

Appendix 12C

Water Framework Directive Screening Assessment

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SSE Tarbert Next Generation Power Station

Environmental Impact Assessment Report (EIAR)
Volume II
Appendix 12C Water Framework Directive Screening
Assessment

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1. Introduction

Background

- 1.1 AECOM Ireland Limited (AECOM) has been commissioned by SSE Ireland Generation Limited to undertake a Water Framework Directive (WFD) Screening Assessment in support of the planning application for the Tarbert Next Generation Power Station hereafter referred to as the Proposed Development.
- 1.2 The Proposed Development will comprise of the construction and operation of an Open Cycle Gas Turbine (OCGT) power plant, inclusive of infrastructure relating to this, in addition to the demolition of pre-existing infrastructure within the site. The closest element of the Proposed Development to the red line boundary is situated approximately 16m inland of the top of the left bank (looking downstream) of the Lower Shannon Estuary, which is a Special Area of Conservation (SAC) and therefore a sensitive water environment.
- 1.3 The principal components of the Proposed Development include the following:
 - Construction of a 350MW OCGT power plant fuelled by hydrotreated vegetable oil.
 - Installation of a pipeline to transport Hydrotreated Vegetable Oil (HVO) from the offloading bays/storage tanks to the OCGT unit; and
 - Demolition of ancillary buildings and structures associated with the Tarbert Heavy Fuel Oil (HFO) Power Station.
- 1.4 Other components of the Proposed Development includes:
 - OCGT generating plant and associated building (40m x 57m x 30m high).
 - Emissions stack 55m in height (external diameter 9m) with continuous environmental monitoring systems (CEMS) platform.
 - Selective Catalytic Reduction (SCR) and air dilution fans, filters and exhaust gas/ ammonia mixing skids.
 - Fin fan coolers (OCGT) (23m x 6.4m x 6m high).
 - Fin fan coolers (lube oil) (7m x 7.5m x 5m high).
 - One main and one auxiliary transformer with a blast wall (20m x 0.6m x 15m high) separating.
 - Fire suppression enclosure/skid.
 - Aqueous ammonia tank (2.5m diameter x 5m length).
 - Ignition propane gas tank and compound (2m diameter x 4.6m length).
 - Demineralisation water treatment plant (15m x 30m x 12m high).
 - Demin water tanks (24m diameter x 17m high) (2 No. x 7,500m³ capacity).
 - Raw water and fire storage water tank (22m diameter x 15.5m high) (5,900m³ capacity).
 - Fire water module (10m x 10m x 8m high).
 - HVO storage tanks 3 No. tanks in total, 1 x 1500m³ capacity (14m diameter by 10m high) and 2 x 4,400m³ capacity (20m diameter x 14m high) with two unloading bays.
 - Fuel polishing building (20m x 15m x 8m high).
 - HVO pipework (approximately 200m) overground with bunding the majority of this length with a short section underground.
 - Electrical connections from main transformer (unit) to 220kV substation (75m overhead cables).
 - New wastewater treatment plant.

- Administration building and workshop (40m x 13m x 5m high).
- Stores (25m x 12.5m x 10m).
- Carparking (eight x spaces to the front of the administration and workshop building totalling 100m²).
- Flood defence works; and
- Demolition works (removal of existing buildings).

Aim

- 1.5 The aim of this report is to summarise a WFD Screening Assessment for the Proposed Development. This is in order to ascertain potential risks to WFD objectives, recommend potential mitigation measures if any are needed, and to identify whether the Proposed Development appears compliant with WFD objectives or if further a WFD Impact Assessment will be required.

Study Area

- 1.6 The Proposed Development, see Plate 1-1 is positioned on Tarbert Island, in County Kerry, Ireland, and is 16.24ha in area. The Proposed Development lies within the boundary of the pre-existing SSE Tarbert Power Station site ('SSE Tarbert'), which is located approximately 1.8km north of the town of Tarbert.
- 1.7 In the immediate surrounding areas are the Lower Shannon Estuary is a Special Area of Conservation (SAC), the River Shannon and River Fergus Estuaries Special Protection Area (SPA) and the Tarbert Bay proposed Natural Heritage Area (pNHA).
- 1.8 The Proposed Development extends across two WFD surface water bodies:
- The RALAPPANE_010 (IE_SH_24R300270) river water body
 - The Lower Shannon Estuary (IE_SH_060_0300) transitional water body
- 1.9 The Proposed Development is situated above the Ballylongford (IE_SH_G_030) groundwater body.

