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APPROPRIATE ASSESSMENT SCREENING REPORT AND NATURA IMPACT STATEMENT IN SUPPORT OF APPROPRIATE ASSESSMENT OF A PROPOSED DEVELOPMENT AT KILMEADEN VILLAGE, CO. WATERFORD.

July 2025









DOCUMENT CONTROL

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Document:	Appropriate assessment screening report and Natura Impact Statement in support of appropriate assessment of a proposed development at Kilmeaden village, Co. Waterford.
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EXECUTIVE SUMMARY

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The proposed development at Kilmeaden, Co. Waterford comprises four distinct but connected areas including a new village centre, a solar farm and rewilding area including grid scale battery storage, and a data centre with associated energy centre. The proposed development covers an area of 908.64 hectares comprising the proposed Technology Park and Village Centre, and the proposed Solar Panel Farm.

Although the potential development will primarily impact on habitats of low ecological significance, it is located within an ecologically sensitive area, being proximate to several Natura 2000 sites. As such, in accordance with the Precautionary Principle, the proposed development required Appropriate Assessment screening in order to comply with article 6(3) of the Habitats Directive. FERS Ltd was commissioned to undertake an Appropriate Assessment screening exercise regarding the potential impacts of the proposed development on the Natura 2000 network.

Screening having identified potential significant impacts on the Lower River Suir SAC, Phase II Appropriate Assessment and the preparation of a Natura Impact Statement was deemed to be required.

In order for Appropriate Assessment (AA) to comply with the criteria set out in the Habitats Directive and Part XAB of the Planning and Development Act 2000, an AA undertaken by the Competent Authority must include an examination, analysis, evaluation, findings, conclusions and a final determination. This document comprises the findings of the Appropriate Assessment (Habitats Directive) screening report and the Natura Impact Statement prepared in respect of the proposed development.

Following an examination, analysis and evaluation of the relevant information, and applying the precautionary principle, it is the professional opinion of the authors of this report that assuming the implementation of all mitigation measures in full as outlined in the EIAR and herein, the proposed development will not alone or in combination with other plans and projects adversely affect the integrity of the Lower River Suir SAC (the only European Site for which Stage 2 appropriate assessment was required) in view of the conservation objectives of its Qualifying Interests. This is the legal test for the NIS which must be met.

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1 Introduction

1.1 FERS Ltd. Company background

Forest, Environmental Research and Services have been conducting ecological surveys and research since the company's formation in 2005 by Dr Patrick Moran and Dr Kevin Black. Dr Moran, the principal ecologist with FERS, holds a 1st class honours degree in Environmental Biology (UCD), a Ph.D. in Ecology (UCD), a Diploma in EIA and SEA management (UCD) a Diploma in Environmental and Planning Law (King's Inn), a M.Sc. in Geographical Information Systems and Remote Sensing (University of Ulster, Coleraine) and a M.Sc. in Environmental and Climate Law (UCD). Patrick has in excess of 20 years of experience in carrying out ecological surveys on both an academic and a professional basis. Dr Emma Reeves, senior ecologist with FERS holds a 1st class honours degree in Botany, and a Ph.D. in Botany. Emma has in excess of 15 years of experience in undertaking ecological surveys on an academic and professional basis. Ciarán Byrne, a senior ecologist with FERS holds a 1st class honours degree in Environmental Management (DIT) and a M.Sc. in Applied Science/Ecological Assessment (UCC). Ciarán has in excess of 10 years in undertaking ecological surveys on both an academic and a professional basis. Senan Clynch, a junior ecologist with FERS holds a 1st class honours in Environmental Science from Trinity College Dublin. Senan has several years of academic and professional experience undertaking ecological surveys.

FERS client list includes National Parks and Wildlife Service, An Bord Pleanála, various County Councils, the Heritage Council, Teagasc, University College Dublin, the Environmental Protection Agency, Inland Waterways Association of Ireland, the Department of Agriculture, the Office of Public Works and Coillte in addition to numerous private individuals and companies. FERS Ltd. has prepared in excess of 300 Appropriate Assessment Screenings/Natura Impact Statements for a wide range of plans and projects.

1.2 The aim of this report

This report has been prepared in compliance with Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities (DoEHLG 2010a) and the European Communities (Birds and Natural Habitats) Regulations 2011, as amended in support of the Appropriate Assessment of a proposed development at Kilmeaden village, Co. Waterford. This report provides the information required in order to establish whether or not the proposed development is likely to have a significant ecological impact on any Natura 2000 sites, in the context of their conservation objectives and specifically on the habitats and species for which the sites have been designated.

1.3 Methodology for Appropriate Assessment

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1.3.1 Guidance

A number of guidance documents on the appropriate assessment process have been consulted during the preparation of this NIS. These are:

- DoEHLG (2010a) *Appropriate Assessment of Plans and Projects in Ireland. Revision February 2010.* Department of Environment, Heritage and Local Government, Dublin.
- DoEHLG (2010b) *Circular NPW 1-10 & PSSP 2-10*. Department of Environment, Heritage and Local Government, Dublin.
- European Commission (2002) *Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC: Novembre 2001*. Publications Office, Luxembourg.
- European Commission (2007) *Guidance Document on Article 6(4) of the 'Habitats Directive' 92/43/EEC. Clarification of the Concepts of: Alternative Solutions, Imperative Reasons of Overriding Public Interest, Compensatory Measures, Overall Coherence, Opinion of the Commission.* Publications Office, Luxembourg.
- European Communities (Birds and Natural Habitats) Regulations 2011 (as amended) , S.I. No. 477 of 2011. Stationery Office, Dublin.
- European Commission (2019) *Managing Natura 2000 Sites: The Provisions of Article 6 of the 'Habitats' Directive 92/43/EEC*. Publications Office, Luxembourg.
- OPR (2021) *OPR Practice Note PN01 Appropriate Assessment Screening for Development Management*. Office of the Planning Regulator, Dublin.

The assessment requirements of Article 6 are generally dealt with in a stage-by-stage approach. The stages as outlined in DoEHLG (2010a) are:

Stage (1) Screening – Appropriate Assessment (Habitats Directive) Screening report

This initial process identifies the likely impacts of a proposed project or plan upon a Natura 2000 site, either alone, or in combination with other projects or plans and considers whether these impacts are likely to be significant. Please note that judgement in the ECJ (C323/17) found that:

"…Article 6(3) of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora must be interpreted as meaning that, in order to determine whether it is necessary to carry out, subsequently, an appropriate assessment of the implications, for a site concerned, of a plan or project, it is not appropriate, at the screening stage, to take account of the measures intended to avoid or reduce the harmful effects of the plan or project on that site…"

The deliverable of the screening process is a screening report.

Stage (2) Appropriate Assessment – preparation of Natura Impact Statement (NIS)

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The consideration of the impact of the project or plan on the integrity of the Natura 2000 Site, either alone or in combination with other projects or plans to the sites structure and function and its conservation objectives. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts. The deliverable of this stage in the Appropriate Assessment process is a Natura Impact Statement.

Stage (3) Assessment of Alternative Solutions

The process which examines alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the Natura 2000 site.

Stage (4) Assessment where Adverse Impacts Remain

An assessment of compensatory measures where, in the light of an assessment of Imperative Reasons of Overriding Public Interest (IROPI), it is deemed that the project or plan should proceed.

At each stage, there is a determination as to whether a further stage in the Appropriate Assessment process is required. If, for example, the conclusions of the Screening stage indicate that there will be no significant impacts on the Natura 2000 site, there is no requirement to proceed further. Appropriate Assessment stages 1 and 2 deal with the main requirements for assessment under Article 6.3. Stage 3 may be part of Article 6(3) or a necessary precursor for Stage 4.

This report has been undertaken in accordance with the European Commission's Guidance on Appropriate Assessment (European Commission, 2002) which comprises the following:

1. Description of the Plan.
2. Identification of Natura 2000 sites likely affected by the Plan.
3. Identification and description of individual and cumulative impacts likely to result from the Plan.
4. Assessment of the significance of the impacts identified on the conservation objectives of the site(s).
5. Exclusion of sites where it can be objectively concluded that there will be no likely impacts on conservation objectives.

1.3.2 Desktop study

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A desk study to collate relevant environmental information pertaining to the proposed development was undertaken to inform this appropriate assessment. The following sources were consulted:

- NPWS boundary data shapefiles for SACs (SAC_ITM_2024_10), SPAs (SPA_ITM_2023_05), NHAs (NHA_ITM_2019_06) and pNHAs (pNHA_ITM_2015_11).
- NPWS habitat/species datasets including National Survey of Native Woodlands (2003-2008), Ancient and Long-established Woodland), *Margaritifera* sensitive areas, Irish Semi-natural Grassland Survey.
- National Biodiversity Data Centre mapping of species of conservation concern, available from https://maps.biodiversityireland.ie/
- Site documents for relevant Natura 2000 sites including Site Synopses, Conservation Objectives and Natura 2000 Standard Data forms.
- Information outlined in NPWS (2019a) and NPWS (2019b) Article 17 reporting on the conservation status of habitats (Annex I) and species (Annex II, IV and V).
- EPA online mapping data including surface and groundwater quality, water features, river catchment boundaries, groundwater bodies, wastewater/IPPC/waste emission points, pressures on rivers/lakes/groundwater, rivers/groundwater in SAC habitats, rivers/surface waters in SPA habitats, drinking water – rivers/lakes/groundwater, etc.
- OSI Geohive online mapping data including historic 6-inch mapping (1837-1842), satellite imagery (1995, 2000, 2005, 2005-2012, Aerial Premium), contours, soils, geology etc.

2 Appropriate Assessment Screening

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Following the guidelines set out by DoEHLG (2010a), Appropriate Assessment Screening (Phase I Appropriate Assessment) is the process that addresses and records the reasoning and conclusions in relation to the first two tests of Article 6(3) of the EU Habitats Directive. According to the guidelines, Appropriate Assessment Screening is the process that addresses and records the reasoning and conclusions in relation to the first two tests of Article 6(3):

(1) Is the plan or project directly connected to or necessary for the management of the site?

(2) Is the plan or project, alone or in combination with other such plans or projects likely to have significant negative effects on a Natura 2000 site(s) in view of the conservation objectives of that site(s)?

The proposed development cannot be screened out via the first screening test (i.e. the proposed development is not directly connected to, or necessary for the management of any Natura 2000 site). The screening exercise will therefore inform the Appropriate Assessment process in determining whether the proposed development, alone or in combination with other plans and projects, has any potential to have significant effects on the Natura 2000 sites within the study area. If the effects are deemed to be significant, potentially significant, or uncertain, or it the screening process becomes overly complicated, then applying the Precautionary Principle and in accordance with Article 6(3) of the Habitats Directive, a Stage 2 Appropriate Assessment is required stage, i.e., "*The consideration of the impact of the project or plan on the integrity of the Natura 2000 Site, either alone or in combination with other projects or plans to the sites structure and function and its conservation objectives. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts.*"

2.1 Location of proposed development

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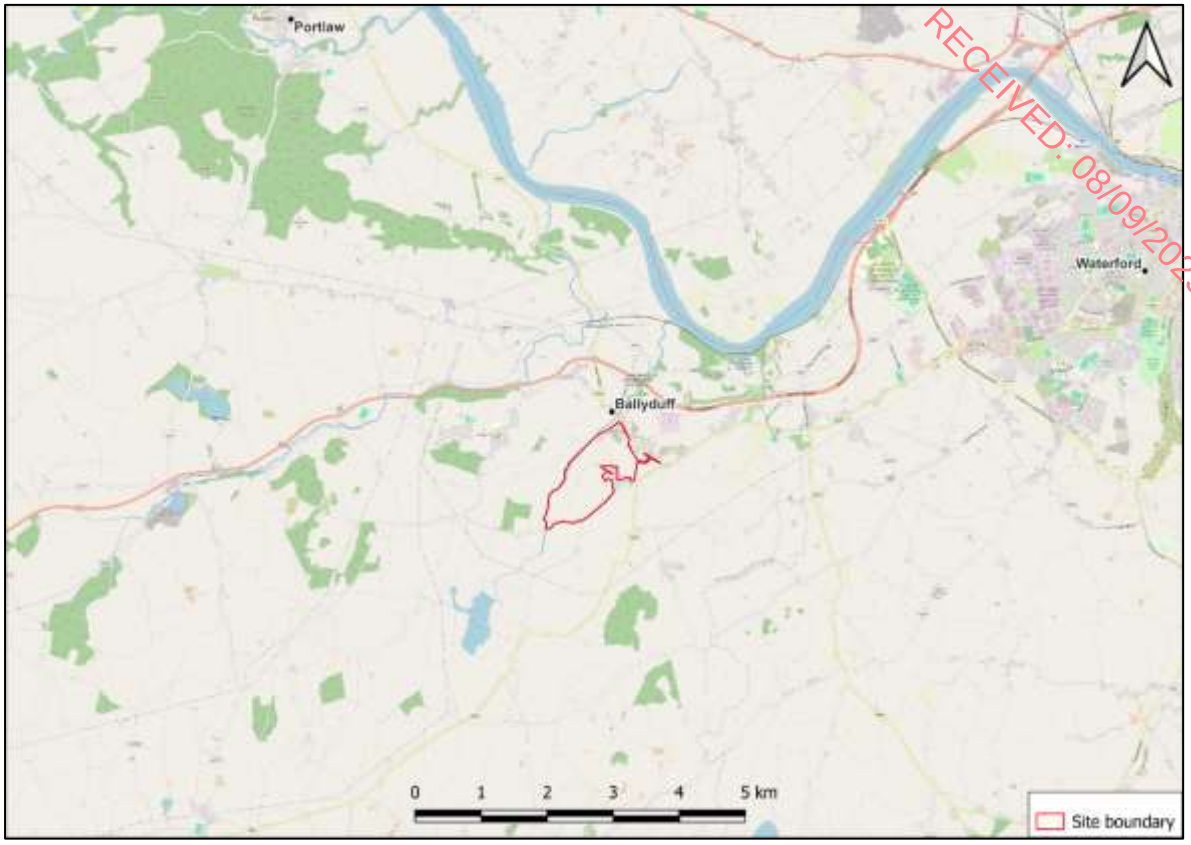
The proposed development is located at Kilmeaden village and environs, Co. Waterford. Kilmeaden village is located on the R680 regional road, approximately 10km west of the centre of Waterford city. The site primarily comprises the site of a previously demolished factory, along with lands which were associated with the management of water discharged from the factory. Figure 1 and Figure 2 below gives an overview of the proposed development site at Kilmeaden village and environs. The approximate location of the proposed development site is illustrated in Figure 3, Figure 4 and Figure 5.



Figure 1: Drone overview of the north-eastern section of the proposed development site showing the demolished Kilmeaden cheese plant.



Figure 2: Drone overview of the constructed wetlands at Kilmeaden.



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Figure 3: Location of proposed development (1:60,000).



Figure 4: Location of proposed development (1:20,000).

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Figure 5: Proposed development relative to surrounding habitats (1:10,000).

2.2 Description of proposed development

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2.2.1 Proposed development overview

The proposed development comprises four distinct but connected areas including a new village centre, a solar farm and rewilding area including grid scale battery storage, and a data centre with associated energy centre. The proposed development covers an area of 108.64 hectares comprising the proposed Technology Park and Village Centre, and the proposed Solar Panel Farm.

The various development areas will be connected with landscaped areas, as well as pedestrian and cycling routes, to provide for an integrated and permeable form of development, which will enhance the economic prosperity and amenity of Kilmeaden.

A 220 kV substation development is also proposed for development within the red line boundary, which will act as the landfall point for an offshore windfarm off the coast of Waterford. Planning for the 220kv grid connection and gas connection will be undertaken under via a separate consenting process undertaken by Gas Networks Ireland.

2.2.2 Characteristics of the proposed development

The proposed development is presented in Figure 6 described below. Details of the layout are presented in the planning drawings prepared by Hyphen Architects and AtkinsRealis. The development comprises a Village Centre and Technology Park with new connections provided from the village to the proposed area of green infrastructure.

For a full description of the proposed development see EIAR Chapter 2 Description of the Proposed Development. The Proposed Development as set out in the public notices consists of:

The proposed development comprises the development of the former cheese factory site and adjoining lands to provide for a mixed use village centre, technology park, and renewable energy development on a total site area of 108.79 hectares. The proposed development will consist of the following:

The demolition of 2 no. existing single storey outbuildings and 1 no. AGI building (126 sq.m. GFA in total) in the northern portion of the site, along with all site clearance and enabling works required to facilitate the proposed development.

In the northern portion of the site the construction of a new village centre comprising the following:

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- A two-storey mixed-use building (fronting onto the R680) comprising a gym, café, health centre, pharmacy, and office space, with a total GFA of c. 1,856 sq.m. (c. 10.3m in height).
- A two-storey community centre (with a GFA of c. 847 sq.m. and c. 11m in height).
- 2 no. three-storey apartment buildings (Apartment Blocks A and B) comprising 48 no. units in total, including 6 no. 1 bedroom apartments and 42 no. 2 bedroom apartments. The apartment buildings have a combined gross floor area (GFA) of c. 5,374 sq.m. and the buildings are c. 14.3m in height. Each of the apartment buildings include private open space in the form of patios and balconies, along with bin stores, communal open space, and access arrangements.
- A two-storey supermarket (including off-licence) comprising a GFA of c. 1,605 sq.m. (c. 1,514 sq. m at ground floor level and c. 91 sq. m . at first floor level) with a height of c. 8.2m . A bring bank will be provided to the south of the supermarket.
- A two-storey childcare facility building with a GFA of c. 1,345 sq.m. (c. 10m in height), along with adjacent outdoor play area.
- A Multi-Use Games Area (MUGA), located adjacent to Apartment Block A and the childcare facility.
- A two-storey commercial / office building comprising 4 no. commercial units, (with a GFA of c. 614 sq.m. and c. 10.1m in height).
- 2 no. two storey warehouse buildings (each with a GFA of c. 562 sq. m. including ancillary office space and staff welfare facilities, with an overall height of c. 10m).
- A District Heating Plant Room (with a GFA of c. 14 sq. m. and c. 3.8m in height) to provide district heating from the technology park to the village centre, bin stores, lighting, access arrangements, and the provision of areas of public realm and open recreational spaces including a new village square.

In the central portion of the site the construction of a new technology park comprising the following:

- 3 no. two storey (with two mezzanine level), information and communication technology (ICT) facility buildings, each with a GFA of c. 24,033 sq.m (c. 72,099 sq.m GFA in total), and with a height (to parapet level) of c. 19.8m and a maximum flue height of c. 25m.
- Each of the 3 no. ICT facility buildings will accommodate ICT equipment rooms, associated electrical and mechanical equipment rooms, loading bays, maintenance and storage space, office administration areas, and staff facilities, emergency generators and flues, and plant at roof level. External plant rooms (with an overall height of c. 3.7m) and modular water tanks will be provided adjacent to each of the ICT facility buildings.

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- An energy centre building (with a GFA of c. 3,720 sq.m and with a parapet height of c. 13.8m) including 16 no. gas powered turbines, associated flues (with a height of c. 29.8m), associated ancillary containers and tanks, backup fuel pumps and tanks, fire tanks (with a height of c. 12.8m) and pump house, MCC control room (with a GFA of c. 41 sq.m.), welfare and storage facilities (with a GFA c. 60 sq.m.), a three storey control room building with basement (with a GFA of c. c. 5,343 sq.m. and an overall height of c. 18.9m), a single storey with basement MV building (with a GFA of c. 1,246 sq.m. and an overall height of c. 5.3m), step up and step down transformers, and 7 no. blackstart generators.
- 2 no. warehouses with ancillary office space, with a GFA of c. 3,121 sq.m. each, and with a height of c. 14.2 metres
- A gas above ground installation (AGI) and pressure regulating and metering station (PRMS) compound, (comprising an AGI Building, Boiler House Kiosk, E&I Kiosk, Control Room and Skid House) with a combined GFA of c. 202 sq.m.), 3 no. ICT pumphouses (c. 40 sq.m. each), and two single storey guardhouses (each with a GFA of c.29 sq.m).

In the southern portion of the site the construction of a of a solar farm with PV arrays consisting of 43,056 PV panels mounted on concrete footings, 3 no. single storey transformer cabins (with a combined GFA of c. 54.6 sq.m), a battery energy storage system (BESS) compound with an area of c. 6,682 sq.m.(comprising modular battery units within a fenced compound, along with associated electrical equipment and transformers), internal access tracks, and security fencing.

In the western portion of the site the construction of a new vehicular access (including a bridge over an existing watercourse) to the Technology Park to be provided between the R680 and the R681. The primary vehicular access to the village centre will be facilitated via the existing access from the local road to the north. Pedestrian and cycling access to the village centre will be facilitated via both the local road and R680. Access to the Solar farm is provided via the local road to the north of the solar farm.

Provision of areas of public open space and a walking/cycling route which extends from the village centre to the southeast of the Technology Park. The development provides 441 no. car parking spaces and 267 no. cycle spaces. The development includes provision of landscaping and planting throughout, PV panel zones at roof level, boundary treatments, signage zones, site lighting, and all associated site services and development works, including underground foul and storm water drainage network and sustainable urban drainage systems, and all ancillary works.

