NATURA IMPACT STATEMENT
PROPOSED RESIDENTIAL DEVELOPMENT ON LANDS AT PATRICK'S ROAD, MARLTON ROAD AND ABBEY STREET IN WICKLOW TOWN, COUNTY WICKLOW
APPLICANT: HEKA DEVELOPMENTS LTD
PLANNING REF: 25/60230
UPDATED FOR RFI ITEM 5A

Prepared by MEC Ltd

2026

1 Contents

This report has been prepared by Minogue Environmental Consulting Ltd with all reasonable skill, care and diligence. Information reported herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

This report is prepared for Heka Developments Ltd and we accept no responsibility to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.

1 Introduction

MEC Ltd has been commissioned by Heka Developments Limited to undertake an Natura Impact Statement for a proposed residential development on lands at Patrick's Road, Marlton Road and Abbey Street in Wicklow Town, County Wicklow. See Figure 1.1 for location of project site and a current aerial view of the project site).

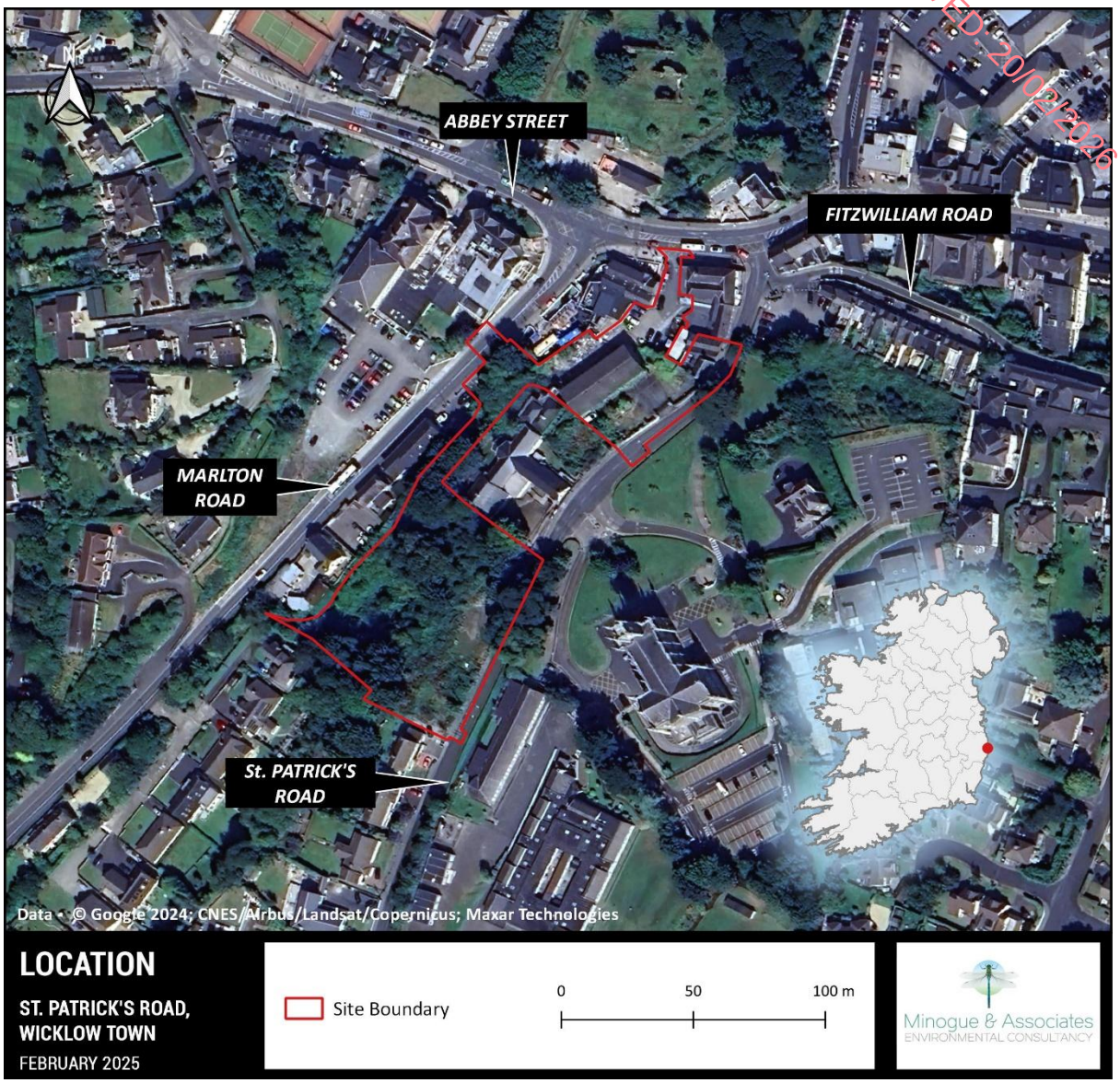
Following a Request for Further Information Item 5 as follows:

Item 5 a states: It is noted that there is a proposal to divert the existing public stormwater sewer through the site and to discharge into the Marlton Stream at a newly constructed Surface Water Outfall. There is a lack of detail in relation to the construction of the outfall and the controls for the interception of silts or other deleterious matter entering the Marlton Stream, which discharges into the Murrough SPA, which is tidally linked to the Murrough Wetlands SAC. The diversion is not referenced in the Storm Water Management Plan and should also be considered in calculations for flood control assessments. Please address."

In response to the above Item 5 a , this Natura Impact Statement is updated to include the additional detail relating to the construction of the outfall and controls for interception of silts or other deleterious matter entering the Marlton Stream which discharges into the Murough SPA, which is tidally linked to the Murrough Wetlands SAC.

For ease of review the RFI text is presented in bold font and the relevant sections updated are Section 2.1.1. and 5.1.2.

FIGURE 1-1 PROJECT LOCATION AND AERIAL VIEW OF PROJECT SITE



In accordance with Article 6(3) of the Habitats Directive, as transposed into Irish law by Regulation 42(1) and Part 5 of the European Communities (Birds and Natural Habitats) Regulations 2011 – 2015 (i.e. the "Habitats Regulations") and Part XAB of the Planning and Development Act, 2000 (as amended) (i.e. the "Planning and Development Act"), a Screening Report for Appropriate Assessment (AA) was prepared to assess whether it could or could not be ruled out, on the basis of objective information, that the project, either individually or in combination with other plans or projects, was likely to have a significant effect on any European Sites. The Screening Report for Appropriate Assessment was prepared by MEC Ltd. on behalf of Heka Developments Ltd and accompanies this NIS, provided in Annex A of this NIS.

The Screening Report for Appropriate Assessment concluded, in view of best scientific knowledge and the conservation objectives of six European Sites occurring within the zone of influence of the project, that, in the absence of appropriate mitigation, it could not be ruled out at the screening stage that the project would not result in significant adverse effects to six European sites, namely the

The conclusion of the Screening Report was informed by a highly precautionary approach and adopted a worst-case scenario. Such an approach was adopted to ensure consistency with the extremely low threshold for triggering likely significant effects as determined in both European and Irish case law and Section 177U of the Planning and Development Act.

On the basis of that conclusion, it has been determined that AA is required in order to assess the implications of the project for those six European Sites. In accordance with Section 177T of the Planning and Development Act an NIS of the project has been prepared in order to assist An Bord Pleanála in carrying out its Appropriate Assessment. This NIS provides an examination, analysis and evaluation of the likely impacts from the Project, both individually and in combination with other plans and projects, in view of best scientific knowledge and the conservation objectives of the European Sites concerned. It also prescribes appropriate mitigation to ensure that the Project will not adversely affect the integrity of those sites identified as being at risk of likely significant effects. Finally, it provides complete, precise and definitive findings, which are capable of removing all reasonable scientific doubt as to the absence of adverse effects on the integrity of the European sites concerned.

1.1 Statement of authority

Ruth Minogue, MCIEEM prepared this NIS. Ruth is an environmental consultant with over 25 years of experience in completing ecological impact assessments, environmental impact assessments and strategic environmental assessment. She has assisted in the writing of Appropriate Assessment screening reports and Natura Impact Statements for a range of landuse activities and types including residential, public realm, recreation and renewable energy.

This Natura Impact Statement has been reviewed by Mr. Pat Doherty BSc., MSc, MCIEEM, of DEC Ltd. Mr. Doherty is a consultant ecologist with over 20 years' experience in completing ecological impact assessments and environmental impact assessments. Pat has been involved in the completion of assessment reports for proposed developments and land use activities under the EIA Directive and Article 6 of the Habitats Directive since 2003 and 2006 respectively. He has extensive experience completing such reporting for projects located in a variety of environments and has a thorough understanding to the biodiversity issues that may arise from proposed land use activities. Pat was responsible for completing one of the first Appropriate Assessment reports for large scale infrastructure developments in Ireland when he prepared the Appropriate Assessment for the N25 New Ross Bypass in 2006/07. Since then Pat has completed multiple examinations of both plans and projects in Ireland. He has completed Natura Impact Statements for national scale plans such as Ireland's CAP Strategic Plan and National Seafood Development Plan and regional and county scale plans including County Development Plans, Local Area Plans, Tourism Strategies and Climate Action Plans. Pat has completed multiple Natura Impact Statements for a range of development types that include large scale infrastructure developments in sectors such as transport and energy as well as industrial, commercial and residential developments.