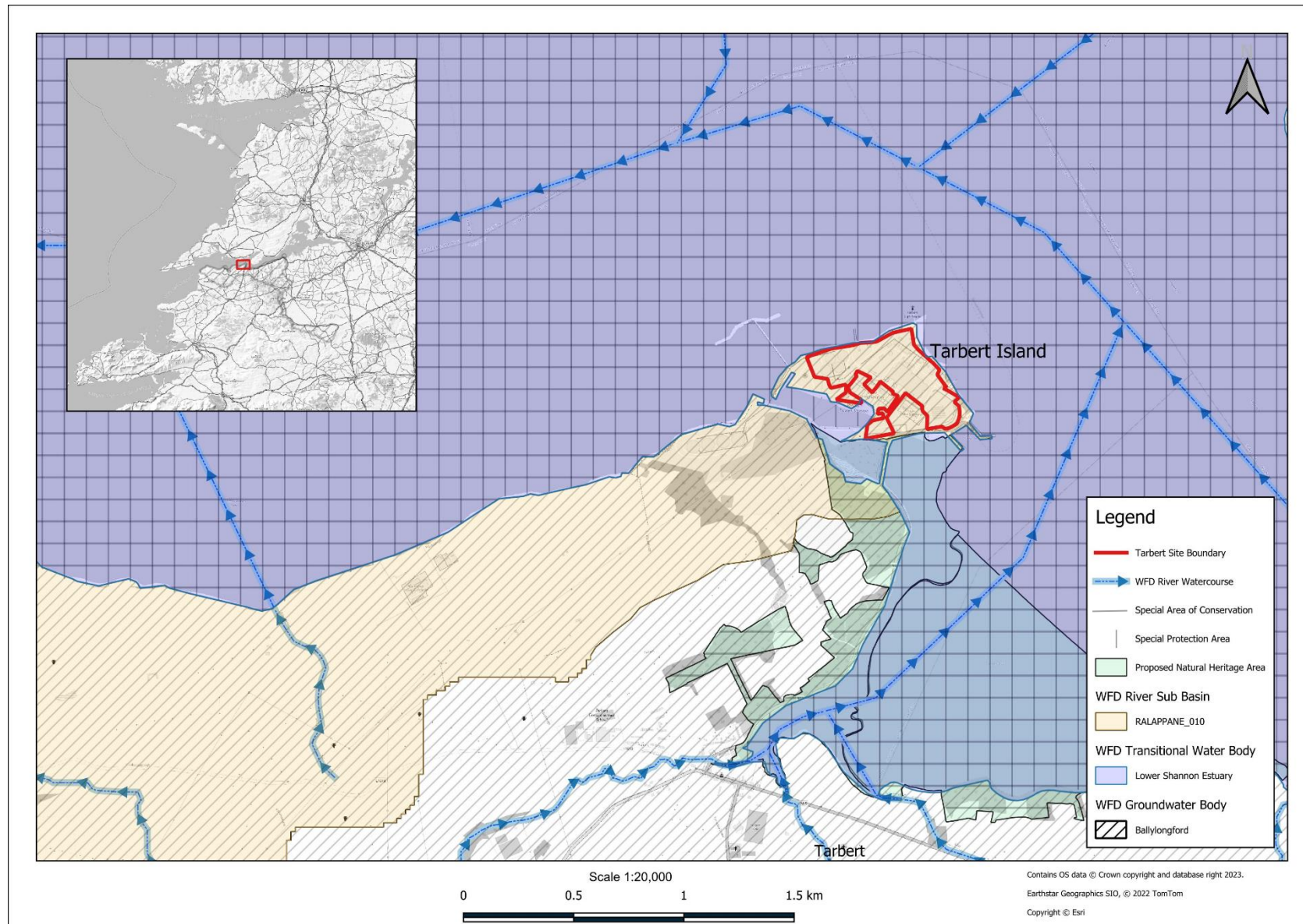


Plate 1-1 Site extent and WFD water bodies

The Water Framework Directive

- 1.10 The EU Water Framework Directive (2000/60/EC) as amended by Directives 2008/105/EC, 2013/39/EU and 2014/101/EU ('WFD') requires all Member States to protect and improve water quality in all waters so that they achieve good ecological status by 2015 or, at the latest, by 2027. It was given legal effect in Ireland by the European Communities (Water Policy) Regulations 2003 (S.I. No. 722 of 2003). It applies to rivers, canals, lakes, groundwater, and transitional coastal waters. The Directive requires that management plans be prepared on a river basin basis and specifies a structured method for developing these plans.
- 1.11 The WFD takes a holistic approach to sustainable management of the water environment by considering interactions between surface water, groundwater, and water-dependent ecosystems. Ecosystem conditions are evaluated according to interactions between classes of biological, chemical, physico-chemical and hydromorphological elements known as 'Quality Elements'.
- 1.12 Under the WFD, 'water bodies' are the basic management units, defined as all or part of a river system or aquifer. Waterbodies form part of a larger 'river basin district' (RBD), for which 'River Basin Management Plans' (RBMPs) are used to summarise baseline conditions and set broad improvement objectives. RBMPs are produced every six years, in accordance with the river basin management planning cycle. The current RBMPs at the date of this assessment are the 2015 Cycle 3 plans, updated in 2021.
- 1.13 The WFD requires water bodies to be classified according to their current condition (i.e. the 'Status' or, in the case of heavily modified or artificial water bodies, the 'Potential') and to set a series of objectives for maintaining or improving conditions so that water bodies maintain or reach Good Status or Potential.
- 1.14 In Ireland, the Local Authority Waters Programme (LAWPRO) is a Local Authority (LA) shared service, responsible for coordinating the LAs response to The European Union Water Framework Directive statutory obligations on placed on Member States and Local Authorities. There are five local authority regional committees, known as Water and Environment Management Committees, LAWPRO supports each one; and they have responsibility for the co-ordinated delivery of measures at the regional and local level and to ensure a consistency of approach across the regions. The five regional committees are chaired at Chief Executive level, with active participation and technical advice from the Environmental Protection Agency (EPA).
- 1.15 In determining whether a development is compliant or non-compliant with the WFD objectives for a water body, the conservation objectives of any Protected Areas such as Special Areas of Conservation and adjacent WFD waterbodies, where relevant, should be considered.

2. Methodology

- 2.1 There are no fixed methods for the WFD assessment. The nature of the water environment and the breadth of the legislation mean that assessments are tailored to proposals on a case-by-case basis.
- 2.2 The following general guidance is available which has been applied for this assessment:
- EU-level guidance document Water Framework Directive Project assessment checklist tool (2018), published by the Joint Assistance to Support Projects in European Regions (JASPERS).
