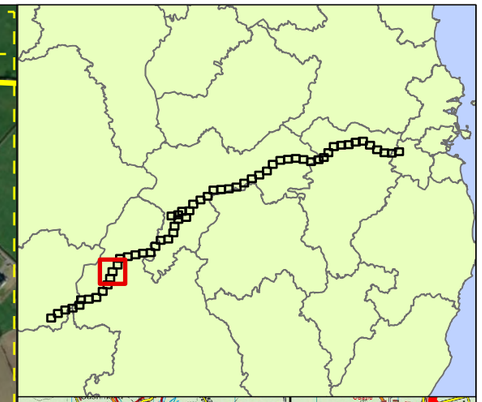
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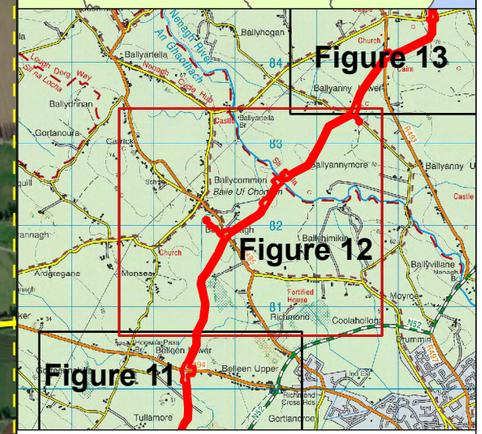
WCX014

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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'





Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Washout Valve (WA) - Temporary Washout to Watercourse/Drain
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Washout Location (WCW)
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- WFD Nutrient Sensitive rivers

River Waterbody WFD Status 2019-2024
WFD Ecological Status
- Moderate

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 12
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

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Drawing No.
32105801/700/12194

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N

RDX122

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TW-23500

TW-23000

TW-22500

TW-22000

TW-21500

TW-21000

RDX024

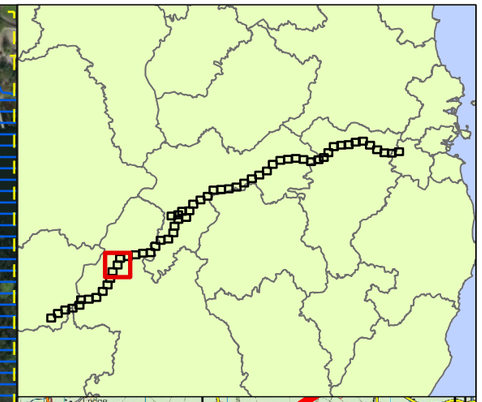
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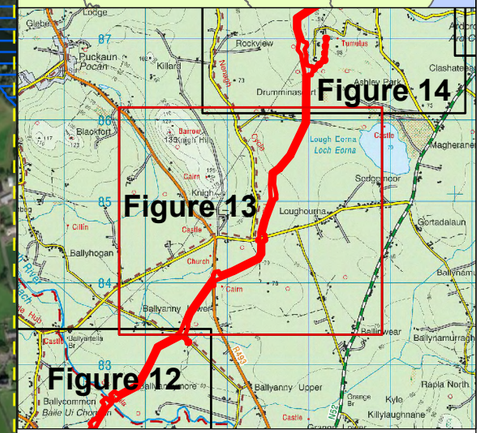
RDX022

NENAGH 070

NENAGH TRIBUTARY 010

NENAGH TRIBUTARY 010





Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Crossing (EPA)(WCX)
- Potential Waterbody Crossing (WBP)
- Proposed Natural Heritage Areas

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Moderate

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 13
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

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Drawing No.	32105801/700/12190		

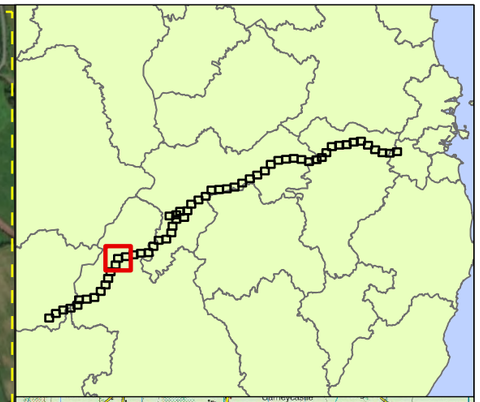
This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

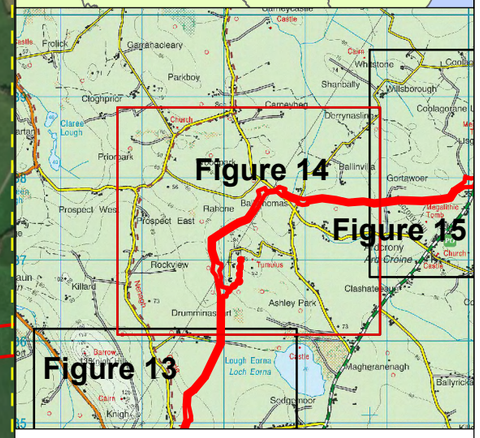
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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

Note :-
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Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Washout Valve (WA) - Temporary Washout to Watercourse/Drain
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Washout Location (WCW)
- Watercourse Crossing (EPA)(WCX)
- Proposed Natural Heritage Areas

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Moderate

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 14
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
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Drawing No.: 32105801/700/12196

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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

Note :-
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N

ARDGRONY STREAM 010

TW-27500

TW-28000

TW-28500

TW-29000

TW-29500

TW-30000

TW-30500

TW-31000

RDX026

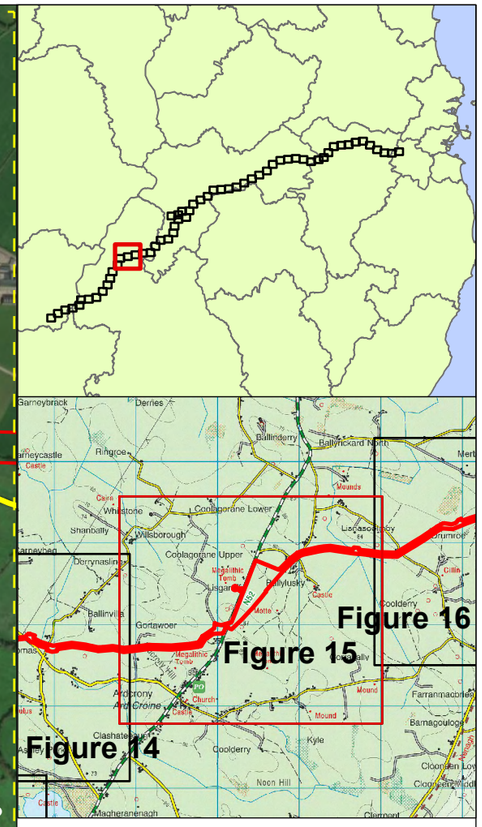
RDX027

RDX028

RDX128

WCX019

CC2



Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Washout Valve (WA) - Temporary Washout to Watercourse/Drain
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Washout Location (WCW)
- Watercourse Crossing (EPA)(WCX)
- Construction Compound (CC)
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Moderate

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 15
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

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Drawing No.: 32105801/700/12197

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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

Note :-
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N

ARDGRONY STREAM_010

BALLYFINBOY_040

TW-31500

TW-32000

TW-32500

TW-33000

TW-33500

TW-34000

TW-34500

WBX019

WBX020

RDX029

RDX030

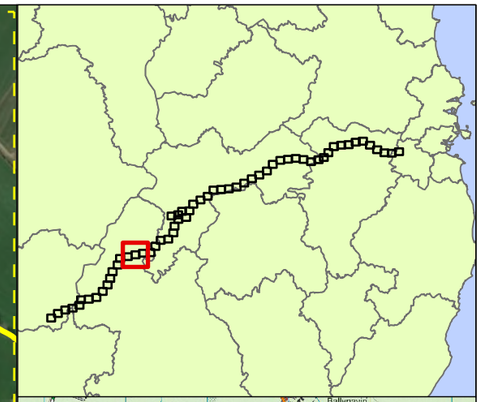
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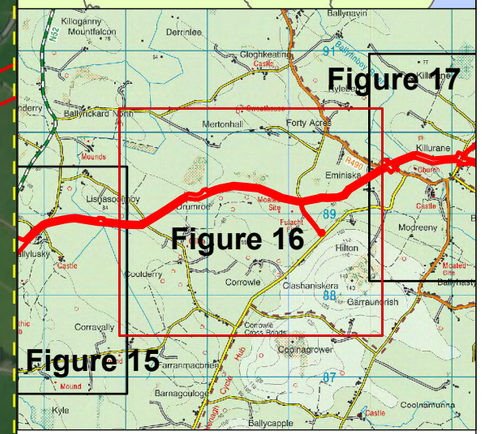
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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres





Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Moderate

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 16
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

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Drawing No.	32105801/700/12198		

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N

BALLYFINBOY 040

RDX031

TW-35000

TW-35500

TW-36000

TW-36500

TW-34500

WCX021

WCX020

RDX032

Break
Pressure Tank

CC3

TWA-500

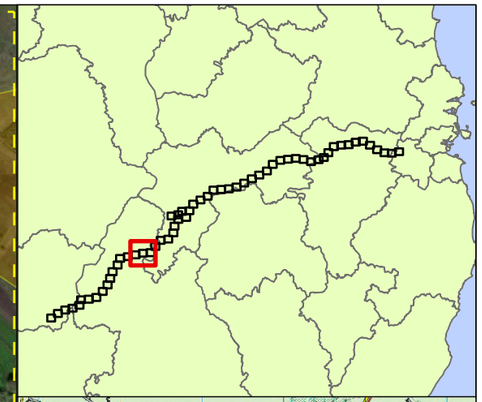
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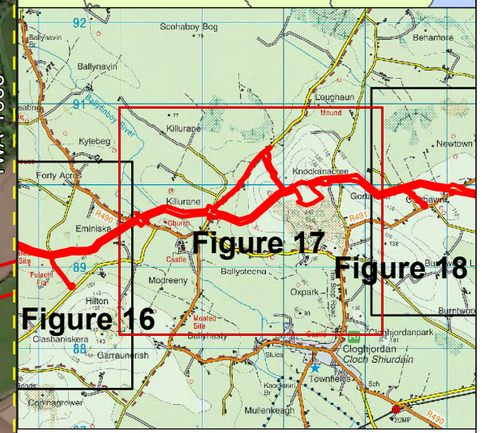
RDX033

BALLYFINBOY 040

BALLYFINBOY 030

BALLYFINBOY 030





Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Washout Valve (WA) - Temporary Washout to Watercourse/Drain
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Washout Location (WCW)
- Watercourse Crossing (EPA)(WCX)
- Construction Compound (CC)
- Natural Heritage Areas
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Moderate

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW
Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project

Water Supply Project
Eastern and Midlands Region

Drawing Title

A9.2 Figure 17
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

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Drawing No. 32105801/700/12199

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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

Note :-
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N

TWA-1000
TWA-1500
TWA-2000
TWA-2500
TWA-3000
TWA-3500
TWA-4000
TWA-4500

RDX034
RDX035
RDX036
WBX021

KILCOMMINSTREAM 030

Figure 19
Figure 18
Figure 17

Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'

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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Moderate
- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

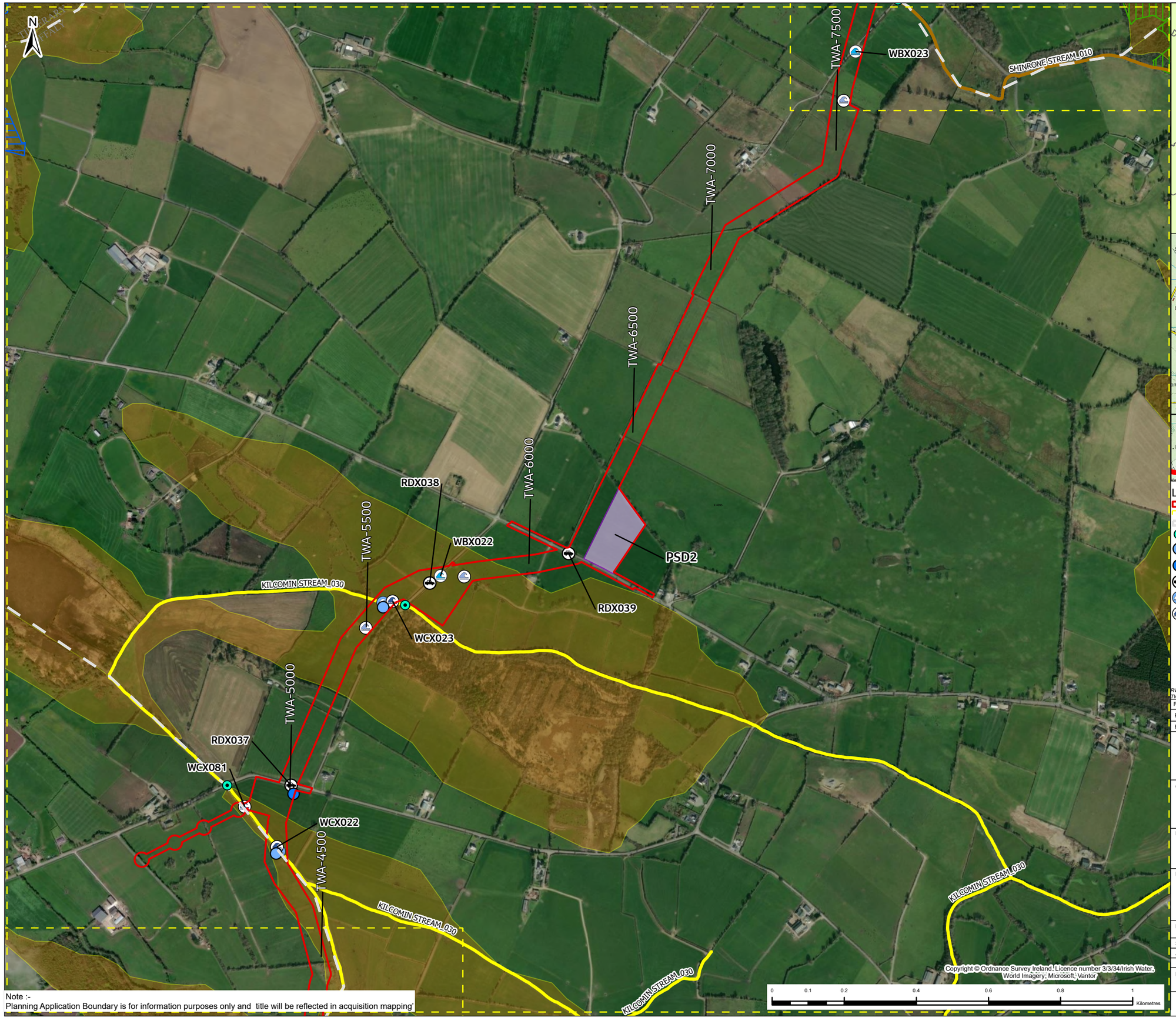
Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 18
Pipeline Crossings

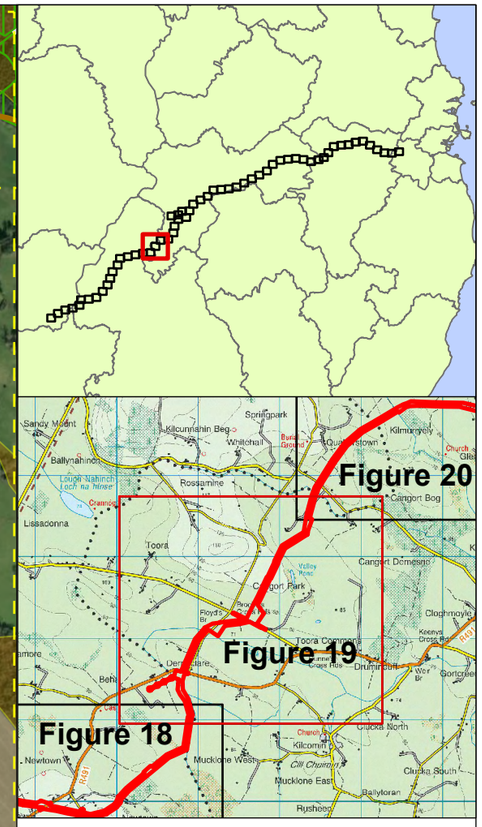
Drawing Status: **FINAL – PLANNING APPLICATION**

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Drawing No.	32105801/700/12200		

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Note :-
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Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Washout Valve (WA) - Temporary Washout to Watercourse/Drain
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Washout Location (WCW)
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Pipe Storage Depot (PSD)
- Natural Heritage Areas
- Proposed Natural Heritage Areas
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status
- Moderate
- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

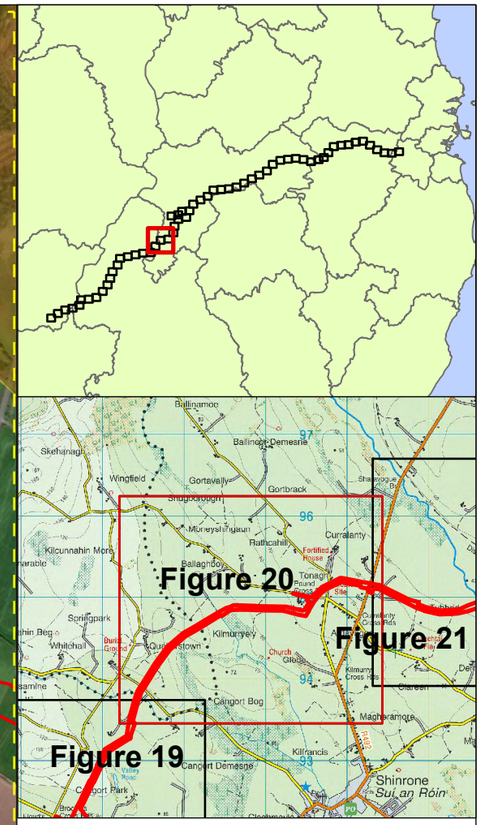
Drawing Title
A9.2 Figure 19
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

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Drawing No.	32105801/700/12201		

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Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'

Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Washout Valve (WA) - Temporary Washout to Watercourse/Drain
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Washout Location (WCW)
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Special Area of Conservation
- Natural Heritage Areas
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024
WFD Ecological Status
- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 20
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
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Drawing No.
32105801/700/12202

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

N

LITTLE BROSNA 040

TWA-11500

TWA-12000

TWA-12500

TWA-13000

TWA-13500

TWA-14000

TWA-14500

TWA-15

RDX045

WBX027

RDX044

PSD3

WBX025

WCX026

WBX026

LITTLE BROSNA 030

Figure 22

Figure 21

Figure 20

Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Washout Valve (WA) - Temporary Washout to Watercourse/Drain
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Washout Location (WCW)
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Pipe Storage Depot (PSD)
- WFD Nutrient Sensitive rivers
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Good
- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 21
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

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Drawing No.	32105801/700/12203		

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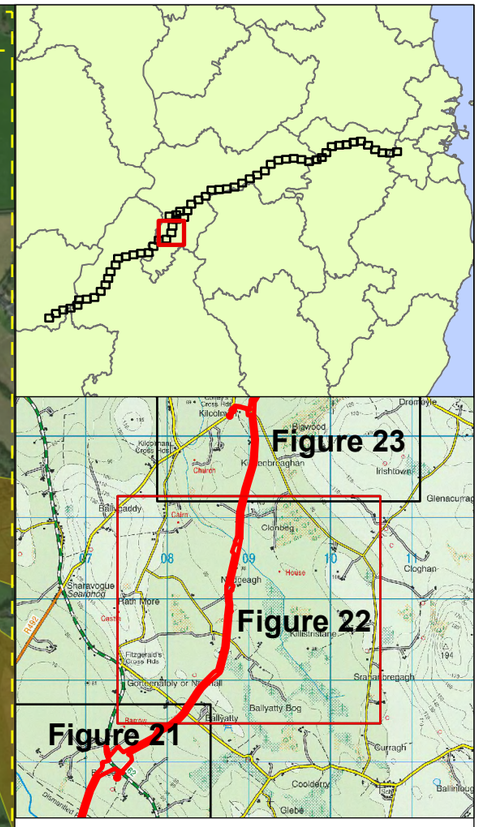
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World Imagery: Microsoft, Vantor

0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'



Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'



Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Crossing (EPA)(WCX)
- Potential Waterbody Crossing (WBP)
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 22
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
Jacobs No.	32105801	Client No.	9318
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Drawing No.	32105801/700/12204		

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

N

ROCK (BIRR) 020

ROCK (BIRR) 010

TWA-

TWA-20500

TWA-20000

TWA-19500

TWA-19000

TWA-18500

WBX031

WBX030

RDX047

WBX029

WBX028

RDX046

Figure 24

Figure 23

Figure 22

Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Special Area of Conservation
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Moderate
- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW
Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 23
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
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Drawing No.: 32105801/700/12205

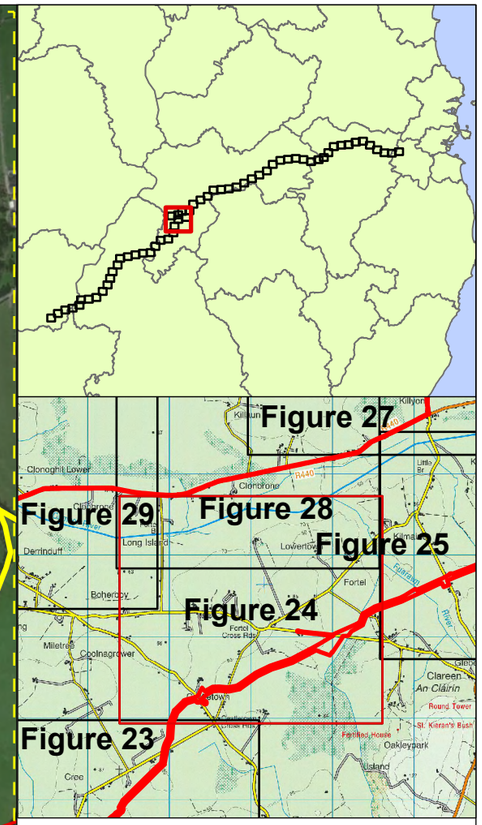
This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'





Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Washout Valve (WA) - Temporary Washout to Watercourse/Drain
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Washout Location (WCW)
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Pipe Storage Depot (PSD)
- WFD Drinking Water
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Good
- Moderate

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 24
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

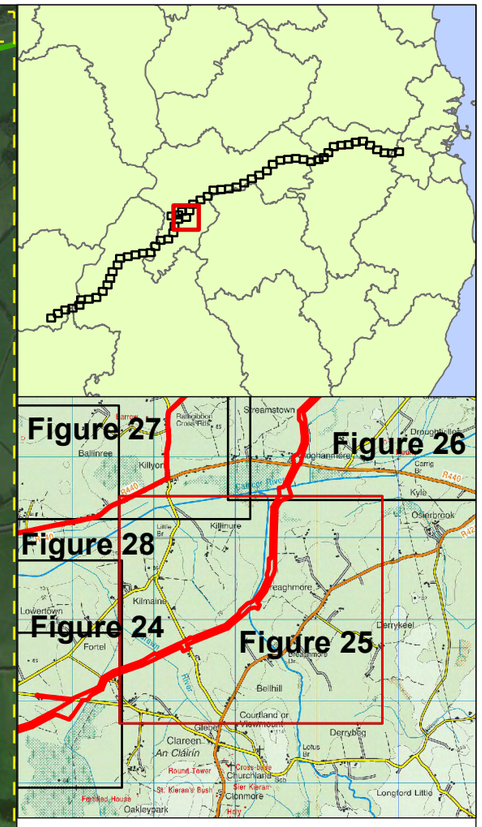
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Drawing No.: 32105801/700/12206

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'





Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'

Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Proposed Natural Heritage Areas
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Good
- Moderate

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 25
Pipeline Crossings

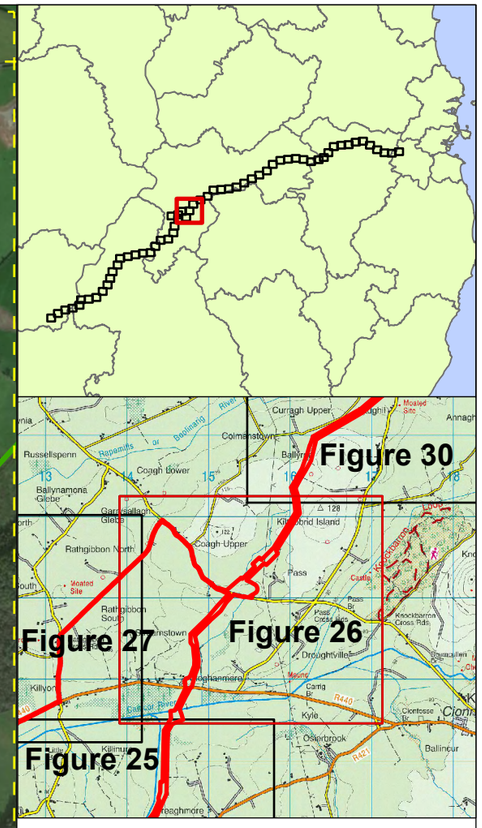
Drawing Status: **FINAL – PLANNING APPLICATION**

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Drawing No.
32105801/700/12207

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Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'

Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Washout Valve (WA) - Temporary Washout to Watercourse/Drain
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Washout Location (WCW)
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Construction Compound (CC)
- WFD Drinking Water
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024
WFD Ecological Status
- Good
- Moderate

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 26
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

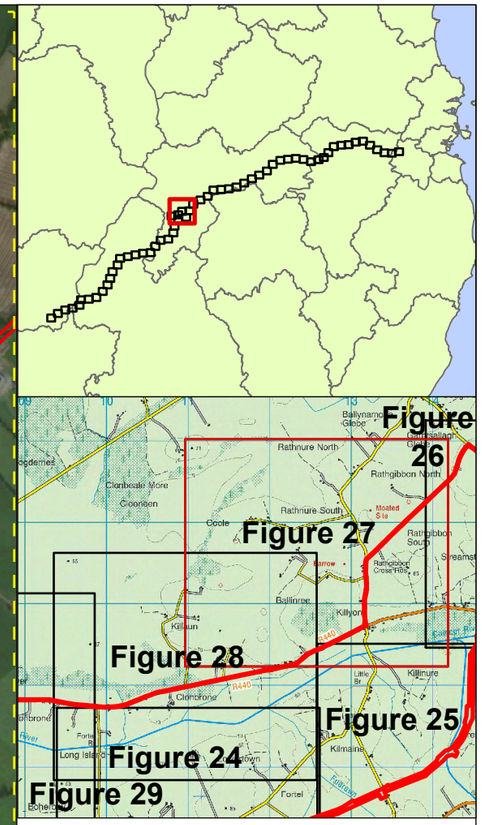
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Drawing No.
32105801/700/12208

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.



Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'



Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Road Crossing
- Watercourse Crossing (WBX)
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Good

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 27
Pipeline Crossings

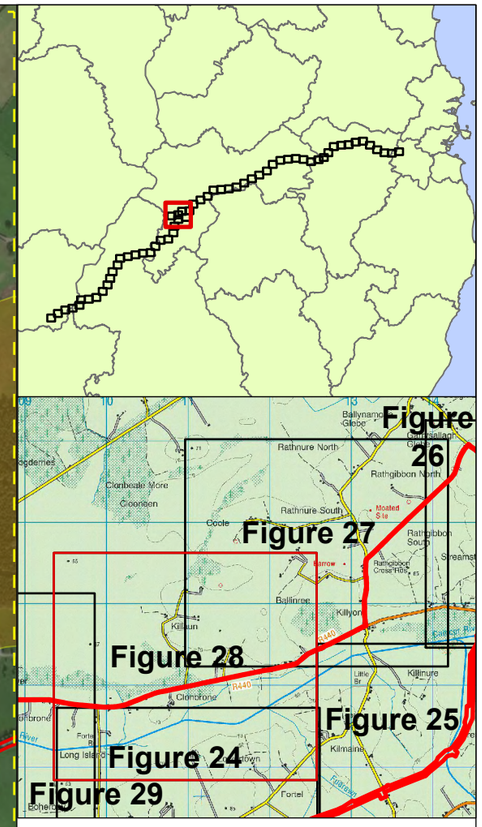
Drawing Status: **FINAL – PLANNING APPLICATION**

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Jacobs No.	32105801	Client No.	9318
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Drawing No.: 32105801/700/12209

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.





Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'

Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- WFD Drinking Water
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Good
- Moderate

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 28
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
Jacobs No.	32105801	Client No.	9318
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Drawing No. 32105801/700/12210

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

N

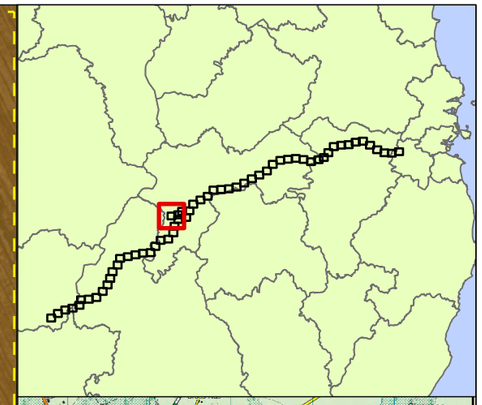
CAMCOR_050

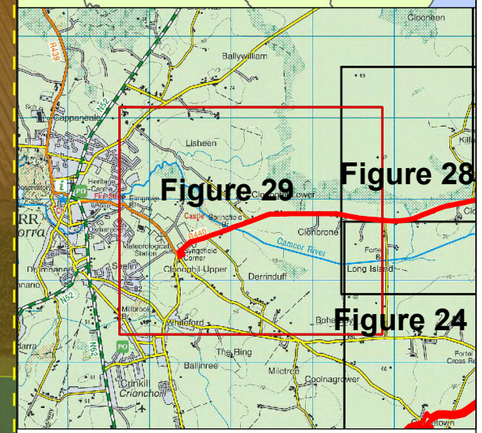
WCX078

RDX134

ROCK(BIRR)_020

CAMCOR_050





Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Road Crossing
- Watercourse Crossing (EPA)(WCX)
- Proposed Natural Heritage Areas
- WFD Drinking Water
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Good
- Moderate

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 29
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
Jacobs No.	32105801	Client No.	9318
Filepath	\\global\ie\DTG\SIN\32105801_WSP_DRArc\GIS\DARCH. 09 - Water\Appendix\A9.2 Pipeline Crossings.aprx		

Drawing No. 32105801/700/12211

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

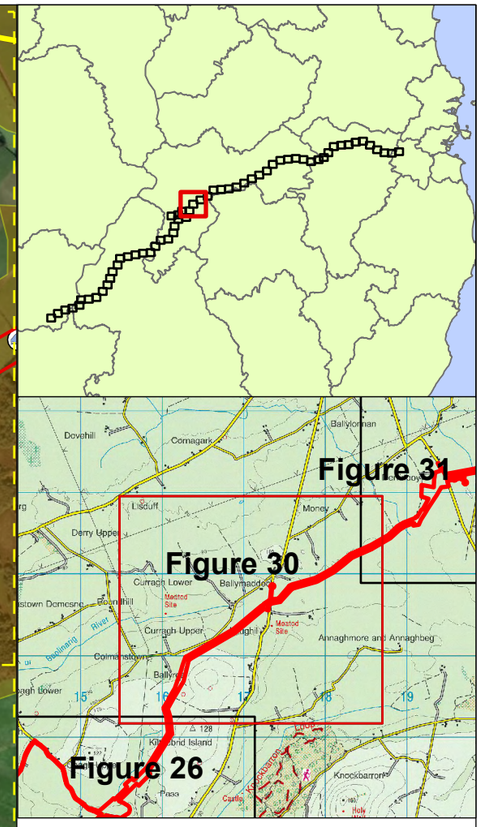
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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'

N

TWB-6000
TWB-5500
TWB-5000
TWB-4500
TWB-4000
TWB-3500
TWB-3000
WBX038
WBX039
WBX107
RDX055
RAPEMILLS_010
CAMCOR_030



Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'

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World Imagery: Microsoft, Vantor

0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Good
- Moderate

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 30
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
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Drawing No.	32105801/700/12212		

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

N

SILVER (KILCORMAC) 030

SILVER (KILCORMAC) 050

TWB-7500

TWB-8000

TWB-8500

TWB-9000

TWB-9500

RDX056

WCX035

RDX057

RDX060

WBX041

WBX040

RDX059

RDX058

PSD5

TWB-7000

Kyleboher 010

TWB-6500

WCX034

TWB-6000

SILVER (KILCORMAC) 020

SILVER (KILCORMAC) 020

SILVER (KILCORMAC) 020

Figure 32

Figure 31

Figure 30

Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Pipe Storage Depot (PSD)
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Good
- Moderate

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date						
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW
Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 31
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
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Drawing No.	32105801/700/12213		

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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'

N

SILVER (KILCORMAC)_030

SILVER (KILCORMAC)_020

TWB-12500

TWB-13000

TWB-13500

WBX092

RDX063

WCX036

TWB-12000

TWB-11500

RDX062

TWB-11000

RDX061

WBX043

TWB-10500

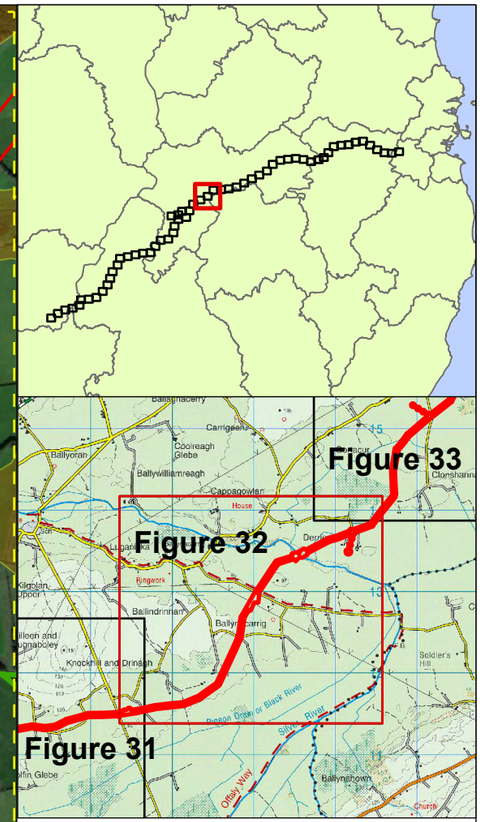
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TWB-10000

WBX042

WBX041

Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'



Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Washout Valve (WA) - Temporary Washout to Watercourse/Drain
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Washout Location (WCW)
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024
WFD Ecological Status
- Good
- Moderate

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 32
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
Jacobs No.	32105801	Client No.	9318
Filepath	\\global\ie\DTG\SPs\32105801_WSP_DRArc\GIS\DARCH...\Appendix\A9.2 Pipeline Crossings.aprx		
Drawing No.	32105801/700/12214		

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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

N

TWB-16000

TWB-16500

TWB-17000

TWB-15500

TWB-15000

TWB-14500

TWB-14000

RDX065

RDX064

WCX038

WBX093

SILVER (KILCORMAC)_020

SILVER (KILCORMAC)_020

SILVER (KILCORMAC)_020

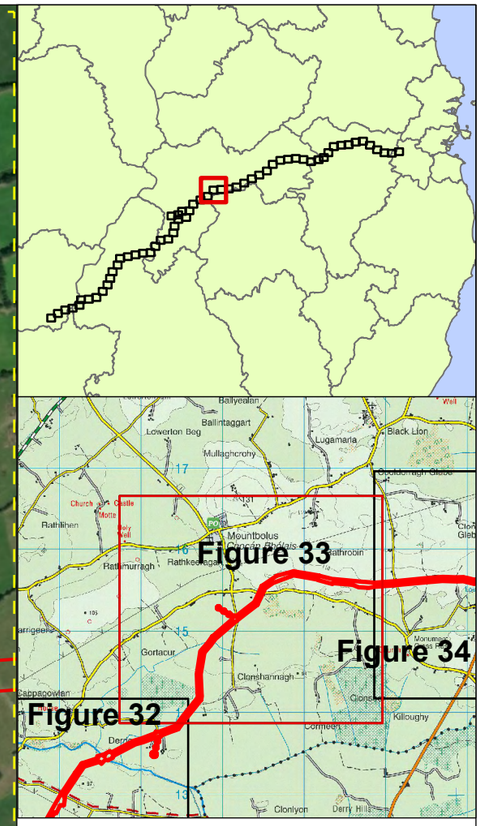
SILVER (KILCORMAC)_020

SILVER (KILCORMAC)_020

Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'

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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres



Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Good

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 33
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
Jacobs No.	32105801	Client No.	9318
Filepath	\\global\ie\dfs\IRGISProj\32105801_WSP_DRAnGIS\04\Mxds\ 09 - Water\Appendix\A9.2 Pipeline Crossings.aprx		

Drawing No.: 32105801/700/12215

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

N

BALLYNACANTY_010

TWB-17500

TWB-18000

TWB-18500

TWB-19000

TWB-19500

TWB-20000

RDX066

RDX067

RDX068

WBX095

WBX046

WBX045

WBX094

CC5

GLODIAGH (TULLAMORE)_020

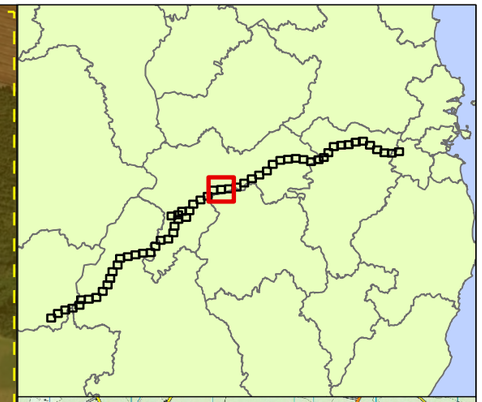
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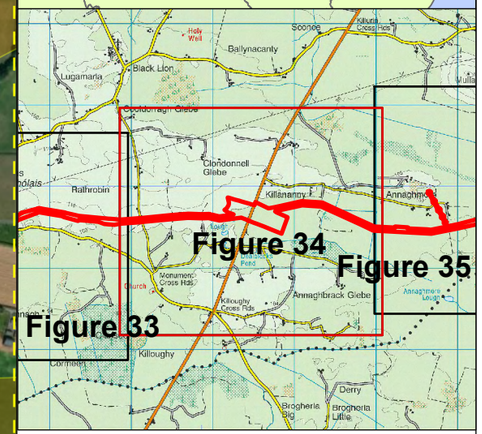
GLODIAGH (TULLAMORE)_020

SILVER (KILCORMAC)_020

SILVER (KILCORMAC)_020

Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'





Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Construction Compound (CC)
- Proposed Natural Heritage Areas
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Good

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 34
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
Jacobs No.	32105801	Client No.	9318
Filepath	\\global\ie\DTG\SHp\32105801_WSP_DRArc\GIS\DARCH. 09 - Water\Appendix\A9.2 Pipeline Crossings.aprx		

Drawing No.: 32105801/700/12216

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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

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N

TWB-20500
TWB-21000
TWB-21500
TWB-22000
TWB-22500
TWB-23000
TWB-23500

WBX047
WBX048
WBX049
WBX050
WBX051

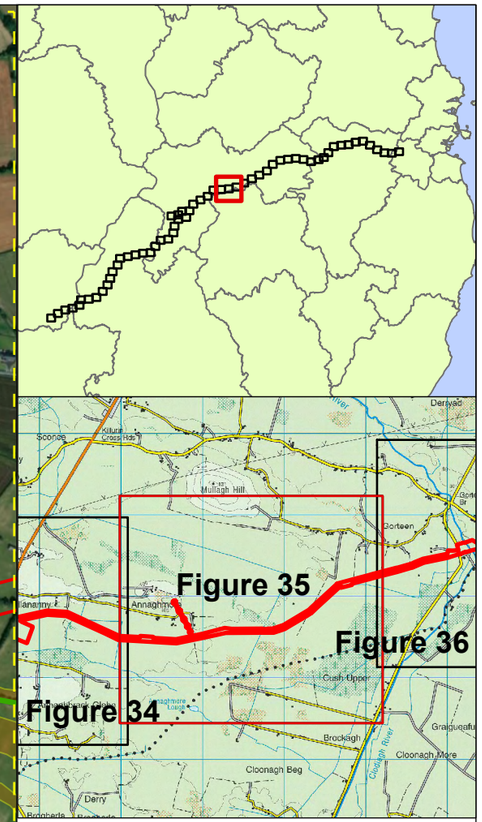
GLODIAGH (TULLAMORE)_020

OFFALY
LAOIS

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World Imagery: Microsoft, Vantor

0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'



Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Washout Valve (WB) - Temporary Washout to Land
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Proposed Natural Heritage Areas
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Good

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 35
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

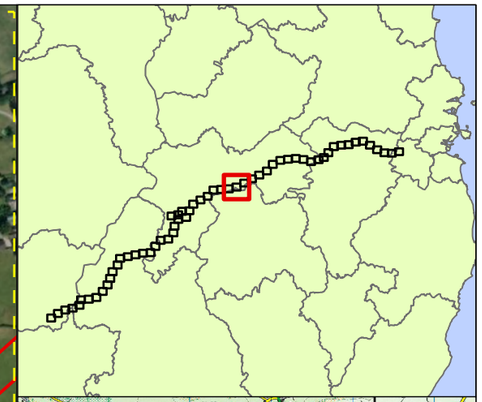
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Filepath	\\glob\ie\DTG\STN\32105801_WSP_DRA\CGIS\DARCH. 09 - Water\Appendix\A9.2 Pipeline Crossings.aprx		

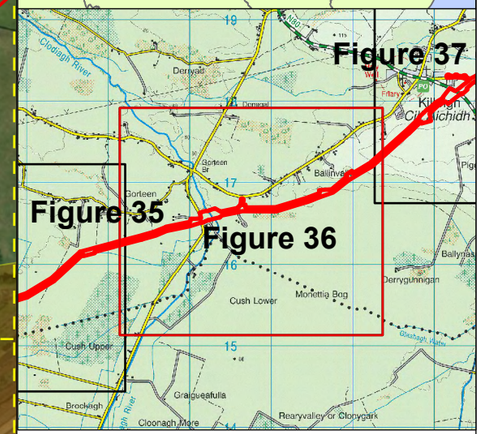
Drawing No. 32105801/700/12217

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Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'





Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Washout Valve (WA) - Temporary Washout to Watercourse/Drain
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Washout Location (WCW)
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024
WFD Ecological Status
- Good
- Moderate

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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 36
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
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Drawing No.
32105801/700/12218

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

N

CLODIAGH (TULLAMORE)_030

CLODIAGH (TULLAMORE)_030

CLODIAGH (TULLAMORE)_030

TWC-500

TWC-1000

TWC-1500

TWC-2000

TWC-2500

WBX053

WCX040

RDX073

RDX072

WBX096

RDX071

TWB-28000

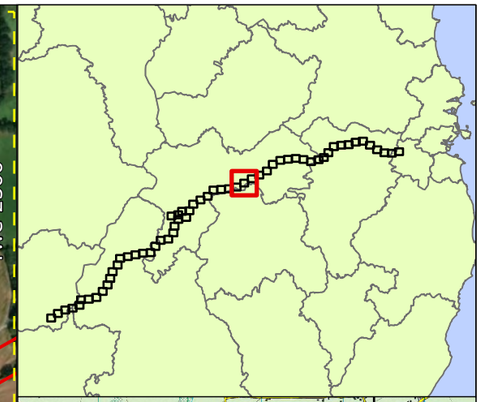
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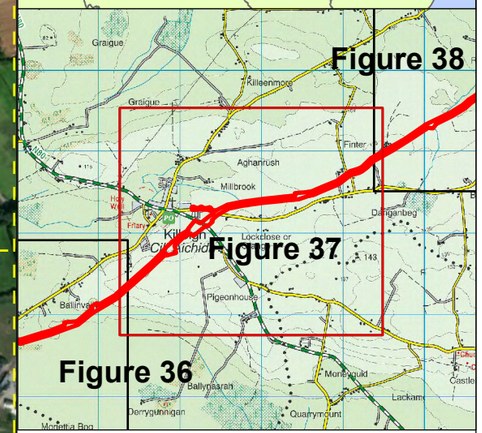
OFFALY
LAOIS

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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'





Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Moderate

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	Drawn	Description	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW
Rev.	Date	RLB	Purpose of revision				

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 37
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
Jacobs No.	32105801	Client No.	9318
Filepath	Ig&wdrive01\GDSfs\32105801_WSP_DRArc\GDS\DARCs. SB - Water\Appendix\A9.2 Pipeline Crossings.apx		
Drawing No.	32105801/700/12219		

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

MEELAGHANS_010

TWC-6000

TWC-5500

TWC-5000

TWC-4500

TWC-4000

TWC-3500

TWC-3000

TWC-2500

WCX042

WCX043

WCX041

WBX056

WBX055

WBX054

RDX074

TULLAMORE_020

Figure 39

Figure 38

Figure 37

Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Washout Valve (WA) - Temporary Washout to Watercourse/Drain
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Washout Location (WCW)
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Moderate
- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW
Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 38
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
Jacobs No.	32105801	Client No.	9318
Filepath	\\global\ie\dfs\IRG\SPs\32105801_WSP_DRAs\GIS\DM\Ch. 09 - Water\Appendix\A9.2 Pipeline Crossings.aprx		

Drawing No.: 32105801/700/12220

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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

Note :-
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N

TULLAMORE_020

TULLAMORE_010

TWC-7500

TWC-8000

TWC-8500

TWC-9000

TWC-9500

TWC-6500

TWC-7000

WCX045

RDX078

RDX077

WCX044

RDX130

RDX076

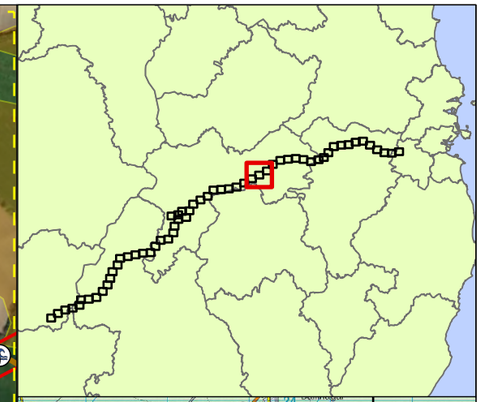
WBX057

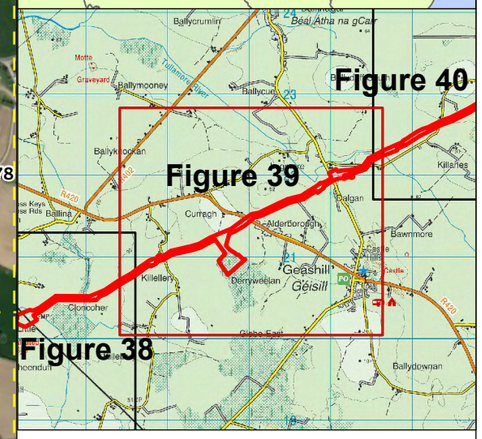
PSD6

RDX075

TULLAMORE

Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'





Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Pipe Storage Depot (PSD)
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW
Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 39
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
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Drawing No. 32105801/700/12221

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

N

TWC-12500

DAINGEAN_020

TWC-13000

TWC-13500

RDX081

TWC-12000

TWC-11500

WBX063

RDX080

TWC-11000

WBX062

TWC-10500

WBX097

RDX079

WBX061

TWC-10000

WBX060

WBX059

WBX058

WCX045

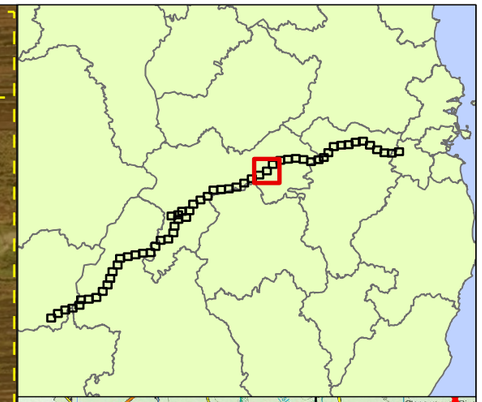
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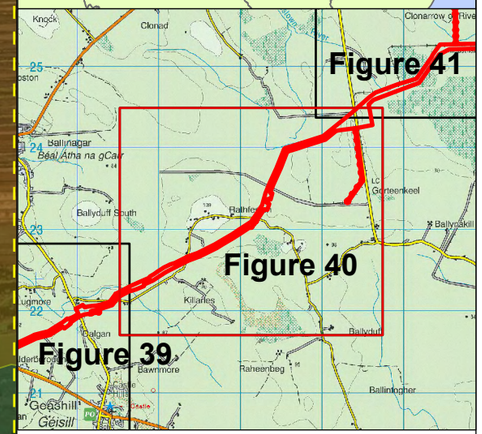
ENAGHAN STREAM_010

Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'

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World Imagery: Microsoft, Vantor

0 0.1 0.2 0.4 0.6 0.8 1 Kilometres





Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Good
- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 40
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
Jacobs No.	32105801	Client No.	9318
Filepath	\\global\ie\DTG\SPs\32105801_WSP_DRAs\GIS\DAR\Ch. 09 - Water\Appendix\A9.2 Pipeline Crossings.aprx		

Drawing No. 32105801/700/12222

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

N

DAINGEAN_030

DAINGEAN_030

TWC-16500

TWC-16000

TWC-15000

TWC-15500

TWC-14500

TWC-14000

TWC-13500

DAINGEAN_010

DAINGEAN_010

RDX081

Figure 41

Figure 42

Figure 40

Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'

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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Potential Waterbody Crossing (WBP)
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 41
Pipeline Crossings

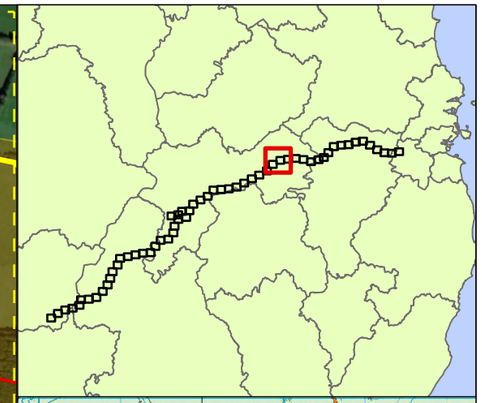
Drawing Status: **FINAL – PLANNING APPLICATION**

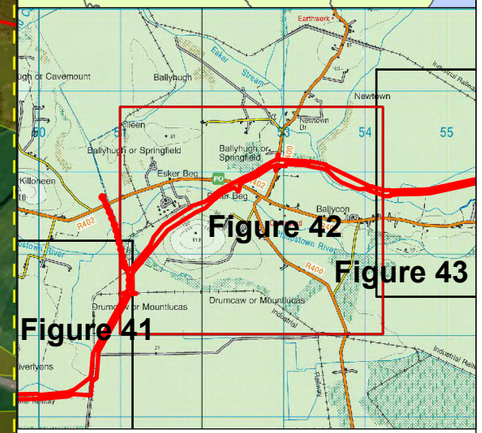
Scale @A3	1:10,000		DO NOT SCALE
Jacobs No.	32105801	Client No.	9318
Filepath	\\global\ie\dfs\IRG\ISH\32105801_WSP_DRAs\GIS\DARA\Ch. 09 - Water\Appendix\A9.2 Pipeline Crossings.aprx		

Drawing No.: 32105801/700/12223

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.