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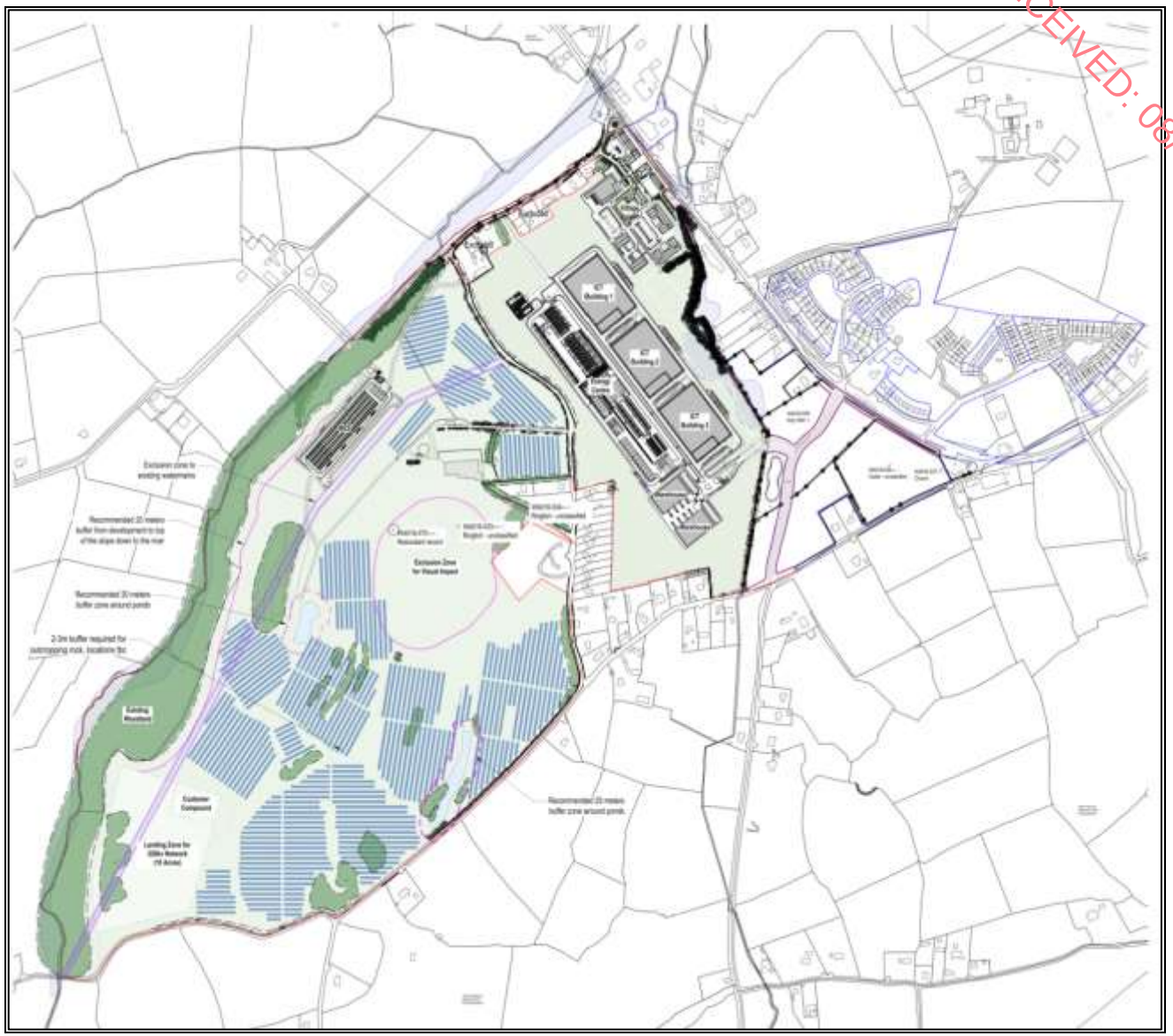


Figure 6: Proposed Masterplan Layout (Source: Hyphen DRG No. KMMP-HYP-ZZ-ZZ-DR-A-0100) Redline – Site Boundary.

2.3 Desktop study

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2.3.1 National Biodiversity Data Centre notable records

The geographical scope of the assessment is to determine if the proposed development has the potential to have any likely significant effects on the Natura 2000 sites occurring within the zone of influence of the proposed development based on Source-Pathway-Receptor linkages. The NBDC database was accessed on 15/01/2025 in order to query records of species of "Conservation Concern (including invasive species)" intersecting the Blackknock townland in which the proposed development is located (See Figure 7). Species of conservation concern whose recorded grid square intersects the queried Blackknock townland are illustrated in Table 1. Invasive species whose recorded grid square intersects the queried Blackknock townland are illustrated in Table 2. Of note, the habitats present have changed markedly since the plant has ceased to operate and only records dating back to 2011 are presented here as older records must be considered historical and no longer of relevance.



Figure 7: Queried Blackknock townland in relation to the proposed development site boundary (1:10,000).

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Table 1: Species of conservation concern recorded in queried grid squares intersecting Blackknock townland in which the proposed development is located. BD = Birds Directive, HD = Habitats Directive, FPO = Flora Protection Order 2015, WA = Wildlife Acts, BOCCI = Birds of Conservation Concern 2020-2026.

SPECIES	YEAR OF LAST RECORD	ANNEX I BD	ANNEX II HD	ANNEX IV HD	ANNEX V HD	FPO	WA	RED LIST STATUS	BOCCI
Bar-tailed Godwit Limosa lapponica	2011	I							Red
Black-headed Gull Larus ridibundus	2011								Amber
Black-tailed Godwit Limosa limosa	2011								Red
Brambling Fringilla montifringilla	2011								Amber
Chough Pyrrhocorax pyrrhocorax	2011	I							Amber
Common Gull Larus canus	2011								Amber
Common Sandpiper Actitis hypoleucos	2011								Amber
Cormorant Phalacrocorax carbo	2011								Amber
Corncrake Crex crex	2011	I							Red
Curlew Numenius arquata	2011								Red
Dunlin Calidris alpina	2011								Red
Goldcrest Regulus regulus	2011								Amber
Golden Plover Pluvialis apricaria	2011	I							Red
Goosander Mergus merganser	2011								Amber
Great Crested Grebe Podiceps cristatus	2011								Amber
Great Northern Diver Gavia immer	2011	I							Amber
Greenfinch Chloris chloris	2011								Amber
Grey Plover Pluvialis squatarola	2011								Red
Grey Wagtail Motacilla cinerea	2011								Red
Hen Harrier Circus cyaneus	2011	I							Amber
Herring Gull Larus argentatus	2011								Amber
House Martin Delichon urbicum	2011								Amber

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House Sparrow Passer domesticus	2011								Amber
Kestrel Falco tinnunculus	2011								Red
Kittiwake Rissa tridactyla	2011								Red
Knot Calidris canutus	2011								Red
Lapwing Vanellus vanellus	2011								Red
Lesser Black-backed Gull Larus fuscus	2011								Amber
Light-bellied Brent Goose Branta bernicla hrota	2011								Amber
Little Egret Egretta garzetta	2011	I							Green
Long-tailed Duck Clangula hyemalis	2011								Red
Mallard Anas platyrhynchos	2011								Amber
Meadow Pipit Anthus pratensis	2011								Red
Mediterranean Gull Larus melanocephalus	2011	I							Amber
Mute Swan Cygnus olor	2011								Amber
Oystercatcher Haematopus ostralegus	2011								Red
Pochard Aythya ferina	2011								Red
Razorbill Alca torda	2011								Red
Red-breasted Merganser Mergus serrator	2011								Amber
Redshank Tringa totanus	2011								Red
Red-throated Diver Gavia stellata	2011	I							Amber
Redwing Turdus iliacus	2011								Red
Ringed Plover Charadrius hiaticula	2011								Amber
Sand Martin Riparia riparia	2011								Amber
Scaup Aythya marila	2011								Red
Shag Phalacrocorax aristotelis	2011								Amber
Shelduck Tadorna tadorna	2011								Amber
Skylark Alauda arvensis	2011								Amber

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Smew Mergellus albellus	2011	I							Amber
Snipe Gallinago gallinago	2011								Red
Spotted Flycatcher Muscicapa striata	2011								Amber
Spotted Redshank Tringa erythropus	2011								Amber
Starling Sturnus vulgaris	2011								Amber
Stock Dove Columba oenas	2011								Red
Swallow Hirundo rustica	2011								Amber
Swift Apus apus	2011								Red
Teal Anas crecca	2011								Amber
Tufted Duck Aythya fuligula	2011								Amber
Turnstone Arenaria interpres	2011								Amber
Whooper Swan Cygnus cygnus	2011	I							Amber
Willow Warbler Phylloscopus trochilus	2011								Amber
Woodcock Scolopax rusticola	2011								Red
Yellowhammer Emberiza citrinella	2011								Red
Irish/Mountain Hare Lepus timidus	2011				V		WA	LC	
Soprano Pipistrelle Pipistrellus pygmaeus	2016			IV			WA	LC	

Table 2: Invasive species recorded in queried grid squares intersecting Blackknock townland in which the proposed development is located including historical species, which may still occur in the vicinity.

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SPECIES	DATE OF LAST RECORD	INVASIVE DESIGNATION
Cherry Laurel Prunus laurocerasus	2002	High Impact
Curly waterweed Lagarosiphon major	1999	Third Schedule | EU Reg. 1143/2014 | High Impact
Field penny-cress Thlaspi arvense	2006	Medium Impact
Himalayan honeysuckle Leycesteria formosa	2001	Medium Impact
Japanese knotweed Fallopia japonica	2008	Third Schedule | High Impact
Parrot's feather Myriophyllum aquaticum	1999	Third Schedule | EU Reg. 1143/2014 | High Impact
Sycamore Acer pseudoplatanus	2001	Medium Impact
American Mink Mustela vison	2008	High Impact
Common Garden Snail Cornu asperum	1975	Medium Impact
European rabbit Oryctolagus cuniculus	2014	Medium Impact
Fallow Deer Dama dama	2008	High Impact
Jenkins's spire snail Potamopyrgus antipodarum	1940	Medium Impact
Wrinkled helicellid Candidula intersecta	1940	Medium Impact

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2.3.2 Map of Irish Wetlands

The Map of Irish Wetlands online resource was queried on 16/01/2025 in order to establish if there are any recorded wetland habitats in the immediate vicinity of the proposed development site. (See Figure 8 below).



Figure 8: Excerpt from Map of Irish Wetlands showing proposed development site boundary relative to proximate wetland sites (1:9,000).

Details of protection status, site evaluation and main wetland types of sites proximate to the proposed development is provided below in Table 3 and Table 4.

Table 3: Map of Irish Wetlands database information pertaining to "Blackknock Ponds".

Site Name	BLACKKNOCK PONDS
Site Code	WMI_WD100
County	Waterford
Site Evaluation	F Rating:
Site Protected	No
Main Wetland Type	ARTIFICIAL POND, SCRUB
Description	Constructed wetland ponds with reed swamp and other wetland communities. These constructed wetlands were designed to treat creamery effluent, and provide a series of pools, some of which may be flooded, others of which may have lower levels (providing exposed mud), at any one time.

Table 4: Map of Irish Wetlands database information pertaining to "Blackknock Wet Woodland".

Site Name	BLACKKNOCK WET WOODLAND

Site Code	WMI_WD195
County	Waterford
Site Evaluation	C+ Rating: County Conservation value
Site Protected	No
Main Wetland Type	RIVER, WET WOODLAND (OAK ASH OR WILLOW ALDER)
Description	The dominant woodland type is wet willow-alder-ash, with all three of these species present: grey willow (*Salix cinerea*) and alder (*Alnus glutinosa*) in the canopy and ash (*Fraxinus excelsior*) mostly in the understorey.

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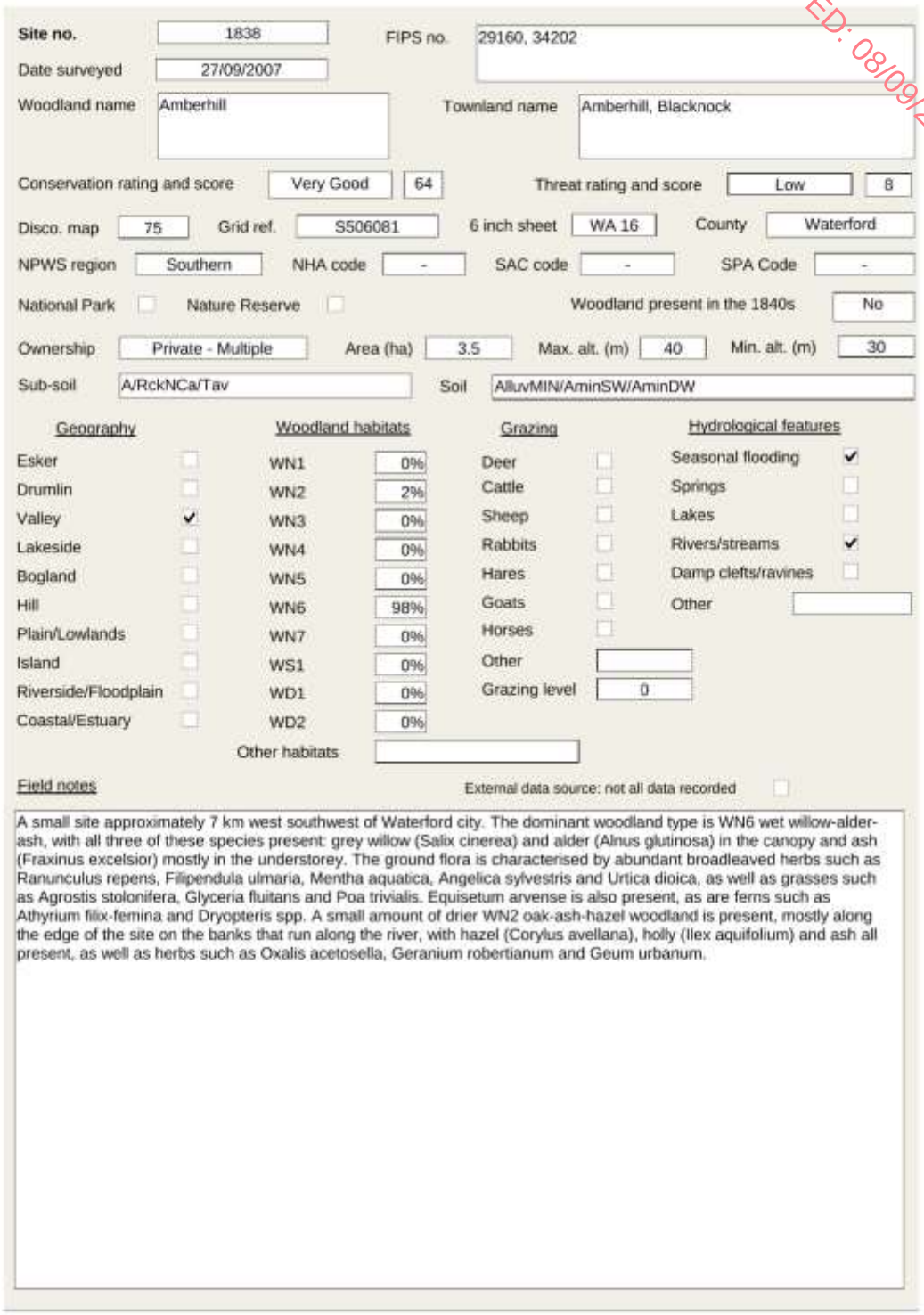
2.3.3 National Survey of Native Woodlands

"Amberhill" woodland (see Figure 9 below), site code 1838 with an area of 3.5ha was surveyed as part of the National Survey of Native Woodlands on the 27/09/2007 (Perrin et al, 2008). The dominant Fossitt (2000) habitat type was WN6 – Wet willow-alder-ash woodland, with small areas of drier WN2 – Oak-ash-hazel woodland along the edges. An excerpt of the survey data from 2007 is provided below in Figure 10. The site was assessed as annexed habitat 91EO Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Pandion, Alnion incanae, Salicion albae).



Figure 9: NSNW site "Amberhill", site code: 1838 along the Whelanbridge River (1:9,000).

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Site no.	1838	FIPS no.	29160, 34202
Date surveyed	27/09/2007		
Woodland name	Amberhill	Townland name	Amberhill, Blacknock
Conservation rating and score	Very Good	64	Threat rating and score: Low 8
Disco. map	75	Grid ref.	S506081
6 inch sheet	WA 16	County	Waterford
NPWS region	Southern	NHA code	-
SAC code	-	SPA Code	-
National Park	☐	Nature Reserve	☐
Woodland present in the 1840s	No		
Ownership	Private - Multiple	Area (ha)	3.5
Max. alt. (m)	40	Min. alt. (m)	30
Sub-soil	A/RckNCa/Tav	Soil	AlluvMIN/AminSW/AminDW

Geography		Woodland habitats		Grazing		Hydrological features	
Esker	☐	WN1	0%	Deer	☐	Seasonal flooding	✔
Drumlin	☐	WN2	2%	Cattle	☐	Springs	☐
Valley	✔	WN3	0%	Sheep	☐	Lakes	☐
Lakeside	☐	WN4	0%	Rabbits	☐	Rivers/streams	✔
Bogland	☐	WN5	0%	Hares	☐	Damp clefts/ravines	☐
Hill	☐	WN6	98%	Goats	☐	Other	
Plain/Lowlands	☐	WN7	0%	Horses	☐		
Island	☐	WS1	0%	Other			
Riverside/Floodplain	☐	WD1	0%	Grazing level	0		
Coastal/Estuary	☐	WD2	0%				
		Other habitats					

Field notes

External data source: not all data recorded ☐

A small site approximately 7 km west southwest of Waterford city. The dominant woodland type is WN6 wet willow-alder-ash, with all three of these species present: grey willow (Salix cinerea) and alder (Alnus glutinosa) in the canopy and ash (Fraxinus excelsior) mostly in the understorey. The ground flora is characterised by abundant broadleaved herbs such as Ranunculus repens, Filipendula ulmaria, Mentha aquatica, Angelica sylvestris and Urtica dioica, as well as grasses such as Agrostis stolonifera, Glyceria fluitans and Poa trivialis. Equisetum arvense is also present, as are ferns such as Athyrium filix-femina and Dryopteris spp. A small amount of drier WN2 oak-ash-hazel woodland is present, mostly along the edge of the site on the banks that run along the river, with hazel (Corylus avellana), holly (Ilex aquifolium) and ash all present, as well as herbs such as Oxalis acetosella, Geranium robertianum and Geum urbanum.

Figure 10: Excerpt from Perrin et al (2008) survey data for “Amberhill”, site code: 1838.

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2.3.4 Margaritifera sensitive areas

GIS shapefiles of Margaritifera sensitive areas were consulted to identify any river catchments within the vicinity of the proposed development in which Freshwater Pearl Mussels (*Margaritifera margaritifera*) have been recorded. The catchment limits are based on sub-basin boundaries from the EPA Water Framework Directive geodatabase (filename: EPA_WFD_v3.mdb), and catchments are divided up into three categories:

1. Catchments of SAC populations
2. Catchments of other extant populations
3. Catchments with previous records of Margaritifera, but current status unknown.

The proposed development is within "Catchments with previous records of Margaritifera, but current status unknown" as illustrated below in Figure 11.

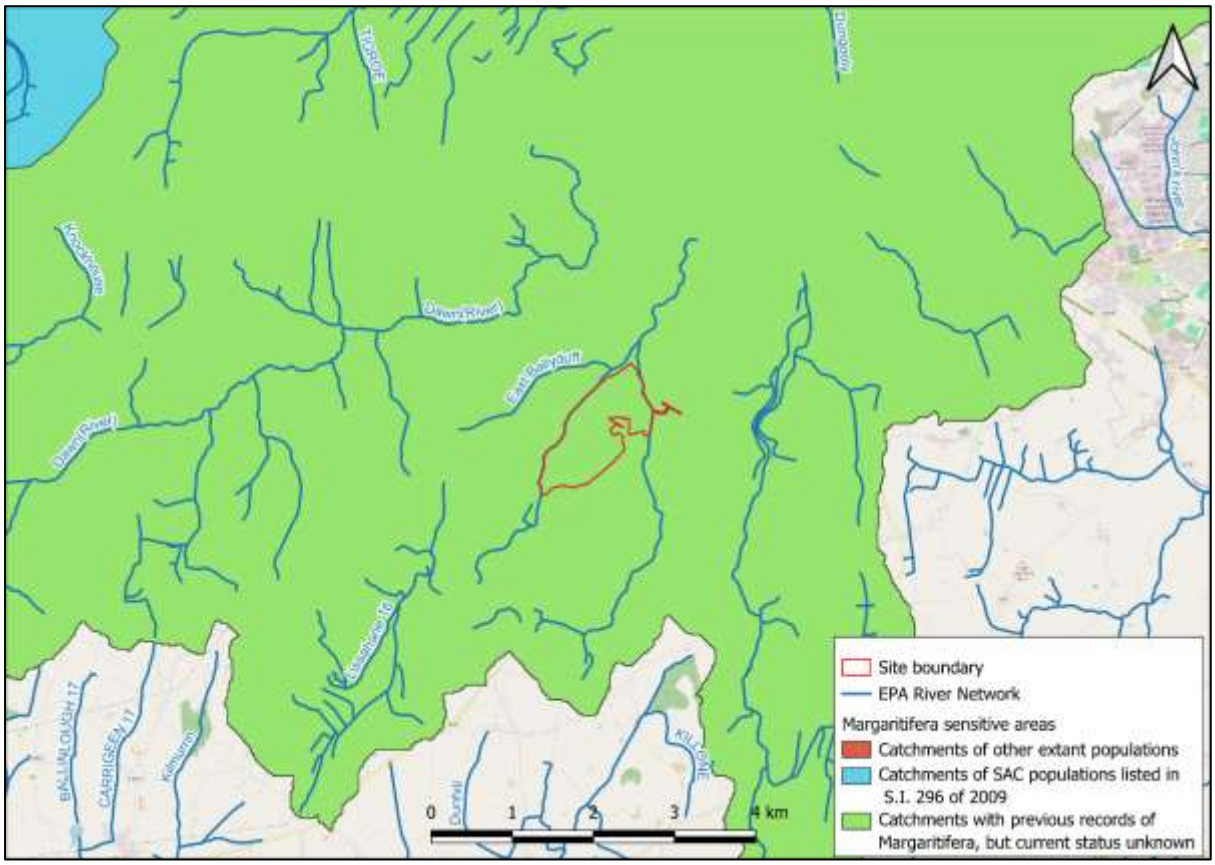


Figure 11: Margaritifera sensitive areas proximate to the proposed development (1:50,000).

2.3.5 I-WeBS data

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"Kilmeaden Cream (Blackknock)", Irish grid reference S5108 was surveyed as part of the Irish Wetland Bird Survey (I-WeBS). The I-WeBS national monitoring programme, which commenced during the 1994/1995 season is funded by the National Parks and Wildlife Service and coordinated by the I-WeBS Office based at BirdWatch Ireland. I-WeBS monitors coastal wetland sites together with inland lakes, turloughs, rivers and callows. I-WeBS aims to monitor all non-breeding waterbirds in Ireland to provide the principal data on which the conservation of their populations and wetland habitats is based. To this end, I-WeBS has three main objectives (Birdwatch Ireland, 2008):

- to assess the importance of individual sites for waterbirds;
- to assess the size of non-breeding waterbird populations in Ireland;
- to assess trends in their numbers and distribution.

The Waterford Birds (2005) webpage "Site guide: Kilmeaden pools birds" provides background information relevant to the site in relation to its importance to birds. The habitat is described as "constructed wetlands with settling ponds and marsh habitat", with the main interest described as "waterfowl and waders". Regular/annual species listed include Green Sandpiper and Water Rail, while scarcer species and rarities at the site include Garganey, Hen Harrier, Ruff, Wood Sandpiper, Little Gull and Water Pipit. An excerpt of further details relevant to the site as outlined by Waterford Birds (2005) is reproduced below as follows:

"These constructed wetlands were designed to treat creamery effluent, and provide a series of pools, some of which may be flooded, others of which may have lower levels (providing exposed mud), at any one time. Large numbers of Moorhen are resident, and Water Rails also occur in the marshes. A good mix of dabbling duck (including Shoveler) occurs in winter, and Garganey has occurred as a migrant. Large numbers of Snipe occur in winter, and Green Sandpiper may occur in almost any month. Passage waders have included Ruff and Wood Sandpiper, and there is potential for rare species. Sedge Warblers breed in the marsh habitat here, and small numbers of Chiffchaffs winter. Water Pipits have occurred in winters 2003/2004 and 2004/2005, up to two birds each winter, and the marsh habitat here seems to be ideal for the species. A few Choughs are occasionally recorded feeding nearby (c.10 km inland)".