 - Planning Inspectorate Advice Note 18: The WFD (PINS, 2017), which provides an overview of the WFD and provides an outline methodology for considering the WFD.
 - [Water Framework Directive assessment: estuarine and coastal waters - GOV.UK \(www.gov.uk\)](http://www.gov.uk)
- 2.3 A stepwise approach consisting of screening, scoping and impact assessment phases is generally followed in order to: (a) rationalise the levels of WFD assessment and impact mitigation that are required; and (b) verify that proposals meet the requirements of the WFD. The general approach is described by The Planning Inspectorate (2017) and briefly summarised.
- 2.4 This WFD comprises of a Screening assessment, identifying the zone of influence of the Proposed Development, and whether the activities involved are going to negatively impact the water environment.

Stage 1 Screening

- 2.5 Screening identifies the zone of influence of a Proposed Development, and if proposed activities pose a risk to the water environment. It is used to identify if there are activities that do not require further consideration for WFD objectives, for example activities which have been ongoing since before the current RBMP cycle and which have thus formed part of the baseline.

Stage 2: Scoping

- 2.6 Scoping is used to identify any potential impacts of the proposed activities to specific WFD receptors and their water quality elements. This involves review of WFD impact pathways, shortlisting which WFD water bodies and quality elements could or could not be affected by proposed activities, and collecting baseline information from the relevant RBMP on the status and objectives for each water body.

Stage 3: Impact Assessment

- 2.7 This involves rationalised assessment of water bodies and quality elements that could be affected by proposed activities, in order to identify any areas of WFD non-compliance. Proposed activities are reviewed in terms of both positive and negative impacts, and the baseline mitigation measures, enhancements, and contributions to the WFD objectives described in the RBMP. Any proposed activities with potentially deleterious impacts are reviewed simultaneously with their corresponding mitigation proposals, to determine a net effect on WFD objectives.

Mitigation Commitments

- 2.8 Proposed mitigation activities relied upon to demonstrate compliance at any of the stages referred to above must be appropriately defined and sufficiently secured. Mitigation could be secured through planning or licence conditions, Development Consent Orders, or other legally binding methods.

Further Assessments and Article 4.7

- 2.9 Where the potential for deterioration of water bodies is identified, and an overriding need is robustly proven, with regards to all relevant legislation and legal processes, that it is not realistically feasible to mitigate impacts to a level where deterioration or failure to improve can be avoided, the proposals would need to be assessed further in the context of WFD Article 4.7. Where an Applicant considers that a derogation case could be prepared, the Applicant will need to provide the necessary information to justify its case, bearing in mind that Applicants must always seek to avoid deterioration of the water environment. It is a matter for the EPA and the Department of Housing, Local Government and Heritage to consider whether derogation under Article 4.7 is justified in relation to a Proposed Development. At this stage a derogation under Article 4.7 is not considered necessary.