Note :-
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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Washout Valve (WA) - Temporary Washout to Watercourse/Drain
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Washout Location (WCW)
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024
WFD Ecological Status
- Moderate
- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

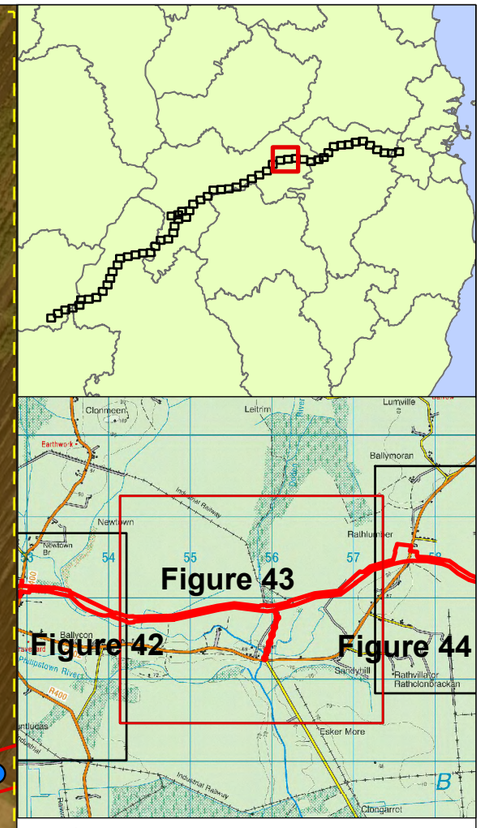
Drawing Title
A9.2 Figure 42
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
Jacobs No.	32105801	Client No.	9318
Filepath	\\global\ie01\GIS\Proj\32105801_WSP_DRAnGIS\DATA\Ch. 09 - Water\Appendix\A9.2 Pipeline Crossings.aprx		
Drawing No.	32105801/700/12224		

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.





Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Washout Valve (WA) - Temporary Washout to Watercourse/Drain
- Washout Valve (WB) - Temporary Washout to Land
- Watercourse Washout Location (WCW)
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024
WFD Ecological Status
- Moderate
- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 43
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
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Drawing No.
32105801/700/12225

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N

ESKER STREAM_020

PSD8

TWC-24500

TWC-24000

TWC-23500

TWD-500

TWD-1000

TWD-1500

WBX074

WBX075

WBX073

RDX085

WBX072

WBX071

WBX068

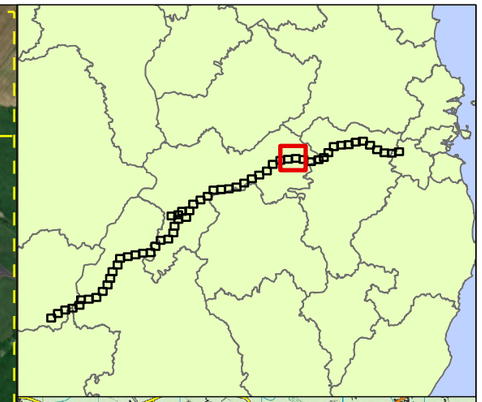
WBX069

ESKER STREAM_020

ESKER STREAM_020

FIGILE_040

Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'



Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Pipe Storage Depot (PSD)
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Moderate
- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW
Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 44
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

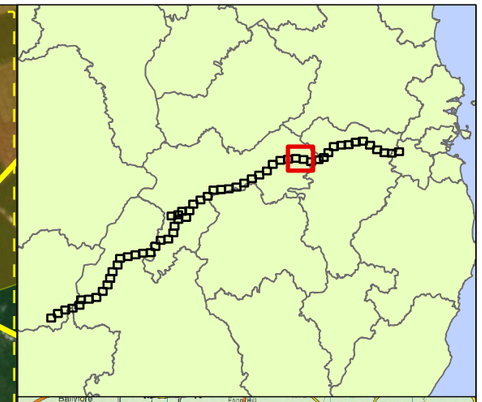
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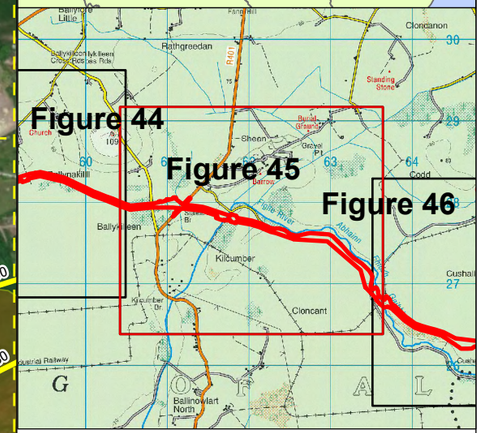
Drawing No. 32105801/700/12226

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

N

WBX075
WBX076
WBX077
WBX099
WBX100
TWD-2000
TWD-2500
TWD-3000
TWD-3500
TWD-4000
TWD-4500
FIGILE_030
WCX055
WCX056
RDX086
RDX087





Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Washout Valve (WA) - Temporary Washout to Watercourse/Drain
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Washout Location (WCW)
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024
WFD Ecological Status
- Moderate
- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 45
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
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Drawing No.
32105801/700/12227

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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

Note :-
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N

FIGILE_030

TWD-5000

TWD-5500

TWD-6000

TWD-6500

TWD-7000

TWD-7500

TWD-8000

TWD-8500

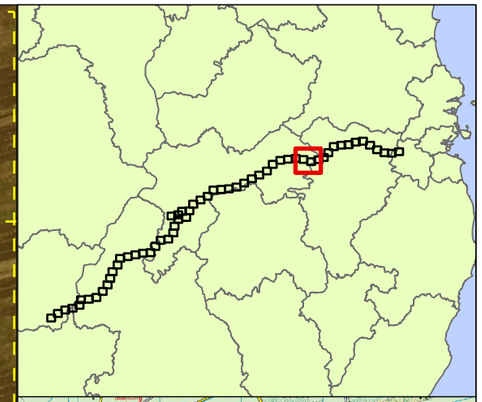
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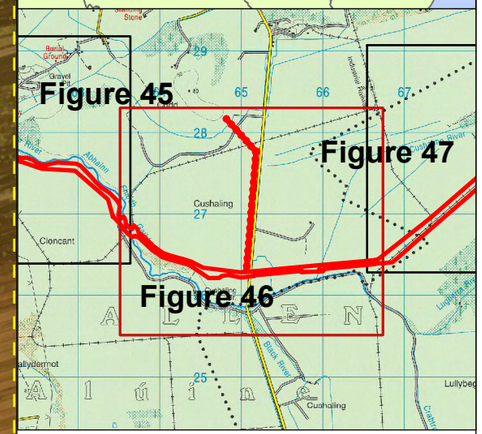
WCX079

WCX057

WBX103

RDX088





Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Moderate

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 46
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

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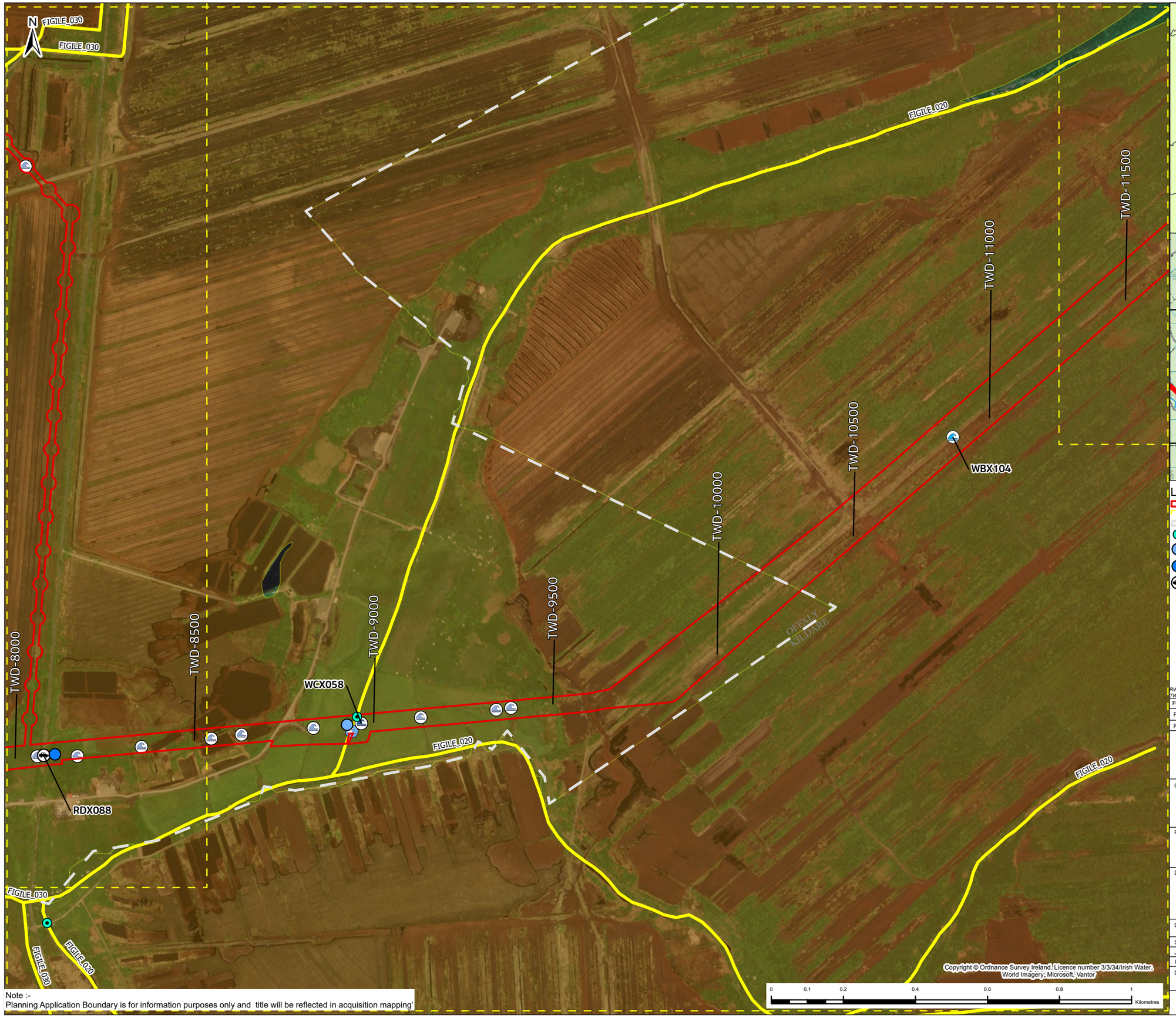
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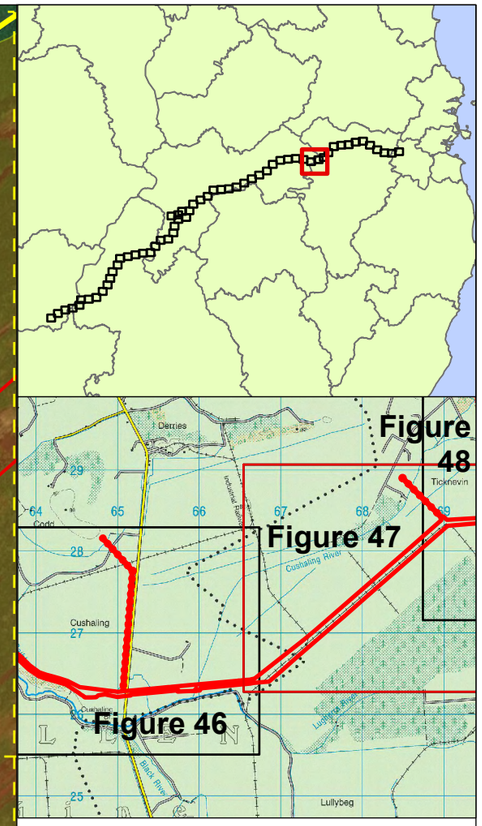
This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'





Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'

Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Washout Valve (WA) - Temporary Washout to Watercourse/Drain
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Washout Location (WCW)
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024
WFD Ecological Status
- Moderate

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 47
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
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Drawing No.	32105801/700/12229		

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

N

FIGILE_030

KILDARE
OFFALY

FIGILE_020

FIGILE_010

FIGILE_020

FIGILE_020

Abbeylough_010

FIGILE_020

WCX083

TWD-12500

TWD-13000

TWD-13500

TWD-14000

TWD-14500

TWD-15000

TWD-15500

WCX059

WBX078

WBX105

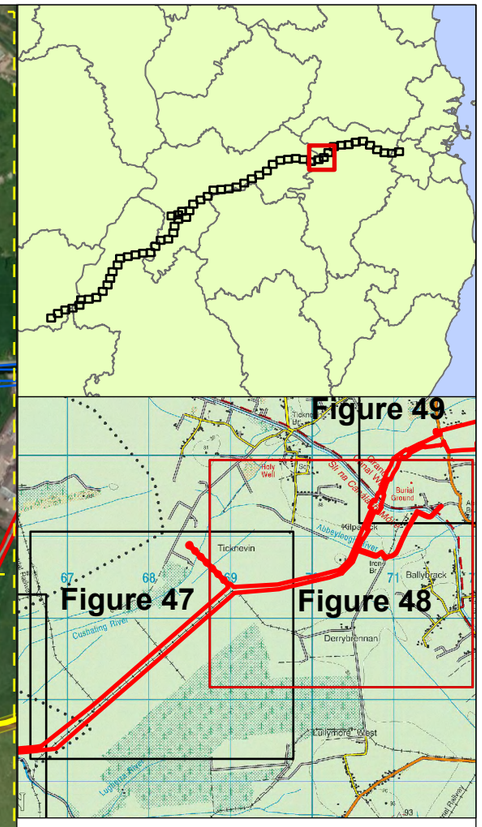
TWD-12000

TWD-11500

Note :-
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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres



Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Washout Valve (WB) - Temporary Washout to Land
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Proposed Natural Heritage Areas
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Moderate
- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

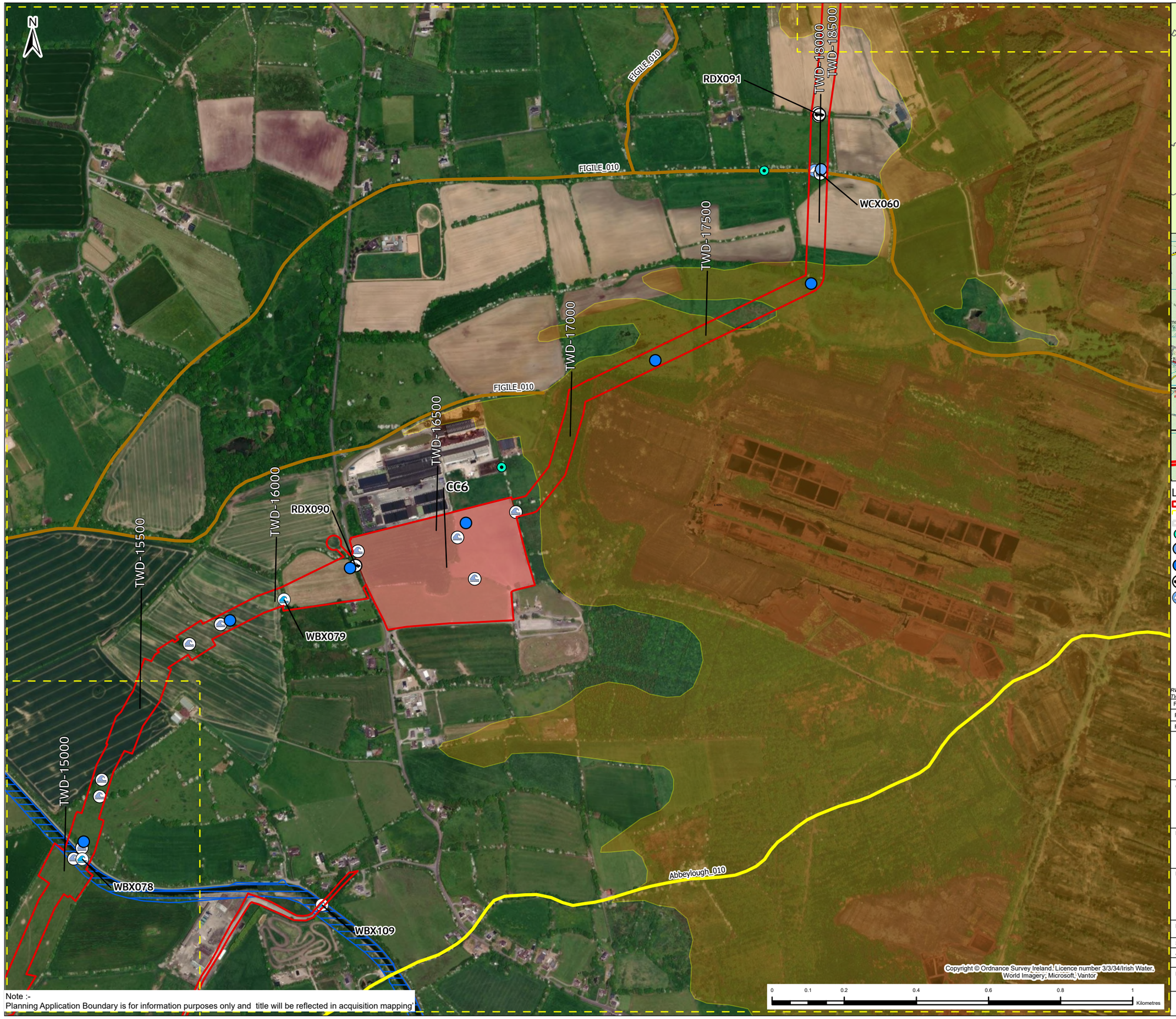
Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 48
Pipeline Crossings

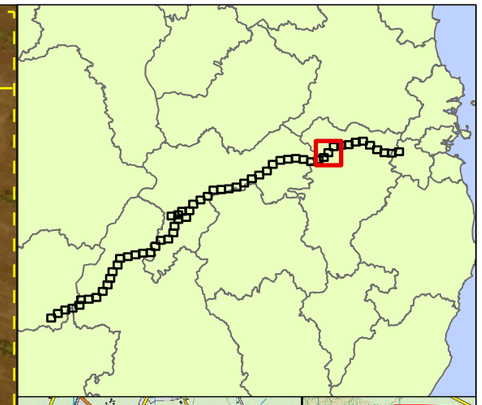
Drawing Status: **FINAL – PLANNING APPLICATION**

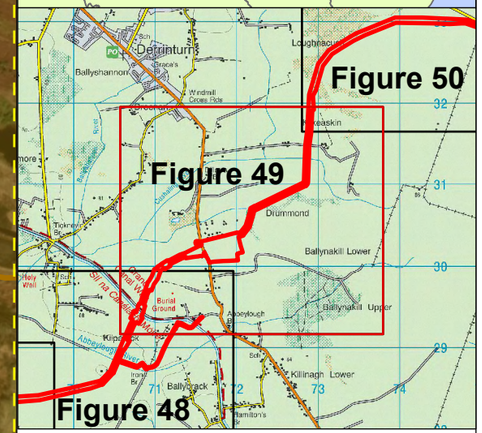
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Drawing No.	32105801/700/12230		

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Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'





Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Washout Valve (WA) - Temporary Washout to Watercourse/Drain
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Washout Location (WCW)
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Construction Compound (CC)
- Proposed Natural Heritage Areas
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024
WFD Ecological Status
- Moderate
- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

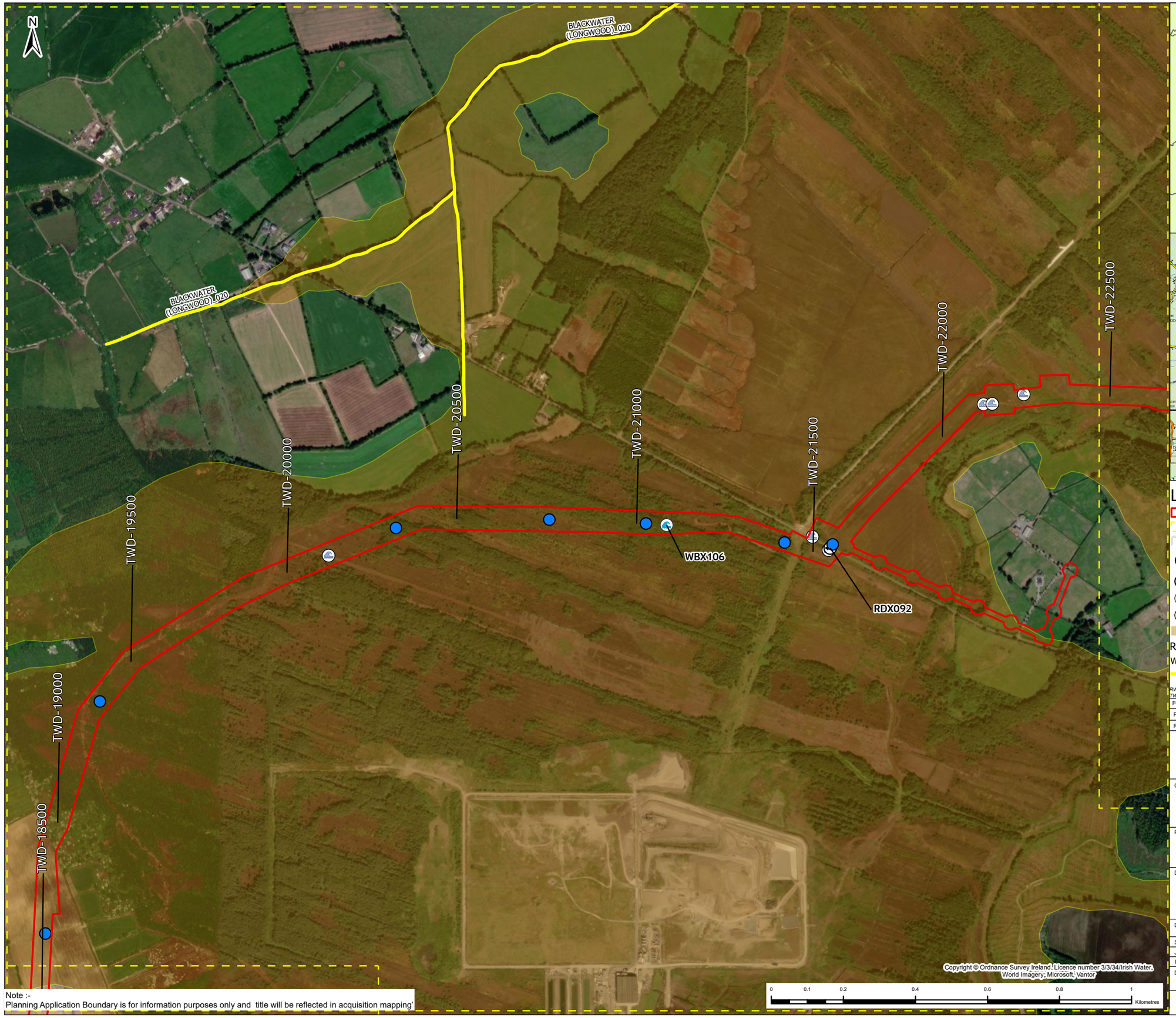
Drawing Title
A9.2 Figure 49
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

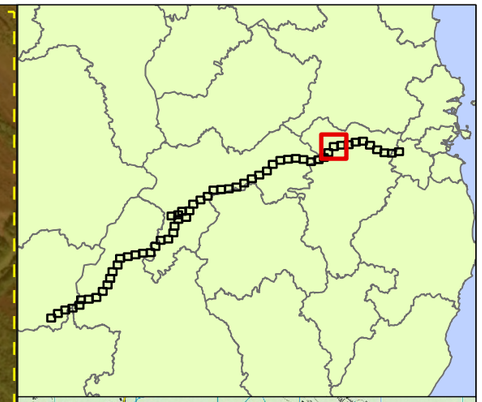
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Drawing No.
32105801/700/12231

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.



Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'



Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Moderate

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 50
Pipeline Crossings

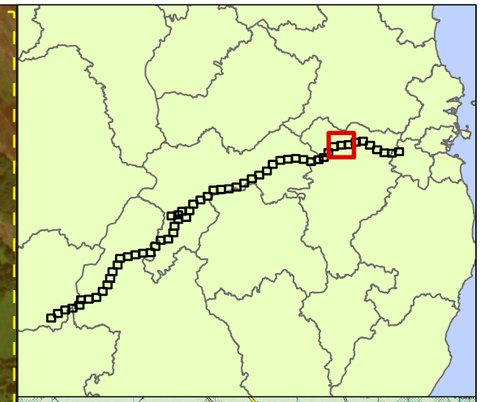
Drawing Status: **FINAL – PLANNING APPLICATION**

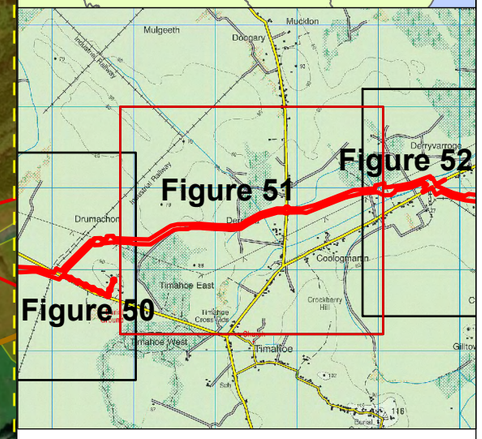
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Drawing No. 32105801/700/12232

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Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'

Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Crossing (EPA)(WCX)
- Potential Waterbody Crossing (WBP)
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 51
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
Jacobs No.	32105801	Client No.	9318
Filepath	\\global\ie\DTG\SPs\32105801_WSP_DRAs\GIS\DARCH. 09 - Water\Appendix\A9.2 Pipeline Crossings.aprx		
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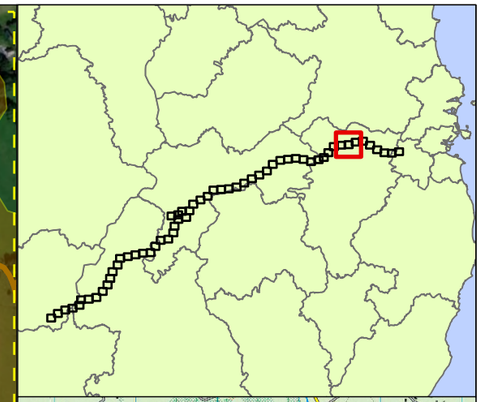
This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

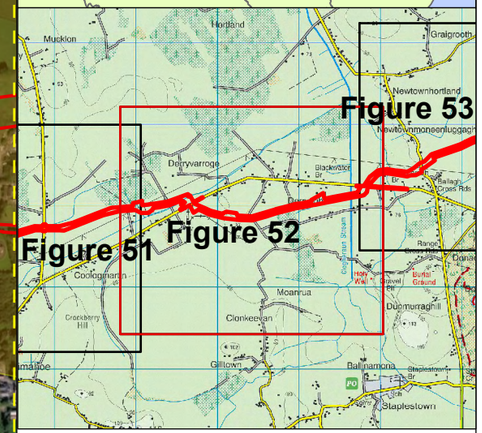
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TWD-28500
TWD-29000

WCX062
WBX080
RDX127
RDX094
RDX095
RDX126
RDX096
WBX081
WCX063
WCX064

BLACKWATER (LONGWOOD)_010





Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Washout Valve (WA) - Temporary Washout to Watercourse/Drain
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Washout Location (WCW)
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024
WFD Ecological Status
- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 52
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
Jacobs No.	32105801	Client No.	9318
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Drawing No.
32105801/700/12234

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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

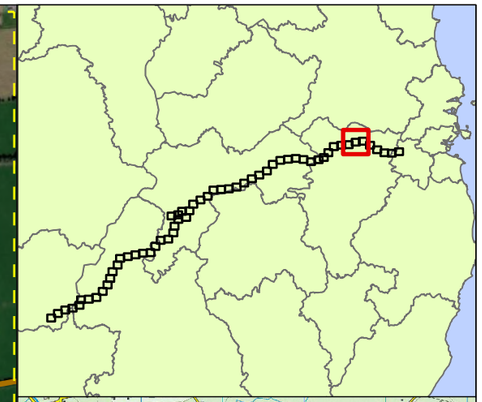
Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'

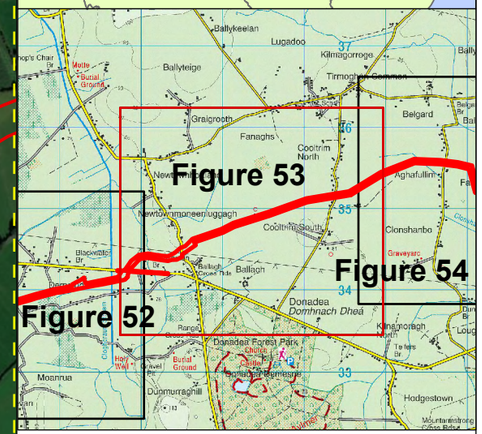
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TWD-30000
TWD-29500
TWD-29000
TWD-30500
TWD-31000
TWD-31500
TWD-32000

BLACKWATER (LONGWOOD)_010
BLACKWATER (LONGWOOD)_010
BLACKWATER (LONGWOOD)_010

RDX096
WCX065
RDX097
WBX081
WBX082
RDX098
WBX083





Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Washout Valve (WA) - Temporary Washout to Watercourse/Drain
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Washout Location (WCW)
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Proposed Natural Heritage Areas
- Peat (source: Teagasc)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 53
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
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Drawing No.
32105801/700/12235

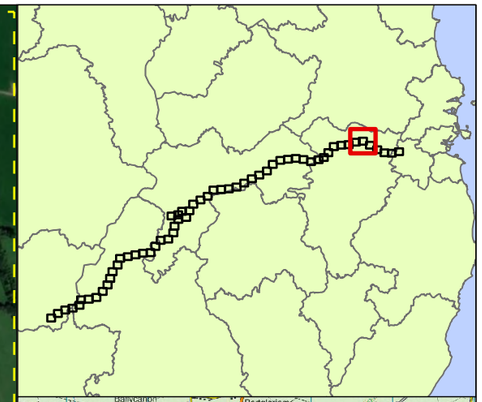
This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

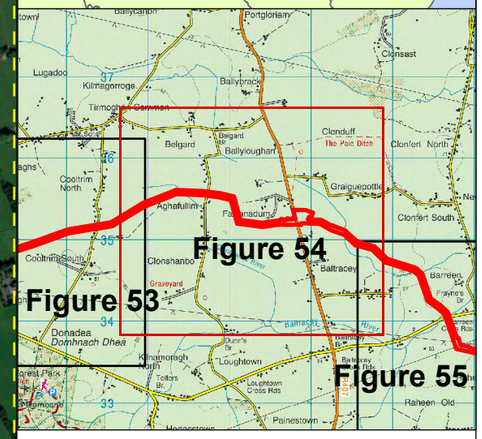
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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'







Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Washout Valve (WA) - Temporary Washout to Watercourse/Drain
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Washout Location (WCW)
- Watercourse Crossing (EPA)(WCX)
- Potential Waterbody Crossing (WBP)
- Pipe Storage Depot (PSD)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 54
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
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Drawing No.: 32105801/700/12236

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Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'



Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'

Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Washout Valve (WA) - Temporary Washout to Watercourse/Drain
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Washout Location (WCW)
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 55
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
Jacobs No.	32105801	Client No.	9318
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Drawing No.	32105801/700/12237		

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

N

RDX104

WBX085

TWE-5500

TWE-6000

RDX105

TWE-6500

TWE-7000

WBX086

PSD10

TWE-7500

TWE-8000

TWE-8500

RDX106

RDX107

LYKEEN_020

LIFFEY_140

LIFFEY_130

LIFFEY_130

LIFFEY_140

Figure 55

Figure 56

Figure 57

Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Pipe Storage Depot (PSD)

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Good
- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A9.2 Figure 56
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
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Drawing No.: 32105801/700/12238

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Note :-
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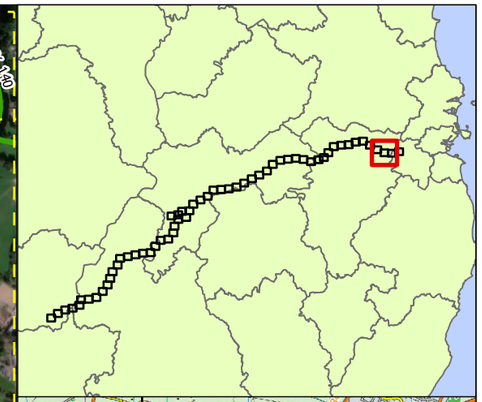
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TWE-9000
TWE-9500
TWE-10000
TWE-10500
TWE-11000
TWE-11500
TWE-12000

WCX071
WCX072
WCX073
WCX074
WCX075
WCX076
RDX108
RDX109
WBX087

LIFFEY_140
REEVES_010

Flow Control Valve



Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Survey Locations 2021
- Washout Valve (WA) - Temporary Washout to Watercourse/Drain
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Washout Location (WCW)
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Flow Control Valve
- Proposed Natural Heritage Areas
- WFD Nutrient Sensitive rivers

River Waterbody WFD Status 2019-2024
WFD Ecological Status
- Good

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 57
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:10,000		DO NOT SCALE
Jacobs No.	32105801	Client No.	9318
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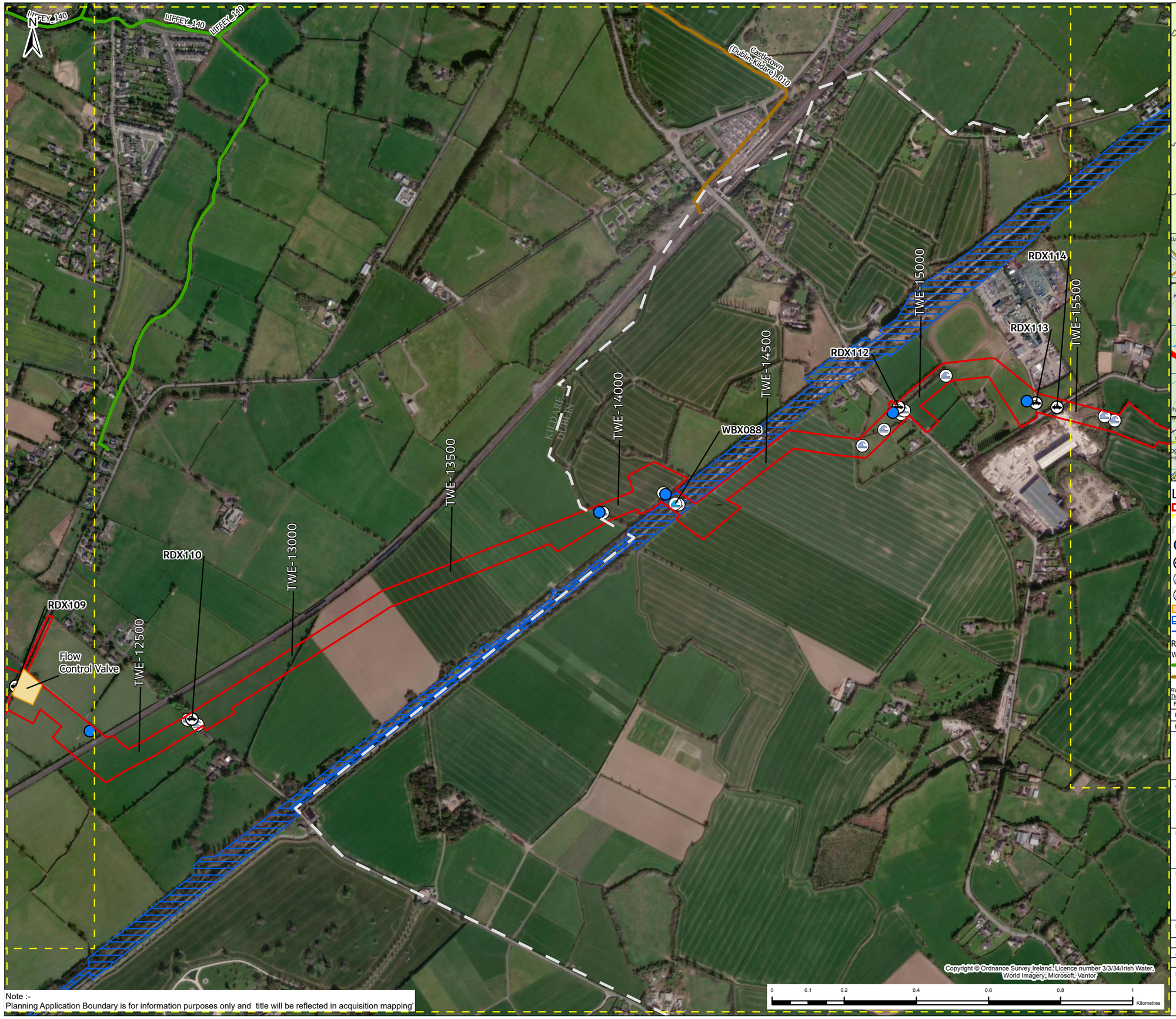
Drawing No.
32105801/700/12239

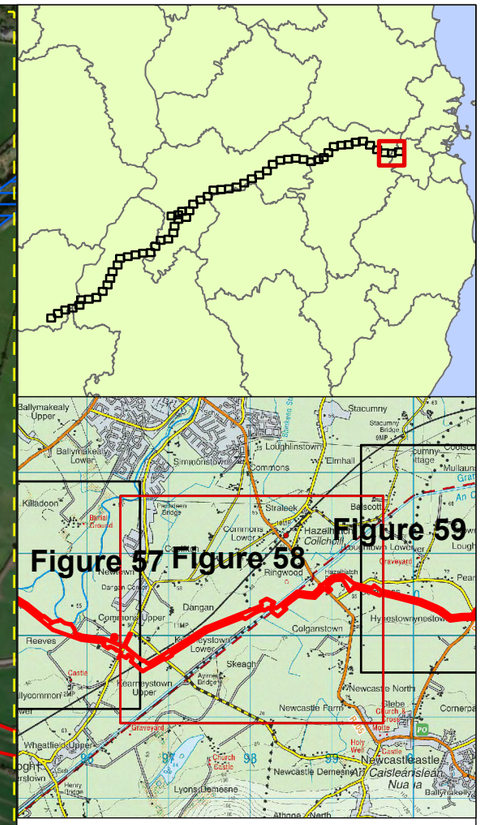
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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

Note :-
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Note :-
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0 0.1 0.2 0.4 0.6 0.8 1 Kilometres

Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Washout Valve (WB) - Temporary Washout to Land
- Road Crossing
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Flow Control Valve
- Proposed Natural Heritage Areas
- WFD Nutrient Sensitive rivers

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Good
- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

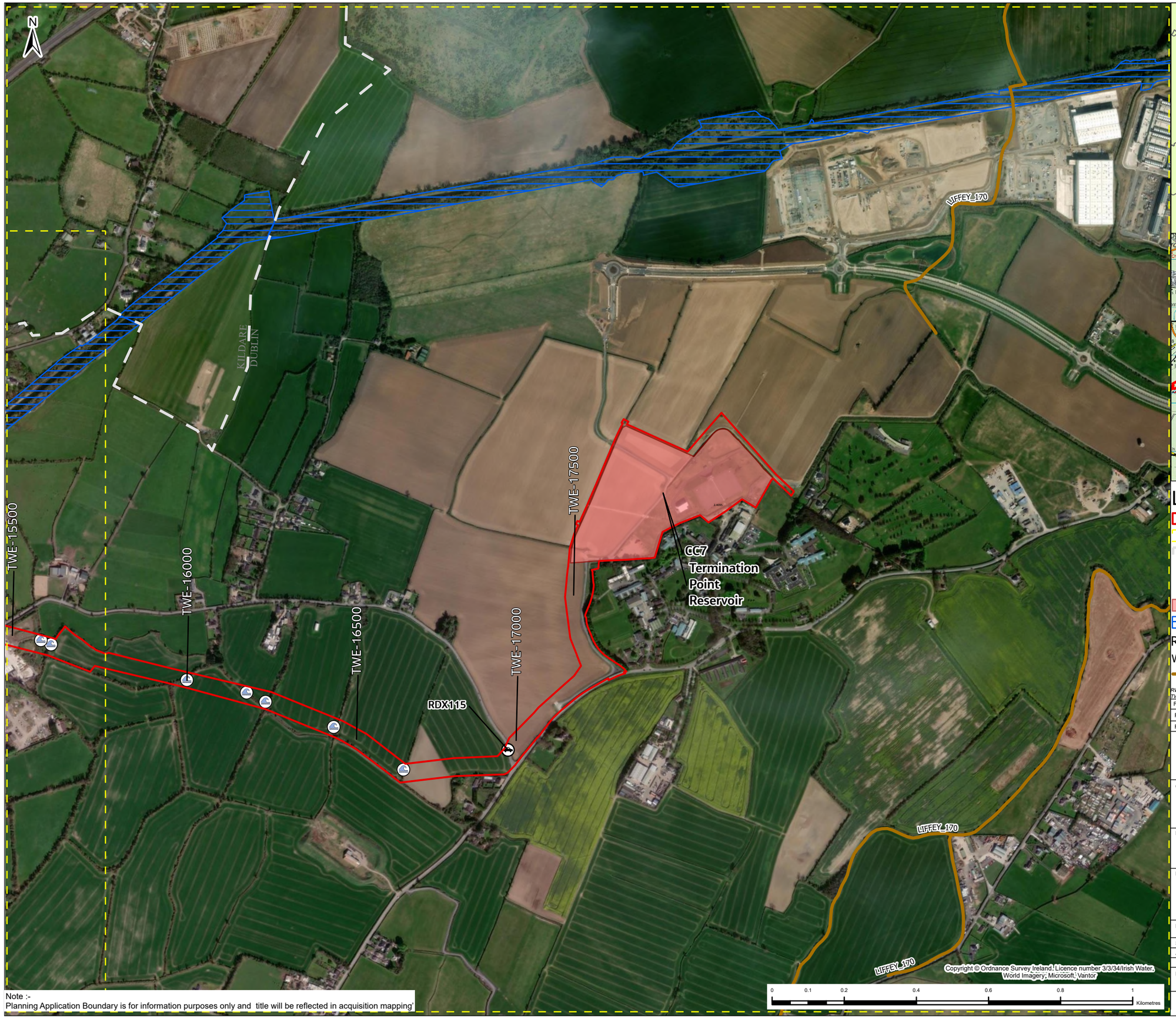
Drawing Title: A9.2 Figure 58
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

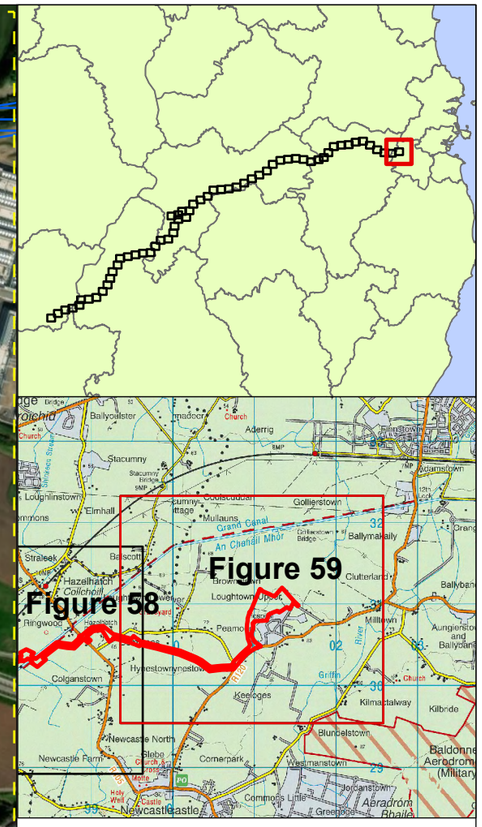
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Filepath	\\glob\ie\DATA\STN\32105801_WSP_DRAs\GIS\DARA's\A9. 09 - Water\Appendix\A9.2 Pipeline Crossings.aprx		

Drawing No.: 32105801/700/12240

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.



Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping'



Legend

- Planning Application Boundary
- Start/End of Bordering Figure
- County Boundaries
- Road Crossing
- Potential Waterbody Crossing (WBP)
- Construction Compound (CC)
- Proposed Natural Heritage Areas

River Waterbody WFD Status 2019-2024

WFD Ecological Status

- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	09/12/202	16	FINAL - PLANNING PERMISSION	EA	PG	KK	SW
F01	10/10/2025	14	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

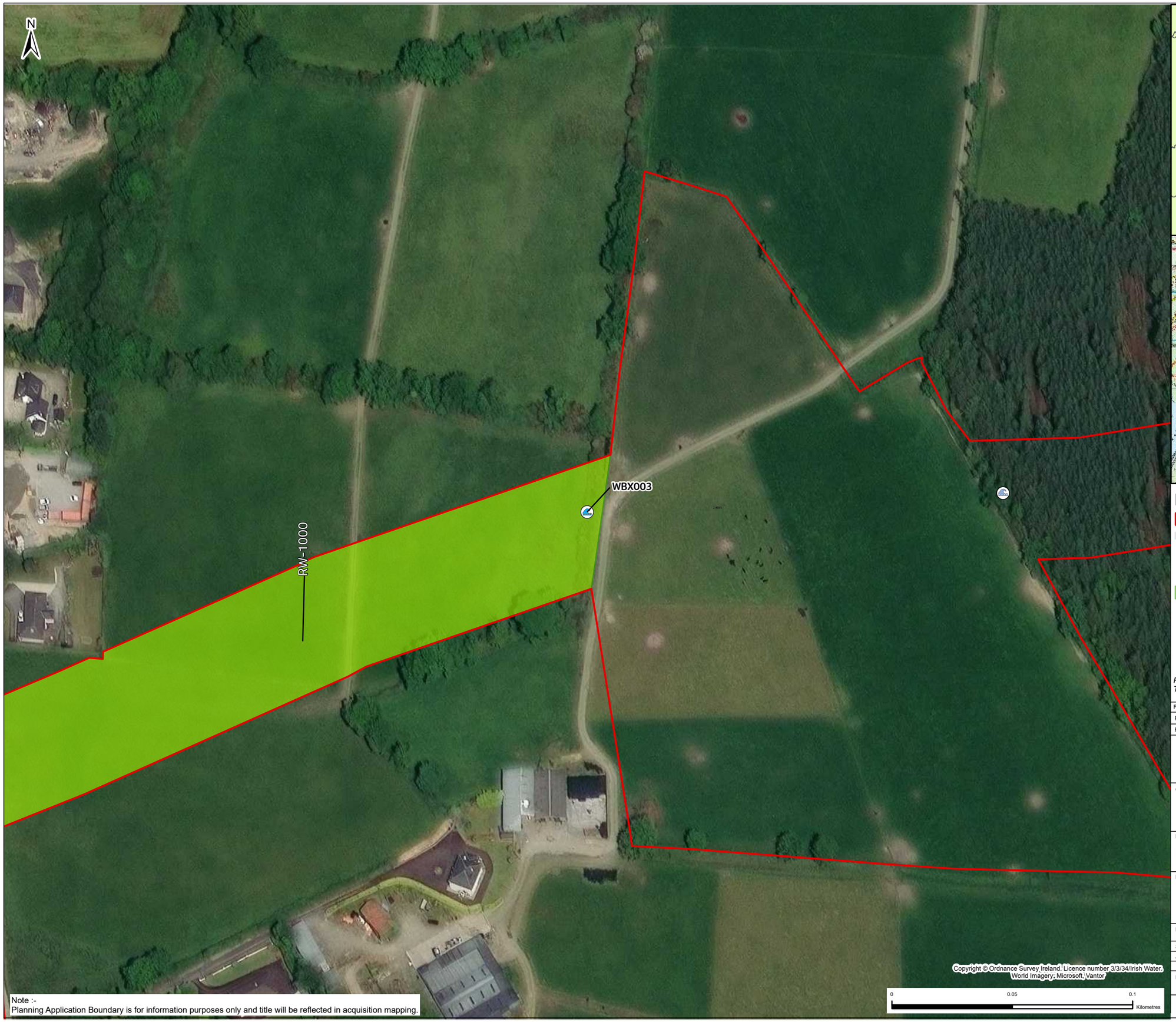
Project
Water Supply Project
Eastern and Midlands Region

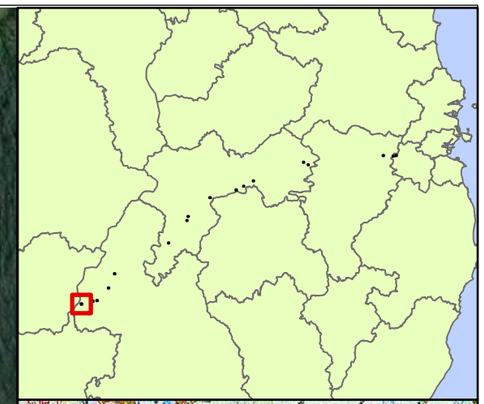
Drawing Title
A9.2 Figure 59
Pipeline Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

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Drawing No.	32105801/700/12241		

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.