2.4 Description of existing conditions on site

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Site visits were undertaken between September 2024 and June 2025 by Senior Ecologists Dr. Emma Reeves and Ciarán Byrne and Junior Ecologist Senan Clynch. Owing to the ecological sensitivity of the site and surroundings, a summary of the results of these surveys are presented in the following sections. Please see the Chapter 7 (Biodiversity) of the EIAR for more detailed information.

2.4.1 Botanical/habitat surveys

Habitats occurring within the proposed development area were classified to Fossitt (2000) level 3. An overview of the habitats observed, and the dominant species present within habitat types are presented in the following paragraphs, along with photographs of representative areas of habitat. The Biodiversity chapter of the EIAR should be referred to for a map of the habitats occurring. The presence of invasive alien species as listed on the third schedule of the European Communities (Birds and Natural Habitats) Regulations 2011-24 within the proposed development area is also described and illustrated.

The location of the site is proximate to Kilmeaden village in Co. Waterford with the site extending away from the village to the southwest. The fields closest to the village consist of lush agricultural grassland dominated by Perennial Rye-grass *(Lolium perenne)* (probably cut for silage as no animals were observed here during the survey period). Large crop fields also occur which, at the start of survey work on the 3rd of September 2024 contained Maize. Harvesting occurred in October. At the most northerly corner of this section of the site the demolished Kilmeaden plant occurs (see Figure 12 and Figure 13). What remains here are large, concreted and tiled areas, levelled rubble piles, tarmac access roads and carpark with Bramble (*Rubus fruticosus* agg.) scrub and a small area of abandoned lawn. A treeline of Poplar (*Populus* sp.) is distinctive on the southeastern boundary of the demolition area. Some pump houses remain within this demolished area, which will be removed to facilitate the proposed development. Static bat monitors deployed to assess the use of the buildings by bats during the winter months detected no activity. Bat surveys in May and June 2025 identified no roosts within the application footprint.



Figure 12: Satellite imagery of the Kilmeaden factory in 2013 (MapGenie imagery).



Figure 13: Satellite imagery of the demolished Kilmeaden factory in 2025 (Google Earth imagery).

A portion of Whelan's Bridge River flows parallel to the town along the northeastern boundary (see Figure 14). For the sake of clarity, the waterways on site occur on the north-eastern boundary and on the western boundary. Both arise from the Knockaderry Reservoir and are components of the Whelan's Bridge River. They converge to the north of the R680. The NE boundary is flanked by hawthorn hedgerow in parts and by a line of mature Monterey Pine (*Pinus radiata*). The northwestern boundary is comprised of curtilage and private homes . On the eastern boundary, this section of the site is adjacent to a local road which runs through the Ballyduff townland and parallel to the R680. A well-managed hedge runs the length of this boundary.



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Figure 14: The Whelan's bridge Stream which runs along the northeastern boundary of the site parallel to the village.

Moving in a south-westerly direction, a farm track runs through the centre of the site and parallel to the Whelan's Bridge River. Along the farm track, Griselinia and Sycamore (*Acer pseudoplatanus*) treelines are notable and lead to an abandoned farmyard. The shed/barn occurs on the lower slopes of Blackknock hill, below it sloping fields of agricultural grassland fall away to the Western boundary of the site. These fields have been reseeded in recent years and are dominated by Perennial Rye-grass (*Lolium perenne*) (see Figure 15). The western boundary of the site is characterised by a significant area of Norway spruce plantation which adjoins the Whelan's Bridge River. Greater spotted woodpecker was noted to be calling in these trees on the 15th of January. Similarly, Common Crossbill were seen flying through and from this plantation on two separate occasions in December 2024 and January 2025.

Grass fields onsite are all grazed by heifers in a rotational manner. Cattle were taken off the land by December 2024. In agricultural terms, the fields become slightly less productive towards the south of the site being dominated by Yorkshire-fog (*Holcus lanatus*) rather than Perennial Rye-grass (*Lolium perenne*). These fields have a higher proportion of herb species such as Yarrow (*Achillea millefolium*), Ribwort Plantain (*Plantago lanceolata*) and Common Bird's-foot-trefoil (*Lotus corniculatus*) with a greater diversity of grass species such as Crested Dog's-tail (Cynosurus cristatus), Creeping Bent (*Agrostis stolonifera*) and Meadow Foxtail (*Alopecurus pratensis*). This grassland has been modified through grazing and other agricultural practices to produce improved dry meadow type grassland (GSi2).



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Figure 15: Reseeded agricultural grassland (GA1) with Norway spruce plantation in the middle-ground, along the Western boundary.

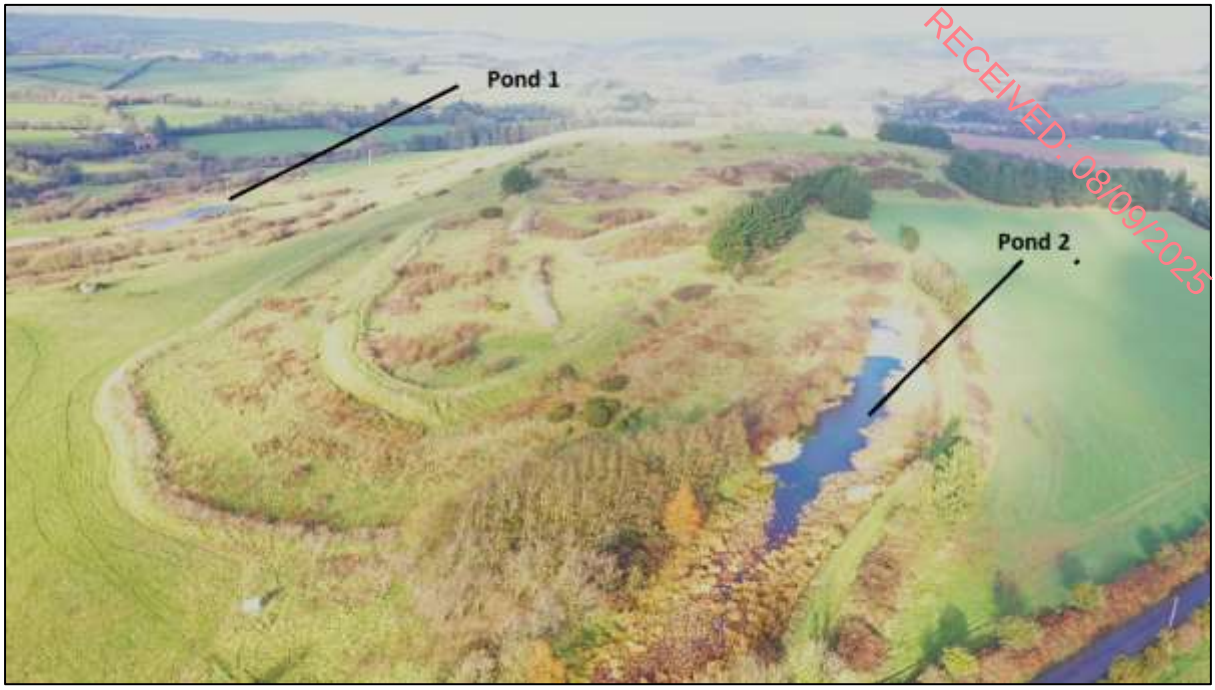
Within the grasslands found to the West of the farm track are island habitats associated with the previous workings of the site as a repository of milk waste products treated though a series of integrated constructed wetlands. The closure of the Kilmeaden factory (cheese production ceased in 2005) and relocation in Kilkenny, has limited the functionality of these 'wetlands'. For the most part these ponds, which require maintenance, have dried out over the years and have become scrubbed over with a mosaic of willow scrub and wet grassland. However, there are two which regularly contain some water (see Figure 16 and Figure 17).

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The first pond lies to the southwest of the Blackknock hill immediately adjacent to the farm trackway. The pond is surrounded by Gorse (Ulex europaeus) scrub and improved dry grassland. This first pond (Figure 18) is entirely artificial and it categorised as FL8 according to the Fossitt classification system. Common Club-rush (*Schoenoplectus lacustris*), Reed Sweet-grass (*Glyceria maxima*) and Soft-rush (*Juncus effusus*). Galingale (*Cyperus longus*), an introduced plant not often recorded in Ireland was noted to be growing alongside this pond. One Schedule three species was identified within this pond, New Zealand Pigmyweed (*Crassula helmsii*) (Figure 19). On the 15th January 2025, water from this pond was noted to be flowing further down Blackknock hill into a previously dry pond. Over land flow of water was evident from this previously dry pond across the field and down the slope into the Whelan's bridge River. Propagules of New Zealand Pigmyweed could be distributed via this pathway.



Figure 16: The constructed wetland system at Kilmeaden in 1996.



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Figure 17: Remaining artificial ponds containing aquatic habitats.



Figure 18: Pond 1 to the southwest of Blackknock hill.

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Figure 19: New-Zealand Pygmyweed found in pond 1.

Pond 2 also falls under the artificial pond category FL8, this pond is found to the southeast of Blackknock hill. It is of a similar size to pond 1. Much of the vegetation is similar to that found in Pond 1. , Water Fern (*Azolla filiculoides*), one of a number of species listed on Part 1 of the First Schedule of the European Union (Invasive Alien Species) occurs within this habitat. A small Alder-willow woodland is located next to the pond.

An Alien Invasive Species Management and Control/Eradication Plan is crucial to preventing any threats to the surrounding environment during and post construction in accordance with the 2024 regulations, which address deficiencies in Irish law implementing the EU Invasive Alien Species Regulation were signed into law.

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Figure 20: Image of Pond 2 to the southeast of Blackknock hill.

There are a variety of grassland habitats onsite which fall into the category of semi improved dry grassland (GSi2) particularly on the mounded soil which once bounded the integrated constructed wetland. Topographically these earthen mounds add structural diversity to the site which enhances biodiversity.

Large swaths of land are entirely dominated by nettles and thistles, particularly around the abandoned farm site. These habitats are very important for the many finches occurring onsite. Similarly, Monterey Pine (*Pinus radiata*) occurs in several areas around the site as treelines, buffering the habitats onsite. These are likely to be very important for transient crossbill populations identified on site.

The old settlement ponds present on the south and east of the site were dry during the initial surveys. It is suggested that these ponds may refill following severe inundation, anecdotal evidence suggests that these areas have been dry for some years. They contain a flora which in some areas contains elements of wet grassland, dominated by Soft-rush (Juncus effusus), Compact Rush (Juncus conglomeratus) and various sedges (*Carex rostrata*, *C. hirta*, *C. nigra*). Scrubbing over of these old settlement ponds is evident with Willow being the dominant tree.

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The presence of outcropping rock on the western side of Blackknock hill was noted during surveys, these rocks occur sporadically through out what is largely semi-improved dry grassland and are too small in size to map as ecological features. Plants noted included Navelwort (*Umbilicus rupestris*) and English Stonecrop (*Sedum anglicum*).

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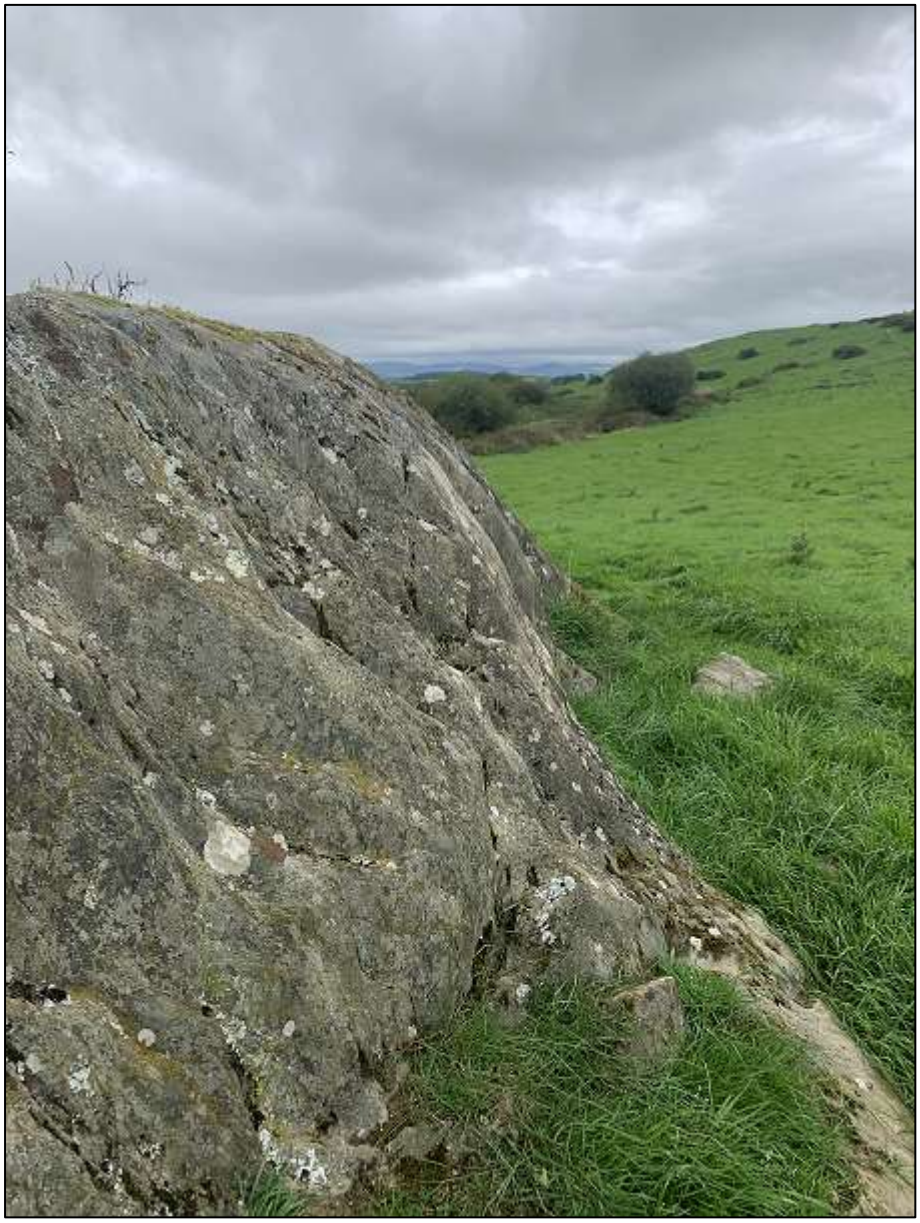


Figure 21: Outcropping rock.

The Norway Spruce plantation ends abruptly along the western boundary and the Whelan's Bridge River. Where the plantation ends a native woodland of Willow and Alder begins (Figure 22). The woodland occurs in a steep sloped valley through which the River runs. It is approximately 7 acres in size. It is largely a wet Willow and Alder woodland (WN6) although there are patches of Oak, Ash and Hazel (WN2) along raised banks by the river's edge. This area of woodland was investigated during the National Survey of Native Woodlands on the 27/09/2007 (see Figure 23). Assessment of the woodland (see Figure 24) indicate that there have been no changes to its status.



Figure 22: The Willow Alder woodland (WN6) (muted pink).

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Site no.	1838	FIPS no.	29160, 34202
Date surveyed	27/09/2007		
Woodland name	Amberhill	Townland name	Amberhill, Blacknock
Conservation rating and score	Very Good	64	Threat rating and score: Low 8
Disco. map	75	Grid ref.	S506081
6 inch sheet	WA 16	County	Waterford
NPWS region	Southern	NHA code	-
SAC code	-	SPA Code	-
National Park	☐	Nature Reserve	☐
Woodland present in the 1840s	No		
Ownership	Private - Multiple	Area (ha)	3.5
Max. alt. (m)	40	Min. alt. (m)	30
Sub-soil	A/RckNCa/Tav	Soil	AlluvMIN/AminSW/AminDW

Geography		Woodland habitats		Grazing		Hydrological features	
Esker	☐	WN1	0%	Deer	☐	Seasonal flooding	✔
Drumlin	☐	WN2	2%	Cattle	☐	Springs	☐
Valley	✔	WN3	0%	Sheep	☐	Lakes	☐
Lakeside	☐	WN4	0%	Rabbits	☐	Rivers/streams	✔
Bogland	☐	WN5	0%	Hares	☐	Damp clefts/ravines	☐
Hill	☐	WN6	98%	Goats	☐	Other	
Plain/Lowlands	☐	WN7	0%	Horses	☐		
Island	☐	WS1	0%	Other			
Riverside/Floodplain	☐	WD1	0%	Grazing level	0		
Coastal/Estuary	☐	WD2	0%				
		Other habitats					

Field notes

External data source: not all data recorded ☐

A small site approximately 7 km west southwest of Waterford city. The dominant woodland type is WN6 wet willow-alder-ash, with all three of these species present: grey willow (Salix cinerea) and alder (Alnus glutinosa) in the canopy and ash (Fraxinus excelsior) mostly in the understorey. The ground flora is characterised by abundant broadleaved herbs such as Ranunculus repens, Filipendula ulmaria, Mentha aquatica, Angelica sylvestris and Urtica dioica, as well as grasses such as Agrostis stolonifera, Glyceria fluitans and Poa trivialis. Equisetum arvense is also present, as are ferns such as Athyrium filix-femina and Dryopteris spp. A small amount of drier WN2 oak-ash-hazel woodland is present, mostly along the edge of the site on the banks that run along the river, with hazel (Corylus avellana), holly (Ilex aquifolium) and ash all present, as well as herbs such as Oxalis acetosella, Geranium robertianum and Geum urbanum.

Figure 23: Excerpt from Perrin et al (2008) survey data for “Amberhill”, site code: 1838.



Figure 24: Wet Willow and Alder woodland (WN6).

Ulex europaeus (Gorse scrub) (WS1) occurs though out the site, this is particularly important for nesting birds and overall cover for birds and mammals. It is most prevalent on the western side of Blackknock hill where it occurs in agricultural grassland on the steep slopes of the hill. A smaller population occurs next to the local road to the south of the site. A small area to the North of Blackknock hill adjacent to residential premises also is dominated by Gorse but with a significant population of Bracken (*Pteridium aquilinum*). Similarly, Bracken is found on the slopes flanking the Whelan's bridge stream to the southwest of the site, in this region however, Dense Bracken (HD1) is the dominant habitat with a lesser quantity of Gorse/Hawthorn scrub.

No Annex I-listed habitat occurred within the application footprint

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2.4.2 Avifauna

A comprehensive assessment of the Bird species occurring within the application footprint and adjacent was undertaken during the period September 2024 – June 2025. The results of this assessment are presented in the Biodiversity Chapter of the EIAR.

Herring Gull and Curlew were the only species comprising a Qualifying Interest of proximate SPAs recorded within this extensive suite of surveys. Herring Gull were observed on a small number of occasions flying over/adjacent to the site and were not utilising the habitats occurring. Curlew were infrequently heard calling in the distance . No Qualifying Interests were observed to utilise the habitats occurring, including post-sunset. The area is not utilised as an *ex situ* foraging/roosting habitat during the winter or breeding season.

2.4.3 Mammals including bats

Comprehensive mammal surveys were undertaken, the results of which are presented in the Biodiversity Chapter of the EIAR. The following non-volant mammal species were identified on site:

- Stoat
- Pine Marten
- Grey Squirrel
- Hare
- Wood mouse
- Hedgehog
- Badger

Of note, although a potential Otter track was observed on one occasion, targeted Otter surveys of the water-course, including the deployment of trail cameras, yielded no evidence of Otter present within the application footprint.

A potential bat roost assessment, winter assessment of buildings on site, summer static monitoring and an emergence and dawn survey (June 2025) indicate that while the site is utilised by foraging bats (Common Pipistrelle, Soprano Pipistrelle, Nathusius' Pipistrelle, Leisler's Bat, Daubenton's Bat, Whiskered Bat, Natterer's Bat and Brown Long-eared Bat were recorded), there are no significant roosts within the application footprint or immediately adjacent. Of note, the primary habitat to be

impacted upon is open grassland habitat, which is not heavily utilised by foraging bats. The ponds present, which support the majority of bat activity on-site will be retained.

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2.4.4 Amphibians, Reptiles, and selected Invertebrates

A comprehensive assessment of amphibians, reptiles and selected invertebrates was undertaken and the results are presented in the Biodiversity Chapter of the EIAR. Common Frog is widespread in suitable habitat. There was no observations of Common Lizard, Pearl Mussel or White-clawed Crayfish. Of note, the primary habitat to be impacted upon is grassland. The ponds present will be retained.

2.4.5 Other

While no adult lamprey were observed during in-stream surveys, the presence of Ammocoetes within sediment cannot be ruled out.

2.5 Identification of Natura 2000 sites potentially impacted upon by the development

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It has been general practice, when screening a plan or project for compliance with the Habitats Directive, to identify all Natura 2000 sites within the functional area of the plan/project itself and within 15 km of the boundaries of the area the plan/project applies to. This approach was recommended in the DoEHLG (2010a) Guidance for Planning Authorities. OPR Guidelines, however, recommend the identification of an appropriate "Zone of Influence" identified from any Source-Pathway-Receptor linkages.

The maintenance of habitats and species within individual Natura 2000 sites at favourable conservation condition contributes to the overall maintenance of favourable conservation status of those habitats and species at a national level. It is therefore necessary to identify any potential impacts of the proposed development on the conservation status of Natura 2000 sites. The National Parks and Wildlife Service deem that the favourable conservation status of a habitat is achieved when:

- Its natural range, and area it covers within that range, is stable or increasing.
- The ecological factors that are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future.
- The conservation status of its typical species is favourable.

The National Parks and Wildlife Service deem that the favourable conservation status of a species is achieved when:

- Population data on the species concerned indicate that it is maintaining itself.
- The natural range of the species is neither being reduced, or likely to be reduced in the foreseeable future.
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

There are two areas designated as Special Areas of Conservation (SAC) within 15km of the proposed development site (See Table 5 and Figure 25). There are two areas designated as Special Protection Areas (SPA) within 15km of the proposed development (See Figure 26). These sites were utilised to identify zone of influence based on the S-P-R methodology as recommended by the OPR.

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Table 5: Natura 2000 sites within 15km of the proposed development.