Desk Study

2.10 A desk-based study was carried out to capture information pertaining the Proposed Development that is not attainable through site survey. Reviewal of relevant information relating to the study area was undertaken to develop a baseline for WFD catchments, watercourses, and surrounding areas. The following data sources were used for the desk study:

- WFD catchment data^{1 2}
- Historical maps and aerial imagery³
- Climate Data (Ireland)⁴
- Geology and soil data⁵
- Specially Protected Area (SPA) and Special Area of Conservation (SAC) data⁶
- Hydrological information^{7 8}

Limitations and Assumptions

- 2.11 This screening exercise is based on the Scheme design information available at the time of assessment in November 2023.
- 2.12 An assumption of this WFD Screening Assessment is that there will be no material alterations to the existing jetty that could affect flow patterns and hydromorphological/ ecological processes within the estuary, and that there would be no dredging operations or other physical impacts to the estuary including its shoreline.
- 2.13 It is assumed that a Construction Environmental Management Plan (CEMP) will be provided by the contractor inclusive of details on mitigation measures to control surface water runoff quantity and quality during the construction phase.
- 2.14 It is also assumed that a Sustainable Drainage Strategy will be provided by the client inclusive of details on mitigation measures to control surface water runoff quantity and quality during the operational phase.

¹ [Data - Catchments.ie - Catchments.ie](https://catchments.ie)

² [Download Data \(epa.ie\)](https://epa.ie)

³ [Side by side georeferenced maps viewer - Map images - National Library of Scotland \(nls.uk\)](https://nls.uk)

⁴ [Home | Climate Change Knowledge Portal \(worldbank.org\)](https://worldbank.org)

⁵ [EPA Maps](https://epa.ie)

⁶ [EPA Maps](https://epa.ie)

⁷ [Realtime waterlevel](https://met.ie)

⁸ [Historical Data - Met Éireann - The Irish Meteorological Service](https://met.ie)

3. Desk Study

Catchment Characteristics

General Characteristics

- 3.1 The Proposed Development is situated on Tarbert Island, which is an historically developed site for electricity generation and fuel storage infrastructure. The land use for the surrounding areas is characterised by very sparsely populated farmland with one off residential properties and farmhouses. The closest dwelling to the Proposed Development is located 0m to the south-west.
- 3.2 There are no drainage ditches or watercourses within the Site boundary, however immediately to the south of the red line boundary of the Proposed Development at (52.588011, -9.364838) is a small headwater channel bounded on all sides existing development which drains south-west into the Lower Shannon Estuary. This is part of the estuary but is a highly modified channel that does not have typical estuarine habitat conditions. It is a tidal channel and the flow/volume of water contained within it is also affected by discharge rates from the Tarbert HFO Power Station and surface water drainage discharge.
- 3.3 The Proposed Development is surrounded by the Lower River Shannon SAC (002165), which includes numerous Annex I protected habitats and species, including Surface Water Dependent Ecosystems (SWDE) such as intertidal flats which support a diverse macro-invertebrate community.
- 3.4 In addition to the SAC, the same area also covers the River Shannon and River Fergus Estuaries SPA (004077), which is designated for wintering birds.
- 3.5 Directly adjacent to the Proposed Development is the Tarbert Bay proposed Natural Heritage Area (pNHA), which consists of a sandy intertidal bay fringed by saline vegetation and deciduous woodland. Much like the SPA area, this pNHA is also a designated habitat suitable for wintering birds.

Geology and Soils

- 3.6 The general area in which the Proposed Development is situated is predominantly low lying, flat and underlain by limestones with the exception of a few isolated hills. This geology provides a significant groundwater resource in the catchment. This formation is mapped as being a locally important aquifer (LI) – bedrock is moderately productive only in local zones.
- 3.7 The bedrock geology underlying the Proposed Development consists of the dark grey Shannon Group of undifferentiated mudstones, siltstones and sandstones. Bedrock outcrops are shown along the shoreline to the north and west. Fault lines are not indicated to be present in the area.
- 3.8 The entire island is underlain by Made Ground, with natural topsoil and subsoils in the surrounding area consisting of Till derived from sandstone and shale.