Legend

- Planning Application Boundary
- County Boundaries
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Tunnel/Trenchless Crossing

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	28/11/2025	16	FINAL - PLANNING PERMISSION	PG	PW	KK	SW
F01	10/10/2025	16	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 60
Trenchless Water Body Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:1,500		DO NOT SCALE
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Filepath	\\glasshost1\GISProj\32105801_WSP_DRAs\GIS\EIARTCH_09 - Water\Appendix\A9.2 Trenchless Water Body\Surface Water Receptor Crossings.aprx		

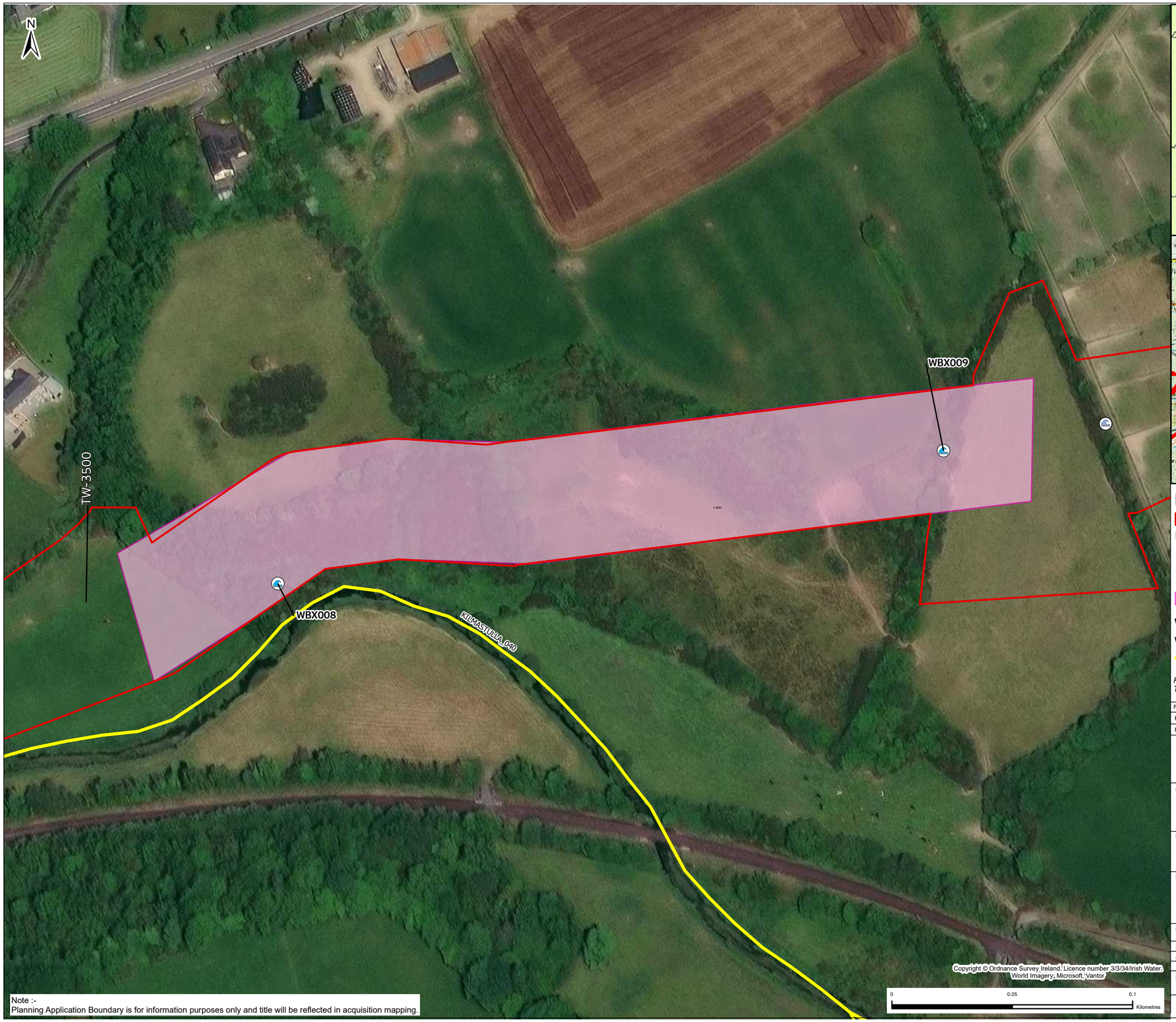
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This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

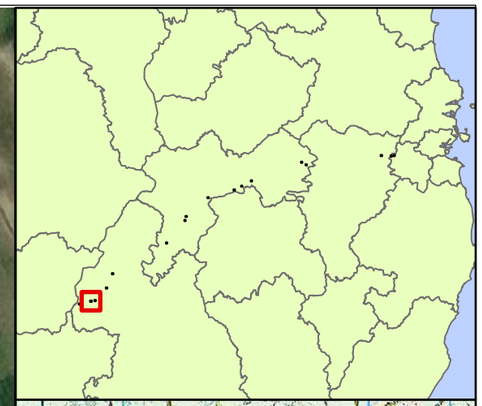
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0 0.05 0.1 Kilometres

Note :-
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Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping.





Legend

- Planning Application Boundary
- County Boundaries
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Tunnel/Trenchless Crossing with No Above Ground Disturbance

WFD River Waterbody Status 2019-2024

WFD Ecological Status

- Moderate

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	28/11/2025	16	FINAL - PLANNING PERMISSION	PG	PW	KK	SW
F01	10/10/2025	16	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

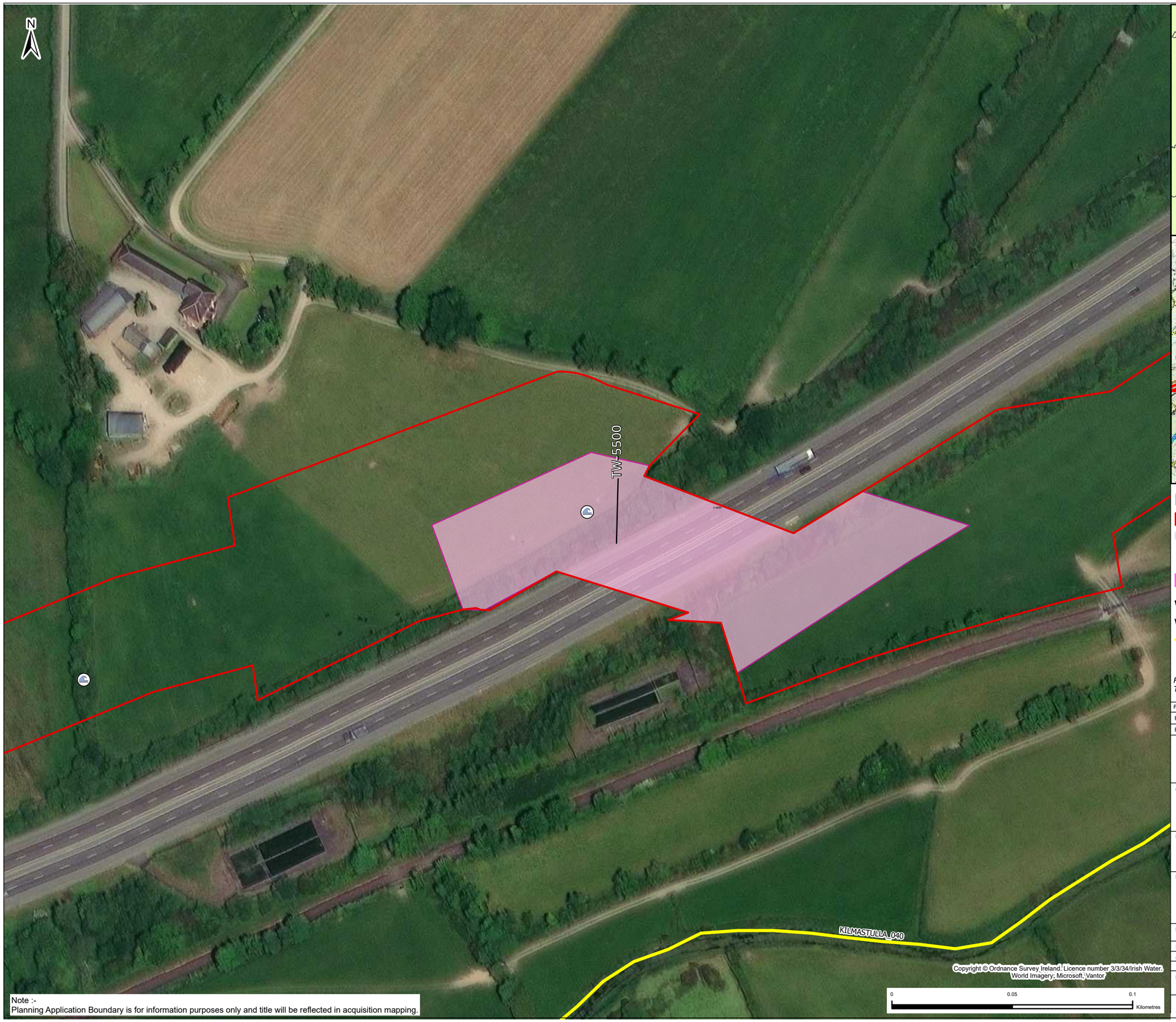
Drawing Title
A9.2 Figure 61
Trenchless Water Body Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

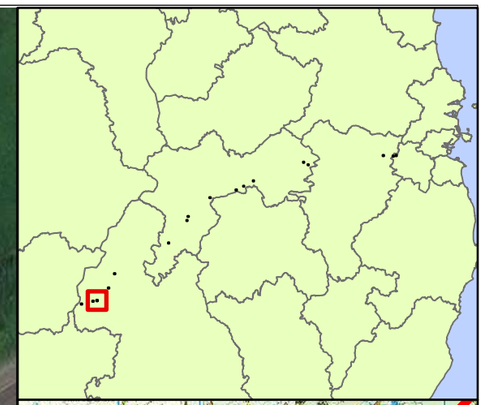
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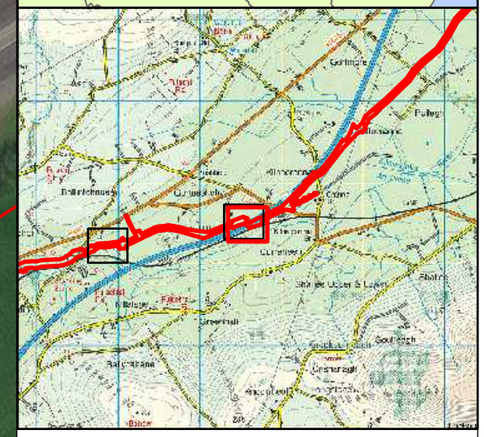
Drawing No.
32105801/700/12246

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Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping.





Legend

- Planning Application Boundary
- County Boundaries
- Potential Waterbody Crossing (WBP)
- Tunnel/Trenchless Crossing with No Above Ground Disturbance

WFD River Waterbody Status 2019-2024

WFD Ecological Status

- Moderate

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

F02	28/11/2025	16	FINAL - PLANNING PERMISSION	PG	PW	KK	SW
F01	10/10/2025	16	FOR APPROVAL	JL	PW	HS	SW
Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

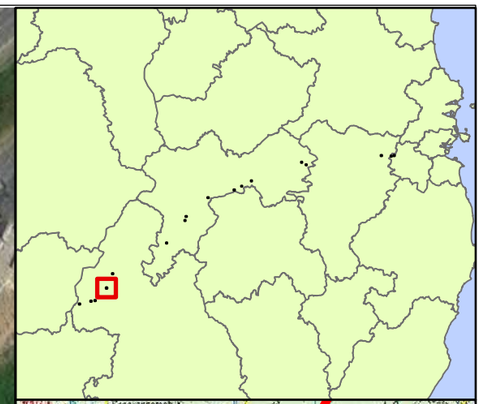
Drawing Title
A9.2 Figure 62
Trenchless Water Body Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:1,500		DO NOT SCALE
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Drawing No.	32105801/700/12247		

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.







Legend

- Planning Application Boundary
- County Boundaries
- Potential Waterbody Crossing (WBP)
- Pipe Storage Depot (PSD)
- Tunnel/Trenchless Crossing

WFD River Waterbody Status 2019-2024

WFD Ecological Status

- Moderate
- Poor

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

F02	28/11/2025	16	FINAL - PLANNING PERMISSION	PG	PW	KK	SW
F01	10/10/2025	16	FOR APPROVAL	JL	PW	HS	SW
Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

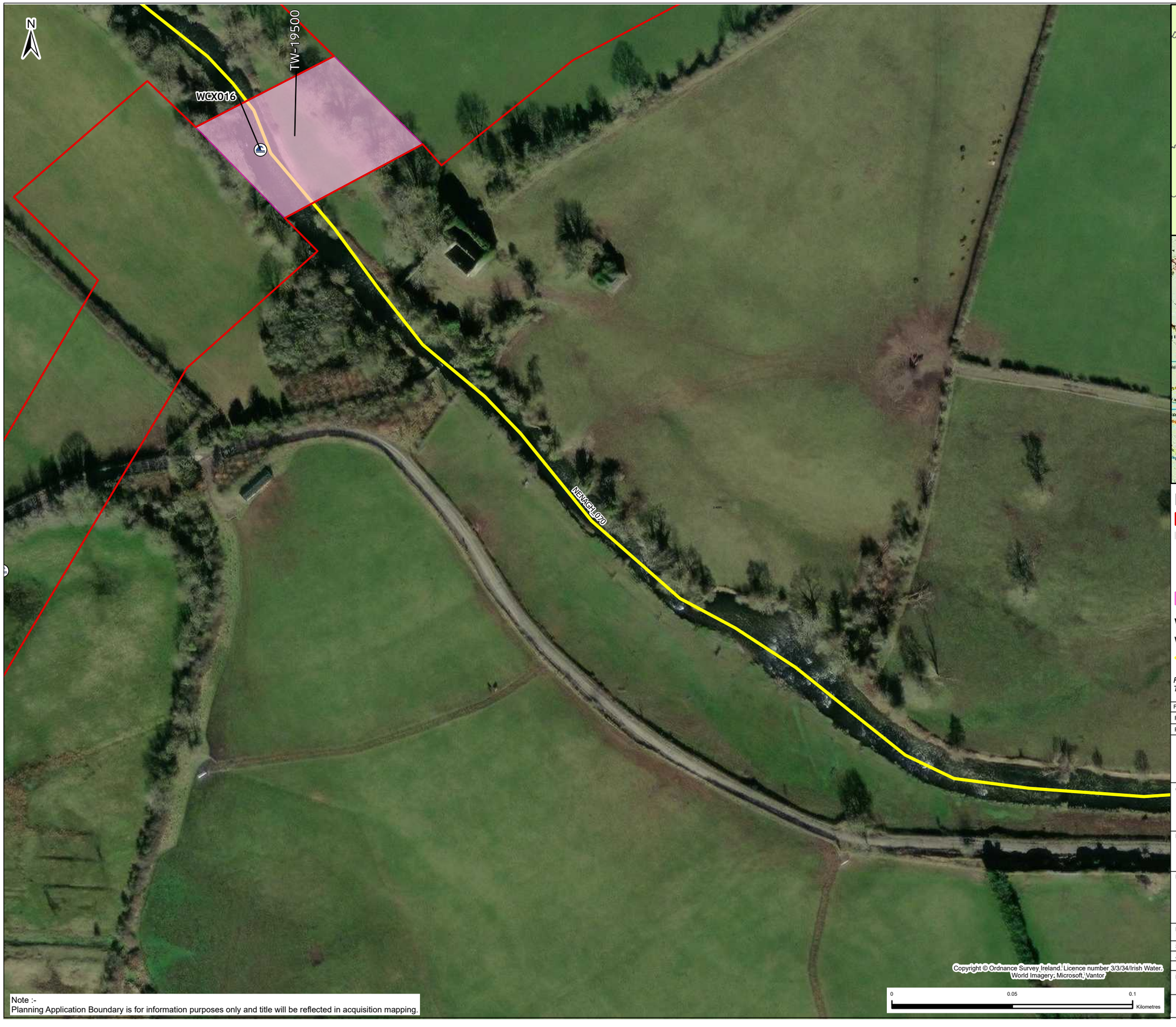
Drawing Title
A9.2 Figure 63
Trenchless Water Body Crossings

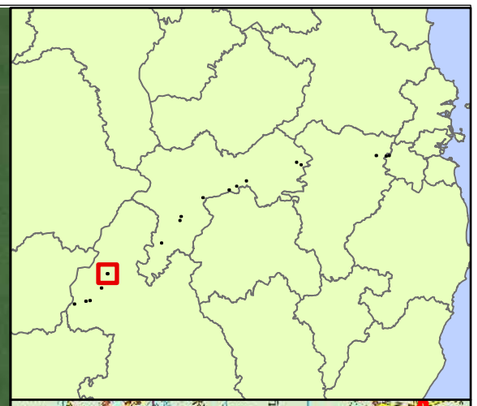
Drawing Status: **FINAL – PLANNING APPLICATION**

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Jacobs No.	32105801	Client No.	9318
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Drawing No.
32105801/700/12248

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0 0.05 0.1 Kilometres

Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping.

Legend

- Planning Application Boundary
- County Boundaries
- Watercourse Crossing (EPA)(WCX)
- Potential Waterbody Crossing (WBP)
- Tunnel/Trenchless Crossing with No Above Ground Disturbance

WFD River Waterbody Status 2019-2024

WFD Ecological Status

- Moderate

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	28/11/2025	16	FINAL - PLANNING PERMISSION	PG	PW	KK	SW
F01	10/10/2025	16	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 64
Trenchless Water Body Crossings

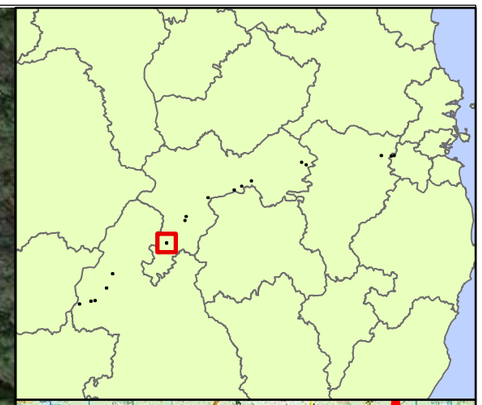
Drawing Status: **FINAL – PLANNING APPLICATION**

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Drawing No.
32105801/700/129

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Legend

- Planning Application Boundary
- County Boundaries
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Tunnel/Trenchless Crossing with No Above Ground Disturbance

WFD River Waterbody Status 2019-2024

WFD Ecological Status

- Good

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	28/11/2025	16	FINAL - PLANNING PERMISSION	PG	PW	KK	SW
F01	10/10/2025	16	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 65
Trenchless Water Body Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:1,500		DO NOT SCALE
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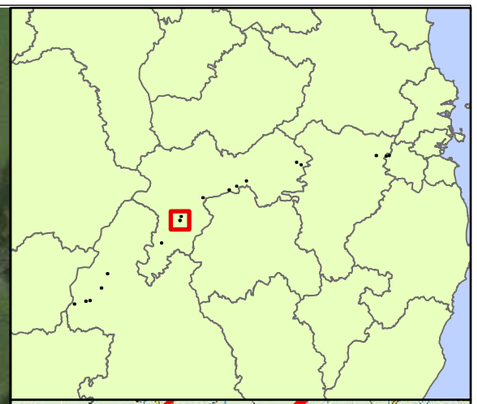
Drawing No.
32105801/700/12250

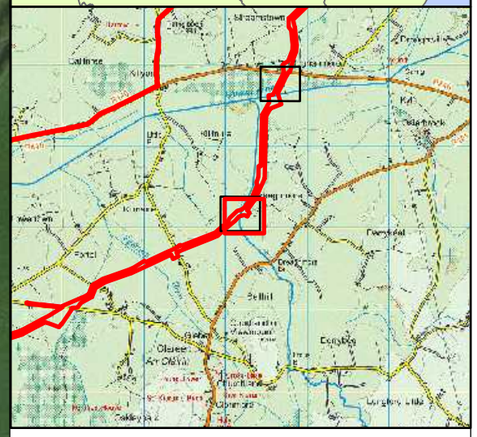
This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping.



Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping.





Legend

- Planning Application Boundary
- County Boundaries
- Watercourse Crossing (EPA)(WCX)
- Potential Waterbody Crossing (WBP)
- Tunnel/Trenchless Crossing

WFD River Waterbody Status 2019-2024

WFD Ecological Status

- Good

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

F02	28/11/2025	16	FINAL - PLANNING PERMISSION	PG	PW	KK	SW
F01	10/10/2025	16	FOR APPROVAL	JL	PW	HS	SW
Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 66
Trenchless Water Body Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

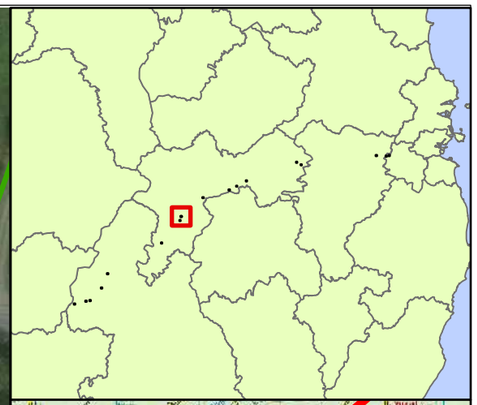
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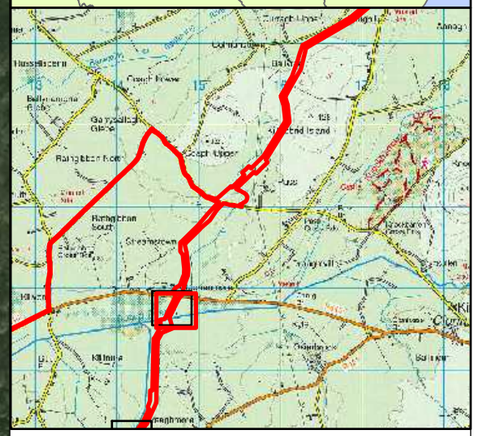
Drawing No.
32105801/700/12251

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.



Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping.





Legend

- Planning Application Boundary
- County Boundaries
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Tunnel/Trenchless Crossing with No Above Ground Disturbance

WFD River Waterbody Status 2019-2024

WFD Ecological Status

- Good

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	28/11/2025	16	FINAL - PLANNING PERMISSION	PG	PW	KK	SW
F01	10/10/2025	16	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 67
Trenchless Water Body Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

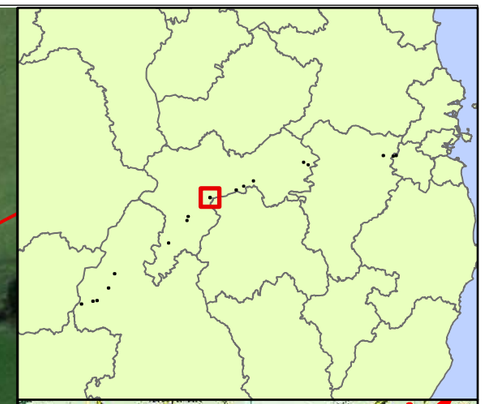
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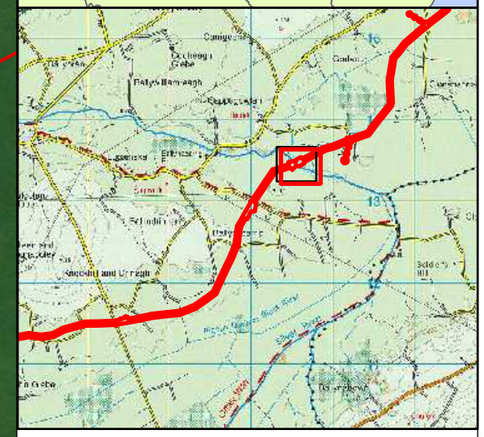
Drawing No.
32105801/700/12252

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.



Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping.