SITE CODE	SITE NAME	DESIGNATION
002137	LOWER RIVER SUIR	SAC
000671	TRAMORE DUNES AND BACKSTRAND	SAC
004027	TRAMORE BACK STRAND SPA	SPA
004193	MID-WATERFORD COAST SPA	SPA

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Figure 25: Location of Special Area of Conservation (SAC) sites within 15 km of the proposed development (1:200,000).

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Figure 26: Location of Special Protection Area (SPA) sites outside 15 km of the proposed development (1:200,000).

2.6 Summary of Natura 2000 sites potentially impacted upon by the proposed development

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There are four Natura 2000 sites within 15km of the proposed development. There are no Natura 2000 sites within the envelope of the proposed development. Sites further away than 15km have been excluded as being outside the zone of influence based on distance from the proposed development.

A summary of the qualifying interests (QIs)/special conservation interests (SCIs), availability of detailed conservation objectives, general conservation objectives and distance of the Natura 2000 site from the proposed development is presented in Table 6.

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Table 6: Summary of Natura 2000 sites within 15km of the proposed development.

SITE CODE	SITE NAME	QIs/SCIs	DETAILED CONSERVATION OBJECTIVES DOCUMENT	CONSERVATION OBJECTIVES (GENERIC)	NEAREST DISTANCE FROM PROPOSED DEVELOPMENT/ SENSITIVITES
002137	LOWER RIVER SUIR SAC	• Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] • Mediterranean salt meadows (Juncetalia maritimi) [1410] • Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260] • Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430] • Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] • Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0] • Taxus baccata woods of the British Isles [91J0] • Margaritifera margaritifera (Freshwater Pearl Mussel) [1029] • Austropotamobius pallipes (White-clawed Crayfish) [1092] • Petromyzon marinus (Sea Lamprey) [1095] • Lampetra planeri (Brook Lamprey) [1096] • Lampetra fluviatilis (River Lamprey) [1099]	YES	• To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected.	• 0.9km north-west

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SITE CODE	SITE NAME	QIs/SCIs	DETAILED CONSERVATION OBJECTIVES DOCUMENT	CONSERVATION OBJECTIVES (GENERIC)	NEAREST DISTANCE FROM PROPOSED DEVELOPMENT/ SENSITIVITES
		• Alosa fallax fallax (Twaite Shad) [1103] • Salmo salar (Salmon) [1106] • Lutra lutra (Otter) [1355]			
04193	MID-WATERFORD COAST SPA	• Cormorant (Phalacrocorax carbo) [A017] • Peregrine (Falco peregrinus) [A103] • Herring Gull (Larus argentatus) [A184] • Chough (Pyrrhocorax pyrrhocorax) [A346]	YES	• To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.	• 8.6km south
000671	TRAMORE DUNES AND BACKSTRAND SAC	• Mudflats and sandflats not covered by seawater at low tide [1140] • Annual vegetation of drift lines [1210] • Perennial vegetation of stony banks [1220] • Salicornia and other annuals colonising mud and sand [1310] • Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] • Mediterranean salt meadows (Juncetalia maritimi) [1410] • Embryonic shifting dunes [2110] • Shifting dunes along the shoreline with Ammophila arenaria (white dunes) [2120] • Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]	YES	• To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected.	• 8.9km south-east
004027	TRAMORE BACK STRAND SPA	• Light-bellied Brent Goose (Branta bernicla hrota) [A046] • Golden Plover (Pluvialis apricaria) [A140]	YES	• To maintain or restore the favourable conservation condition of the bird species	• 9.05km south-east

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SITE CODE	SITE NAME	QIs/SCIs	DETAILED CONSERVATION OBJECTIVES DOCUMENT	CONSERVATION OBJECTIVES (GENERIC)	NEAREST DISTANCE FROM PROPOSED DEVELOPMENT/ SENSITIVITES
		• Grey Plover (Pluvialis squatarola) [A141] • Lapwing (Vanellus vanellus) [A142] • Dunlin (Calidris alpina) [A149] • Black-tailed Godwit (Limosa limosa) [A156] • Bar-tailed Godwit (Limosa lapponica) [A157] • Curlew (Numenius arquata) [A160] • Wetland and Waterbirds [A999]		listed as Special Conservation Interests for this SPA. • To maintain or restore the favourable conservation condition of the wetland habitat at Tramore Back Strand SPA as a resource for the regularly-occurring migratory waterbirds that utilise it.	

2.7 Identification and evaluation of likely significant effect

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2.7.1 Description of source-pathway-receptor linkages and identification of "Zone of Influence"

The basis for identifying potential impacts/significance thereof and defining the zone of influence is the "Source-Pathway-Receptor" (S-P-R) model. This model underpins all water-protection schemes in Ireland, as well as the EU Water Framework Directive on which both surface water and groundwater regulations are based. This model is applied to all possible impacts (i.e. not just water-based impacts). When examining S-P-R relationships in regard to impacts on Natura 2000 sites, the main questions to be considered are:

1. Source characterisation – Identification of potential source(s) of the impact(s);
2. Pathways analysis – Identification of means through which potential impacts could take place, for example is there a hydrogeological or hydrological link that can deliver a pollutant source to a nearby receptor; and
3. Receptor identification – identification of Natura 2000 sites/qualifying interests potentially affected.

There are no Natura 2000 sites within the immediate boundary of the proposed development. Taking into account the potential impacts associated with the proposed development, the pathways through which potential impacts could take place, a zone of influence over which an impact can have potential effects is identified. Considering the above, the zone of influence of the proposed development will comprise the following potential receptors:

- Natura 2000 sites in downstream catchments with Qualifying Interests (QIs) or Special Conservation Interests (QCIs) that include habitats or species that are water dependent or otherwise hydrologically connected.

- Natura 2000 sites with QIs or SCIs with a foraging and breeding range that includes the proposed development site.

The source(s), pathways(s) and receptor(s) are identified as follows.

2.7.2 Sources of potential impacts

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It is important to note that the potential development will primarily impact on habitats of low ecological significance, such as Improved Agricultural Grassland. Potential impacts on Natura 2000 sites associated with the proposed development could arise from:

- Impacts on water quality from sediment and hydrocarbons from works associated with the demolition of existing buildings on site or construction activities associated with various elements of the proposed development;
- Introduction and dispersal of propagules of Alien Invasive Plant Species, in particular any listed in Part (1) of the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations of 2011 as amended;
- In combination effects.

2.7.3 Presence of pathway and receptor

The Whelanbridge (River) (EPA Code: 16W01) forms an extensive boundary of the proposed development site to the west. The Whelanbridge (River) flows for approximately 1.6km along the boundary of the proposed development. The Whelanbridge Trib 1 (EPA Code: 16W29) flows along the north-eastern boundary of the proposed development site for approximately 820 metres, before joining the Whelanbridge (River). The Whelanbridge (River) joins the River Suir approximately 1.7km from the proposed development sites northernmost boundary. The hydrological connectivity of the aforementioned watercourses and the Lower River Suir SAC is illustrated below in Figure 27.

There is a potential for works on site in such close proximity to these sensitive ecological receptors to result in negative impacts owing to, for example:

- Accidental contamination associated with leaks of hydraulic fluid/diesel/petrol, etc from works associated with the demolition of existing buildings on site or construction activities associated with various elements of the proposed development;
- Sediment release associated with onsite machinery operations;
- Introduction of propagules of Alien Invasive Plant Species, in particular any listed in Part (1) of the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations of 2011 as amended.

In the absence of mitigation, any impacts on water quality could have direct and/or secondary impacts on QI's of the Lower River Suir SAC. Please note that this SAC is adjacent to River Barrow and River

Nore SAC (002162). The conservation objectives for this site have been used in conjunction with those for the adjacent site as appropriate

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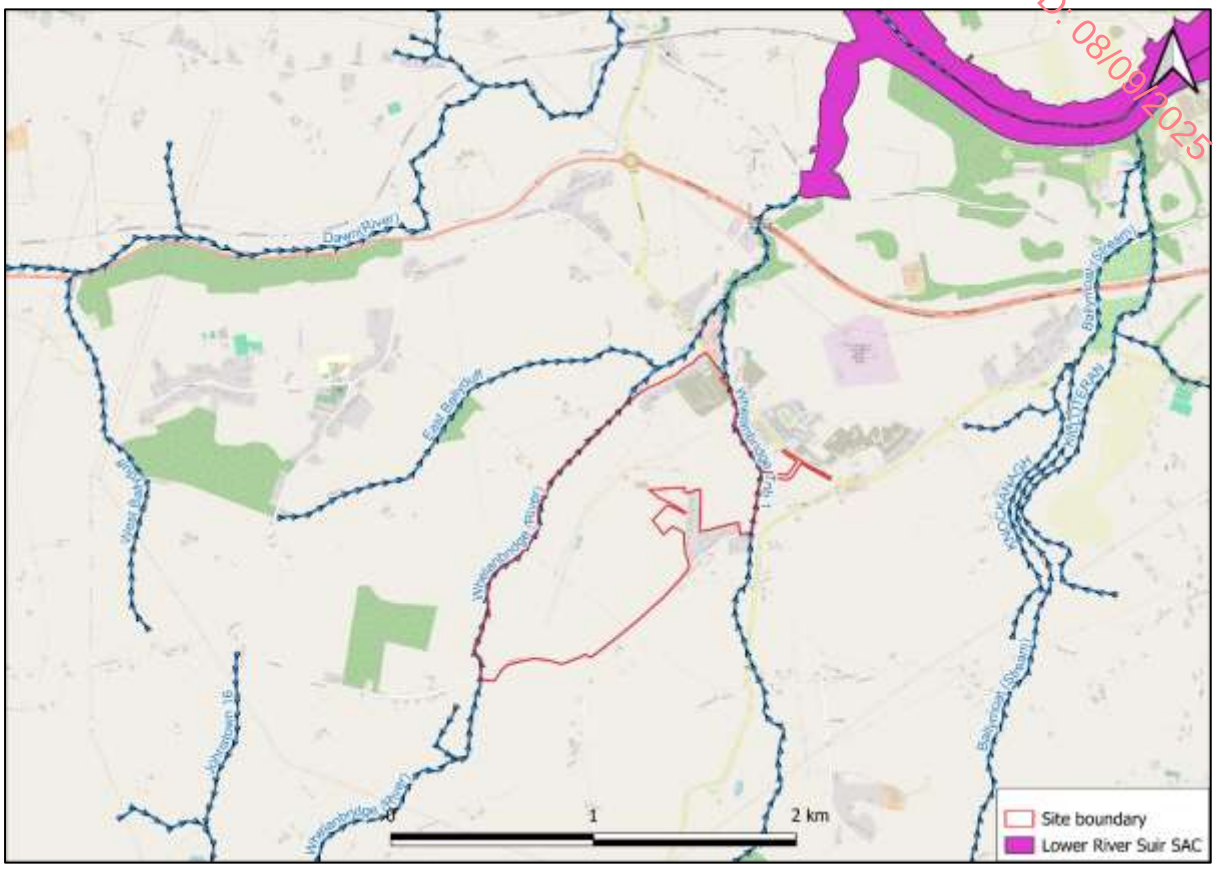


Figure 27: Hydrological connectivity between proposed development site and the Lower River Suir SAC (1:20,000).

The Mid-Waterford Coast SPA is 8.6km south of the proposed development, while the Tramore Back Strand SPA is 9.05km south-east of the proposed development. QIs of the Mid-Waterford Coast SPA include (breeding populations of) Cormorant (Phalacrocorax carbo), [A017], Peregrine (*Falco peregrinus*), [A103] Herring Gull (*Larus argentatus*) and [A184] Chough (*Pyrrhocorax pyrrhocorax*) [A346]. There is no suitable breeding habitat for these species in the vicinity of the proposed development. QIs of the Tramore Back Strand SPA include (over-wintering populations of) Light-bellied Brent Goose (*Branta bernicla hrota*) [A046], Golden Plover (*Pluvialis apricaria*) [A140], Grey Plover (*Pluvialis squatarola*) [A141], Lapwing (*Vanellus vanellus*) [A142], Dunlin (*Calidris alpina*) [A149], Black-tailed Godwit (*Limosa limosa*) [A156], Bar-tailed Godwit (*Limosa lapponica*) [A157], Curlew (*Numenius arquata*) and [A160] Wetland and Waterbirds [A999].

Bird surveys undertaken during the period September 2024 – June 2025 indicate that none of the habitats occurring with the application footprints are used by significant populations of any Qualifying Interest. Although Herring Gull and Curlew were recorded with low frequency flying in the vicinity of

the application footprint they were not observed to utilise the habitats present within the application footprint.

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The lack of any direct S-P-R linkages and the distances involved would preclude any likely significant impacts on the conservation objectives of the qualifying interests of The Mid-Waterford Coast SPA, Tramore Back Strand SPA or Tramore Dunes and Backstrand SAC.

2.7.4 Natura 2000 site(s) with potential to be impacted upon and Zone of Influence

Adhering to the Precautionary Principal, there is potential for negative impacts associated with the proposed development on:

- LOWER RIVER SUIR SAC;

The "Zone of Influence" will, therefore extend to this Natura 2000 site.

2.7.5 Sources of potential Direct, Indirect or Secondary Impacts

2.7.5.1 Direct Impacts

The proposed development will not take place within any Natura 2000 site, therefore, no direct impacts are likely to occur through land-take, habitat fragmentation, etc.

2.7.5.2 Indirect Impacts

The proposed development is hydrologically connected to the Lower River Suir SAC. The construction and/or operation of the proposed development has potential for indirect impacts through impacts on water quality.

2.7.5.3 Secondary and or Residual Impacts

In the event of indirect impacts on water quality, there is potential for secondary/residual impacts on the Lower River Suir SAC such as bioaccumulation. There are no likely significant potential secondary and or residual impacts on Natura 2000 sites outside of the zone of influence.

It must also be noted that there are populations of several species listed on Part (1) of the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations of 2011 occurring on site, including (but may not be limited to) New Zealand Pygmyweed (*Crassula helmsii*), Water Fern (*Azolla filiculoides*) and Japanese Knotweed (*Fallopia japonica*). These species have the potential to

impact on water quality and stream management. There is potential for impact associated with the spread of these species on and off site.

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A comprehensive assessment of the potential impacts of the proposed development on climate change, and vulnerability of the proposed development to impacts associated with climate change has been undertaken within Chapter 9 of the EIAR. The Potential impacts to the Proposed Development as a result climate change include:

- Flood risk due to increased precipitation, and intense periods of rainfall. This includes fluvial and pluvial flooding;
- Increased temperatures potentially causing drought, wildfires and prolonged periods of hot weather;
- Reduced temperatures resulting in ice or snow;
- Geotechnical impacts; and
- Major Storm Damage – including wind damage.

A summary of the potential for primary impacts upon Natura 2000 sites within the zone of influence of the proposed development is summarized in Table 7. The potential for impacts upon the Natura 2000 sites identified in the event of negative impacts is summarized in Table 8. The potential impacts on the QIs/SCIs of identified Natura 2000 sites are summarized in Table 9

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Table 7: Summary of the potential for impacts upon Natura 2000 sites.

SITE NAME	DIRECT IMPACTS	INDIRECT/ SECONDARY IMPACTS	RESOURCE REQUIREMENTS (WATER ABSTRACTION ETC.)	EMISSIONS (TO LAND, WATER OR AIR)	EXCAVATION REQUIREMENTS	DURATION OF CONSTRUCTION, OPERATION AND DECOMMISSIONING
LOWER RIVER SUIR SAC	No likely significant impact	Potential	Potential	Potential	None foreseen	Potential
MID-WATERFORD COAST SPA	No likely significant impact	No likely significant impact	No likely significant impact	No likely significant impact	No likely significant impact	No likely significant impact
TRAMORE DUNES AND BACKSTRAND SAC	No likely significant impact	No likely significant impact	No likely significant impact	No likely significant impact	No likely significant impact	No likely significant impact
TRAMORE BACK STRAND SPA	No likely significant impact	No likely significant impact	No likely significant impact	No likely significant impact	No likely significant impact	No likely significant impact

Table 8: Summary of the potential for changes to Natura 2000 sites.

SITE NAME	REDUCTION OF HABITAT AREA	DISTURBANCE TO KEY SPECIES	HABITAT/SPECIES FRAGMENTATION	REDUCTION IN SPECIES DENSITY	CHANGES IN KEY INDICATORS OF CONSERVATION VALUE	CLIMATE CHANGE
LOWER RIVER SUIR SAC	Potential	Potential	Potential	Potential	Potential	Potential
MID-WATERFORD COAST SPA	No likely significant change	No likely significant change	No likely significant change	No likely significant change	No likely significant change	No likely significant change
TRAMORE DUNES AND BACKSTRAND SAC	No likely significant change	No likely significant change	No likely significant change	No likely significant change	No likely significant change	No likely significant change

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TRAMORE BACK STRAND SPA	No likely significant change	No likely significant change	No likely significant change	No likely significant change	No likely significant change	No likely significant change

Table 9: Summary of potential impacts on Qualifying Interests of Natura 2000 sites identified as at risk of impact.

SITE NAME	QUALIFYING INTEREST	POTENTIAL IMPACT
LOWER RIVER SUIR SAC	• Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330]	• Impacts unlikely owing to scale of development and distance from habitat.
	• Mediterranean salt meadows (Juncetalia maritimi) [1410]	• Impacts unlikely owing to scale of development and distance from habitat.
	• Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260]	• Potential impacts associated with changes in water quality, potential secondary impacts. • Changes in deposition of silt in habitat resulting in poor substrate quality.
	• Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430]	• Potential impacts associated with invasive alien species.
	• Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0]	• Impacts unlikely owing to scale of development and distance from habitat.
	• Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0]	• Potential impacts associated with invasive alien species
	• Taxus baccata woods of the British Isles [91J0]	• Impacts unlikely owing to scale of development and distance from habitat.
	• Margaritifera margaritifera (Freshwater Pearl Mussel) [1029]	• Change in chemical and/or nutrient status of water and/or silt.Changes in deposition of silt in habitat resulting in poor substrate quality.
	• Austropotamobius pallipes (White-clawed Crayfish) [1092]	• Change in chemical and/or nutrient status of water and/or silt. Changes in deposition of silt in habitat resulting in poor substrate quality.
	• Petromyzon marinus (Sea Lamprey) [1095]	• Change in chemical and/or nutrient status of water and/or silt. • Changes in deposition of silt in habitat. • Impacts on feeding ammocoetes through siltation and/or bioaccumulation.

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SITE NAME	QUALIFYING INTEREST	POTENTIAL IMPACT
	• Lampetra planeri (Brook Lamprey) [1096]	• Change in chemical and/or nutrient status of water and/or silt • Changes in deposition of silt in habitat. • Impacts on feeding ammocoetes through siltation and/or bioaccumulation.
	• Lampetra fluviatilis (River Lamprey) [1099]	• Change in chemical and/or nutrient status of water and/or silt. • Changes in deposition of silt in habitat. • Impacts on feeding ammocoetes through siltation and/or bioaccumulation.
	• Alosa fallax fallax (Twaite Shad) [1103]	• Change in chemical and/or nutrient status of water and/or silt. • Changes in deposition of silt in habitat resulting in poor substrate quality.
	• Salmo salar (Salmon) [1106]	• Change in chemical and/or nutrient status of water and/or silt. • Changes in deposition of silt in habitat resulting in poor substrate quality.
	• Lutra lutra (Otter) [1355]	• Change in chemical and/or nutrient status of water and/or silt. • Changes in deposition of silt in habitat resulting in poor substrate quality.

Of note, all potential impacts identified are associated with changes in water quality/hydrology (including indirect impacts through Alien Invasive Plant Species).

2.7.6 Identification of Potential cumulative impacts in association with other plans or projects

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Cumulative impacts can be defined as impacts on Natura 2000 sites that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the plan/project being assessed.

Article 6(3) of the Habitats Directive requires an assessment of a plan/project to consider other plans/projects that might, in combination with the proposed project, have the potential to adversely impact upon Natura 2000 sites. The main threats, pressures and activities for the Lower Suir SAC are outlined in Table 10. (Please note, O refers to outside site, I refers to within site, B refers to both inside and outside site with H, M and L referring the High, Medium and Low respectively).Identification of plans/projects which might act in combination is informed by identified threats to the structure and function the site.

Table 10: Lower River Suir SAC threats, pressures and activities with impacts on the site.

CODE	DESCRIPTION	INSIDE/ OUTSIDE	RANK
A08	Agriculture - Fertilisation	O	H
E01	Urbanisation, residential and commercial development - Urbanised areas, human habitation	B	H
E03	Urbanisation, residential and commercial development - Discharges	B	H
H01	Pollution - Pollution to surface waters (limnic, terrestrial, marine & brackish)	B	H
J02.12.02	Natural System modifications - human induced changes in hydraulic conditions - Dykes, embankments, artificial beaches, general - dykes and flooding defence in inland water systems	I	H
J02.01	Natural System modifications - human induced changes in hydraulic conditions - Landfill, land reclamation and drying out, general	B	M
A01	Agriculture - Cultivation	I	L
B	Sylviculture, forestry	O	L
D03.01	Transportation and service corridors - shipping lanes, ports, marine constructions - port areas	B	L
I01	Invasive, other problematic species and genes - invasive non-native species	I	L
J02.01.02	Natural System modifications - human induced changes in hydraulic conditions - Landfill, land reclamation and drying out, general - reclamation of land from sea, estuary or marsh	I	L

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The primary threats, pressures and activities with impacts on the Natura 2000 sites examined (with High Ranking) are Agriculture, Urbanisation/Human disturbances, Pollution and Natural System modification (primarily modifications in hydrology).

All identified potential likely impacts are associated with impacts to water/hydrology/hydrology (including the spread of alien invasive plant species, which can impact on erosion, sedimentation, etc.). The cumulative impact of the proposed development with any/all relevant other planned or permitted developments with regard to hydrology/hydrogeology are examined comprehensively in Chapter 6 of the EIAR, excerpts from which are presented as follows:

"…Existing developments that are already built and in operation contribute to the characterisation of the baseline environment. As such any further environmental impacts that the proposed development may have in addition to these already constructed and operational developments has been assessed in the preceding sections of this chapter.

Any future application on these lands will be subject to planning approval and environmental assessment as required. Any new development proposed on the lands after the submission of the proposed development would be accompanied by an EIA, or EIA Screening as required and take into consideration the development of this site.

- ***Construction Phase***

In relation to the potential cumulative impact on hydrology and hydrogeology during the construction phase, the construction works which would have potential cumulative impacts are as follows:

Surface water run-off during the construction phase may contain increased silt levels or become polluted from construction activities. Run-off containing large amounts of silt can cause damage to surface water systems and receiving watercourses.