Hydrology

- 3.9 The closest Met Éireann weather station to the Proposed Development with available historic data is located at Tarbert (Kilpadouge), situated approximately 2.3km south-west. The annual precipitation recorded at this station in 2022 was 1231.3mm, which is similar to the Ireland average of 1288mm for the same period. Spring is typically the driest time of year, with the most precipitation falling in autumn months.
- 3.10 The nearest Office of Public Works (OPW) hydrological gauging station to the Proposed Development is Foynes (0000024064), which is located approximately 20km west of the Proposed Development. Thus, the flow conditions at this location are unlikely to be representative of those within the subbasin that the Proposed Development falls in as the river and catchment area drained are much smaller.

Historical Change

- 3.11 Comparing current aerial imagery to historical Ordnance Survey (OS) maps surveyed between 1829 and 1842, shows that there haven't been any significant changes to the watercourse in the WFD sub

basin that the Proposed Development is situated within. However, Tarbert Island (where the Site boundary for the Proposed Development lies), has seen a change in infrastructure type, with historical OS maps showing a coast guard station and signal masts at the southern point of Tarbert Island, as well as a light keepers house and grassland located in the north. Infrastructure relating to Tarbert Island station is now in-situ.

4. WFD Screening

WFD Screening

- 4.1 The purpose of the WFD screening stage is to identify the potential zone of influence of the Proposed Development and to determine the potential to positively or adversely impact upon WFD water body receptors. The screening stage also identifies specific activities of the Proposed Development that could affect receptor water bodies' WFD status and carries them forward to subsequent stages of the assessment process. Water body receptors that are screened out are not carried forward, and justification is provided.

Screening of WFD Water Bodies

- 4.2 The Proposed Development, in theory, is in the vicinity of and has the potential to interact with several WFD surface water and groundwater bodies. WFD Screening of these water bodies is provided in Table 1.

Table 1: Screening of WFD Water Bodies Potentially Impacted by the Proposed Development

Water Body ID	Screening Outcome	Justification
Lower Shannon Estuary (IE_SH_060_0300)	In	This WFD transitional water body may be directly impacted by the Proposed Development due to a range of activities which may interact with this water body.
RALAPPANE_010 (IE_SH_24R300270)	Out	Whilst the Proposed Development does lie within this WFD sub basin, there will not be any interference with the watercourse because the WFD water body is located 3km away, and Tarbert Island is predominantly geographically isolated from the mainland.
Ballylongford (IE_SH_G_030)	In	This groundwater body is situated directly beneath the entire area bound by the Proposed Development, thus there is a potential impact pathway.

WFD Status

WFD Status – Surface Water

- 4.3 WFD Status data for the WFD surface water bodies within the potential zone of influence of the Proposed Development are summarised in **Error! Reference source not found..**

- 4.4 WFD Status data for the WFD ground water bodies within the potential zone of influence of the Proposed Development are summarised in **Error! Reference source not found..**

Table 2: Summary of WFD Surface Water Body status data

SWB	Overall Status (2010-2015)	2 nd Cycle WFD Pressures	Overall Status (2013-2018)	Overall Status (2016-2021)	Risk Status 3 rd Cycle
Lower Shannon Estuary	Moderate	Anthropogenic Pressures	Good	Good	Not at Risk
Ralappane_10	Unassigned		Good	Moderate	Review

Table 3: WFD Status Summary for the Ballylongford (IE_SH_G_030)

SWB	Overall (2010-2015)	Status	2 nd Cycle Pressures	WFD Overall (2013-2018)	Status	Overall (2016-2021)	Status	Risk Cycle	Status	3 rd
Ballylongford	Good			Good		Good		At Risk		

Screening of Activities

- 4.5 The Proposed Development comprises a number of activities that present a potential risk to the WFD status of the water body identified in the previous section. The screening assessment of activities pertaining to the Proposed Development is provided in **Error! Reference source not found..**

Table 4: Screening of the Proposed Development's activities

Activity	Description	Screening Outcome	Justification
Construction and operation of an Open Cycle Gas Turbine (OCGT) power plant	A 350MW OCGT power plant is to be constructed and is to be fuelled by hydrotreated vegetable oil (HVO).	<p>Out:</p> <p>Lower Shannon Estuary (IE_SH_060_0300)</p> <p>Ballylongford (IE_SH_G_030)</p>	<p>Activities and Waterbodies Screened Out: Risks Mitigated</p> <p>Construction</p> <p>During construction embedded mitigation is in place to prevent any contaminants such as pollutants or silt entering the Lower Shannon Estuary.</p> <p>Any surface water runoff is to be managed according to a CEMP.</p> <p>Operation</p> <p>Any surface water and treated process water generated from hard surfaces will not be directly discharged into any water body during operational phases – all surface water runoff generated from hard surfaces is to be directed to a drainage system.</p> <p>Treated process water will be discharged into the estuary and will be in line with existing discharge limits so there will be no changes to the current baseline. Hence there will be negligible impacts.</p> <p>Therefore, following mitigation measures outlined in the embedded</p>