Legend

- Planning Application Boundary
- County Boundaries
- Watercourse Crossing (EPA)(WCX)
- Tunnel/Trenchless Crossing with No Above Ground Disturbance

WFD River Waterbody Status 2019-2024

WFD Ecological Status

- Good

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	28/11/2025	16	FINAL - PLANNING PERMISSION	PG	PW	KK	SW
F01	10/10/2025	16	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 68
Trenchless Water Body Crossings

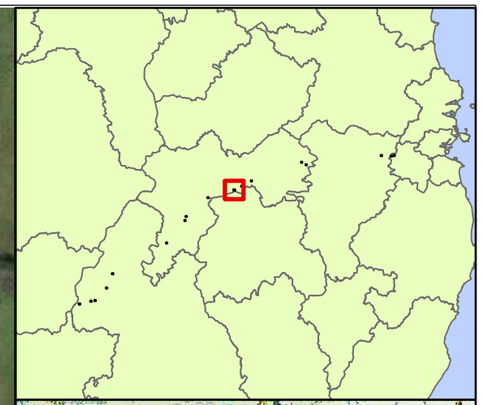
Drawing Status: **FINAL – PLANNING APPLICATION**

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Drawing No.	32105801/700/12253		

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Note :-
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Legend

- Planning Application Boundary
- County Boundaries
- Watercourse Crossing (EPA)(WCX)
- Potential Waterbody Crossing (WBP)
- Tunnel/Trenchless Crossing with No Above Ground Disturbance

WFD River Waterbody Status 2019-2024

WFD Ecological Status

- Good

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	28/11/2025	16	FINAL - PLANNING PERMISSION	PG	PW	KK	SW
F01	10/10/2025	16	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 69
Trenchless Water Body Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

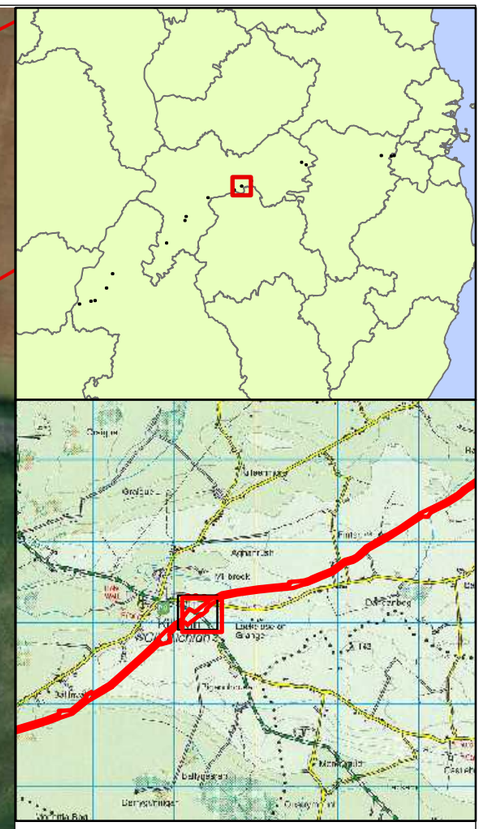
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Drawing No.
32105801/700/12254

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Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping.



Legend

- Planning Application Boundary
- County Boundaries
- Watercourse Crossing (WBX)
- Tunnel/Trenchless Crossing

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	28/11/2025	16	FINAL - PLANNING PERMISSION	PG	PW	KK	SW
F01	10/10/2025	16	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 70
Trenchless Water Body Crossings

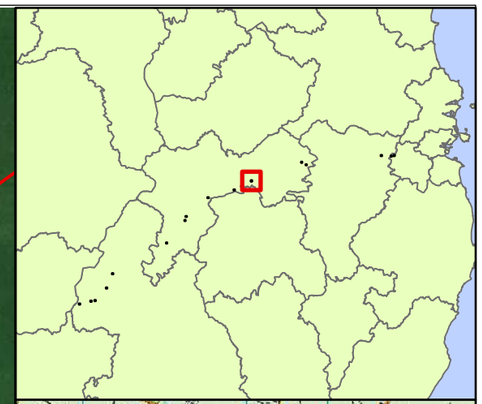
Drawing Status: **FINAL – PLANNING APPLICATION**

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Drawing No.	32105801/700/12255		

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.



Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping.





Legend

- Planning Application Boundary
- County Boundaries
- Watercourse Crossing (EPA)(WCX)
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Tunnel/Trenchless Crossing with No Above Ground Disturbance

WFD River Waterbody Status 2019-2024

WFD Ecological Status

- Moderate

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	28/11/2025	16	FINAL - PLANNING PERMISSION	PG	PW	KK	SW
F01	10/10/2025	16	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 71
Trenchless Water Body Crossings

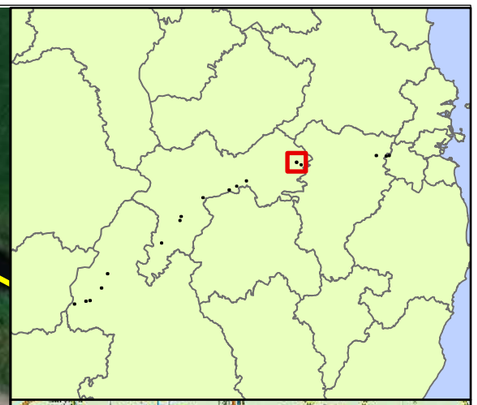
Drawing Status: **FINAL – PLANNING APPLICATION**

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Drawing No.
32105801/700/12256

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.







Legend

- Planning Application Boundary
- County Boundaries
- Watercourse Crossing (EPA)(WCX)
- Potential Waterbody Crossing (WBP)
- Tunnel/Trenchless Crossing

WFD River Waterbody Status 2019-2024

WFD Ecological Status

- Moderate

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	28/11/2025	16	FINAL - PLANNING PERMISSION	PG	PW	KK	SW
F01	10/10/2025	16	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 72
Trenchless Water Body Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

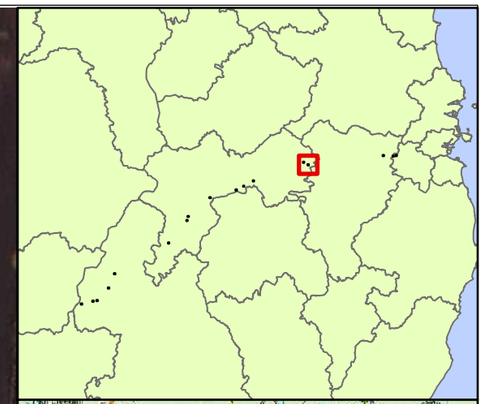
Scale @A3	1:1,500		DO NOT SCALE
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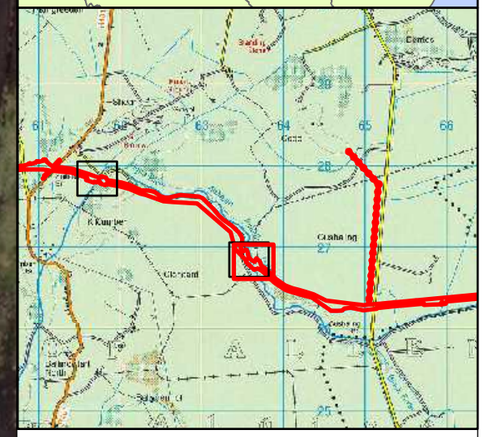
Drawing No.
32105801/700/12257

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.



Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping.





Legend

- Planning Application Boundary
- County Boundaries
- Watercourse Crossing (EPA)(WCX)
- Potential Waterbody Crossing (WBP)
- Tunnel/Trenchless Crossing

WFD River Waterbody Status 2019-2024

WFD Ecological Status

- Moderate

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	28/11/2025	16	FINAL - PLANNING PERMISSION	PG	PW	KK	SW
F01	10/10/2025	16	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 73
Trenchless Water Body Crossings

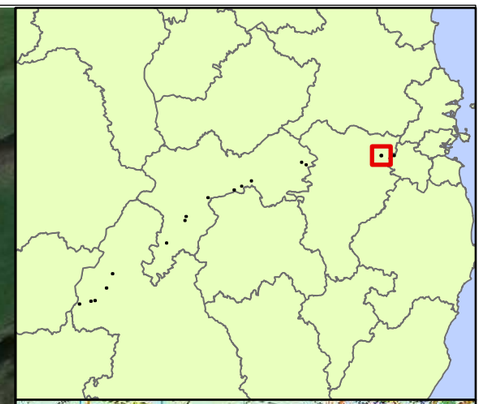
Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:1,500		DO NOT SCALE
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Drawing No.	32105801/700/12258		

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.



Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping.





Legend

- Planning Application Boundary
- County Boundaries
- Watercourse Crossing (EPA)(WCX)
- Tunnel/Trenchless Crossing with No Above Ground Disturbance

WFD River Waterbody Status 2019-2024

WFD Ecological Status

- Good

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	28/11/2025	16	FINAL - PLANNING PERMISSION	PG	PW	KK	SW
F01	10/10/2025	16	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 74
Trenchless Water Body Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:1,500		DO NOT SCALE
Jacobs No.	32105801	Client No.	9318
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Drawing No.
32105801/700/12259

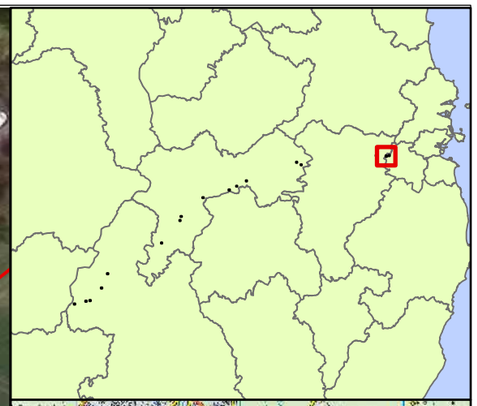
This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.



Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping.

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World Imagery: Microsoft, Vantor

0 0.05 0.1 Kilometres





Legend

- Planning Application Boundary
- County Boundaries
- Watercourse Crossing (WBX)
- Potential Waterbody Crossing (WBP)
- Tunnel/Trenchless Crossing with No Above Ground Disturbance

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	28/11/2025	16	FINAL - PLANNING PERMISSION	PG	PW	KK	SW
F01	10/10/2025	16	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water — Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 75
Trenchless Water Body Crossings

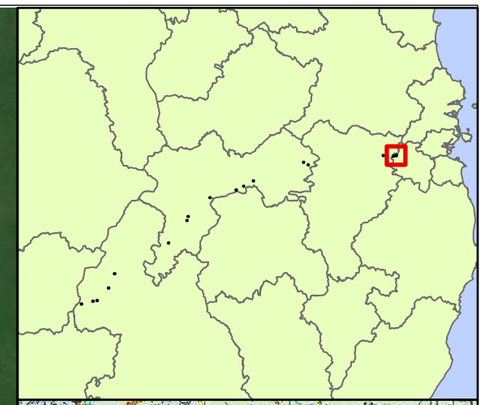
Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:1,500		DO NOT SCALE
Jacobs No.	32105801	Client No.	9318
Filepath	\\global\ie\IrlGIS\Proj\32105801_WSP_DR\Arc\GIS\EIARCh. 09 - Water\Appendix\A9.2 Trenchless Water Body\Surface Water Receptor Crossings.aprx		
Drawing No.	32105801/700/12260		

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.



Note :-
Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping.





Legend

- Planning Application Boundary
- County Boundaries
- Potential Waterbody Crossing (WBP)
- Tunnel/Trenchless Crossing with No Above Ground Disturbance

RW-xxx - Raw Water Chainage
TW-xxx - Treated Water Chainage

Rev.	Date	RLB	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F02	28/11/2025	16	FINAL - PLANNING PERMISSION	PG	PW	KK	SW
F01	10/10/2025	16	FOR APPROVAL	JL	PW	HS	SW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A9.2 Figure 76
Trenchless Water Body Crossings

Drawing Status: **FINAL – PLANNING APPLICATION**

Scale @A3	1:1,500		DO NOT SCALE
Jacobs No.	32105801	Client No.	9318
Filepath	\\glenvsvd1\GIS\Projects\32105801_WSP_DRAs\GIS\EIA\RCA_09 - Water\Appendix\A9.2 Trenchless Water Body\Surface Water Receptor Crossings.aprx		
Drawing No.	32105801/700/12261		

This drawing is not to be used in whole in or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

Annex A. Water Body Crossings and Washout Valves – Detailed Assessment

Tionscadal Soláthair Uisce
Water Supply Project

Environmental Impact Assessment Report (EIAR)

Volume 6 of 6: Appendices

(Appendix A9.2 Annex A) Waterbody Crossings and Washout Valves - Detailed Assessment

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1. Introduction

1. This Annex sets out the detailed assessments for the construction of watercourse crossings and the construction, commissioning and operation of washout valves and washouts at Line Valves. These assessments are summarised within Appendix A9.2.

2. There are several stages to the impact assessment - all related to differing mitigation levels and types. All impacts are first assessed pre-mitigation, only accounting for mitigation embedded to the design. Then impacts are assessed with additional mitigation, generic and site specific, for the residual magnitude and significance of effect. This assessment approach is detailed in Appendix 9.2 (Pipeline Assessment). Generic mitigation is detailed in Annex A Surface Water Management Plan (SWMP) of Appendix 5.1 Construction Environmental Management Plan (CEMP) and is applicable to all impacts. Details of site specific mitigation measures are also presented in the Surface Water Management Plan (SWMP), Annex A of Appendix 5.1 (CEMP), and the site specific mitigation IDs are presented in Table 1.1 to Table 5.1

1.1 Water Body Crossings

1.1.1 Open Cut Crossings

3. Potential sources of impacts from open cut water body crossings during construction comprise the following:

    - Damming and working in the watercourse
    - Accidental spillage of oil/chemicals from machinery
    - Silt laden runoff during excavations
    - Dewatering of excavations
    - Excavation of channel bed and bank
    - Excavation of peat with downstream pathway to the water body.

4. Note these are common to all open cut crossing locations for the Raw Water Intake Pipe and Pumping Station / Pressure Pipeline trench / Gravity Pipeline trench and laying of the pipeline with the exception of Item 6 which is common to all areas where peat is present:

5. Given that the construction methodologies at each open cut crossing location are essentially common to all open cut crossing locations, the anticipated impacts are also common with the exception of item F which is common to all areas where peat is present. These comprise the following:

    - Changes to geomorphology of watercourse, bed and bank structure and composition
    - Potential for reduction in water quality as a result of accidental spillages of potentially polluting substances, followed by pollution of water column as substance degrades
    - Potential for reduction in water quality as a result of increased suspended solids.
    - Changes to water levels due to dewatering/changes in drainage
    - Changes in hydrological flow as a result of channelisation and/or diversion to watercourses and changes to overland runoff as a result of cleared working areas
    - Potential to impact the hydrological regime of receiving water bodies, and thus downstream flood risk, where peat is removed, due to the ability of peat to retain water
    - Potential for reduction in baseline water quality as a result of disturbance of peat. Impacts include release of suspended solids, increased turbidity, elevated nutrient content, changes to pH (more acidic) and increased levels of ammonia, phosphorus and Dissolved Organic Carbon (DOC).

1.1.2 Trenchless (tunnelling) Crossings

6. Potential sources of impacts from trenchless water body crossings during construction comprise the following, note these are common to all trenchless crossing locations:
    - Potential for a ‘breakout’ of bentonite drilling fluid (a fine suspended solid)
    - Accidental spillage of oil/chemicals from machinery
    - Dewatering of launch and catch pit for drill
    - Vegetation clearance and topsoil stripping with the potential to create bare earth surfaces providing a source of fine sediment.

7. Potential impacts from trenchless water body crossings during construction comprise the following, note these are common to all trenchless crossing locations:
    - Potential for a ‘breakout’ of bentonite drilling fluid (a fine suspended solid)
    - Potential pollution of watercourse from spillage, discharge, silty runoff from trenchless compounds or breakout of drilling fluid
    - Potential for a reduction in baseline water quality
    - Changes to water levels due to dewatering/changes in drainage.

Table 1.1: Watercourse Pipeline Assessment - Raw Water - Rising Main Crossings

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water Body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBX Water Bodies													
WBX001	RW-00300	Raw Water - Rising Main	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX003	RW-01100	Raw Water - Rising Main	Tunnel - Trenchless	Non-designated	High	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Construction works adjacent to a watercourse which are therefore likely to risk a moderate, measurable shift away from baseline water quality. Adverse changes to the water feature bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the reach scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WBP Water Bodies													
WBP001	RW-00800	Raw Water - Rising Main	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP062	RW-00100	Raw Water - Rising Main / Construction Compound CC0	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP220	RW-02000	Raw Water - Rising Main	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP320	RW-01300	Raw Water - Rising Main	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Table 1.2: Watercourse Pipeline Assessment - Treated Water - Pipeline from WTP to BPT Crossings

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water Body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WCX Water Bodies													
WCX003	TW-00700	Treated Water Pipeline - from WTP to BPT	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX004	TW-01000	Treated Water Pipeline - from WTP to BPT	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX005	TW-07500	Treated Water Pipeline - from WTP to BPT	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX006	TW-08500	Treated Water Pipeline - from WTP to BPT	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX007	TW-09000	Treated Water Pipeline - from WTP to BPT	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX008	TW-10200	Treated Water Pipeline - from WTP to BPT	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water Body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WCX009	TW-10500	Treated Water Pipeline - from WTP to BPT	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX010	TW-11400	Treated Water Pipeline - from WTP to BPT	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX011	TW-13500	Treated Water Pipeline - from WTP to BPT	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX012	TW-15000	Treated Water Pipeline - from WTP to BPT	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX013	TW-16500	Treated Water Pipeline - from WTP to BPT	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX014	TW-17200	Treated Water Pipeline - from WTP to BPT	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water Body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WCX015	TW-17900	Treated Water Pipeline - from WTP to BPT	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX016	TW-19500	Treated Water Pipeline - from WTP to BPT	Tunnel - Trenchless - No Above Ground Disturbance	WFD Designated Riverine Water body	Very High	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Water quality impacts may contribute to reduction in waterbody WFD classification. Impacts may increase the extent of morphological pressures. May contribute to, but not cause, a deterioration in hydromorphology status.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WCX017	TW-20700	Treated Water Pipeline - from WTP to BPT	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX018	TW-26500	Treated Water Pipeline - from WTP to BPT	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX019	TW-30800	Treated Water Pipeline - from WTP to BPT	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX020	TW-34800	Treated Water Pipeline - from WTP to BPT	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water Body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WCX021	TW-35000	Treated Water Pipeline - from WTP to BPT	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX Water Bodies													
WBX005	TW-02800	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX006	TW-02900	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX007	TW-03100	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX008	TW-03600	Treated Water Pipeline - from WTP to BPT	Tunnel - Trenchless	Non-designated	Medium	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Construction works adjacent to a watercourse which are therefore likely to risk a moderate, measurable shift away from baseline water quality. Adverse changes to the water feature bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the reach scale.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WBX009	TW-03900	Treated Water Pipeline - from WTP to BPT	Tunnel - Trenchless	Non-designated	Medium	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Construction works adjacent to a watercourse which are therefore likely to risk a moderate, measurable shift away from baseline water quality. Adverse changes to the water feature bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the reach scale.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water Body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBX010	TW-04000	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX011	TW-04400	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX012	TW-04900	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX013	TW-11200	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX014	TW-12400	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX015	TW-15300	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water Body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBX016	TW-17000	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX017	TW-19200	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX018	TW-20400	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX019	TW-31600	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX020	TW-34200	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water Body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBX090	TW-00000	Treated Water Pipeline - from WTP to BPT /Water Treatment Works / Construction Compound CC1	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX091	TW-00300	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX108	TWB-04400	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP Water Bodies													
WBP003	TW-05300	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP004	TW-07000	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP005	TW-09900	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water Body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP059	TW-11000	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP069	TW-09200	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP070	TW-09500	Treated Water Pipeline - from WTP to BPT /Water Treatment Works / Construction Compound CC1	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP071	TW-10000	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP072	TW-11100	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP073	TW-12500	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water Body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP074	TW-14800	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP075	TW-16000	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP107	TW-10700	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP108	TW-15600	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP126	TW-12700	Treated Water Pipeline - from WTP to BPT	Tunnel - Trenchless / Culvert	Non-designated	Medium	Sources of Impact 7-10	Potential Impacts H-K	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WBP058	TW-03300	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water Body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP063	RW-02000	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP066	TW-02400	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP068	TW-02800	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP076	TW-18100	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP077	TW-18300	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP078	TW-18400	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water Body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP079	TW-18800	Treated Water Pipeline - from WTP to BPT / Pipe Storage Depot PSD1	Tunnel - Trenchless	Non-designated	High	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Construction works adjacent to a watercourse which are therefore likely to risk a moderate, measurable shift away from baseline water quality. Adverse changes to the water feature bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the reach scale.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WBP175	TW-00100	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP206	TW-33100	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP222	TW-02200	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP223	TW-04200	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water Body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP224	TW-04400	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP226	TW-04800	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP227	TW-05500	Treated Water Pipeline - from WTP to BPT	Tunnel - Trenchless - No Above Ground Disturbance	Non-designated	Medium	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Construction works adjacent to a watercourse which are therefore likely to risk a moderate, measurable shift away from baseline water quality. Adverse changes to the water feature bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the reach scale.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WBP228	TW-06600	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP229	TW-09700	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water Body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP230	TW-10300	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP231	TW-10500	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP232	TW-12700	Treated Water Pipeline - from WTP to BPT / Pipe Storage Depot PSD1	Open Cut / Culvert	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP233	TW-12800	Treated Water Pipeline - from WTP to BPT / Pipe Storage Depot PSD1	Open Cut / Culvert	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP234	TW-12700	Treated Water Pipeline - from WTP to BPT / Pipe Storage Depot PSD1	Tunnel - Trenchless / Culvert	Non-designated	Medium	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Construction works adjacent to a watercourse which are therefore likely to risk a moderate, measurable shift away from baseline water quality. Adverse changes to the water feature bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the reach scale.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water Body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP235	TW-13400	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP236	TW-13800	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP239	TW-14300	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP240	TW-14400	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP241	TW-15500	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP242	TW-17700	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water Body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP243	TW-17800	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP264	TW-04400	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP265	TW-04300	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP272	TW-14400	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP273	TW-19300	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP274	TW-12900	Treated Water Pipeline - from WTP to BPT / Pipe Storage Depot PSD1	Open Cut / Culvert	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water Body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP282	TW-04200	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP287	TW-12100	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP288	TW-12200	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP289	TW-11900	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP290	TW-11900	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP291	TW-11500	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water Body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP312	TW-03900	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP318	TW-12500	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP321	TW-00200	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP322	TW-00600	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP323	TW-17400	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP324	TW-17400	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

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WBP325	TW-17500	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP328	TW-11600	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP329	TW-17900	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP330	TW-20300	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP331	TW-22700	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water Body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP332	TW-33300	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP333	TW-33300	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP397	TW-33900	Treated Water Pipeline - from WTP to BPT	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Table 1.3: Watercourse Pipeline Assessment - Treated Water - Pipeline from BPT to TPR Crossings