Stockpiled material will be stored on hardstand away from surface water drains, and gullies will be protected during works to ensure there is no discharge of silt-laden water into the surrounding surface water drainage or to ground.

Contamination of surface water and groundwater from accidental spillage and leakage from construction traffic and construction materials is possible unless project-specific measures are put in place for each development and complied with.

The works contractors for other planned or permitted developments will be obliged to ensure that measures are in place to protect surface water and groundwater quality in compliance with legislative standards for receiving groundwater quality (European Communities Environmental Objectives

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(Groundwater) Regulations (S.I. 9 of 2010 and S.I. 266 of 2016) and surface water quality (European Communities Environmental Objectives (Surface Water) Regulations (S.I. 272 of 2009 and S.I. 77 of 2019).

The implementation of mitigation and monitoring measures previously detailed above in section 6.6.1 and 6.7.1 as well as the compliance of other developments with their respective planning conditions, will ensure there will be minimal cumulative potential for change to the hydrological and hydrogeological environment during the construction phase of the proposed development.

The residual cumulative impact of the proposed development in combination with other planned or permitted developments can therefore be considered to be ***neutral, imperceptible*** *and* ***short-term****.*

- ***Operational Phase***

In relation to the potential cumulative impact on hydrology and hydrogeology during the operational phase, the operational activities which would have potential cumulative impacts are as follows:

Increased hard standing areas will reduce local recharge to ground and increase surface water run-off potential if not limited to the green field run-off rate from the site. Cumulatively this development and others in the area will result in localised reduced recharge to ground and increase in surface run-off.

Increased risk of accidental discharge of hydrocarbons from car parking areas, and along roads is possible unless diverted to surface water system with petrol interceptor.

There will be a small loss of greenfield area locally as part of the proposed development.

Each specialist has considered the list of relevant planning permissions from the surrounding areas of the proposed development as presented in Chapter 2 – Description of Proposed Development - Appendix 2.1. The proposed development and other permitted developments will result in an increase in hard standing which will result in localised reduced recharge to ground.

The proposed development site is underlain by a "Regionally Important Aquifer – Fissured Bedrock". There is no potential for change in groundwater levels as a result of local changes in the groundwater regime at the site due to the natural recharge capacity of the underlying aquifer which allows for the maintenance of groundwater levels.

The implementation of SuDs measures on site will mitigate against and reduce the recharge rate to ground.

All developments are required to ensure they do not have an impact on the receiving water environment in accordance with the relevant legislative standards for receiving groundwater quality

(European Communities Environmental Objectives (Groundwater) Regulations (S.I. 9 of 2010 and S.I. 266 of 2016) and surface water quality (European Communities Environmental Objectives (Surface Water) Regulations (S.I. 272 of 2009 and S.I. 77 of 2019).

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…The residual cumulative impact of the proposed development in combination with other planned or permitted developments can therefore be considered to be ***neutral, imperceptible*** *and* ***short-term****…"*

The primary source of any cumulative impacts concerns impacts on water quality. The proposed development is located within the Suir surface water catchment and the Dawn [River]_SC_010 sub-catchment.

The Suir catchment includes the area drained by the River Suir and all streams entering tidal water between Drumdowney and Cheekpoint, Co. Waterford, draining a total area of 3,542km² (EPA, 2024). The largest urban centre in the catchment is Waterford City. The other main urban centres in this catchment are Carrick-on-Suir, Clonmel, Caher, Thurles, Tipperary, Fethard and Templemore. The Suir catchment is divided into 29 subcatchments and has 179 surface water bodies and 43 groundwaterbodies. There are nine waterbodies with a High Ecological Status Objective (HSO) in the Suir Catchment, with seven currently not meeting their environmental objective of High (EPA, 2024). A total of 112 (50%) waterbodies are At Risk of not meeting their environmental objective in the Suir Catchment, while 41 (18%) are under Review and 69 (31%) are Not At Risk. EPA Q-values for stations proximate to the proposed development include:

- "WHELAN'S BRIDGE STREAM - Br W of Carrickadustara" (Station code: RS16W010200) southeast (upstream) of proposed development along the Whelanbridge (River) – Q-value 3-4 "Moderate" (Year: 1988).
- "Whelan's Bridge" (Station code: RS16W010400) (c.0.9km downstream of the proposed development) along the Whelanbridge (River) – Q-value 3 "Poor" (Year: 2023).

EPA (2024) state that significant pressure affecting the majority of river water bodies in the catchment is agriculture followed by forestry, hydromorphological pressures, peat, urban run-off, urban wastewater, industry, mines and quarries, domestic wastewater, invasive species and abstractions. EPA (2018) state issues related to farming in this catchment are phosphorus loss to surface waters from, for example, direct discharges; or runoff from yards, roadways or other compacted surfaces, or runoff from poorly draining soils. Sediment can also be a problem from land drainage works, bank erosion from animal access or stream crossings.

Projects within the Dawn [River]_SC_010 sub-catchment have the potential for in-combination impacts on aquatic conservation objectives of the Lower River Suir SAC.

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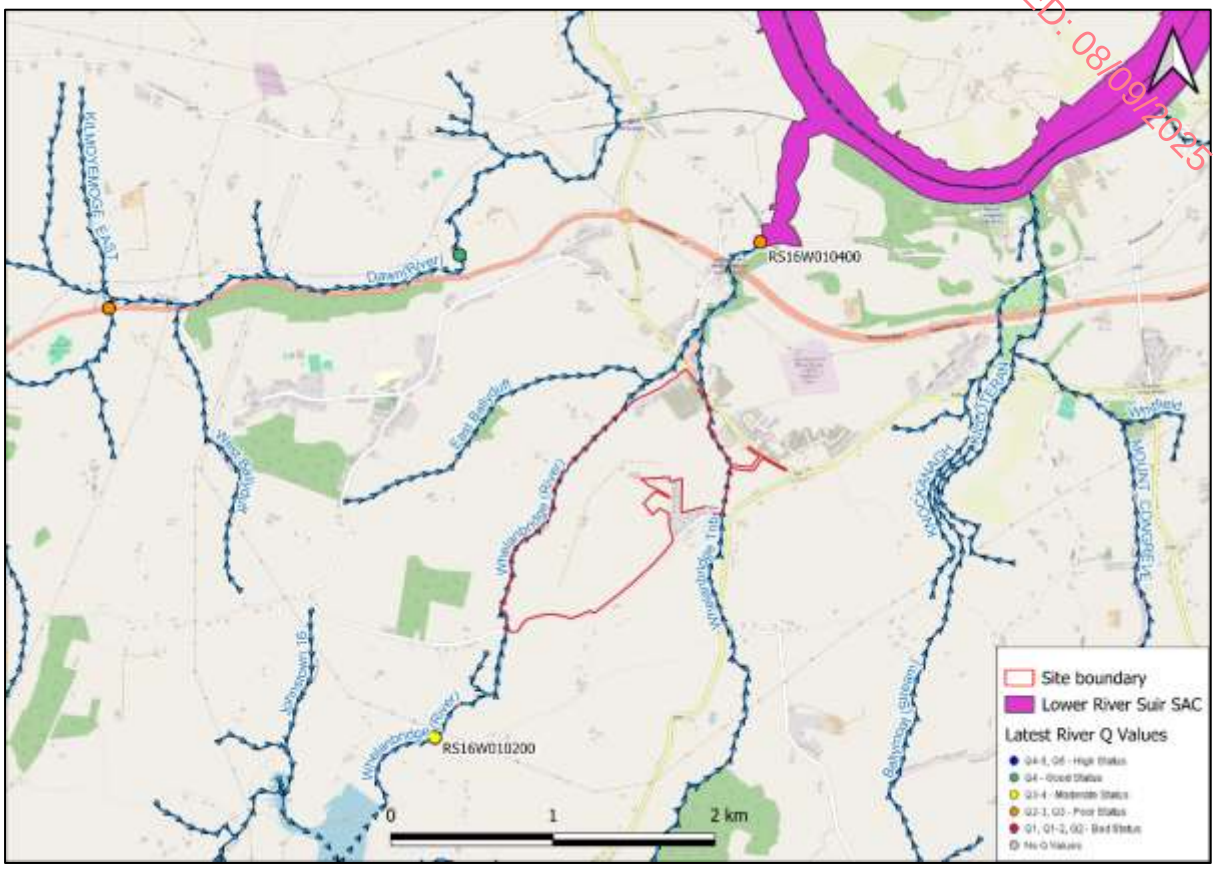


Figure 28: Latest EPA Q-vale scores proximate to the proposed development (1:25,000).

2.7.6.1 Planning application search

In order to identify projects with the potential for cumulative/in combination projects, a search of planning applications in the vicinity was undertaken. There are a number of granted planning permissions, and appealed planning permissions for residential or other small-scale developments in the immediate vicinity of the proposed development. A comprehensive list of these projects considered in the cumulative impacts assessment is presented in Table 11. Small scale developments, by virtue of their scale, nature or distance from the proposed development, in light of the cumulative impacts as identified in the Hydrology/Hydrogeology Chapter of the EIAR, are not likely to have any significant cumulative/in combination impact on the Natura 2000 network. Proximate developments requiring an EIAR were considered further.

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Table 11: Projects included in cumulative/in combination assessment

Application no.	Development description	Development address	Application status	Application type	Decision	Cumulative/ in-combination impact likely
2038	the erection of a farm gate to allow access to agricultural land and all associated site works	Whelans Bridge , Kilmeaden , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
20114	to replace wing walls and entrance to achieve sight lines at farm entrance and to construct a cattle underpass beneath the public road L4410, adjacent to this farm entrance and together with associated site works	Mount Congreve & Knockanagh , Kilmeaden , Co Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
20209	to construct a storey and half dwelling house, installation of a wastewater treatment system and percolation area, new site entrance and associated site works at	Raheens , Kilmeaden , Co Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
20223	to raise field levels of existing agricultural lands using clean inert soil and stones (EU Waste Class 17 0504) in order to improve quality of said lands and an area to recycle construction materials	Ballycraddock , Kilmeaden , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
20225	the construction of a new single storey side and rear extension, an amendment to the existing driveway entrance, the addition of one new rooflight to the front including all internal modifications to existing dwelling and all associated site works	Carrigadustra , Kilmeaden , Co Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
20260	for change of use of part of the existing Stores Area at the rear of the building to Retail use including Off-Licence and the amalgamation of this area into the existing Supermarket, relocation of the Offices/Staff Facilities into the Stores Areas, alter	Centra , Kilmeaden Adamstown , Kilmeaden	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
20316	for a concrete batch manufacturing facility consisting of the following; one concrete batching plant unit including a control cabin, four no. cement silos (to 15 metres in height), six no. storage bins, a reserve water tank, a truck wash out area with se	Greenan and Ballyshonock , Kilmacthomas , Co Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
20335	to remove existing cottage remains and to replace with single storey dwelling house, storage shed, entrance, wastewater treatment system, percolation area and all ancillary site works at	Ballygarran , Kilmeaden , Co Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO

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Application no.	Development description	Development address	Application status	Application type	Decision	Cumulative/ in-combination impact likely
20400	to build 40 no. dwellinghouses, consisting of (i) 14 no. two storey, semi detached houses (ii) 16 no. two storey, terraced houses in two blocks and (iii) 10 no. two storey terraced houses in three blocks, with option of providing a third floor to any of	Adamstown , Kilmeaden , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
20445	for construction of single storey extension to the side of the existing building and changes to front façade fenestration including new roof lights together with all additional site works at	Ashler , Ballyduff West , Kilmeaden	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
20438	to construct a single storey dwelling, this is change of house design from that granted under PD10/409 and extended under PD16/22 and all ancillary site works at	Ballyshonock , Kilmacthomas , Co Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
20557	to construct a part single storey/part storey and a half dwelling and garage with site entrance, driveway and domestic waste water treatment plant and percolation area, a connection to the public water supply main and all ancillary and associated site wo	Carrickphilip , Kill , Co Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
20572	for the following works to my existing dwelling house comprising refurbishment and alterations to the existing dwelling house, conversion of the existing garage to a new utility room, boot room, and plant room, construction of 2 no. single storey extensi	Creamery House , Blackknock , Kilmeaden	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
20593	the construction of a single-storey dwelling with detached garage, septic tank/wastewater treatment system and all associated site works	Caheruane , Kill , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
20656	to construct a calf house / machinery shed and all associated ancillary site works	Lissahane , Kill , Co Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
20802	for a change of use from previous retail use (part of previous larger retail unit) to use as a full traditional fast food/hot food takeaway. Together with modifications in creating the floor plan layout, forming the entrance to the service area of the la	Unit 2 (part of) , of the Ground Floor , Kilmeaden Village Centre Adamstown	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
20948	the construction of a new dormer bungalow, a new driveway entrance and the installation of a waste water treatment system with polishing filters and percolation area and all associated site works	Ballydurn , Portlaw , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
2114	for the construction of a steel finished garden shed located in the northern corner of the site, along with connection to existing surface water drainage and all associated site works at	Adamstown , Kilmeaden , Co Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO

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Application no.	Development description	Development address	Application status	Application type	Decision	Cumulative/ in-combination impact likely
2135	for the construction of a new extension to the rear of our existing Public House comprising the construction of a new single storey residential accommodation to the rear (south) of the existing Public House together with connection to the existing on-sit	Haughtons's Public House , Ross , Kilmeaden	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
21199	two-storey extension to the side of my existing dwelling together with connection to on site services and all associated site works	Ballyduff , Kilmeaden , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
21214	for the construction of 96 no. dwelling units incorporating 10 no. 2 storey 4 bed detached units (Type A) 32 No. 2 storey semi detached 4 bed units (Type 8), 28 No. 2 storey semi detached 3 bed units (Type C), 10 no. 2 storey semi detached 3 bed units (T	Adamstown , Kilmeaden , Co Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
21240	to construct a livestock shed containing a straw bedded area, feed passage, covering an existing U/G slatted tank and associated site works with the development at	Lahardan , Kilmeaden , Co Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
21324	to alter the footprint of the house plan from that granted planning permission under reference 20/335 and ancillary works at	Ballygarran , Kilmeaden , Co Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
21351	change of site boundaries from those granted planning permission under reference 20/948 and ancillary works at	Ballydurn , Kilmacthomas , Co Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
21416	for a new single storey extension to the side and rear of existing house and all associated site works at	22 Fan Glas , Adamstown , Kilmeaden Co Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
21509	the following works to existing dwelling house, the de-commissioning of existing septic tank and percolation area, together with the construction, installation and re-location of a new packaged waste water treatment system and percolation area to serve e	The Pines , Ballyduff East , Kilmeaden	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
21512	sub division of the existing site boundary to incorporate the existing garage and exiting site entrance (prev. granted under pl. perm. ref. no. 98/39) and extension of existing site boundary to the south together with the construction of a new storey and	Ballyduff East , Kilmeaden , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO

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Application no.	Development description	Development address	Application status	Application type	Decision	Cumulative/ in-combination impact likely
21581	Decommission existing septic tank, connect existing dwelling to the public drainage system, construct a new single storey dwelling, and all ancillary site works	Adamstown , Kilmeaden , Co. Waterford	APPLICATION FINALISED	OUTLINE PERMISSION	CONDITIONAL	NO
21618	Construct single storey extensions to existing single storey house and associated works	Ballygarran , Kilmeaden , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
21663	Erect deli kitchen/store extension and all associated works	Gala Express Filling Station , Kilmeaden , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
21797	Section 254 Licence Application - The erection of overground electronic communications infrastructure and any associated physical infrastructure along public roads including:- 1. The erection of new overground fibre optic cables on existing timber poles	Comeragh MD , Municipal District	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
21845	for the refurbishment of the existing cottage including raising the roof to allow a storey and a half, the addition of gable windows and rooflights to the front, elevational changes to the front faÃ§ade, the construction of a rear storey and a half exten	Carrolls Cross , Kilmacthomas , Co Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
21895	to construct a single storey dwelling, garage, waste water treatment system, percolation area, splayed entrance and all ancillary site works at	Crinalisk , Kill , Co Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
21908	Converting Broadleaf High Forest to Mixed High Forest (removal of diseased ash forest and replacement with a mixture of broadleaf and conifer species)	Johnstown , Kilmeaden , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
21923	Planning Permission consequent on the grant of outline planning permission to decommission existing septic tank, connect existing dwelling to the public drainage system, construct a new single storey dwelling, connect to public drainage system, new entra	Adamstown , Kilmeaden , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
21967	for the construction of a new single storey dwelling house, new single storey garage, new bored well, together with a new waste water treatment system and percolation area together with all ancillary and associated site works, at	Carrickphilip , Kill , Co Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO

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Application no.	Development description	Development address	Application status	Application type	Decision	Cumulative/ in-combination impact likely
211067	SECTION 254 LICENCE for the erection of overground electronic communications infrastructure and any associated physical infrastructure along public roads including: 1. The erection of new overground fibre optic cables on existing timber poles. 2. The er	Comeragh MD ,	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
211108	the construction of a new single storey house with an attached garage, a wastewater treatment system, a bored well and an entrance along with all associated site works	Ballygarron , Kilmeaden , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
211109	construct cubicles shed with loose area and underground effluent tanks and all associated site works	Kilmoyemoge West , Portlaw , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
211126	Planning Permission is being sought to construct new single-storey dwelling, single-storey garage, upgrading of existing entrance, new waste water treatment system and percolation area and all associated site works	Crinalisk , Kill , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
211134	Planning permission is required for construction of a new single storey dwelling, site entrance, wastewater treatment system and percolation area and all ancillary site works	Hacketstown , Portlaw , Co. Waterford.	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
211218	the construction of a new dwelling, a new driveway entrance and the installation of a wastewater treatment system with polishing filters and percolation area and all associated site works	Ballydurn , Portlaw , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
211216	the construction of a new two storey split level dwelling house with new single storey carport, new bored well, together with a new waste water treatment system and percolation area together with all ancillary and associated site works	Stonehouse , Kilmeaden , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
211223	construct a single-storey dwelling and garage, together with landscaping, sewage treatment plant and percolation area, borehole, driveway and ancillary site works. The proposed development will be accessed via the existing farm entrance	Mount Congreve Farm , Knockanagh , Kilmeaden	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
224	erect a two-storey home, garage, driveway entrance, waste water treatment system, percolation area, borewell, landscaping and all associated site works	Grenan , Kill , Kilmacthomas	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO

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Application no.	Development description	Development address	Application status	Application type	Decision	Cumulative/ in-combination impact likely
228	demolish existing dwelling house and build new dwelling, sewage treatment system and all ancillary works	Ballyrobin , Kill , Co Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
22163	demolish existing dormer dwelling, to decommission existing septic tank, to construct a replacement dwelling which is to be a dormer style dwelling, wastewater treatment system, percolation area, alterations to existing entrance from public road to impro	Greenan , Kilmacthomas , County Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
22178	the Restoration of a disused rock and gravel quarry comprising some 3.26 hectares to agricultural use using imported inert soil and stone classified as Article 27 by-products of the construction industry. It is proposed to import some 270,000m3 of that	Powersknock , Kilmeaden , County Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	EIAR REQUIRED SEE EIA PORTAL REVIEW
22295	the following works to our existing GAA Club, the widening and enlarging of the existing vehicular entrance and access road way, the erection of new fencing to both sides of the new widened access roadway, the conversion of the existing dressing rooms to	Kildermody , Kilmeaden , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
22309	construct a single storey dwelling, garage, wastewater treatment system, percolation area, splayed entrance and all ancillary site works	Ballygarran , Kilmeaden , County Waterford	APPLICATION FINALISED	OUTLINE PERMISSION	CONDITIONAL	NO
22507	the demolition of 2 no. existing habitable dwellinghouses and existing farm buildings comprising of haybarn, walker, lunge ring and stables. PLANNING PERMISSION is sought for the construction of 67 No. 2 storey dwelling units consisting of; 11 No. detac	Adamstown , Kilmeaden , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
22615	for the development of a single-storey dwelling, garage, driveway entrance, wastewater treatment system, percolation area, well, landscaping and all associated site works	Lissahane , Kill , Co.Waterford	APPLICATION FINALISED	OUTLINE PERMISSION	CONDITIONAL	NO
22613	for erection of a dwelling house, sewage treatment system and all ancillary works.	Coolfin , Portlaw , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
22666	for the demolition of the existing rear extension and for the construction of a new replacement rear extension and to include all associated and ancillary site works	Carrickadustra , Kilmeaden , Co Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
22696	to construct a single storey extension to the side of the dwelling and all ancillary site works	Georgestown , Kill , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO

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Application no.	Development description	Development address	Application status	Application type	Decision	Cumulative/ in-combination impact likely
22758	for development of a Biopharmaceutical Development and Manufacturing Campus.	Butlerstown IDA Business and Technology Park, Butlerstown, Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	EIAR REQUIRED SEE EIA PORTAL REVIEW
22766	to construct a single storey dwelling, garage, wastewater treatment system, percolation area, splayed entrance and all ancillary site works	Ballygarran , Kilmeaden , Co. Waterford	APPLICATION FINALISED	PERMISSION CONSEQUENT	CONDITIONAL	NO
22808	for change of use from stables to a dwelling house together with planning permission for sub-division of the site, waste water treatment plant and percolation area, soakaway, shared entrance, connection to mains water and all associated site works	Ballyduff , Kilmeaden , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
22811	for single storey family dwelling together with detached garage, waste water treatment plant and percolation area, soakaway, boundary treatment, new entrance, connection to public services and all associated site works	Amberhill , Kilmeaden , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
22821	to extend existing dwelling house with single storey separate living unit, entrance, upgrade existing septic tank system to wastewater treatment system and ancillary works	Carrigeen , Newtown , Kilmacthomas	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
22988	the refurbishment and extension to an existing dwelling house and outbuildings including limited demolition, restoration and adaptation of existing structures, new wastewater treatment system and other ancillary site works	Kilmagemogue , Kilmeaden , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
221006	Outline planning permission to construct a dormer style dwelling, garage, waste-water treatment system, percolation area, splayed entrance & all ancillary works	Ballyduff East , Kilmeaden , Co. Waterford	APPLICATION FINALISED	OUTLINE PERMISSION	CONDITIONAL	NO
2260010	Planning Permission to construct a dormer dwelling with attached carport and domestic garage, on site sewerage treatment, new entrance onto the public road and all associated works	Lissahane , Kill , Co.Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
2322	To demolish a calf house and to construct a calf house and ancillary works	Kilmoyemoge West , Portlaw , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO

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Application no.	Development description	Development address	Application status	Application type	Decision	Cumulative/ in-combination impact likely
2360057	for proposed new single-story dwelling house with detached garage, including new on-site proprietary wastewater treatment system and percolation area, new vehicular entrance and all associated groundworks and landscaping	Stonehouse , Kilmeaden , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
2360073	for single storey dwelling house and detached garage, proprietary waste water treatment system and percolation area and decommissioning of existing septic tank, demolition of part outbuilding on site, together with all associated site development works	Hacketstown , Portlaw , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
2360082	Planning permission for the construction of a garage along with all associated site works at Ballyshunnock, Kilmacthomas, Co. Waterford.	Ballyshunnock , Kilmacthomas , Co. Waterford.	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
2360099	construction of a one-and-a-half story dwelling and garage, upgrading the existing entrance, new wastewater treatment system and percolation area together with all associated site work.	Crinalisk , Kill , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
2360115	construction of an agricultural cubicle shed, slatted tank & feed passage. This shed is proposed to also cover the existing cubicle area & feed passage.	Coolagaddden , KIlmeaden , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
23114	to construct a single storey extension to existing dwelling and all associated site works	Penrose Cottage , Ballyduff , Kilmeaden	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
23137	permission consequent on the grant of outline planning permission to construct a dormer style dwelling, garage, wastewater treatment system, percolation area, splayed entrance and all ancillary site works. Outline planning permission granted under planni	Ballyduff East , Kilmeaden , Co. Waterford	APPLICATION FINALISED	PERMISSION CONSEQUENT	CONDITIONAL	NO
2360242	for renovation of existing derelict dwelling house, including extension and alterations, including all necessary site works.	Ballyshonock , Kilmacthomas , Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
2360250	construction of a calf shed, an extension to existing cubicle shed to contain a new slatted tank and all associated site works	Kilmovee , Portlaw , Co. Waterford.	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO

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Application no.	Development description	Development address	Application status	Application type	Decision	Cumulative/ in-combination impact likely
2360277	for the restoration of part of an exhausted quarry void located within the former rock quarry at Carrollâ€™s Cross in the townland(s) of Greenan and Ballyshanock. The application area will be ca. 4.7 hectares and the void which will be subjected to resto	Former Roadstone Carrolls Cross Quarry , Greenan and Ballyshanock , Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
2360301	demolition of an existing two storey dwelling and construction of a new two storey dwelling, driveway, wastewater treatment plant & percolation area, landscaping and all ancillary site works	Kilmoyemoge West , Portlaw , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
23223	for the construction of a new dormer dwelling house, new single storey garage, new bored well, together with a new packaged waste water treatment system and partially raised polishing filter percolation area together with all ancillary and associated sit	Ballyvadd , Portlaw , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
23244	to construct a two storey dwelling, wastewater treatment system, percolation area, splayed entrance and all ancillary site works	Ballyhussa , Kilmacthomas , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
23254	for the construction of a new two storey extension to the existing dressing room block, comprising of the following; 2 no dressing rooms, showers and toilet facilities, meeting room and gym, together with all ancillary and associated accommodations, all	Ballyduff West , Kilmeaden , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
2360429	new bungalow (3bed 4/5 person), garage, waste treatment system, percolation area, landscaping, site entrance, with temporary siting of a mobile home for the duration of the build and all site development and associated works and connections	Carrigeen , Newtown , Kilmacthomas Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
2360486	Complete renovation of existing dwelling, including extensions to side and rear, new roof, new windows and doors, new vehicular entrance, replacement of waste water treatment system and new percolation area together with all associated site works.	Ballycraddock , Kilmeaden , Co. Waterford.	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
2360528	to subdivide existing site to create a new development site. Permission includes for construction of new 2.1m high Dividing wall, a new vehicular entrance on the public road and permission to construct a 1.5 storey dwelling house along with associated si	Ballyduff West , Kilmeaden , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO

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Application no.	Development description	Development address	Application status	Application type	Decision	Cumulative/ in-combination impact likely
23329	change of house type from that granted under planning permission 22/613	Coolfinn , Portlaw , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
243	to construct a dormer style dwelling, garage, wastewater treatment system, percolation area, splayed entrance and all ancillary site works	Ballyhussa , Kilmacthomas , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
2414	to construct a new single storey dwelling, bio-crete waste water treatment unit, 45m2 polishing filter, recessed entrance and all associated site works	Carrickphilip , Kill , Co. Waterford	DECISION MADE	PERMISSION	CONDITIONAL	NO
2462	for the following works, comprising the construction of a new sensory garden area with associated fencing and access path to the side (east) of the existing school, together with all ancillary and associated site works	Ballyduff West , Kilmeaden , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
2460163	for development of a 800MWh Battery Energy Storage Systems facility within a total site area of 5.45 hectares. The site will include 40No. Electrical Inverters, 20No. Electrical Transformers, 103No. Containerised Battery Storage Modules on Concrete Plint	Townlands of Glenhouse and Lahardan Co. Waterford , on a site approximately 15 kilometres , West of Waterford City.	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
2460175	to construct a livestock calf shed, remove an existing round roof shed with lean-to and construct a livestock shed containing cubicles, feed passage and associated site works	Carrickphilip , Kill Kilmacthomas , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
24123	for development consisting of the construction of a new extension to an existing single storey house, which includes a new roof, three dormer windows to the front of the house, and extension to the rear on the ground and first floor. Refurbishment of the	Ballyduff West , Kilmeaden , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
24131	change of design for the refurbishment and extension to an existing dwellinghouse and outbuildings, including limited demolition, restoration and adaptation of existing structures, granted permission under PD22/988 and all associated ancillary site works	Kilmagemogue , Kilmeaden , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
24137	Change of use of part of the building from Cold Storage presently to that of a Packaging/Processing Area. Permission to demolish the existing Inspection Room and Canteen to be replaced by a new Canteen & Amenities building, to partition off the packagin	QK Coldstores LTD. , Carrolls Cross , Ballyshunnock Kilmacthomas	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO

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Application no.	Development description	Development address	Application status	Application type	Decision	Cumulative/ in-combination impact likely
2460431	the demolition of the existing rear extension and for the renovation and refurbishment of the original dwelling and for the construction of single storey and storey and a half type extensions to same, and including all ancillary and associated site works	KNOCKHOUSE , PORTLAW , CO. WATERFORD	FURTHER INFORMATION	PERMISSION	N/A	NO
2460442	The construction of a calf shed, and to carry out all ancillary siteworks	Balyvadd , Portlaw , Co. Waterford	APPEALED	PERMISSION	CONDITIONAL	NO
2460450	: alterations to north elevation windows; new timber roof window to replace leaking PVC roof window; four new windows to North elevation; modification of the existing ramps to be replaced with new landing, stairs and railings; new replacement timber exte	Pouldrew House , Portlaw , Co. Waterford	NEW APPLICATION	PERMISSION	N/A	NO
2460512	the renovation and extension of an existing vacant and derelict dwelling, bringing the dwelling up to modern living standards, and providing further accommodation including living spaces, additional bedrooms, a garden room/gym area, a new wastewater trea	Robertstown , Newtown , Co. Waterford	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO
2460564	the construction of a single storey extension and all other ancillary site works	KILMOYEMOGE WEST , PORTLAW , CO. WATERFORD	APPLICATION FINALISED	PERMISSION	CONDITIONAL	NO

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2.7.6.2 EIA Portal search

A search of projects requiring assessment under the European Union Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (the 'EIA Directive') as amended by Directive 2014/52/EU was carried out on the Department of Housing, Local Government and Heritage's EIA Portal[1]. Two developments requiring EIAR and Appropriate Assessment were identified proximate to the proposed development. The potential for cumulative/in-combination impact of these developments was assessed separately as indicated below

- Portal ID **2022023**: Restoration of a disused rock and gravel quarry comprising some 3.26 hectares to agricultural use using imported inert soil and stone classified as Article 27 by-products of the construction. An Appropriate Assessment screening report of the development found that the project would not have any cumulative impact on the Natura 2000 network
- Portal ID **2022162**: Biopharmaceutical Development and Manufacturing Campus, as an extension to the existing Horizon Development and Manufacturing Facility. A Natura Impact Statement was prepared for this development, which found that the "*…mitigation measures incorporated into the design of the proposed project allow a conclusion to be arrived at that there will be no significant adverse effects as a result of the proposed project either alone or in combination with other plans/projects…*"

[1] Available from: https://housinggovie.maps.arcgis.com/apps/webappviewer/index.html?id=d7d5a3d48f104ecbb206e7e5f84b71f1 Accessed 17 January 2025.



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Figure 29: Projects subject to assessment under the EIA Directive proximate to the proposed development.

In conclusion, with regard to cumulative/in-combination impacts, there is potential for cumulative/in combination impacts with regard to impacts on hydrology/water quality **in the absence of mitigation measures that would remove the potential for likely significant impact on hydrology/water quality associated with the proposed development.**

2.7.7 "Do nothing" scenario

Any potential negative impacts associated with the proposed development would be avoided. Of note, the do nothing scenario may result in the spread of propagules of alien invasive plant species.

2.7.8 Gauging of Impacts on Natura 2000 sites – potential for likely significant impact

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The potential for likely significant impact of the proposed development on Natura 2000 sites are gauged using a checklist, which aids in determining the potential of development to have a significant negative impact on any Natura 2000 site. This checklist consists of a number of pertinent questions as set out in Table 12.

Table 12: Potential of the proposed development to impact on Natura 2000 sites in the absence of suitable mitigation/preventative measures.

DOES THE PLAN HAVE THE POTENTIAL TO:	YES/NO
Cause delays in progress towards achieving the conservation objectives of the Natura 2000 site?	YES
Interrupt progress toward achieving the conservation objectives of the Natura 2000 site?	YES
Disrupt those factors helping to maintain the favourable conditions at the Natura 2000 site?	YES
Interfere with the balance, distribution and density of key species that are the indicators of the favourable condition of the Natura 2000 site?	YES
Cause changes to the vital defining aspects (e.g. nutrient balance) that determine how the Natura 2000 site functions as a habitat or ecosystem?	YES
Change the dynamics of the relationships (between, for example, soil and water or plants and animals) that define the structure and/or function of the Natura 2000 site?	YES
Interfere with predicted or expected natural changes to the Natura 2000 site (such as water dynamics or chemical composition)?	YES
Reduce the area of key habitats within the Natura 2000 site?	YES
Reduce the population of key species of the Natura 2000 site?	YES
Alter the balance between key species of the Natura 2000 site?	YES
Reduce the biodiversity of the Natura 2000 site?	YES
Result in disturbance that could affect population size or density or the balance between key species within the Natura 2000 site?	YES
Result in fragmentation?	YES
Result in the loss or reduction of key features of Natura 2000 sites?	YES

2.8 Conclusions of screening

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According to the guidance published by the NPWS (DoEHLG, 2010a), Screening for Appropriate Assessment can either identify that a Natura Impact Statement (NIS) is not required where:

1. A project/proposal is directly related to the management of the site; or
2. There is no potential for significant impacts affecting the Natura 2000 network

Where the screening process identifies that significant impacts are certain, likely or uncertain the project must either proceed to Stage 2 Appropriate Assessment or be rejected.

The potential impacts that will arise from the proposed development have been examined in the context of a number of factors that could potentially impact upon the integrity of the Natura 2000 network. On the basis of the findings of this Screening for Appropriate Assessment, it is concluded that the development:

1. Is not directly connected with or necessary to the management of a Natura 2000 site; and
2. May have significant impacts on one or more Natura 2000 sites.

Following an examination, analysis and evaluation of the relevant information and the potential for significant effects on the conservation objectives of Natura 2000 sites, and applying the Precautionary Principle, it is not possible to exclude (on the basis of objective information and in the absence of specific prescribed precautionary/mitigation measures) that the proposed development, individually or in combination with other plans or projects, has the potential to have significant negative impacts on the following Natura 2000 site:

LOWER RIVER SUIR SAC

Screening having identified potential impacts of the proposed development upon this Natura 2000 site and in accordance with Article 6(3) of the Habitats Directive, a Stage 2 Appropriate Assessment is required, i.e., "*The consideration of the impact of the project or plan on the integrity of the Natura 2000 Site, either alone or in combination with other projects or plans to the sites structure and function and its conservation objectives. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts.*"

3 Natura Impact Statement (NIS)

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The potential for significant negative impacts of the proposed development on the ecological integrity of the following site, in light of the conservation objective of the site, is examined in this section, namely:

- LOWER RIVER SUIR SAC

3.1 Stage 2 Appropriate Assessment (NIS) background

Screening having identified potential impacts Stage 2 Appropriate Assessment (preparation of a Natura Impact Statement) is carried out to determine whether the project either alone or in combination with other plans and projects will have adverse effects on the integrity of the Natura 2000 site in question in light of its conversation objectives. For the purposes of Appropriate Assessment, a significant effect is any effect that is likely to affect the Conservation Objectives of the QIs/SCIs for which a site was designated but excluding inconsequential effects. If the effect is not relevant to the conservation objective, then it cannot be a significant effect for the purposes of Appropriate Assessment. A likely significant effect, for the purpose of Appropriate Assessment must be:

a. Significant;
b. Relevant to the conservation objective for that site; and
c. The possibility of effects cannot be reasonably excluded.

This stage of the Appropriate Assessment process includes:

1. Impact Prediction - the potential impact of the proposed development on the ecological integrity of Natura 2000 sites in terms of the conservation objectives of those sites is assessed; and
2. Mitigation Measures – mitigation/preventative measures are identified (either in place or to be implemented) in relation to any significant negative impacts associated with the proposed development on the Natura 2000 sites as described herein.

This stage of the Appropriate Assessment process involves the identification of potentially affected sites, the identification of the QIs/SCIs of those sites, and an assessment of the significance of impacts on the conservation objectives of those sites. Any negative impacts on the integrity of structure, function or conservation objectives of these sites will require the implementation of avoidance or mitigation measures to avoid progression to Stages 3 and 4 of the Appropriate Assessment process.

3.2 Summary of Natura 2000 sites relevant to the Stage 2 Appropriate Assessment

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It is the goal of NPWS to draw up conservation plans for all areas designated for nature conservation, and that these plans will, among other things, set clear objectives for the conservation of the features of interest within a site. Where a detailed Conservation Objectives Document is not available, NPWS have provided a site synopsis, generic Conservation Objectives and a Natura 2000 data form.

In this section, the Natura 2000 sites potentially impacted upon by the proposed development are described according to:

1. General description of the site;
2. Qualifying Interests (QI) of the site;
3. Threats, pressures and activities with negative impacts on the site;
4. Conservation Objectives of the site – see conservation objectives document; and
5. Baseline conservation status of the site.

A summary of the Natura 2000 sites potentially impacted upon by the proposed development including general description, qualifying interests, conservation objectives, vulnerability/threats and conservation status of habitats/species within individual sites and conservation status of qualifying interests on a national basis, is provided as follows.

3.2.1 Lower River Suir SAC (Site synopsis version date 19/07/23, Natura 2000 form update 09/18, Conservation Objectives version 1)

3.2.1.1 General Description

The Lower River Suir SAC consists of the freshwater stretches of the River Suir immediately south of Thurles, the tidal stretches as far as the confluence with the Barrow/Nore immediately east of Cheekpoint in Co. Waterford, and many tributaries including the Clodiagh in Co. Waterford, the Lingaun, Anner, Nier, Tar, Aherlow, Multeen and Clodiagh in Co. Tipperary. The Suir and its tributaries flow through the counties of Tipperary, Kilkenny and Waterford.

Good examples of this alluvial wet woodland in the site are found on the islands just below Carrick-on-Suir and at Fiddown Island. Species occurring here include Almond Willow (Salix triandra), White Willow (S. alba), Rusty Willow (S. cinerea subsp. oleifolia), Osier (S. viminalis), with Yellow Iris (Iris pseudacorus), Hemlock Water-dropwort (Oenanthe crocata), Wild Angelica (Angelica sylvestris), Pendulous Sedge (Carex pendula), Meadowsweet (Filipendula ulmaria) and Common Valerian

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(Valeriana officinalis). In the drier areas species such as Ash (Fraxinus excelsior), Hazel (Corylus avellana), Hawthorn (Crataegus monogyna) and Blackthorn (Prunus spinosa) occur. Eutrophic tall herb vegetation occurs in association with the various areas of alluvial forest and elsewhere where the floodplain of the river is intact.

Old oak woodlands are also of importance at the site. The best examples are seen in Portlaw Wood which lies on both sides of the Clodiagh River. On the south-facing side the stand is more open and the oaks (mainly Pedunculate Oak, Quercus robur) are well grown and spreading. Ivy (Hedera helix) and Bramble (Rubus fruticosus agg.) are common on the ground, indicating relatively high light conditions. Oak regeneration is dense, varying in age from 0-40 years and Holly (Ilex aquifolium) is fairly common but mostly quite young. Across the valley, by contrast, the trees are much more closely spaced and though taller, are poorly grown on average. There are no clearings; large oaks extend to the boundary wall. In the darker conditions, Ivy is much rarer and Holly much more frequent, forming a closed canopy in places. Oak regeneration is uncommon since there are as yet few natural clearings. The shallowness of the soil on the north-facing slope probably contributes to the poor tree growth there. The acid nature of the substrate has induced a 'mountain' type oakwood community to develop. The site is quite species-rich throughout, including an abundance of mosses, liverworts and lichens. The rare lichen Lobaria pulmonaria, an indicator of ancient woodlands, is found here. Two stands of Yew (Taxus baccata) woods, a rare habitat in Ireland and the E.U., occur within the site. These are on limestone ridges at Shanbally and Cahir Park. Both are in woods planted with non-native species, including conifers. However, the area at Cahir Park is fairly substantial in size and includes some relatively undisturbed patches of wood and some very old trees.

Floating river vegetation is evident in the freshwater stretches of the River Suir and along many of its tributaries. Typical species found include Canadian Pondweed (Elodea canadensis), water-milfoils (Myriophyllum spp.), Fennel Pondweed (Potamogeton pectinatus), Curled Pondweed (P. crispus), Perfoliate Pondweed (P. perfoliatus), Pond Water-crowfoot (Ranunculus peltatus), other crowfoots (Ranunculus spp.) and the moss Fontinalis antipyretica. At a couple of locations along the river Opposite-leaved Pondweed (Groenlandia densa) occurs. This species is protected under the Flora (Protection) Order, 2022.

Salt meadows occur below Waterford City in old meadows where the embankment is absent, or has been breached, and along the tidal stretches of some of the in flowing rivers below Little Island. There are very narrow, non-continuous bands of this habitat along both banks. More extensive areas are also seen along the south bank at Ballynakill, the east side of Little Island, and in three large salt meadows between Ballynakill and Cheekpoint. The Atlantic sub-type occurs, with an extensive species

list which includes Red Fescue (Festuca rubra), oraches (Atriplex spp.), Sea Aster (Aster tripolium), Sea Couch (Elymus pycnanthus), frequent Sea Milkwort (Glaux maritima), occasional Wild Celery (Apium graveolens), Parsley Water-dropwort (Oenanthe lachenalii), English Scurvygrass (Cochlearia anglica) and Sea Arrowgrass (Triglochin maritima). Common Cord-grass (Spartina anglica), is rather frequent along the main channel edge and up the internal channels. The legally protected (Flora (Protection) Order, 2022) Meadow Barley (Hordeum secalinum) grows at the landward transition of the saltmarsh.

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The site is of particular conservation interest for the presence of a number of Annex II animal species, including Freshwater Pearl Mussel (both Margaritifera margaritifera and M. margaritifera subsp. durrovensis occur), White-clawed Crayfish, Salmon, Twaite Shad (Alosa fallax fallax), three species of Lampreys - Sea Lamprey, Brook Lamprey and River Lamprey, and Otter. This is one of only three known spawning grounds in the country for Twaite Shad. Parts of the site have also been identified as of ornithological importance for a number of Annex I (E.U. Birds Directive) bird species, including Greenland White fronted Goose (10), Golden Plover (1,490), Whooper Swan (7) and Kingfisher.

3.2.1.2 Qualifying Interests

The qualifying interests of the site are:

- Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330]
- Mediterranean salt meadows (Juncetalia maritimi) [1410]
- Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260]
- Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430]
- Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0]
- Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0]
- Taxus baccata woods of the British Isles [91J0]
- Margaritifera margaritifera (Freshwater Pearl Mussel) [1029]
- Austropotamobius pallipes (White-clawed Crayfish) [1092]
- Petromyzon marinus (Sea Lamprey) [1095]
- Lampetra planeri (Brook Lamprey) [1096]
- Lampetra fluviatilis (River Lamprey) [1099]
- Alosa fallax fallax (Twaite Shad) [1103]
- Salmo salar (Salmon) [1106]
- Lutra lutra (Otter) [1355]

3.2.1.3 Threats, pressures, and activities with negative impacts on the site

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Details as to the threats, pressures and activities with negative impacts on the site are identified from the Natura 2000 data form (NPWS, 2018a) for the site and are illustrated in Table 13 (I:inside, O:Outside, B:Both Inside and Outside, H: High, M:moderate, L:Low).

Table 13: Lower River Suir SAC threats, pressures and activities with impacts on the site.

CODE	DESCRIPTION	INSIDE/ OUTSIDE	RANK
A08	Agriculture - Fertilisation	O	H
E01	Urbanisation, residential and commercial development - Urbanised areas, human habitation	B	H
E03	Urbanisation, residential and commercial development - Discharges	B	H
H01	Pollution - Pollution to surface waters (limnic, terrestrial, marine & brackish)	B	H
J02.12.02	Natural System modifications - human induced changes in hydraulic conditions - Dykes, embankments, artificial beaches, general - dykes and flooding defence in inland water systems	I	H
J02.01	Natural System modifications - human induced changes in hydraulic conditions - Landfill, land reclamation and drying out, general	B	M
A01	Agriculture - Cultivation	I	L
B	Sylviculture, forestry	O	L
D03.01	Transportation and service corridors - shipping lanes, ports, marine constructions - port areas	B	L
I01	Invasive, other problematic species and genes - invasive non-native species	I	L
J02.01.02	Natural System modifications - human induced changes in hydraulic conditions - Landfill, land reclamation and drying out, general - reclamation of land from sea, estuary or marsh	I	L

3.2.1.4 Conservation Objectives of the site

A detailed Conservation Objectives Document has been prepared for this site and is available to download from:

https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002137.pdf

This document is provided as an Appendix to this document.

3.2.1.5 Baseline Conservation Status of the site

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A synopsis of the conservation status of this site as detailed in NPWS (2018a) is provided in Table 14 and Table 15.

Table 14: Habitat types present on the site and assessment for them.

Annex I Habitat types						Site assessment			
Code	PF	NP	Cover [ha]	Cave [number]	Data quality	A|B|C|D	A|B|C		
						Representativity	Relative Surface	Conservation	Global
1330			142	0	M	A	C	A	B
1410			71	0	M	A	C	A	B
3260			71	0	M	C	C	B	C
6430			71	0	M	B	C	B	B
91A0			71	0	M	A	C	B	B
91E0			497	0	M	A	B	A	B
9130			71	0	M	B	C	C	B

Table 15: Species referred to in Article 4 of Directive 2009/147/EC and listed in Annex II of Directive 92/43/EEC and site evaluation for them.