Activity	Description	Screening Outcome	Justification
Demolition of the OCGT and ancillary works	There are no plans at present for the demolition of the OCGT and ancillary works, but 25 years post construction the Proposed Development will either be upgraded to extend the operational life, or it may be decommissioned.	Out: Lower Shannon Estuary (IE_SH_060_0300) Ballylongford (IE_SH_G_030)	mitigation as part of the Proposed Development, the risk of this activity negatively impacting the WFD status of the surface and groundwater bodies is negligible. A Decommissioning Plan (which will include a Decommissioning Environmental Management Plan (DEMP)) will be prepared and agreed with the EPA as part of the permit surrender process. The Decommissioning EMP will consider the potential environmental risks at the Site and provide guidance and appropriate mitigation procedures as necessary, to minimise risk. As such permitting sufficient mitigation is in place, there will be a low risk to the WFD status of these water bodies. To ensure the risk is properly managed, another WFD screening assessment would be required when plans are confirmed.
Hydrotreated Vegetable Oil (HVO) pipework	A 200m long pipeline is to be installed from the offloading bays/ storage tanks to the OCGT unit. It will be used to transport HVO. The majority of the pipeline is to be situated above ground, with a short section (approximately 22m) laid underground.	Out: Lower Shannon Estuary (IE_SH_060_0300) Ballylongford (IE_SH_G_030)	<p><u>Activities and Waterbodies Screened Out:</u> <u>Risks Mitigated</u></p> <p>Construction</p> <p>The installation of the HVO pipeline is proposed to be approximately 30m away from the nearest waterbody. A suitable CEMP will mitigate against any risks associated with excavations for the pipeline installation.</p> <p>Operation</p> <p>There is the potential for spillages of HVO fuel during the loading and unloading from trucks which can present a risk to</p>

Activity	Description	Screening Outcome	Justification
Demolition of pre-existing infrastructure	Demolition of ancillary buildings and structures associated with the Tarbert HFO Power Station, buildings to be demolished include chemical storage buildings, water storage tank, water treatment plant, toilet block, fuel lines, storage area, carpentry workshop, contractor/ canteen building, boiler wash open top storage tank, remnant foundations, ESB building used by Tarbert HFO Power Station and ESB toilet block.	<p>Out: Lower Shannon Estuary (IE_SH_060_0300)</p> <p>Ballylongford (IE_SH_G_030)</p>	<p>the Lower Shannon Estuary WFD water body; however this risk has been reduced by refuelling taking place in bunded areas.</p> <p>HVO is to be delivered to the Site by HDV road tankers as such there will be no interactions with waterbodies. In addition to this embedded mitigation measures such as a HVO fuel unloading bay will be implemented as part of the Proposed Development to contain any spillages.</p> <p><u>Activities and Waterbodies Screened Out: Risks Mitigated</u></p> <p>Demolition</p> <p>There is to be no direct discharge to the water bodies during the demolition process and any indirect pollution of these waters can be limited following embedded mitigation measures.</p> <p>Therefore, the demolition of these buildings and structures will not have a negative impact on the WFD status of the surface and groundwater bodies should embedded mitigation measures be followed.</p>

5. Construction Risks

- 5.1 Some general guidance is provided below on typical risks and mitigation with regards to water bodies that can occur during construction activities. A bespoke CEMP has been developed for the Proposed Development to review and mitigate risks (refer to Appendix 5A, EIAR Volume II).