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WCX Water Bodies													
WCX022	TWA-04800	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WCX023	TWA-05600	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WCX024	TWA-08000	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX025	TWA-09400	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WCX026	TWA-13000	Treated Water Pipeline - from BPT to TPR	Tunnel - Trenchless - No Above Ground Disturbance	WFD Designated Riverine Water body	High	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Water quality impacts may contribution to reduction in water body WFD classification. Impacts may increase the extent of morphological pressures. May contribute to, but not cause a deterioration of hydromorphology status.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WCX027	TWA-17500	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX028	TWA-23800	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WCX029	TWA-24800	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX030*	TWA-25700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX031	TWA-26000	Treated Water Pipeline - from BPT to TPR	Tunnel - Trenchless - No Above Ground Disturbance	WFD Designated Riverine Water body	High	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Water quality impacts may contribution to reduction in water body WFD classification. Impacts may increase the extent of morphological pressures. May contribute to, but not cause a deterioration of hydromorphology status.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WCX032	TWA-27600	Treated Water Pipeline - from BPT to TPR	Tunnel - Trenchless - No Above Ground Disturbance	WFD Designated Riverine Water body	High	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Water quality impacts may contribution to reduction in water body WFD classification. Impacts may increase the extent of morphological pressures. May contribute to, but not cause a deterioration of hydromorphology status.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WCX033	TWB-01400	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX034	TWB-06600	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WCX035	TWD-07800	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX036	TWB-12600	Treated Water Pipeline - from BPT to TPR	Tunnel - Trenchless - No Above Ground Disturbance	WFD Designated Riverine Water body	High	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Water quality impacts may contribution to reduction in water body WFD classification. Impacts may increase the extent of morphological pressures. May contribute to, but not cause a deterioration of hydromorphology status.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WCX038	TWB-14800	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WCX039	TWB-24900	Treated Water Pipeline - from BPT to TPR	Tunnel - Trenchless - No Above Ground Disturbance	WFD Designated Riverine Water body	High	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Water quality impacts may contribution to reduction in water body WFD classification. Impacts may increase the extent of morphological pressures. May contribute to, but not cause a deterioration of hydromorphology status.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WCX040**	TWC-01000	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX041	TWC-03300	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX042	TWC-05000	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX043	TWC-05600	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX044**	TWC-08900	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX045	TWC-09700	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WCX047	TWC-17700	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WCX048	TWC-18900	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WCX049	TWC-20300	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WCX050	TWC-20300	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WCX051	TWC-21100	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WCX053	TWC-21300	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WCX054	TWC-22800	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WCX055	TWD-03500	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WCX056	TWD-04100	Treated Water Pipeline - from BPT to TPR	Tunnel - Trenchless	WFD Designated Riverine Water body	High	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Water quality impacts may contribution to reduction in waterbody WFD classification. Impacts may increase the extent of morphological pressures. May contribute to, but not cause a deterioration of hydromorphology status.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WCX057	TWD-06400	Treated Water Pipeline - from BPT to TPR	Tunnel - Trenchless	WFD Designated Riverine Water body	High	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Water quality impacts may contribution to reduction in waterbody WFD classification. Impacts may increase the extent of morphological pressures. May contribute to, but not cause a deterioration of hydromorphology status.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WCX058	TWD-09000	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WCX059	TWD-14400	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WCX060	TWD-18100	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX061	TWD-24300	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WCX062	TWD-26400	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WCX063	TWD-28100	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WCX064	TWD-28500	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WCX065	TWD-29200	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WCX066	TWD-32800	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WCX067	TWE-00700	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX068	TWE-01800	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX069	TWE-02500	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX070	TWE-03600	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX071	TWE-09000	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX072	TWE-09100	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX073	TWE-09800	Treated Water Pipeline - from BPT to TPR	Tunnel - Trenchless - No Above Ground Disturbance	WFD Designated Riverine Water body	Very High	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Water quality impacts may contribution to reduction in water body WFD classification. Impacts may increase the extent of morphological pressures. May contribute to, but not cause a deterioration of hydromorphology status.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WCX074	TWE-11400	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX075	TWE-10100	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WCX076	TWE-09700	Treated Water Pipeline - from BPT to TPR	Tunnel - Trenchless - No Above Ground Disturbance	WFD Designated Riverine Water body	High	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Water quality impacts may contribution to reduction in water body WFD classification. Impacts may increase the extent of morphological pressures. May contribute to, but not cause a deterioration of hydromorphology status.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WBX Water Bodies													
WBX021	TWA-04300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX022	TWA-05800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX023	TWA-07800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBX024	TWA-08700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX025	TWA-12100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX026	TWA-13200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX027	TWA-14800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX028	TWA-19400	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBX029	TWA-19500	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX030	TWA-21100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX031	TWA-21200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBX032	TWA-21300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX033	TWA-21300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX034	TWA-27200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX035	TWA-27900	Treated Water Pipeline - from BPT to TPR	Tunnel - Trenchless	Non-designated	High	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Construction works adjacent to a watercourse which are therefore likely to risk a moderate, measurable shift away from baseline water quality. Adverse changes to the water feature bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the reach scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WBX036	TWA-27800	Treated Water Pipeline - from BPT to TPR	Tunnel - Trenchless - No above ground disturbance	Non-designated	High	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBX037	TWB-00300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX038	TWB-04600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX039	TWB-04800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX040	TWB-09100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX041	TWB-09500	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX042	TWB-10000	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBX043	TWB-10900	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX045	TWB-19800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX046	TWB-19000	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBX047	TWB-21000	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX048	TWB-21200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX049	TWB-21800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBX050	TWB-22100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX051	TWB-23300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX052	TWB-23900	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX053	TWC-01200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX054	TWC-03800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBX055	TWC-04000	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX056	TWC-04700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX057	TWC-06900	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX058	TWC-10000	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX059	TWC-10200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBX060	TWC-10300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX061	TWC-10400	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX062	TWC-11100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX063	TWC-11900	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBX064	TWC-19000	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX066	TWC-19600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX067	TWC-22400	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBX068	TWC-23700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX069	TWC-23900	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX071	TWC-24100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBX072	TWC-24300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX073	TWC-24500	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX074	TWD-00500	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Low	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX075	TWD-01700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Low	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX076	TWD-01800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Low	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBX077	TWD-02000	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX078***	TWD-15100	Treated Water Pipeline - from BPT to TPR	Tunnel - Trenchless - No Above Ground Disturbance	WFD Designated Canal Water body	Very High	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Water quality impacts may contribution to reduction in water body WFD classification. Impacts may increase the extent of morphological pressures. May contribute to, but not cause a deterioration of hydromorphology status.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WBX079	TWD-16000	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX080	TWD-26000	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBX081	TWD-28800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX082	TWD-31200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX083	TWD-31700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX084	TWE-04400	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Low	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX085	TWE-05200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX086	TWE-07300	Treated Water Pipeline - from BPT to TPR	Open Cut / Culvert	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBX087	TWE-11100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX088***	TWE-14200	Treated Water Pipeline - from BPT to TPR	Tunnel - Trenchless - No Above Ground Disturbance	WFD Designated Canal Water body	Very High	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Water quality impacts may contribution to reduction in waterbody WFD classification. Impacts may increase the extent of morphological pressures. May contribute to, but not cause a deterioration of hydromorphology status.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WBX092	TWB-13600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX093	TWB-14800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBX094	TWB-18900	Treated Water Pipeline - from BPT to TPR	Open Cut / Culvert	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX095	TWB-19600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX096	TWC-00100	Treated Water Pipeline - from BPT to TPR	Tunnel - Trenchless	Non-designated	Medium	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Construction works adjacent to a watercourse which are therefore likely to risk a moderate, measurable shift away from baseline water quality. Adverse changes to the water feature bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the reach scale.	Moderate (significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WBX097	TWC-11000	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBX098	TWC-17600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX099	TWD-02300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX100	TWD-04600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX103	TWD-07800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBX104	TWD-10900	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX105	TWD-12400	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX106	TWD-21100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Low	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBX107	TWB-04700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP Water Bodies													
WBP006	TWA-03600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP010	TWA-15300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP011	TWA-15300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Low	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP012	TWA-20300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Low	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP013	TWA-23200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP014	TWA-27400	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP016	TWB-05800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP017	TWB-06300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP018	TWB-06300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP019	TWB-06500	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP020	TWB-06700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP021	TWB-06800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP022	TWB-14100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP023	TWC-05200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP024	TWC-07100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP025	TWC-07200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Low	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP026	TWC-11900	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Low	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP027	TWC-16000	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP028	TWC-20000	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP029	TWC-23200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP030	TWD-03200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP031	TWD-03300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP032	TWD-06600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP033	TWD-08400	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP034	TWD-08800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP035	TWD-09300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP036	TWD-09100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP039	TWD-21400	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP040	TWD-24500	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP041	TWD-26100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP042	TWD-26800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP043	TWD-27700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP044	TWD-28700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP045	TWD-29200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP046	TWD-31700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP047	TWD-32300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP048	TWD-32300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP050	TWE-00300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP051	TWE-00500	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP055	TWE-11500	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP056	TWE-11800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP057	TWE-12600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP061	TWB-10100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP081	TWA-25600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP082	TWA-26300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP083	TWA-26500	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP084	TWB-05100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP085	TWB-10800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP087	TWB-15300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP089	TWB-25200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP090	TWC-20400	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP091	TWC-22600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP092	TWD-06100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP093	TWD-08200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP094	TWD-15000	Treated Water Pipeline - from BPT to TPR	Tunnel - Trenchless - No above ground disturbance	Non-designated	High	Sources of Impact 7-10	Potential Impacts H-K	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WBP095	TWD-15100	Treated Water Pipeline - from BPT to TPR	Tunnel - Trenchless - No above ground disturbance	Non-designated	Medium	Sources of Impact 7-10	Potential Impacts H-K	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WBP096	TWD-15200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP097	TWD-16300	Treated Water Pipeline - from BPT to TPR	Open Cut / Culvert	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP102	TWD-32200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP104	TWE-12000	Treated Water Pipeline - from BPT to TPR	Tunnel - Trenchless - No Above Ground Disturbance	Non-designated	Medium	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Construction works adjacent to a watercourse which are therefore likely to risk a moderate, measurable shift away from baseline water quality. Adverse changes to the water feature bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the reach scale.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WBP106	TWB-08000	Treated Water Pipeline - from BPT to TPR	Tunnel - Trenchless - No Above Ground Disturbance	Non-designated	Medium	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Construction works adjacent to a watercourse which are therefore likely to risk a moderate, measurable shift away from baseline water quality. Adverse changes to the water feature bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the reach scale.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WBP111	TWB-04700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP112	TWB-08000	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP113	TWB-08100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP116	TWC-15700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP117	TWD-00400	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP120	TWE-13900	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP121	TWD-26500	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP122	TWE-04800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP123	TWB-08800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP124	TWB-09100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP125	TWB-10200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP128	TWB-13200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP129	TWB-13300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP130	TWB-13500	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP131	TWB-14000	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP132	TWB-14500	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP133	TWB-14600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP134	TWB-14900	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP136	TWB-15100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP137	TWB-15400	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP145	TWB-23200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP146	TWB-25000	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP147	TWC-04800	Treated Water Pipeline - from BPT to TPR	Tunnel - Trenchless - No above ground disturbance	Non-designated	High	Sources of Impact 7-10	Potential Impacts H-K	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WBP148	TWC-05300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP150	TWC-07500	Treated Water Pipeline - from BPT to TPR	Open Cut / Culvert	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP151	TWC-07900	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP152	TWC-08100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP153	TWC-09900	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP154	TWC-10800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP155	TWC-11200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP156	TWC-12000	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP157	TWC-12300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP158	TWC-12800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP159	TWC-13700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP160	TWC-13700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP161	TWC-15700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP162	TWC-17600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP163	TWC-17600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP164	TWC-17600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP165	TWC-20700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP166	TWC-22100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP167	TWC-22300	Treated Water Pipeline - from BPT to TPR	Tunnel - Trenchless - No Above Ground Disturbance	Non-designated	Medium	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Construction works adjacent to a watercourse which are therefore likely to risk a moderate, measurable shift away from baseline water quality. Adverse changes to the water feature bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the reach scale.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WBP168	TWC-23000	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP169	TWC-23100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP170	TWC-23500	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP172	TWC-23700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP173	TWC-23700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP174	TWC-23800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP176	TWD-02000	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP177	TWD-02100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP178	TWD-02400	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP179	TWD-02900	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP180	TWD-03200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP182	TWD-28600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP183	TWD-29600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP184	TWD-30200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP185	TWD-30800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP186	TWD-32900	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP187	TWD-32900	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP188	TWD-33300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP189	TWD-33700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP190	TWD-33800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP191	TWD-34000	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP192	TWD-34100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP193	TWE-00200	Treated Water Pipeline - from BPT to TPR	Open Cut / Culvert	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP194	TWE-00900	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP195	TWE-01400	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP196	TWE-03100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP197	TWE-03100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP198	TWE-04900	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP009	TWA-12800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP052	TWE-05800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP080	TWA-16000	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP098	TWD-16600	Treated Water Pipeline - from BPT to TPR	Open Cut / Culvert	Non-designated	Low	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP099	TWD-16600	Treated Water Pipeline - from BPT to TPR	Open Cut / Culvert	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP100	TWD-16700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP103	TWE-05500	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP109	TWA-16600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP110	TWA-18800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP115	TWB-18900	Treated Water Pipeline - from BPT to TPR	Open Cut / Culvert	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP118	TWD-15800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP119	TWE-08100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP139	TWB-18700	Treated Water Pipeline - from BPT to TPR	Open Cut / Culvert	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP140	TWB-18700	Treated Water Pipeline - from BPT to TPR	Open Cut / Culvert	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP142	TWB-20300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP143	TWB-22700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP199	TWE-05200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP200	TWE-05400	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP201	TWE-05700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP202	TWE-05900	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP203	TWE-07400	Treated Water Pipeline - from BPT to TPR	Open Cut / Culvert	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP205	TWE-07800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP207	TWE-09000	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP208	TWE-11900	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP209	TWE-12600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP210	TWA-27700	Treated Water Pipeline - from BPT to TPR	Tunnel - Trenchless - No Above Ground Disturbance	Non-designated	High	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Construction works adjacent to a watercourse which are therefore likely to risk a moderate, measurable shift away from baseline water quality. Adverse changes to the water feature bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the reach scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WBP211	TWE-14100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP212	TWE-14100	Treated Water Pipeline - from BPT to TPR	Tunnel - Trenchless - No Above Ground Disturbance	Non-designated	High	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Construction works adjacent to a watercourse which are therefore likely to risk a moderate, measurable shift away from baseline water quality. Adverse changes to the water feature bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the reach scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WBP213	TWE-14700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP214	TWE-14800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP215	TWE-14800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP216	TWE-15500	Treated Water Pipeline - from BPT to TPR	Tunnel - Trenchless	Non-designated	Low	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Construction works adjacent to a watercourse which are therefore likely to risk a moderate, measurable shift away from baseline water quality. Adverse changes to the water feature bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the reach scale.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP217	TWE-15900	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Low	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP218	TWE-16100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Low	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP219	TWE-16600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP225	TWA-20100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP244	TWD-27200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP245	TWD-26400	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP246	TWD-23900	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP247	TWD-22800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP248	TWD-22200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP249	TWD-18200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP251	TWA-21500	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP252	TWD-15700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP253	TWD-15300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP254	TWE-15500	Treated Water Pipeline - from BPT to TPR	Tunnel - Trenchless	Non-designated	Low	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Construction works adjacent to a watercourse which are therefore likely to risk a moderate, measurable shift away from baseline water quality. Adverse changes to the water feature bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the reach scale.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WBP255	TWE-16300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP256	TWA-27500	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP257	TWA-27600	Treated Water Pipeline - from BPT to TPR	Tunnel - Trenchless - No Above Ground Disturbance	Non-designated	High	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Construction works adjacent to a watercourse which are therefore likely to risk a moderate, measurable shift away from baseline water quality. Adverse changes to the water feature bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the reach scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WBP258	TWA-27700	Treated Water Pipeline - from BPT to TPR	Tunnel - Trenchless - No Above Ground Disturbance	Non-designated	High	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Construction works adjacent to a watercourse which are therefore likely to risk a moderate, measurable shift away from baseline water quality. Adverse changes to the water feature bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the reach scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WBP259	TWA-27800	Treated Water Pipeline - from BPT to TPR	Tunnel - Trenchless - No Above Ground Disturbance	Non-designated	High	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Construction works adjacent to a watercourse which are therefore likely to risk a moderate, measurable shift away from baseline water quality. Adverse changes to the water feature bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the reach scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WBP260	TWB-01000	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP261	TWB-06700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP262	TWB-07000	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP263	TWB-07500	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP266	TWA-26500	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP267	TWA-20200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP268	TWE-09200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP269	TWA-26700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP271	TWD-30600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Low	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP275	TWB-06100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP276	TWB-06200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP277	TWB-06400	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP278	TWA-23000	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP279	TWD-31500	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP280	TWD-28900	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP281	TWA-23300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP283	TWA-24300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP284	TWA-19200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP285	TWD-30400	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP286	TWA-19200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP292	TWD-21500	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP293	TWD-29300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP294	TWC-23600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP296	TWD-22100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP297	TWD-22100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP298	TWB-23600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP299	TWC-14800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Low	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP300	TWC-14800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Low	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP301	TWC-15100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Low	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP302	TWD-07700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP303	TWD-07500	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP304	TWD-08600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP305	TWD-06300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP306	TWD-08500	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP307	TWE-16100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Low	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP309*	TWC-00700	Treated Water Pipeline - from BPT to TPR	Open Cut	WFD Designated Riverine Water body	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Water quality impacts have the potential to impact the waterbody at the waterbody scale and cause deterioration in WFD status and/or prevent the waterbody from achieving its objectives under the WFD and River Basin Management Plan. Impacts have the potential to cause deterioration on hydromorphology status or prevent the achievement of 'Good' hydromorphology status due to an increase in the extent of morphological pressures on the waterbody.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP310	TWE-05800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP311	TWE-06200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP314	TWB-25100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP316	TWD-14300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP317	TWD-23200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP319	TWA-20700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP326	TWC-17400	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP327	TWC-17500	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP334	TWA-05500	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP335	TWA-05800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
HighWBP336	TWA-07600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP337	TWB-06500	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP338	TWB-09600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP339	TWB-21100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP340	TWB-23800	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP341	TWC-06700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP342	TWC-13500	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP343	TWC-17100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP344	TWC-17500	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP345	TWC-19600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP346	TWC-21100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP347	TWC-22400	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP348	TWC-23700	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP349	TWD-00300	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP350	TWD-02200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP351	TWD-04200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP352	TWD-04600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP353	TWD-04900	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP354	TWD-08100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP355	TWD-09400	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP356	TWD-13100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	Medium Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP357	TWD-14400	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP359	TWD-18200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP360	TWD-20000	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP361	TWD-24500	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP362	TWD-26100	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP363	TWE-03900	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	Medium Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP364	TWE-03900	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP365	TWD-06500	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP366	TWE-06200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP367	TWE-14900	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP368	TWE-15000	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP390	TW-11200	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect - (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP391	TWC-23600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP392	TWD-24600	Treated Water Pipeline - from BPT to TPR	Open Cut	Non-designated	Medium	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant

Notes:
* A WFD designated water body. Not shown to be a WFD designated water body however, professional judgement has determined it is part of the WFD designated water body channel.
** Not WFD designated waterbodies but are labelled WCX.
*** A WFD designated artificial water body (AWB) but with the label WBX.
**** A WFD designated water body but with the label WBP.

Table 1.4: Watercourse Pipeline Assessment - Construction Compounds & Pipe Storage Depots

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water Body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBX Water Bodies													
WBX086	TWE-07300	Pipe Storage Depot PSD10	Open Cut / Culvert	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX090	TW-00000	Construction Compound CC1	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBX094	TWB-18900	Construction Compound CC5	Open Cut / Culvert	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP Water Bodies													
WBP062	RW-00100	Construction Compound CC0	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP063	RW-02000	Construction Compound CC1	Open Cut	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP097	TWD-16300	Construction Compound CC6	Open Cut / Culvert	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP098	TWD-16600	Construction Compound CC6	Open Cut / Culvert	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water Body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP099	TWD-16600	Construction Compound CC6	Open Cut / Culvert	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP115	TWB-18900	Construction Compound CC5	Open Cut / Culvert	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP126	TW-12700	Pipe Storage Depot PSD1	Tunnel - Trenchless / Culvert	Non-designated	Medium	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Construction works adjacent to a watercourse which are therefore likely to risk a moderate, measurable shift away from baseline water quality. Adverse changes to the water feature bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the reach scale.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WBP139	TWB-18700	Construction Compound CC5	Open Cut / Culvert	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP140	TWB-18700	Construction Compound CC5	Open Cut / Culvert	Non-designated	High	Sources of Impact 1-6	Potential Impacts A-G	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC9 W-SC10 W-SC11 W-SC12 W-SC13 W-SC14 W-SC15 W-SC4 W-SC5 W-SC6 W-SC7 W-SC8	Negligible	Not Significant
WBP150	TWC-07500	Pipe Storage Depot PSD6	Open Cut / Culvert	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

Water Body Crossing ID	Approximate Chainage	Project Element	Crossing Type	Water Body designation (Lake, River, non - designated, Drain, Canal)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre-Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre-mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WBP193	TWE-00200	Pipe Storage Depot PSD9	Open Cut / Culvert	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP203	TWE-07400	Pipe Storage Depot PSD10	Open Cut / Culvert	Non-designated	High	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP232	TW-12700	Pipe Storage Depot PSD1	Open Cut / Culvert	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP233	TW-12800	Pipe Storage Depot PSD1	Open Cut / Culvert	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant
WBP234	TW-12700	Pipe Storage Depot PSD1	Tunnel - Trenchless / Culvert	Non-designated	Medium	Sources of Impact 7-10	Potential Impacts H-K	Medium Adverse	Construction works adjacent to a watercourse which are therefore likely to risk a moderate, measurable shift away from baseline water quality. Adverse changes to the water feature bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the reach scale.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC3 W-SC8	Negligible	Not Significant
WBP274	TW-12900	Pipe Storage Depot PSD1	Open Cut / Culvert	Non-designated	Medium	Sources of Impact 1-5	Potential Impacts A-E	High Adverse	Construction works in-channel and/or extensive construction works adjacent to a watercourse which are therefore likely to risk a major, measurable shift from baseline water quality. Loss of, or extensive adverse changes to the watercourse bed, banks and vegetated riparian corridor resulting in changes to existing morphological features and/or channel planform and cross section and/or natural fluvial processes. Impacts would be at the waterbody scale.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC4 W-SC5 W-SC6 W-SC8	Negligible	Not Significant

2. Washouts Construction Phase Assessment

8. Potential sources of impacts from construction of washouts (outwith trenchless crossings) comprise the following, note these are common to all washout locations:
    - Working adjacent to and on the banks of the water body
    - Construction of outfall structure (removal of natural bank material)
    - Accidental spillage of oil / chemicals from machinery during excavation and installation of outfall structure
    - Silt laden runoff during excavation for outfall structure
    - Dewatering of excavations for outfall structure
    - Excavation of channel bed and bank
    - Drying of area for constructing outfall (applicable to trenchless crossings), of for water bodies with no pipeline crossing.

9. Potential sources of impact and construction methodologies are essentially common to each outfall location, therefore the anticipated impacts are also common. These comprise the following:
    - Changes to geomorphology of watercourse, bed and bank structure due to altering the bed and banks for construction of the outfall
    - Potential for reduction in water quality due to oil spillages followed by pollution of water column as oil degrades
    - Potential for reduction in water quality due to increased silt laden runoff from machinery in construction of outfalls
    - Changes in hydrological flow as a result of channelisation and/or diversion to watercourses
    - Changes to water levels due to dewatering / changes in drainage.

Table 2.1: Watercourse Pipeline Assessment - Washouts - Construction

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WA-001	WCW001	TW-00760	WCX003	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Low Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-002	WCW002	TW-00960	WCX004	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Low Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-003	WCW003	TW-02620	Kilmastulla_040	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Medium Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact which may result in an overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-004	WCW004	TW-03415	Kilmastulla_040	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Medium Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact which may result in an overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-005	WCW005	TW-07520	WCX005	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Low Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-007	WCW007	TW-10560	WCX009	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Low Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WA-008	WCW008	TW-11450	WCX010	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Low Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-009	WCW009	TW-13490	WCX011	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Low Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-010	WCW010	TW-15665	Ardgregane Stream_020	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Medium Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact which may result in an overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-011	WCW011	TW-16455	WCX013	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Low Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-013	WCW013	TW-19500	WCX016	On Water Body	Very High	Sources of Impact 1-7	Potential Impacts A-E	Medium Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact which may result in an overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-014	WCW014	TW-26465	WCX018	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Low Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-015	WCW015	TW-31300	WCX019	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Low Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WA-017	WCW017	TW-34970	WCX021	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Low Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-018	WCW018	TWA-04820	WCX022	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Low Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-019	WCW019	TWA-05575	WCX023	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Low Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-020	WCW020	TWA-07945	WCX024	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Low Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-021	WCW021	TWA-09380	WCX025	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Low Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-022	WCW022	TWA-12930	WCX026	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Medium Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact which may result in an overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-023	WCW023	TWA-21315	WBX032	On Water Body	Medium	Sources of Impact 1-7	Potential Impacts A-E	Low Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WA-024	WCW024	TWA-27595	WCX032	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Medium Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact which may result in an overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-025	WCW025	TWB-10160	WBP061	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Low Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-026	WCW026	TWB-12630	WCX036	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Medium Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact which may result in an overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-027	WCW027	TWB-24900	WCX039	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Medium Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact which may result in an overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-028	WCW028	TWC-04950	WCX042	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Low Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-029	WCW029	TWC-18915	WCX048	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Low Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-030	WCW030	TWC-20240	WCX049	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Low Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WA-031	WCW031	TWD-04185	WCX056	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Medium Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact which may result in an overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-032	WCW032	TWD-08925	WCX058	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Low Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-033	WCW033	TWD-18145	WCX060	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Low Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-034	WCW034	TWD-26415	WCX062	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Low Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-041	WCW041	TWD-28520	WCX064	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Low Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-042	WCW042	TWD-29115	WCX065	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Low Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-035	WCW035	TWD-32725	WCX066	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Low Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WA-036	WCW036	TWE-02430	WCX069	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Low Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-037	WCW037	TWE-03585	WCX070	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Low Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-038	WCW038	TWE-09105	WCX072	On Water Body	High	Sources of Impact 1-7	Potential Impacts A-E	Low Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-039	WCW039	TWE-09825	WCX073	On Water Body	Very High	Sources of Impact 1-7	Potential Impacts A-E	Medium Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact which may result in an overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-040	WCW040	TWE-11425	Liffey_140	On Water Body	Very High	Sources of Impact 1-7	Potential Impacts A-E	Low Adverse	Impacts would be temporary over the construction period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant

3. Washouts Commissioning Phase Assessment

10. Potential sources of impacts from washout during commissioning comprise the following:
    - Discharge of treated drinking water
    - Change in flow regime at washout locations including flow concentrated on one section of channel.

11. The anticipated impacts are common to each outfall (WA and WB), except that B is not applicable to WA outfalls as a stilling basin to avoid scour is part of the outfall design (embedded mitigation). These comprise the following:
    - Changes to water quality in the receiving watercourse, including increases in suspended solids as the pipeline will not have been cleaned up to this point, it may contain residues of fine suspended solids
    - Discharges may cause scour of the channel bed and banks at the discharge point, potentially altering morphological process leading to erosion of the channel and/or morphological features and to destabilisation of the watercourse.