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Species					Population in the site						Site assessment			
G	Code	Scientific Name	S	NP	T	Size		Unit	Cat.	D.qual.	A|B|C|D	A|B|C		
						Min	Max				Pop.	Con.	Iso.	Glo.
B	A229	Alcedo atthis			p	5	5	p		G	C	B	C	B
F	1102	Alosa alosa			c	0	0		P	DD	D			
F	1103	Alosa fallax			p	0	0		P	DD	C	B	B	A
B	A052	Anas crecca			w	159	159	i	P	M	C	C	C	C
B	A050	Anas penelope			w	26	26	i		G	C	C	C	C
B	A053	Anas platyrhynchos			w	21	21	i		G	C	C	C	C
B	A051	Anas strepera			w	7	19	i	P	M	B	A	C	B
B	A395	Anser albifrons flavirostris			w	1	10	i		M	C	B	C	C
B	A043	Anser anser			w	615	615	i		G	A	B	C	B
I	1092	Austropotamobius pallipes			p	0	0		P	DD	C	A	C	A
B	A061	Aythya fuligula			w	60	60	i	P	M	C	C	C	C
B	A149	Calidris alpina			w	101	101	i	P	M	C	C	C	C
B	A038	Cygnus cygnus			w	7	7	i		G	C	C	C	C
B	A153	Gallinago gallinago			w	30	30	i	P	M	C	C	C	C
F	1099	Lampetra fluviatilis			p	0	0		P	DD	C	B	C	B
F	1096	Lampetra planeri			p	0	0		P	DD	C	B	C	B
B	A156	Limosa limosa			w	20	20	i	P	M	C	B	C	C
M	1355	Lutra lutra			p	0	0		P	DD	C	A	C	A
I	1029	Margaritifera margaritifera			p	0	0		P	DD	C	B	C	C
B	A160	Numenius arquata			w	195	195	i		G	C	C	C	C
F	1095	Petromyzon marinus			p	0	0		P	DD	C	B	C	B
B	A017	Phalacrocorax carbo			w	73	73	i	P	M	C	A	C	B
B	A140	Pluvialis apricaria			w	1490	1490	i		G	C	A	C	B
F	1106	Salmo salar			p	0	0		C	DD	C	A	C	A
B	A164	Tringa nebularia			w	4	4	i	P	M	C	A	C	B
B	A162	Tringa totanus			w	28	28	i	P	M	C	B	C	C
B	A142	Vanellus vanellus			w	2125	2125	i	P	M	C	A	C	B

3.3 Summary of Conservation Status of Natura 2000 sites potentially exposed to significant negative impacts

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The focus of the Appropriate Assessment process at the second stage must be on the integrity of European sites "in light of their conservation objectives."

A summary of the conservation status of the qualifying interests as indicated in NPWS (2019a) and NPWS (2019b) in Table 16. In addition, site specific conservation status as recorded in the individual Natura 2000 form as well as conditions underpinning site integrity are outlined.

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Table 16: Summary of conservation status of relevant Natura sites and conditions underpinning site integrity.

SITE NAME/CODE	QUALIFYING INTEREST HABITAT/SPECIES CODE	NATIONAL CONSERVATION STATUS (NPWS, 2019a & NPWS, 2019b)		SITE ASSESSMENT OF CONSERVATION STATUS (NATURA 2000 DATA FORM)		CONDITIONS UNDERPINNING SITE INTEGRITY
LOWER RIVER SUIR SAC						
	[1330]	RANGE	FAVOURABLE=	REPRESENTATIVITY	A	• SURFACE AND GROUND WATER QUALITY • APPROPRIATE LEVELS OF DISTURBANCE • WATER LEVELS • AIR QUALITY • TIDAL CURRENTS • EROSION/SEDIMENTATION REGIME
		AREA	INADEQUATE↓	RELATIVE SURFACE	C	
		STRUCTURES AND FUNCTIONS	INADEQUATE=	CONSERVATION	A	
		FUTURE PROSPECTS	UNFAVOURABLE - INADEQUATE	GLOBAL	C	
		OVERALL STATUS	INADEQUATE↓			
	[1410]	RANGE	FAVOURABLE	REPRESENTATIVITY	A	
		AREA	INADEQUATE↓	RELATIVE SURFACE	C	
		STRUCTURES AND FUNCTIONS	FAVOURABLE	CONSERVATION	A	
		FUTURE PROSPECTS	UNFAVOURABLE - INADEQUATE	GLOBAL	A	
		OVERALL STATUS	INADEQUATE↓			
	[3260]	RANGE	FAVOURABLE=	REPRESENTATIVITY	A	
		AREA	INADEQUATE↓	RELATIVE SURFACE	C	
		STRUCTURES AND FUNCTIONS	FAVOURABLE	CONSERVATION	B	
		FUTURE PROSPECTS	UNFAVOURABLE - INADEQUATE	GLOBAL	B	
		OVERALL STATUS	INADEQUATE↓			

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SITE NAME/CODE	QUALIFYING INTEREST HABITAT/SPECIES CODE	NATIONAL CONSERVATION STATUS (NPWS, 2019a & NPWS, 2019b)		SITE ASSESSMENT OF CONSERVATION STATUS (NATURA 2000 DATA FORM)		CONDITIONS UNDERPINNING SITE INTEGRITY
	[6430]	RANGE	INADEQUATE↓	REPRESENTATIVITY	B	
		AREA	INADEQUATE↓	RELATIVE SURFACE	C	
		STRUCTURES AND FUNCTIONS	BAD=	CONSERVATION	B	
		FUTURE PROSPECTS	UNFAVOURABLE/BAD	GLOBAL	B	
		OVERALL STATUS	UNFAVOURABLE/BAD↓			
	[91A0]	RANGE	FAVOURABLE=	REPRESENTATIVITY	A	
		AREA	BAD↓	RELATIVE SURFACE	B	
		STRUCTURES AND FUNCTIONS	BAD=	CONSERVATION	B	
		FUTURE PROSPECTS	BAD/UNFAVOURABLE	GLOBAL	B	
		OVERALL STATUS	BAD↓			
	91E0	RANGE	FAVOURABLE=	REPRESENTATIVITY	A	
		AREA	BAD↓	RELATIVE SURFACE	B	
		STRUCTURES AND FUNCTIONS	INADEQUATE↓	CONSERVATION	A	
		FUTURE PROSPECTS	BAD/UNFAVOURABLE	GLOBAL	A	
		OVERALL STATUS	BAD↓			
	91J0	RANGE	FAVOURABLE	REPRESENTATIVITY	B	
		AREA	BAD↓	RELATIVE SURFACE	C	
		STRUCTURES AND FUNCTIONS	BAD↓	CONSERVATION	C	
		FUTURE PROSPECTS	BAD↓	GLOBAL	B	
		OVERALL STATUS	UNFAVOURABLE/BAD=			

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SITE NAME/CODE	QUALIFYING INTEREST HABITAT/SPECIES CODE	NATIONAL CONSERVATION STATUS (NPWS, 2019a & NPWS, 2019b)		SITE ASSESSMENT OF CONSERVATION STATUS (NATURA 2000 DATA FORM)		CONDITIONS UNDERPINNING SITE INTEGRITY
	[1029]	RANGE	UNFAVOURABLE/INADEQUATE=	POPULATION	C	
		POPULATION	UNFAOURABLE/BAD↓	CONSERVATION	B	
		HABITAT FOR SPECIES	UNFAOURABLE/BAD↓	ISOLATION	C	
		FUTURE PROSPECTS	UNFAOURABLE/BAD	GLOBAL	B	
		OVERALL STATUS	UNFAOURABLE/BAD↓			
	[1092]	RANGE	INADEQUATE=	POPULATION	C	
		POPULATION	UNFAOURABLE/BAD↓	CONSERVATION	A	
		HABITAT FOR SPECIES	UNFAOURABLE/BAD↓	ISOLATION	C	
		FUTURE PROSPECTS	UNFAOURABLE/BAD	GLOBAL	A	
		OVERALL STATUS	UNFAOURABLE/BAD↓			
	[1095]	RANGE	UNFAOURABLE/BAD=	POPULATION	C	
		POPULATION	UNFAOURABLE/BAD=	CONSERVATION	B	
		HABITAT FOR SPECIES	UNFAVOURABLE/INADEQUATE=	ISOLATION	C	
		FUTURE PROSPECTS	UNFAOURABLE/BAD	GLOBAL	B	
		OVERALL STATUS	UNFAOURABLE/BAD=			
	[1096]	RANGE	FAVOURABLE=	POPULATION	C	
		POPULATION	FAVOURABLE=	CONSERVATION	B	

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SITE NAME/CODE	QUALIFYING INTEREST HABITAT/SPECIES CODE	NATIONAL CONSERVATION STATUS (NPWS, 2019a & NPWS, 2019b)		SITE ASSESSMENT OF CONSERVATION STATUS (NATURA 2000 DATA FORM)		CONDITIONS UNDERPINNING SITE INTEGRITY
		HABITAT FOR SPECIES	FAVOURABLE=	ISOLATION	C	
		FUTURE PROSPECTS	FAVOURABLE	GLOBAL	B	
		OVERALL STATUS	FAVOURABLE=			
	[1099]	RANGE	FAVOURABLE			
		POPULATION	UNKNOWN			
		HABITAT FOR SPECIES	FAVOURABLE			
		FUTURE PROSPECTS	UNKNOWN			
		OVERALL STATUS	UNKNOWN			
	[1103]	RANGE	UNFAOURABLE/BAD=	POPULATION	B	
		POPULATION	UNFAOURABLE/BAD=	CONSERVATION	B	
		HABITAT FOR SPECIES	UNFAVOURABLE/INADEQUATE=	ISOLATION	B	
		FUTURE PROSPECTS	UNFAOURABLE/BAD	GLOBAL	A	
		OVERALL STATUS	UNFAOURABLE/BAD=			
	[1106]	RANGE	FAVOURABLE=	POPULATION	C	
		POPULATION	UNFAVOURABLE/INADEQUATE ↓	CONSERVATION	B	
		HABITAT FOR SPECIES	FAVOURABLE=	ISOLATION	C	
		FUTURE PROSPECTS	UNFAVOURABLE/INADEQUATE	GLOBAL	B	

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SITE NAME/CODE	QUALIFYING INTEREST HABITAT/SPECIES CODE	NATIONAL CONSERVATION STATUS (NPWS, 2019a & NPWS, 2019b)		SITE ASSESSMENT OF CONSERVATION STATUS (NATURA 2000 DATA FORM)		CONDITIONS UNDERPINNING SITE INTEGRITY
		OVERALL STATUS	UNFAVOURABLE/INADEQUATE =			
	[1355]	RANGE	FAVOURABLE=	POPULATION	C	
		POPULATION	FAVOURABLE↑	CONSERVATION	A	
		HABITAT FOR SPECIES	FAVOURABLE=	ISOLATION	C	
		FUTURE PROSPECTS	FAVOURABLE	GLOBAL	A	
		OVERALL STATUS	FAVOURABLE↑			

3.4 Impact Prediction

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In this section the potential significant negative impacts of the proposed development on the ecological integrity of identified Natura 2000 sites in terms of their conservation objectives is assessed. Significant effects encompass impacts on the structure and function of defined sites, habitats or ecosystems and the conservation status of habitats and species (including extent, abundance and distribution) (CIEEM, 2018). Potential effect pathways and predicted impacts on identified at risk QIs/SCIs are discussed in the sections following.

3.4.1 Identified pathways

The Whelanbridge (River) (EPA Code: 16W01) forms an extensive boundary of the proposed development site to the west. The Whelanbridge (River) flows for approximately 1.6km along the boundary of the proposed development. The Whelanbridge Trib 1 (EPA Code: 16W29) flows along the north-eastern boundary of the proposed development site for approximately 820 metres, before joining the Whelanbridge (River). The Whelanbridge (River) joins the River Suir approximately 1.7km from the proposed development sites northernmost boundary.

There is a potential for works on site in such close proximity to these sensitive ecological receptors to result in negative impacts owing to, for example:

- Accidental contamination associated with leaks of hydraulic fluid/diesel/petrol, etc from works associated with the demolition of existing buildings on site or construction activities associated with various elements of the proposed development;
- Sediment release associated with onsite machinery operations;
- Introduction of propagules of Alien Invasive Plant Species, in particular any listed in Part (1) of the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations of 2011 as amended by SI 355/2015 (Part (1) of First Schedule of European Union (Invasive Alien Species) Regulations of 2024) These species can impact on water quality, stream management, etc. – impacting indirectly on habitat quality.

Any impacts on hydrology/water quality would be likely to have indirect and/or secondary impacts and contribute to cumulative/in-combination impacts on QI's of the Lower River Suir SAC.

3.4.2 Potential Direct Impacts

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No habitat for which any relevant Natura 2000 sites is designated will be lost through land-take, etc. There is no likely significant potential for direct impacts associated with the proposed development on any Natura 2000 site.

3.4.3 Potential Indirect Impacts

There is a water course within and adjacent to the application site that discharges to the Lower River Suir SAC. The qualifying interests of this site are directly or indirectly dependent on water quality. There is potential for indirect impacts associated with construction and/or operation associated with the proposed development through an impact on water quality (including any changes as regards the hydrology, sedimentation, alien invasive species, etc.).

3.4.4 Potential Secondary/Residual/In-combination Impacts

There is potential for secondary/residual impacts on the Lower River Suir SAC in the event of impacts on water quality. For example, bioaccumulation of contaminants, impacts of sedimentation on Ammocoetes of Lamprey species, etc. There is a potential for secondary and/or residual impacts on the Conservation Objectives of Qualifying interests of the Natura 2000 site.

Given the nature of the proposed development, which includes for the construction and operation of a data centre, there is potential for the proposed development to impact through Climate Change.

3.4.5 Summary of Potential Impacts on QIs

A summary of potential impacts indicating: The QIs (habitat/species); Primary Sensitivities of QIs; Potential Impacts affecting QIs and Source of Impacts is provided in Table 17.

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Table 17: Summary of identified potential impacts on Qualifying Interests of relevant Natura 2000 sites in the absence of mitigation measures.

SITE NAME	QUALIFYING INTEREST	SENSITIVITIES ASSOCIATED WITH POTENTIAL DEVELOPMENTS	POTENTIAL IMPACT(S) FROM THE PROPOSED DEVELOPMENT IN ABSENCE OF ANY MITIGATION MEASURES
LOWER RIVER SUIR SAC	• Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260]	• Potential impacts associated with changes in water quality, potential secondary impacts. • Changes in deposition of silt in habitat resulting in poor substrate quality.	• Sediment/hydrocarbon input to watercourses proximate to the proposed development and consequently to hydrologically connected watercourses.
	• Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430]	• Potential impacts associated with invasive alien species.	• Potential impacts associated with the importation and spread of invasive alien species
	• Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0]	• Potential impacts associated with invasive alien species.	• Potential impacts associated with the importation and spread of invasive alien species
	• Margaritifera margaritifera (Freshwater Pearl Mussel) [1029]	• Change in chemical and/or nutrient status of water and/or silt. Direct impacts (mortality) & indirect impacts (increased growth of algae or macrophytes). • Changes in deposition of silt in habitat resulting in poor substrate quality.	• Sediment/hydrocarbon input to watercourses proximate to the proposed development and consequently to hydrologically connected watercourses.
	• Austropotamobius pallipes (White-clawed Crayfish) [1092]	• Potential impacts associated with changes in water quality, potential secondary impacts.	• Sediment/hydrocarbon input to watercourses proximate to the proposed development and consequently to hydrologically connected watercourses.

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SITE NAME	QUALIFYING INTEREST	SENSITIVITIES ASSOCIATED WITH POTENTIAL DEVELOPMENTS	POTENTIAL IMPACT(S) FROM THE PROPOSED DEVELOPMENT IN ABSENCE OF ANY MITIGATION MEASURES
	• Petromyzon marinus (Sea Lamprey) [1095]	• Change in chemical and/or nutrient status of water and/or silt. • Changes in deposition of silt in habitat. • Impacts on feeding ammocoetes through siltation and/or bioaccumulation.	• Sediment/hydrocarbon input to watercourses proximate to the proposed development and consequently to hydrologically connected watercourses.
	• Lampetra planeri (Brook Lamprey) [1096]	• Change in chemical and/or nutrient status of water and/or silt. • Changes in deposition of silt in habitat. • Impacts on feeding ammocoetes through siltation and/or bioaccumulation.	• Sediment/hydrocarbon input to watercourses proximate to the proposed development and consequently to hydrologically connected watercourses.
	• Lampetra fluviatilis (River Lamprey) [1099]	• Change in chemical and/or nutrient status of water and/or silt. • Changes in deposition of silt in habitat. • Impacts on feeding ammocoetes through siltation and/or bioaccumulation.	• Sediment/hydrocarbon input to watercourses proximate to the proposed development and consequently to hydrologically connected watercourses.
	• Alosa fallax fallax (Twaite Shad) [1103]	• Change in chemical and/or nutrient status of water. • Bioaccumulation of contaminants. • Changes in deposition of silt in habitat.	• Sediment/hydrocarbon input to watercourses proximate to the proposed development and consequently to hydrologically connected watercourses.

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SITE NAME	QUALIFYING INTEREST	SENSITIVITIES ASSOCIATED WITH POTENTIAL DEVELOPMENTS	POTENTIAL IMPACT(S) FROM THE PROPOSED DEVELOPMENT IN ABSENCE OF ANY MITIGATION MEASURES
	• Salmo salar (Salmon) [1106]	• Change in chemical and/or nutrient status of water. • Changes in deposition of silt in habitat.	• Sediment/hydrocarbon input to watercourses proximate to the proposed development and consequently to hydrologically connected watercourses.
	• Lutra lutra (Otter) [1355]	• Change in chemical/nutrient status could impact on prey species. • Bioaccumulation of contaminants. • Disturbance.	• Potential indirect and secondary impacts associated with changes in water quality

3.5 Mitigation Measures – avoiding potential impacts

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The mitigation measures outlined relate primarily to the prevention of impacts associated with water quality (including impacts on water quality associated with invasive alien plants). The current habitats and conditions present do not support populations of Qualifying Interests of any Natura 2000 site described herein:

3.5.1 Impacts on water quality

The primary source of potential negative impacts on the conservation objectives of the QIs of the Natura 2000 network described herein regards the potential for impacts on surface/ground water quality as a result of the proposed development, including secondary impacts. The potential impacts of the proposed development on water quality during the demolition , construction and operation phases are clearly outlined in Section 6.5 of the Hydrology and Hydrogeology Chapter of the EIAR.

The Whelanbridge (River) (EPA Code: 16W01) forms an extensive boundary of the proposed development site to the west. The Whelanbridge (River) flows for approximately 1.6km along the boundary of the proposed development. The Whelanbridge Trib 1 (EPA Code: 16W29) flows along the north-eastern boundary of the proposed development site for approximately 820 metres, before joining the Whelanbridge (River). The Whelanbridge (River) joins the River Suir approximately 1.7km from the proposed development sites northernmost boundary. The measures to mitigate against any adverse impact on water quality are outlined in length in Section 6.6 of the Hydrology and Hydrogeology Chapter of the EIAR. Mitigation measures will include :

Demolition Phase

"…The development contains existing buildings to be demolished. …Overall, no mitigation measures are required during the demolition phase in relation to hydrogeology and hydrology due to the surface level nature of the works. The surface-level demolition works will have a negligible impact on hydrogeology and hydrology, preserving their integrity and minimizing any potential environmental consequences.

Construction Phase

Construction & Environmental Management Plan

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"…A Construction & Environmental Management Plan (CEMP) has been prepared in respect of the proposed development. The CEMP outlines and explains the construction techniques and methodologies which will be implemented during construction of the proposed development.

Construction works and the proposed mitigation measures are informed by best practice guidance on the prevention of pollution during development projects including but not limited to:

Construction Industry Research and Information Association (CIRIA), Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors (C532);

Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters (2016);

Construction Industry Research and Information Association (CIRIA) Environmental Good Practice on Site (4th edition), (C741);

Enterprise Ireland Best Practice Guide, Oil Storage Guidelines (BPGCS005).

Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites (Eastern Regional Fisheries Board);

Central Fisheries Board Channels and Challenges – The enhancement of Salmonid Rivers;

CIRIA C532 Control of Water Pollution from Construction Sites Guidance for Consultants and Contractors;

CIRIA C648 Control of Water Pollution from Constructional Sites;

Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes (NRA 2008); and

Inland Fisheries Ireland (IFI) – A Guideline on Planning for Watercourses in the Urban Environment.

The CEMP will set out the proposed procedures and operations to be utilised on the proposed construction site to protect water quality. The CEMP will be implemented and adhered to by the construction Contractor and will be overseen and updated as required if site conditions change by the Project Manager, Environmental Clerk of Works where relevant. All personnel working on the site will be trained in the implementation of the procedures. All relevant personnel will be fully trained in the use of this equipment. Guidelines such as "Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors" (CIRIA 532, 2001) will be complied with.

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During the project planning phase, a comprehensive emergency response plan will be developed by the construction contractor. This plan will outline a well-defined procedure for effectively managing emergencies as they arise. Furthermore, it's imperative to disseminate this emergency protocol to all site personnel during the site induction process. This plan will include for events such as:

Pollution incidents: These may involve spillages, the malfunction of temporary structures, embankment collapse, acts of vandalism, fires, and other related events.

Extreme weather occurrences: Events such as heavy rainfall, flooding, are important factors to consider due to their potential impact on the construction process.

All mitigation measures outlined here, and within the CEMP will be implemented during the construction phase, as well as any additional measures required pursuant to planning conditions which may be imposed.

Suspended solids

As there is potential for run-off to indirectly discharge to a watercourse (Whelanbridge River and Whelanbridge Trib 1 and eventually to the Lower River Suir SAC), in order to manage the potential impact associated with sediment and sediment runoff the following mitigation measures will be implemented during the construction phase.

During earthworks and excavation works care will be taken to ensure that exposed soil surfaces are stable to minimise erosion. All exposed soil surfaces will be within the main excavation site which limits the potential for any offsite impacts.

Silt reduction measures on site will include a combination of silt fencing and settlement measures.

A riparian zone will be maintained along the Whelanbridge River

It is proposed to install a french drain where required surrounding the solar farm area on Blackknock Hill and other water quality control measures i.e. silt traps, 20m buffer zones surrounding the 2 no. ponds on site will be installed during construction. Refer to Figure 6.4 below.