Potential Construction Phase Risks

- 5.2 During construction the following adverse impacts may occur:
- Impacts on surface water quality due to deposition or spillage of soils, sediments, oils, fuels, or other construction chemicals, or through mobilisation of contamination following disturbance of contaminated ground or groundwater, or through uncontrolled site run-off.
 - Potential changes in on-site and off-site flood risk due to changes in the volume, rate and flow of surface water runoff from the construction site, which could mobilise pollutants into water bodies.
 - Contamination of surface waters, groundwater and soil could result from leakage and spills of fuels, oils, chemicals and concrete during construction affecting watercourses indirectly via site runoff or directly where works are close to and within a water body. Contamination may reduce water quality and impact aquatic fauna and flora.
 - Construction activities such as earth works, excavations, site preparation, levelling and grading operations result in the disturbance of soils. Exposed soil is more vulnerable to erosion during rainfall events due to loosening and removal of vegetation to bind it, compaction and increased runoff rates. Surface runoff from such areas can contain excessive quantities of fine sediment, which may eventually be transported to the Lower Shannon Estuary where it can result in adverse impacts on water quality and habitats of this SAC. Construction works within, along the banks and across watercourses can also be a direct source of fine sediment mobilisation.
- 5.3 Whilst there are potential risks during the construction phase, they will be temporary, thus when completed will no longer be present. Any potential risks are likely to have a localised, temporary adverse effect on the Lower Shannon Estuary and are unlikely to deteriorate the WFD status but may be eliminated with effective mitigation.

Construction Mitigation

- 5.4 Construction phase risks will be managed using a CEMP, which has been prepared for the EIAR, and will be finalised and updated in advance of being implemented by the Contractor. It includes a Water Management Plan (WMP) as a technical appendix that will provide site specific information of how the risks to the water environment from potential pollution and the risk of physical damage will be managed. These measures require Contractor input and thus the WMP would not be developed until the detailed design phase and pre-construction planning period. The following conditions are to be included:
- Existing surface water management systems are to be inspected, ensuring they are in suitable working order prior to any Proposed Development works commencing on site.
 - There will be no direct discharge to any water body at any time during the demolition, construction, or operational phases. All surface water run-off within the Site will be directed to the drainage system.
 - Silt loss from the site is to be limited by ensuring excavations are open for the shortest amount of time possible. Silt traps are to be placed at any crossing points to avoid siltation of drainage channels and, if the need arises, silt fences will be used during the course of works in order to reduce the potential for pollution of watercourses. These will be maintained and cleaned regularly throughout the construction phase.
 - There will be a designated bunded storage area at the Contractor's compound(s) and away from surface water gullies or drains for oils, solvents and paints used during construction. The fuel storage tanks will be bunded and any drainage from this area will be diverted for collection and safe disposal.

- Refuelling of construction vehicles and the addition of hydraulic oils or lubricants to vehicles, will take place in designated impermeable refuelling areas isolated from surface water drains. Spill kit facilities will be provided at the fuelling area in order to provide for any accidental releases or spillages in and around the area.
 - Equipment will be regularly maintained, and leaks repaired as soon as is practicable. If the equipment cannot be repaired, it will be removed from the site. Accidental spillages will be contained and cleaned up immediately.
 - No wash-down or wash-out of ready-mix concrete vehicles during the construction works will be carried out at the Site within 20 m of an existing surface water drainage point. Washouts will only be allowed to take place in designated areas with an impervious surface.
- 5.5 Works would be carried out in accordance with established best practice and the CEMP, which would include information on:
- Permissions and Consents
 - Management of Construction Site Runoff
 - Management of Construction Site Spillage Risk
 - Management of Flood Risks.
- 5.6 Development and implementation of an appropriate CEMP is the responsibility of the appointed Contractor(s), and thus the details would not be developed until the detailed design phase and pre-construction period. It is reasonable to assume for planning submission purposes and for this WFD assessment that the CEMP for the Proposed Development contains appropriate measures and the CEMP will be updated by the Contractor in the future (with agreement from Consenting Authority) and that objectives for managing temporary WFD objectives will be met.
- 5.7 It is anticipated that all construction risks where full details are available could be adequately mitigated with appropriate planning and management.

6. Operational Phase

Operational Phase Risks

- 6.1 The main operational phase risks associated with the Proposed Development include:
- Pollution of water bodies by increased volume and rate of site runoff and discharge
 - Accidental pollution of water bodies due to spillages, including spillages from the pipeline from the offloading bays/storage tanks to the OCGT unit
- 6.2 Any activities carried out close to surface waters involve a risk of pollution due to accidental spillages and leaks. Accidental spillages, should they occur, could impact both surface water and groundwater bodies both directly and indirectly. Should there be a direct impact, water quality is likely to be negatively impacted. This can be mitigated against with embedded mitigation. Refer to EIAR Volume I **Chapter 12** (Water Environment).
- 6.3 During the operational phase wastewater is to be produced from sources such as foul wastewater and process wastewater from the production of demineralised water and periodic washing of the internal blading of the gas turbine. Process wastewater from the demineralisation process is to be discharged to the surface water drainage system once treated to adjust the pH to a neutral range. Foul wastewater will first be directed to the wastewater treatment plant including a septic tank and trickle filter before being discharged to outfall 8 and 9 / SE 3. Wastewater from the fuel polishing system and periodic washing of the internal blading is to be stored in a tank and periodically disposed of offsite.