Table 3.1: Watercourse Pipeline Assessment - Washouts - Commissioning

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Potential Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WA-001	WCW001	TW-00760	WCX003	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-002	WCW002	TW-00960	WCX004	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-003	WCW003	TW-02620	Kilmastulla_040	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Medium Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-004	WCW004	TW-03415	Kilmastulla_040	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Medium Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-005	WCW005	TW-07520	WCX005	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-007	WCW007	TW-10560	WCX009	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-008	WCW008	TW-11450	WCX010	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-009	WCW009	TW-13490	WCX011	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-010	WCW010	TW-15665	Ardgregane Stream_020	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Medium Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-011	WCW011	TW-16455	WCX013	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Potential Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WA-013	WCW013	TW-19500	WCX016	On Water Body	Very High	Potential Sources of Impact 1-2	Potential Impact A	Medium Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-014	WCW014	TW-26465	WCX018	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-015	WCW015	TW-31300	WCX019	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-017	WCW017	TW-34970	WCX021	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-018	WCW018	TWA-04820	WCX022	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-019	WCW019	TWA-05575	WCX023	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-020	WCW020	TWA-07945	WCX024	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-021	WCW021	TWA-09380	WCX025	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-022	WCW022	TWA-12930	WCX026	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Medium Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-023	WCW023	TWA-21315	WBX032	On Water Body	Medium	Potential Sources of Impact 1-2	Potential Impact A	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Potential Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WA-024	WCW024	TWA-27595	WCX032	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Medium Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-025	WCW025	TWB-10160	WBP061	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-026	WCW026	TWB-12630	WCX036	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Medium Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-027	WCW027	TWB-24900	WCX039	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Medium Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-028	WCW028	TWC-04950	WCX042	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-029	WCW029	TWC-18915	WCX048	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-030	WCW030	TWC-20240	WCX049	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-031	WCW031	TWD-04185	WCX056	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Medium Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-032	WCW032	TWD-08925	WCX058	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-033	WCW033	TWD-18145	WCX060	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Potential Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WA-034	WCW034	TWD-26415	WCX062	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-041	WCW041	TWD-28520	WCX064	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-042	WCW042	TWD-29115	WCX065	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-035	WCW035	TWD-32725	WCX066	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-036	WCW036	TWE-02430	WCX069	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-037	WCW037	TWE-03585	WCX070	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-038	WCW038	TWE-09105	WCX072	On Water Body	High	Potential Sources of Impact 1-2	Potential Impact A	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-039	WCW039	TWE-09825	WCX073	On Water Body	Very High	Potential Sources of Impact 1-2	Potential Impact A	Medium Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Very Significant	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WA-040	WCW040	TWE-11425	Liffey_140	On Water Body	Very High	Potential Sources of Impact 1-2	Potential Impact A	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC16	Negligible	Not Significant
WB-001	N/A	TW-02260	Kilmastulla_040	100	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant

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WB-002	N/A	TW-03255	Kilmastulla_040	60	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-002a	N/A	TW-03520	WBX008	65	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-003	N/A	TW-04415	WBX108	10	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-004	N/A	TW-04945	WBX012	5	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-005	N/A	TW-06620	WBP228	10	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-006	N/A	TW-06940	WBP004	15	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-007	N/A	TW-08490	WCX006	10	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-007a	N/A	TW-09000	WCX007	10	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-008	N/A	TW-10165	WCX008	10	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-009	N/A	TW-13030	Ardgregane Stream_010	30	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant

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WB-010	N/A	TW-13795	WBP236	20	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-011	N/A	TW-14270	N/A	N/A	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-012	N/A	TW-17135	WCX014	30	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-012a	N/A	TW-17885	WCX015	25	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-012b	N/A	TW-18255	WBP077	50	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-013	N/A	TW-19145	WBX017	20	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-014	N/A	TW-20450	WBX018	10	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-014a	N/A	TW-27080	N/A	N/A	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-015	N/A	TW-29270	N/A	N/A	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-016	N/A	TW-31595	WBX019	15	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Potential Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-017	N/A	TW-32160	N/A	N/A	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-018	N/A	TW-34205	WBX020	10	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-018a	N/A	TW-34750	WCX020	15	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-019	N/A	TWA-00690	N/A	N/A	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-020	N/A	TWA-03545	WBP006	45	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-020a	N/A	TWA-04025	N/A	N/A	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-022	N/A	TWA-08765	WBX024	15	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-022a	N/A	TWA-12110	WBX025	65	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-023	N/A	TWA-14170	N/A	N/A	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-024	N/A	TWA-14775	WBX027	20	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Potential Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-025	N/A	TWA-15305	WBP010	10	Low	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-026	N/A	TWA-15955	WBP080	15	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-027	N/A	TWA-17545	WCX027	10	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-028	N/A	TWA-19370	WBX028	5	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-029	N/A	TWA-20315	WBP012	10	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-030	N/A	TWA-23215	WBP013	20	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-031	N/A	TWA-23800	WCX028	20	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-032	N/A	TWA-24775	WCX029	15	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-033	N/A	TWA-25690	WCX030	15	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-034	N/A	TWA-26085	WCX031	45	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Potential Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-035	N/A	TWA-27155	WBX034	5	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-036	N/A	TWB-00270	WBX037	20	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-036a	N/A	TWB-01130	N/A	N/A	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-037	N/A	TWB-01390	WCX033	20	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-038	N/A	TWB-03490	N/A	N/A	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-038a	N/A	TWB-05850	WBP016	20	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-039	N/A	TWB-05850	WBP016	10	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-040	N/A	TWB-06550	WBP019	20	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-041	N/A	TWB-07770	WCX035	15	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-042	N/A	TWB-09130	WBX040	10	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant

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WB-043	N/A	TWB-10940	WBX043	20	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-044	N/A	TWB-14170	WBP022	15	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-045	N/A	TWB-14740	WCX038	20	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-045a	N/A	TWB-15265	WBP087	10	Low	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-046	N/A	TWB-15850	N/A	N/A	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-047	N/A	TWB-16600	N/A	N/A	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-048	N/A	TWB-17740	N/A	N/A	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-049	N/A	TWB-19755	WBX045	5	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-050	N/A	TWB-20290	WBP142	10	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-051	N/A	TWB-21770	WBX049	15	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant

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WB-052	N/A	TWB-22060	WBX050	15	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-053	N/A	TWB-23310	WBX051	20	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-054	N/A	TWB-23940	WBX052	15	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-055	N/A	TWB-26235	N/A	N/A	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-056	N/A	TWB-28050	N/A	N/A	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-057	N/A	TWC-00970	WCX040	15	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-058	N/A	TWC-01180	WBX053	20	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-059	N/A	TWC-03310	WCX041	30	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-060	N/A	TWC-04780	WBP147	15	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-061	N/A	TWC-05190	WBP023	15	Low	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Potential Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-062	N/A	TWC-05590	WCX043	15	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-063	N/A	TWC-06930	WBX057	10	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-064	N/A	TWC-08875	WCX044	15	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-065	N/A	TWC-09680	WCX045	15	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-066	N/A	TWC-09985	WBX058	5	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-067	N/A	TWC-11095	WBX062	10	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-068	N/A	TWC-11865	WBX063	10	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-069	N/A	TWC-12010	WBP156	15	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-070	N/A	TWC-12585	Daingean_010	110	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-071	N/A	TWC-13240	N/A	N/A	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Potential Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-072	N/A	TWC-13485	N/A	N/A	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-073	N/A	TWC-13670	WBP160	20	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-074	N/A	TWC-15725	WBP161	10	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-075	N/A	TWC-17635	WBX098	10	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-076	N/A	TWC-18150	N/A	N/A	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-077	N/A	TWC-19260	N/A	N/A	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-078	N/A	TWC-20570	Esker Stream_020	130	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-079	N/A	TWC-21120	WCX051	20	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-080	N/A	TWC-21320	WCX053	5	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-081	N/A	TWC-21675	Esker Stream_020	50	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Potential Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-082	N/A	TWC-22805	WCX054	10	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-083	N/A	TWC-23190	WBP029	30	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-084	N/A	TWC-23670	WBP173	20	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-085	N/A	TWC-24115	WBX071	20	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-086	N/A	TWD-00385	WBP117	25	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-087	N/A	TWD-00490	WBX074	5	Low	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-088	N/A	TWD-01080	N/A	N/A	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-089	N/A	TWD-02845	N/A	N/A	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-091	N/A	TWD-03520	WCX055	25	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-092	N/A	TWD-04615	Figile_030	25	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Potential Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-093	N/A	TWD-04890	Figile_030	15	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-094	N/A	TWD-05275	Figile_030	95	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-095	N/A	TWD-05645	Figile_030	100	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-096	N/A	TWD-05895	Figile_030	75	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-097	N/A	TWD-06150	Figile_030	25	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-098	N/A	TWD-06280	Figile_030	70	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-099	N/A	TWD-06685	N/A	N/A	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-100	N/A	TWD-06915	N/A	N/A	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-101	N/A	TWD-07125	N/A	N/A	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-102	N/A	TWD-07430	N/A	N/A	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Potential Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-103	N/A	TWD-07875	WBX103	25	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-104	N/A	TWD-12160	N/A	N/A	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-105	N/A	TWD-12895	N/A	N/A	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-106	N/A	TWD-14145	N/A	N/A	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-107	N/A	TWD-14410	WCX059	0	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-109	N/A	TWD-15865	WBP118	30	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-110	N/A	TWD-16585	WBP098	35	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-111	N/A	TWD-17345	N/A	N/A	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-112	N/A	TWD-17825	WBP038	315	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-113	N/A	TWD-18690	N/A	N/A	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Potential Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-114	N/A	TWD-19360	N/A	N/A	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-115	N/A	TWD-20325	N/A	N/A	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-116	N/A	TWD-20755	N/A	N/A	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-117	N/A	TWD-21025	WBX106	110	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-118	N/A	TWD-21415	N/A	N/A	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-119	N/A	TWD-22705	N/A	N/A	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-120	N/A	TWD-23110	WBP317	220	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-121	N/A	TWD-23395	N/A	N/A	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-122	N/A	TWD-24305	WCX061	10	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-123	N/A	TWD-24705	WBP040	50	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Potential Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-124	N/A	TWD-25645	N/A	N/A	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-125	N/A	TWD-26885	WBP042	15	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-128	N/A	TWD-30400	N/A	N/A	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (Not Significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-129	N/A	TWD-31205	WBX082	20	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-130	N/A	TWD-31880	WBP046	30	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-131	N/A	TWE-00715	WCX067	10	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-132	N/A	TWE-01740	WCX068	15	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-133	N/A	TWE-04365	WBX084	5	Low	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-134	N/A	TWE-05765	WBP310	15	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-135	N/A	TWE-06390	N/A	N/A	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Potential Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-136	N/A	TWE-08210	WBP119	30	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-136a	N/A	TWE-08520	N/A	N/A	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-137	N/A	TWE-10125	WCX075	15	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-138	N/A	TWE-12325	N/A	N/A	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-139	N/A	TWE-13945	WBP120	10	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-140	N/A	TWE-14145	WBP211	10	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WB-140a	N/A	TWE-15360	N/A	N/A	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant

4. Washouts Operational Phase Assessment

12. Potential sources of impacts from washouts during operation comprise the following:

    - Use of washout valves for the rare emptying of sections of pipeline during drawdown for maintenance of emergency repairs.

13. The anticipated impacts are common to each outfall (WA and WB). These comprise the following:

    - Discharges may cause scour of the channel bed and banks at the discharge point, potentially altering morphological process leading to erosion of the channel and/or morphological features and to destabilisation of the watercourse.

Table 4.1: Watercourse Pipeline Assessment - Washouts - Operational

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WA-001	WCW001	TW-00760	WCX003	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-002	WCW002	TW-00960	WCX004	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-003	WCW003	TW-02620	Kilmastulla_040	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-004	WCW004	TW-03415	Kilmastulla_040	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-005	WCW005	TW-07520	WCX005	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-007	WCW007	TW-10560	WCX009	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-008	WCW008	TW-11450	WCX010	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-009	WCW009	TW-13490	WCX011	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-010	WCW010	TW-15665	Ardgregane Stream_020	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-011	WCW011	TW-16455	WCX013	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-013	WCW013	TW-19500	WCX016	On Water Body	Very High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WA-014	WCW014	TW-26465	WCX018	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-015	WCW015	TW-31300	WCX019	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-017	WCW017	TW-34970	WCX021	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-018	WCW018	TWA-04820	WCX022	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-019	WCW019	TWA-05575	WCX023	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-020	WCW020	TWA-07945	WCX024	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-021	WCW021	TWA-09380	WCX025	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-022	WCW022	TWA-12930	WCX026	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-023	WCW023	TWA-21315	WBX032	On Water Body	Medium	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-024	WCW024	TWA-27595	WCX032	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-025	WCW025	TWB-10160	WBP061	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WA-026	WCW026	TWB-12630	WCX036	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-027	WCW027	TWB-24900	WCX039	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-028	WCW028	TWC-04950	WCX042	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-029	WCW029	TWC-18915	WCX048	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-030	WCW030	TWC-20240	WCX049	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-031	WCW031	TWD-04185	WCX056	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-032	WCW032	TWD-08925	WCX058	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-033	WCW033	TWD-18145	WCX060	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-034	WCW034	TWD-26415	WCX062	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-041	WCW041	TWD-28520	WCX064	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-042	WCW042	TWD-29115	WCX065	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WA-035	WCW035	TWD-32725	WCX066	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-036	WCW036	TWE-02430	WCX069	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-037	WCW037	TWE-03585	WCX070	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-038	WCW038	TWE-09105	WCX072	On Water Body	High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-039	WCW039	TWE-09825	WCX073	On Water Body	Very High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WA-040	WCW040	TWE-11425	Liffey_140	On Water Body	Very High	Source of Impact 1	No impacts	Negligible	No impacts are anticipated.	Not Significant	No impacts are anticipated	Negligible	Not Significant
WB-001	N/A	TW-02260	Kilmastulla_040	100	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-002	N/A	TW-03255	Kilmastulla_040	60	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-002a	N/A	TW-03520	WBX008	65	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-003	N/A	TW-04415	WBX108	10	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-004	N/A	TW-04945	WBX012	5	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-005	N/A	TW-06620	WBP228	10	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-006	N/A	TW-06940	WBP004	15	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-007	N/A	TW-08490	WCX006	10	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-007a	N/A	TW-09000	WCX007	10	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-008	N/A	TW-10165	WCX008	10	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-009	N/A	TW-13030	Ardgregane Stream_010	30	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-010	N/A	TW-13795	WBP236	20	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-011	N/A	TW-14270	N/A	N/A	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-012	N/A	TW-17135	WCX014	30	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-012a	N/A	TW-17885	WCX015	25	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-012b	N/A	TW-18255	WBP077	50	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-013	N/A	TW-19145	WBX017	20	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-014	N/A	TW-20450	WBX018	10	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-014a	N/A	TW-27080	N/A	N/A	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-015	N/A	TW-29270	N/A	N/A	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-016	N/A	TW-31595	WBX019	15	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-017	N/A	TW-32160	N/A	N/A	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-018	N/A	TW-34205	WBX020	10	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-018a	N/A	TW-34750	WCX020	15	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-019	N/A	TWA-00690	N/A	N/A	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-020	N/A	TWA-03545	WBP006	45	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-020a	N/A	TWA-04025	N/A	N/A	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-022	N/A	TWA-08765	WBX024	15	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-022a	N/A	TWA-12110	WBX025	65	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-023	N/A	TWA-14170	N/A	N/A	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-024	N/A	TWA-14775	WBX027	20	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-025	N/A	TWA-15305	WBP010	10	Low	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-026	N/A	TWA-15955	WBP080	15	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-027	N/A	TWA-17545	WCX027	10	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-028	N/A	TWA-19370	WBX028	5	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-029	N/A	TWA-20315	WBP012	10	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-030	N/A	TWA-23215	WBP013	20	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-031	N/A	TWA-23800	WCX028	20	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-032	N/A	TWA-24775	WCX029	15	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-033	N/A	TWA-25690	WCX030	15	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-034	N/A	TWA-26085	WCX031	45	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-035	N/A	TWA-27155	WBX034	5	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-036	N/A	TWB-00270	WBX037	20	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-036a	N/A	TWB-01130	N/A	N/A	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-037	N/A	TWB-01390	WCX033	20	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-038	N/A	TWB-03490	N/A	N/A	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-038a	N/A	TWB-05850	WBP016	20	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-039	N/A	TWB-05850	WBP016	10	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-040	N/A	TWB-06550	WBP019	20	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-041	N/A	TWB-07770	WCX035	15	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-042	N/A	TWB-09130	WBX040	10	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-043	N/A	TWB-10940	WBX043	20	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-044	N/A	TWB-14170	WBP022	15	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-045	N/A	TWB-14740	WCX038	20	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-045a	N/A	TWB-15265	WBP087	10	Low	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-046	N/A	TWB-15850	N/A	N/A	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-047	N/A	TWB-16600	N/A	N/A	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-048	N/A	TWB-17740	N/A	N/A	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-049	N/A	TWB-19755	WBX045	5	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-050	N/A	TWB-20290	WBP142	10	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-051	N/A	TWB-21770	WBX049	15	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-052	N/A	TWB-22060	WBX050	15	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-053	N/A	TWB-23310	WBX051	20	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-054	N/A	TWB-23940	WBX052	15	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-055	N/A	TWB-26235	N/A	N/A	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-056	N/A	TWB-28050	N/A	N/A	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-057	N/A	TWC-00970	WCX040	15	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-058	N/A	TWC-01180	WBX053	20	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-059	N/A	TWC-03310	WCX041	30	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-060	N/A	TWC-04780	WBP147	15	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-061	N/A	TWC-05190	WBP023	15	Low	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-062	N/A	TWC-05590	WCX043	15	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-063	N/A	TWC-06930	WBX057	10	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-064	N/A	TWC-08875	WCX044	15	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-065	N/A	TWC-09680	WCX045	15	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-066	N/A	TWC-09985	WBX058	5	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-067	N/A	TWC-11095	WBX062	10	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-068	N/A	TWC-11865	WBX063	10	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-069	N/A	TWC-12010	WBP156	15	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-070	N/A	TWC-12585	Daingean_010	110	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-071	N/A	TWC-13240	N/A	N/A	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-072	N/A	TWC-13485	N/A	N/A	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-073	N/A	TWC-13670	WBP160	20	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-074	N/A	TWC-15725	WBP161	10	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-075	N/A	TWC-17635	WBX098	10	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-076	N/A	TWC-18150	N/A	N/A	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-077	N/A	TWC-19260	N/A	N/A	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-078	N/A	TWC-20570	Esker Stream_020	130	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-079	N/A	TWC-21120	WCX051	20	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-080	N/A	TWC-21320	WCX053	5	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-081	N/A	TWC-21675	Esker Stream_020	50	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-082	N/A	TWC-22805	WCX054	10	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-083	N/A	TWC-23190	WBP029	30	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-084	N/A	TWC-23670	WBP173	20	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-085	N/A	TWC-24115	WBX071	20	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-086	N/A	TWD-00385	WBP117	25	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-087	N/A	TWD-00490	WBX074	5	Low	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-088	N/A	TWD-01080	N/A	N/A	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-089	N/A	TWD-02845	N/A	N/A	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-091	N/A	TWD-03520	WCX055	25	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-092	N/A	TWD-04615	Figile_030	25	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-093	N/A	TWD-04890	Figile_030	15	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-094	N/A	TWD-05275	Figile_030	95	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-095	N/A	TWD-05645	Figile_030	100	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-096	N/A	TWD-05895	Figile_030	75	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-097	N/A	TWD-06150	Figile_030	25	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-098	N/A	TWD-06280	Figile_030	70	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-099	N/A	TWD-06685	N/A	N/A	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-100	N/A	TWD-06915	N/A	N/A	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-101	N/A	TWD-07125	N/A	N/A	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-102	N/A	TWD-07430	N/A	N/A	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-103	N/A	TWD-07875	WBX103	25	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-104	N/A	TWD-12160	N/A	N/A	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-105	N/A	TWD-12895	N/A	N/A	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-106	N/A	TWD-14145	N/A	N/A	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-107	N/A	TWD-14410	WCX059	0	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-109	N/A	TWD-15865	WBP118	30	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-110	N/A	TWD-16585	WBP098	35	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-111	N/A	TWD-17345	N/A	N/A	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-112	N/A	TWD-17825	WBP038	315	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-113	N/A	TWD-18690	N/A	N/A	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-114	N/A	TWD-19360	N/A	N/A	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-115	N/A	TWD-20325	N/A	N/A	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-116	N/A	TWD-20755	N/A	N/A	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-117	N/A	TWD-21025	WBX106	110	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-118	N/A	TWD-21415	N/A	N/A	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-119	N/A	TWD-22705	N/A	N/A	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-120	N/A	TWD-23110	WBP317	220	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-121	N/A	TWD-23395	N/A	N/A	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-122	N/A	TWD-24305	WCX061	10	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-123	N/A	TWD-24705	WBP040	50	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-124	N/A	TWD-25645	N/A	N/A	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-125	N/A	TWD-26885	WBP042	15	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-128	N/A	TWD-30400	N/A	N/A	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-129	N/A	TWD-31205	WBX082	20	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-130	N/A	TWD-31880	WBP046	30	Medium	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-131	N/A	TWE-00715	WCX067	10	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-132	N/A	TWE-01740	WCX068	15	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-133	N/A	TWE-04365	WBX084	5	Low	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-134	N/A	TWE-05765	WBP310	15	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-135	N/A	TWE-06390	N/A	N/A	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-136	N/A	TWE-08210	WBP119	30	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-136a	N/A	TWE-08520	N/A	N/A	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-137	N/A	TWE-10125	WCX075	15	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-138	N/A	TWE-12325	N/A	N/A	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-139	N/A	TWE-13945	WBP120	10	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant
WB-140	N/A	TWE-14145	WBP211	10	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

Washout ID	Washout Outfall ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WB-140a	N/A	TWE-15360	N/A	N/A	High	Source of Impact 1	Potential Impact A	Low Adverse	Impacts would be temporary over the operational use of the valve and localised (not at the waterbody scale). Resulting in a measurable impact for a short period of time and resulting in no overall change in the WFD classification or status of supporting quality elements. Minor impact on a small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-WO1	Negligible	Not Significant

5. Washouts at Line Valves Commissioning Phase Assessment

14. Potential sources of impacts from washouts at Line Valves during commissioning comprise the following:

- Discharge of treated drinking water
- Change in flow regime at washout locations including flow concentrated on one section of channel.

15. The anticipated impacts are common to each outfall, and comprise the following:

- Changes to water quality in the receiving watercourse, including increases in suspended solids as the pipeline will not have been cleaned up to this point, it may contain residues of fine suspended solids
- Discharges may cause scour of the channel bed and banks at the discharge point, potentially altering morphological process leading to erosion of the channel and/or morphological features and to destabilisation of the watercourse.

Table 5.1: Watercourse Pipeline Assessment – Washouts at Line Valves - Commissioning

Washout ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Potential Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WO-10	TW-6050	Kilmastulla River (Kilmastulla_040)	100	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WO-20	TW-12440	WBX014	40	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WO-33	TW-20730	WCX017	10	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WO-37	TW-28785	N/A	N/A	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WO-52	TWA-5000	WCX022	150	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WO-61	TWA-14155	N/A	N/A	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WO-69	TWA-19235	WBX028	100	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WO-77	TWA-25140	WBX037	230	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WO-89	TWB-4655	WBX038	45	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant

Washout ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Potential Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WO-100	TWB-13725	WBP128	25	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WO-112	TWB-21205	WBX048	30	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WO-123	TWB-350	WBP309	330	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (Significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WO-152	TWB-17145	WBP343	90	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WO-167	TWC-24700	WBX073	180	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WO-188	TWC-8110	WBP093	65	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WO-198	TWC-16225	WBP097	50	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WO-215	TWC-24620	WBP040	40	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WO-229	TWE-120	WBP050	225	Medium	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Slight (not significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant

Washout ID	Chainage	Discharge Water Body Crossing ID (or WFD Water body name if not crossing)	Approx. distance to nearest WFD water body (m)	Overall Sensitivity	Potential Source of Impact	Potential Impacts	Pre Mitigation Magnitude	Rationale for Magnitude	Significance of Effect (Pre - mitigation)	Mitigation	Residual Magnitude	Residual Significance of Effect
WO-240	TWE-7315	WBX086	15	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant
WO-250	TWE-14910	WBP215	20	High	Potential Sources of Impact 1-2	Potential Impacts A-B	Low Adverse	Impacts would be temporary over the commissioning period and localised (not at the waterbody scale). Resulting in a measurable impact but no overall change in the WFD classification or status of supporting quality elements. Minor impact on integrity of small part of or temporary loss of small part of the receptor.	Moderate (significant)	Generic mitigation detailed in the SWMP (Annex B of Appendix 5.1) Specific mitigation items: W-SC20	Negligible	Not Significant