Any hard surface site roads will be swept to remove mud and aggregate materials from their surface while any unsurfaced roads shall be restricted to essential site traffic only.

A power washing facility or wheel cleaning facility will be installed near to the site compound for use by vehicles exiting the site when appropriate,

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The temporary storage of soil will be carefully managed. Stockpiles will be tightly compacted to reduce runoff and graded to aid in runoff collection.

Aggregate materials such as sands and gravels will be stored in clearly marked receptacles within a secure compound area to prevent contamination.

Movement of material will be minimised to reduce the degradation of soil structure and generation of dust.

Excavations will remain open for as little time as possible before the placement of fill. This will help to minimise the potential for water ingress into excavations.

Weather conditions will be considered when planning construction activities to minimise the risk of run-off from the site.

Any surface water run-off collecting in excavations will likely contain a high sediment load. This will not be allowed to directly discharge to any stormwater sewer, drainage ditch or watercourse.

Figure 3-1 20m Buffer Zone Artificial Ponds and Drainage On Site (Source: Hyphen)



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Cement/concrete works

Where feasible all ready-mixed concrete will be brought to site by truck. A suitable risk assessment for wet concreting will be completed prior to works being carried out which will include measures to prevent discharge of alkaline wastewaters or contaminated storm water to the underlying subsoil.

No wash-down or wash-out of ready-mix concrete vehicles during the construction works will be carried out at the site within 10 meters of an existing surface water drainage point. Wash-outs will only be allowed to take place in designated areas with an impervious surface where all wash water is contained and removed from site by road tanker or discharged to foul sewer subject to agreement with Uisce Éireann (Irish Water) / WCC.

The construction contractor will be required to implement emergency response procedures, and these will be in line with industry guidance. Relevant personnel working on the site will be suitably trained in the implementation of the procedures.

Hydrocarbons and other construction chemicals

The following mitigation measures will be implemented during the construction phase in order to prevent any spillages to ground of fuels and other construction chemicals and prevent any resulting to surface water (and groundwater) systems:

Designation of bunded refuelling areas on the site;

Provision of spill kit facilities across the site;

Where mobile fuel bowsers are used, the following measures will be taken:

Any flexible pipe, tap or valve will be fitted with a lock and will be secured when not in use;

The pump or valve will be fitted with a lock and will be secured when not in use;

All bowsers to carry a spill kit and relevant operatives must have spill response training;

Portable generators or similar fuel containing equipment will be placed on suitable drip trays.

In the case of drummed fuel or other potentially polluting substances which may be used during the construction phase, the following measures will be adopted:

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Secure storage of all containers that contain potential polluting substances in a dedicated internally bunded chemical storage cabinet unit or inside a concrete bunded area;

Oil and fuel storage tanks shall be stored in designated areas, and these areas shall be stored within temporary bunded areas, doubled skinned tanks or bunded containers to a volume of 110% of the capacity of the largest tank/container. Drainage from the bunded area(s) shall be diverted for collection and safe disposal.

Clear labelling of containers so that appropriate remedial measures can be taken in the event of a spillage;

All drums to be quality approved and manufactured to a recognised standard;

If drums are to be moved around the Site, they will be secured and on spill pallets; and

Drums will be loaded and unloaded by competent and trained personnel using appropriate equipment.

In addition to the measures above, all excavated materials will be visually assessed by suitably qualified persons for signs of possible contamination such as staining or strong odours. Should any unusual staining or odour be noticed, samples of this soil will be analysed for the presence of potential contaminants to ensure that historical pollution of the soil has not occurred. Should it be determined that any of the soil excavated is contaminated, this will be segregated and appropriately disposed of by a suitably permitted/licensed waste disposal contractor.

Refuelling of construction vehicles and the addition of hydraulic oils or lubricants to vehicles will take place in designated bunded refuelling areas, which will be away from surface water gulleys or drains. In the event of a machine requiring refuelling outside of this area, fuel will be transported in a mobile double skinned tank. An adequate supply of spill kits and hydrocarbon adsorbent packs will be stored in this area. All relevant personnel will be fully trained in the use of this equipment. Guidelines such as "Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors" (CIRIA 532, 2001) will be complied with.

The construction contractor will be required to implement emergency response procedures, and these will be in line with industry guidance. All personnel working on the Site will be suitably trained in the implementation of the procedures.

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Wastewater Management

Foul wastewater arising from the site will be managed and controlled for the duration of the construction works.

Foul water from the offices and welfare facilities on the site will be collected in portable sanitary facilities and disposed of appropriately by licenced contractor.

The construction contractor will implement emergency response procedures, and these will be in line with industry guidance. All personnel working on the site will be suitably trained in the implementation of the procedures.

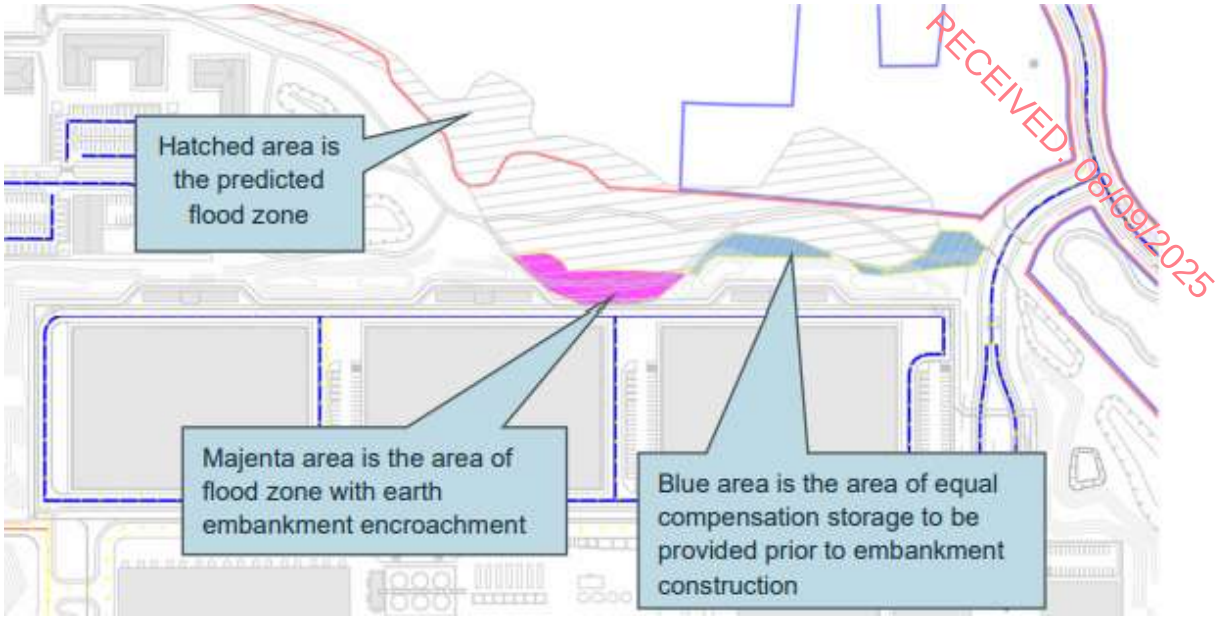
Surface Water and Groundwater Flow and Quality

Surface water discharge from the site will be managed and controlled for the duration of the construction works until the surface water drainage system of the proposed development is complete.

No instream works are required for the construction of the proposed bridge crossing on the Whelanbridge Trib 1. The bridge has been designed for 100yr flood event with a minimum of 300mm freeboard. A specific method statement will be prepared for approval of the OPW and Local authority prior to commencement of construction works to insure protection of water quality during construction works. The method statement will include best practice measures as outlined in the "Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors" (CIRIA 532, 2001) and "Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters (2016)".

For the construction of the data centres, it will be required to raise the levels to a suitable height. Part of the area of construction of the earth embankments will be within the identified flood zone on site. To mitigate this, it is proposed to lower the levels of lands adjacent to provide equal compensation storage. This should be provided prior to the construction of the earth embankment such that the current flood storage volume is never decreased below the current volume i.e compensation storage as outlined in Figure 3-2 below.

Figure 3-2 Compensation storage (Engineering Report, Atkins, 2025)



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Human Health and Populations

… there are no recorded Recreational Waters, Bathing Waterbodies or Surface Water Drinking RPA located downstream in the Whelanbridge River, Whelanbridge Trib 1 or the Lower River Suir SAC. In addition, there are no recorded Public Supply Source Protection Area or Group Scheme Preliminary Source Protection Areas defined by the GSI within which development is limited in order to protect drinking water supplies from potential pollution located in the vicinity of the proposed development site.

As there is no source pathway linkage, no mitigation is required.

Potential Impacts on Water Framework Directive Status

…there is a potential of accidental discharges during the construction phase. However, these are temporary short-lived events that will not impact on the status of the Whelanbridge River, Whelanbridge Trib 1, The Lower River Suir SAC (Site Code: 002137) or the underlying Waterford groundwater body (GWB) in the long-term. As such the proposed development will not cause any significant deterioration or change in water quality status or prevent attainment, or potential to achieve the WFD objectives or to meet the requirements and/or objectives in the third cycle river basin management plan (2022-2027) i.e. Water Action Plan 2024 - A River Basin Management Plan for Ireland.

On a precautionary basis, the mitigation measures set out in Section 6.6.1 will be implemented during the construction works for the protection of surface water and groundwater quality.

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Operational Phase

Surface Water and Groundwater Quality

The design has taken account of the potential impacts of the development on surface water quality; measures have been incorporated in the design to mitigate these potential impacts. The surface water design approach taken will comply with the key design criteria set out in the Greater Dublin Regional Code of Practice for Drainage Works.

The proposed surface water management design establishes a hydrological connection to the Whelanbridge Trib 1, located along the eastern boundary of the site, during the operational phase. This design includes two (2) no. discharge locations for the village centre and one (1) no. for the technology park.

To mitigate potential contamination from surface water runoff, which may originate from roads, car parks, and hardstanding areas, a sustainable drainage system (SuDS) will be implemented. This system is designed to minimize the risk of contaminants, such as hydrocarbons, entering the stormwater drainage network and subsequently impacting surface water bodies like the Whelanbridge River, Whelanbridge Trib 1, the Upper Suir Estuary transitional waterbody and the Lower River Suir SAC; as well as groundwater bodies, including the Waterford GWB underlying the site.

The surface water drainage strategy integrates various measures, including porous asphalt in car parks, filter drains and swale drains in open spaces, permeable paving (Grasscrete) around the buildings, attenuation ponds, infiltration tanks, and a rainwater harvesting system. These features will effectively manage surface water flows, directing them to the attenuation ponds and infiltration tanks to maximize their storage potential. The flow control devices will be installed downstream of the ponds outlet pipes to ensure the surface water runoff is stored maximising storage potential, prior to entering the network downstream i.e. the Whelanbridge Trib 1 located along the sites eastern boundary.

The proposed surface water design was designed to provide the following, including a 20% climate change;

No surcharging in the 1 in 5-year storm event. Pipes immediately upstream of flow control devices may encounter small amount of surcharging due to the flow being throttled accordingly.

No Flooding in the 1 in 30-year storm event.

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No flooding against a 1 in 100-year storm event or controlled flooding allowing the volume to be contained on site and not impact the surrounding infrastructure.

The total maximum attenuated volume of water stored in all the attenuation ponds for the 100-year event was calculated to be 7905.1m^3 for the Technology Park and 2025.5m^3 for the Village Centre.

The system shall also incorporate an overflow on the most downstream hydro-brake manhole. The overflow shall consist of a high-level overflow pipe provided to allow water escape should the hydro-brake block or malfunction, or to cater for high water levels created by a storm greater than the design storm (100-year).

Furthermore, the use of hydrotreated vegetable oil (HVO) instead of bulk diesel for back up generators, will further mitigate potential impacts on local hydrology and hydrogeology in the event of a spill/leak (refer to Section 6.5.2). Storm drainage from the generator yards is drained through an oil interceptor to treat any accidental leaks.

Refer to the Engineering Report, prepared by AtkinsRéalis Ireland Limited in December 2024 submitted as part of the planning application for further information on the proposed storm water management and design.

Surface Water and Groundwater Flow and Quantity

The proposed incorporation of hardstand area and the use of SUDs design measures will have a minor effect on local recharge to ground and has the potential to result in increased run-off from the site if not adequately mitigated.

The proposed incorporation of hardstand areas and the implementation of Sustainable Urban Drainage Systems (SuDS) design measures will have a minor effect on local groundwater recharge and may lead to increased runoff from the site if not properly managed. However, the overall impact on the groundwater regime is expected to be insignificant, given the site's area relative to the total aquifer area. Additionally, the natural recharge capacity of the underlying "Regionally Important Aquifer – Fissured Bedrock" (Rf) supports the maintenance of groundwater levels.

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An increase in surface water runoff could adversely affect the hydrological regime of downstream environments, potentially causing flooding and inundation of downstream properties. It is important to note that majority of the proposed development is located in flood zone c while small portion of the development (earthwork embankments) is constructed in flood zones A & B . It is proposed to keep all construction out of the areas identified as having localised flooding, completely mitigating any flood risk.

To mitigate these risks, the design of the development and its drainage infrastructure will ensure that runoff rates are restricted to those of greenfield conditions. The development will incorporate SuDS and an attenuation system, with a design that includes a 20% allowance for climate change. The proposed surface water management strategy aims to prevent surcharging during a 1 in 5-year storm event, eliminate flooding during a 1 in 30-year storm event, and either prevent flooding or control flooding during a 1 in 100-year storm event, thereby containing runoff on-site and protecting surrounding infrastructure.

The ground under the panels shall be maintained as grassland which will serve to reduce the risk of erosion and limit surface water flows across the site. The operation and maintenance of the solar farm shall include monitoring and maintenance of the grassland beneath the panels. Where compaction of soil is observed, the ground will be cultivated and re-seeded.

Furthermore, there are no proposed surface water or groundwater abstractions, eliminating potential impacts on the quantity of surface water or groundwater resources.

Human Health and Populations

… there are no recorded Recreational Waters, Bathing Waterbodies or Surface Water Drinking RPA located downstream in the Whelanbridge River, Whelanbridge Trib 1 or the Lower River Suir SAC. In addition, there are no recorded Public Supply Source Protection Area or Group Scheme Preliminary Source Protection Areas defined by the GSI within which development is limited in order to protect drinking water supplies from potential pollution located in the vicinity of the proposed development site.

As there is no source pathway linkage, no mitigation is required.

Water Framework Directive Status

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There is a potential risk of accidental discharges during the operational phase from car parking areas, roads and HVO during delivery (as detailed in Section 6.5.2). However, these events are temporary and short-lived, with no long-term impact on the status of the Whelanbridge River, Whelanbridge Trib 1, the Lower River Suir SAC (Site Code: 002137), or the underlying Waterford groundwater body (GWB).

Consequently, the proposed development will not lead to any significant deterioration or changes in water quality status, nor will it hinder the achievement of the Water Framework Directive (WFD) objectives or the goals outlined in the third cycle river basin management plan (2022-2027), specifically the Water Action Plan 2024 for Ireland.

Limited surface water discharges during the operational phase will occur to the Whelanbridge Trib 1, located along the site's eastern boundary (refer to Section 6.4.2). However, these discharges will be effectively managed through Sustainable Urban Drainage Systems (SuDS) measures, including porous asphalt for the proposed car parks, filter drains/swale drains along the drainage route in open spaces, permeable paving (Grasscrete) outside the proposed building, as well as attenuation ponds, an infiltration tank, and rainwater harvesting. All surface water flows from the proposed development will be directed efficiently to the attenuation ponds and infiltration tank, maximizing their potential. Flow control devices will be installed downstream of the ponds outlet pipes to ensure that surface water runoff is stored effectively, optimizing storage capacity before entering the downstream network.

According to Uiscé Éireann's (Irish Water) Wastewater Treatment Capacity Register (June 2023), there is capacity available at Ballyduff Lower-Kilmeaden WWTP. Therefore, the proposed peak effluent discharge calculated for the proposed development is not likely to have an impact on the capacity at Ballyduff Lower-Kilmeaden WWTP or the overall water quality within the Whelanbridge River, the Lower River Suir SAC or the Waterford GWB and therefore would likely not have any impact on the current Water Body Status (as defined within the Water Framework Directive). In addition, the proposed development will not contribute any additional stormwater drainage to Ballyduff Lower-Kilmeaden WWTP.

No further mitigation is required.

3.5.2 Impacts associated with the introduction and spread of invasive alien species/non-native species

Populations of several species of invasive plant, including New Zealand Pygmyweed (*Crassula helmsii*), Water Fern (*Azolla filiculoides*) and Japanese Knotweed (*Fallopia japonica*) - species listed on Part (1)

of the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations of 2011/Part (1) of the First Schedule of the European Union (Invasive Alien Species) Regulations 2024are present on site. There is potential for impact associated with the spread of these species both within and off site.

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Given the nature of the proposed development, there is potential for importation to/export from and spread of alien invasive plant species throughout the proposed development site through:

- Propagules of invasive alien species imported to/exported from the site on the tyres, buckets, bodies, etc. of machinery and plant involved in the proposed development works.
- Propagules of invasive alien species imported in fill material used in the construction of proposed development.

A detailed Alien Invasive Plant Species Management and Control Plan, to be prepared pre-construction will be adhered to in order to eradicate such species on site and prevent spread off site.

Contractor's plant, equipment etc. must arrive at the site free from propagules of any invasive alien species as listed on the third schedule of the European Communities (Birds and Natural Habitats) Regulations 2011 as amended. (and Part (1) of the First Schedule of the European Union (Invasive Alien Species) Regulations 2024). Any imported fill material onto site should be sourced from stock that has been screened for the presence of invasive alien species and must be accompanied by a written guarantee of such. In order to ensure traceability, all incoming loads must be accompanied by paperwork outlining the nature of the material, the origin of the material, and certification that all material is free of propagules of any invasive plant species listed on the Third Schedule and the EU (Invasive Species) Regulations 2024.

3.5.3 Impacts associated with Climate Change

Chapter 9 of the EIAR has prescribed mitigation measures as outlined below

"…Construction Phase
The objective of the mitigation measures outlined below is to ensure that GHG emissions are minimized wherever possible during the construction phase. The measures will include:

- *Prevention of on-site or delivery vehicles from leaving engines idling, even over short periods.*
- *Where possible site traffic will avoid peak traffic periods to avoid congestion on local roads.*
- *Ensure all plant and machinery are well maintained and inspected regularly.*
- *Minimising waste of materials due to poor timing or over ordering on site will aid to minimise the embodied carbon footprint of the site.*
- *Waste materials will be re-used on site where possible and where re-use is not possible on-site they will be sent off-site for recycling, re-use or recovery.*
- *Sourcing materials locally where possible to reduce transport related CO_2 emissions.*

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Operational Phase

The data centre will be powered by electricity from the national grid. A brief summary of some of the measures included in the Proposed Development which will help to reduce the impact to climate are:

- *Artificial lighting will consist of energy efficient LED luminaires with the use of natural daylight as much as possible through the building design.*
- *DHW water source heat pump will be used for all spaces.*
- *The proposed cooling system design accommodates the installation of heat recovery plate heat exchangers to recover waste heat for reuse. The plant proposes to use motorised ventilation with heat recovery efficiency of 66%.*
- *The cooling solution for the data centre is a hybrid approach that combines fan wall CRAH (Computer Room Air Handler) units with free cooling chillers and direct-to-chip liquid cooling.*
- *Significant carbon emission reductions could be realised by the implementation of a low temperature heat network utilizing waste heat from the proposed ICT facilities*
- *Bicycle parking will be provided to promote more sustainable modes of travel.*
- *Electric vehicle charging will be provided which promotes more sustainable modes of travel.*
- *A proposed Battery Energy Storage System (BESS) will provide 114 MWe with an autonomy of 3.5 hours.*
- *A OCGT power generation facility will be designed to provide 203 MWe (at 10°C) output capacity to match the proposed ICT buildings power demand and operate as a demand and grid supporting asset, providing support to the electricity grid.*
- *PV solar panels will be installed onsite with over 29MW of input.*
- *The applicant is aligned with the goals and objectives of the EU Climate Neutral Data Centre Pact and is committed to leading and exceeding the target performance criteria as outlined in the EU Climate Neutral Data Centre Pact.*
- *The PUE will be annualised to be below 1.287 which is an improvement on the EU Climate Neutral Data Centre Pact.*
- *The WUE will be annualised to be below 0.000106 which is an improvement on the EU*
- *Climate Neutral Data Centre Pact target by 99%.*

These above identified measures will aid in reducing the impact to climate during the operational phase of the Proposed Development in line with the goals of the Climate Action Plan…"

3.6 Significance of impacts following implementation of mitigation measures

The significance of impacts on the conservation objectives of the QIs of the Lower River Suir SAC (please note for completeness all QIs are included, regardless of prescription of mitigation measures for that QI) are indicated in Table 18.

Table 18: Summary of significance of likely significant impacts of the proposed development on all Qualifying Interests of the Lower River Suir SAC assuming full implementation of all mitigation measures identified in EIAR and NIS.

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SITE NAME	QUALIFYING INTEREST	SIGNIFICANCE OF IMPACT FOLLOWING IMPLEMENTATION OF MITIGATION MEASURES
LOWER RIVER SUIR SAC	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260]	Not significant
	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430]	Not significant
	Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330]	Not significant
	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0]	Not significant
	Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0]	Not significant
	Taxus baccata woods of the British Isles [91J0]	Not significant
	Margaritifera margaritifera (Freshwater Pearl Mussel) [1029]	Not significant
	Austropotamobius pallipes (White-clawed Crayfish) [1092]	Not significant
	Petromyzon marinus (Sea Lamprey) [1095]	Not significant
	Lampetra planeri (Brook Lamprey) [1096]	Not significant
	Lampetra fluviatilis (River Lamprey) [1099]	Not significant
	Alosa fallax fallax (Twaite Shad) [1103]	Not significant
	Salmo salar (Salmon) [1106]	Not significant
	Lutra lutra (Otter) [1355]	Not significant

4 Conclusions

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Based on an examination, analysis, and evaluation of the best scientific information (and applying the precautionary principle), and assuming the implementation in full of all mitigation measures as outlined in the EIAR and this NIS, it is the professional opinion of the authors of this report that there is not likely to be an adverse impact on the integrity of any relevant Natura 2000 sites in view of their conservation objectives as outlined herein either alone or in combination with other plans or projects. Consequently, there will be no risk of adverse effects on Qualifying Interest habitats or species, nor on the attainment of specific conservation objectives, either alone or in-combination with other plans or projects, for the relevant Natura 2000 sites. The ecological integrity of the Natura 2000 sites concerned (connected with qualifying interests for which the sites have been designated) will not be adversely impacted.

5 References not referred to in footnotes

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