Operational Phase Mitigation

- 6.4 Operational phases mitigation measures relate to the pollution of WFD water bodies through site run off and accidental spillages.
- The existing site drainage system is to provide interception, conveyance, treatment, and attenuation of surface water runoff and treated process water from the areas of hard standing associated with the Proposed Development.
 - The maintenance of drainage networks is required and will be based on standard guidance and practice.
- 6.5 Alongside these embedded mitigation measures to reduce the risk of the accidental pollution of the Lower Shannon SAC due to spillages during the operational phase, and by the mobilisation and accidental release of existing contaminants also during the operational phase.
- 6.6 . An Environmental Management Plan (EMP) is to be implemented and is likely to include trigger levels being set for key parameters against which the results of monitoring can be assessed, and any risks can be identified early and acted upon to remediate/ mitigate. In addition to this it is proposed that weekly checks will also be carried out to ensure surface water drains are not blocked by silt, or other items, and that all storage is located at least 50 m from the edge of the SAC.
- 6.7 Overall, it is anticipated that all operational phase risks, can be adequately mitigated against when by following mitigation procedures outlined.

7. Decommissioning Phase

- 7.1 The Proposed Development is expected to have a design life of at least 25 years after commissioning. After 25 years in operation, the Proposed Development will either be upgraded to extend its operational life or it may be decommissioned, depending on the national grid requirement. A decision on whether to extend the operational lifetime or to decommission the Proposed Development will be expected to be made before the equipment reaches 25 operational years.
- 7.2 A Demolition Environmental Management Plan (DEMP) will be produced to ensure that activities and mitigation implemented will be suitable so that the WFD status of water bodies isn't negatively impacted.

8. Conclusion

- 8.1 This Water Framework Directive (WFD) Screening Assessment has been prepared by AECOM on behalf of SSE Generation Ireland Limited to assess potential risks and identify appropriate mitigation measures (if any are needed) for the Proposed Development at SSE Tarbert to comply with WFD objectives.
- 8.2 The assessment has been made based on site and design information available in November 2023.
- 8.3 Based on the information provided, the Proposed Development will not directly interact with any WFD water bodies, and there are no indirect risk pathways (such as drains) to WFD water body receptors.
- 8.4 There are potential surface pollution risks associated with the Proposed Development construction and operation, however these can be mitigated to avoid risks to water bodies.
- 8.5 A Construction Environment Management Plan (CEMP) will provide sufficient mitigation for any construction risks to protect the WFD status of the Lower Shannon Estuary (IE_SH_060_0300) transitional water body, and the Ballylongford (IE_SH_G_030) groundwater body against any risks from activities such as the demolition of current infrastructure and the construction of the Proposed Development.
- 8.6 An operational Environment Management Plan (EMP) would provide sufficient mitigation measures for any operational risks as part of the Proposed Development, which will protect the WFD status of the transitional water body, and the Ballylongford (IE_SH_G_030) groundwater body.
- 8.7 Based on the information available, this WFD Screening Assessment concludes that the Proposed Development is NOT going to:
- Cause a deterioration in the status of all surface and groundwater bodies assessed.
 - Jeopardise the objectives to achieve 'Good' surface water/groundwater status.
 - Jeopardise the attainment of 'Good' surface water/groundwater chemical status.
 - Jeopardise the attainment of 'Good' surface water/groundwater quantity status.
 - Permanently exclude or compromise the achievement of the objectives of the WFD in other waterbodies within the same river basin district.
- 8.8 In summary, the Proposed Development will be compliant with the requirements of the Water Framework Directive (2000/60/EC) as amended.

9. References

- ¹ Available at: [Data - Catchments.ie - Catchments.ie](#) Last Accessed August 2023
- ² Available at: [Download Data \(epa.ie\)](#) Last Accessed August 2023
- ³ Available at: [GeoHive Map Viewer](#) Last Accessed August 2023
- ⁴ Available at: [Home | Climate Change Knowledge Portal \(worldbank.org\)](#) Last Accessed August 2023
- ⁵ Available at: [EPA Maps](#) Last Accessed August 2023
- ⁶ Available at: [EPA Maps](#) Last Accessed August 2023
- ⁷ Available at: [Realtime waterlevel](#) Last Accessed August 2023
- ⁸ Available at: [Historical Data - Met Éireann - The Irish Meteorological Service](#) Last Accessed August 2023
- ⁹ Available at: [Data - Catchments.ie - Catchments.ie](#) Last Accessed October 2023