1.1 Summary of Screening

The Screening Report identified the following European Sites, occurring within the wider zone of influence of the project site. These sites are shown in Figure 1.2 below and their location with respect to the project site is also shown. The following European Site was screened in:

- The Murrough SPA

The reason for identifying this European Site within the zone of influence of the project was due to the presence of a potential surface water and groundwater pathways linking the project site to them.

During the Screening of the project, it could not be ruled out that the project did not have potential to result in downstream effects to special conservation interests bird species by virtue of its potential to generate polluted surface water within project site and to discharge such water to the Wicklow River and downstream to the Varty River. It was acknowledged during the Screening Report that any contaminated surface drainage waters being discharged into the Wicklow River and downstream to the receiving waters of Murrough SPA are likely to be well diluted and distributed within this water body, thereby limiting their potential to result in significant downstream effects. However the Screening Report and its conclusions have been underpinned by a precautionary approach and the very low threshold (i.e. the mere probability for a significant effect to occur) required to trigger a Stage 2 Appropriate Assessment and based on this approach it was found that the potential for such downstream effects to arise as a consequence of the project and to result in significant negative impacts to the conservation objectives of the Murrough SPA could not be ruled out at the screening stage.

In summary based on the information provided in the Screening Report, the precautionary approach adopted during the consideration of impacts for the Screening Report and the extremely low threshold required to trigger Stage 2 Appropriate Assessment, it was concluded that the potential for significant effects to the following European sites as a result of the discharge of contaminated surface drainage waters, could not be ruled out. As such the Screening Report concluded that an NIS was required to evaluate further the potential for these impacts to result in significant adverse effects to the Murrough SPA and where necessary prescribe mitigation measures to avoid such adverse effects.

1.2 Guidance

This NIS has been undertaken in accordance with National and European guidance documents: Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities (DEHLG 2010) and Assessment of Plans and Projects Significantly Affecting Natura 2000 sites – Methodological Guidance of the Provisions of Article 6(3) and (4) of the Habitats directive 92/43/EEC. The following guidance documents were also of relevance during this the preparation of this NIS:

• A guide for competent authorities. Environment and Heritage Service, Sept 2002. Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities (2010). DEHLG.

• Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites – Methodological Guidance of the Provisions of Article 6(3) and (4) of the Habitats Directive 92/42/EEC. European Commission (2021).

• Managing Natura 2000 Sites – The provisions of Article 6 of the Habitats directive 92/43/EEC. European commission (2018). The information provided in this NIS is also guided by European and Irish case law guiding the approach to Stage 2 Appropriate Assessment.

In particular it is noted that the consideration of impacts provided in Section 4 this NIS has been undertaken in the absence of any regard to construction phase best practice measures and environment safeguards and operation phase design measures that aim to safeguard the receiving environment and the above European Sites from adverse impacts.

1.3 Background to Directive Article 6 Assessments

This NIS has been undertaken in accordance with National and European guidance documents: Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities (DEHLG 2010) and Assessment of Plans and Projects Significantly Affecting Natura 2000 sites – Methodological Guidance of the Provisions of Article 6(3) and (4) of the Habitats directive 92/43/EEC. The following guidance documents were also of relevance during this the preparation of this NIS:

• A guide for competent authorities. Environment and Heritage Service, Sept 2002. Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities (2010). DEHLG.

• Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites – Methodological Guidance of the Provisions of Article 6(3) and (4) of the Habitats Directive 92/42/EEC. European Commission (2021).

• Managing Natura 2000 Sites – The provisions of Article 6 of the Habitats directive 92/43/EEC. European commission (2018). The information provided in this NIS is also guided by European and Irish case law guiding the approach to Stage 2 Appropriate Assessment. In particular it is noted that the consideration of impacts provided in Section 4 this NIS has been undertaken in the absence of any regard to construction phase best practice measures and environment safeguards and operation phase design measures that aim to safeguard the receiving environment and the European Sites identified in the Screening assessment from potential adverse impacts

Stage 1 – Screening: This stage defines the proposed project, establishes whether the proposed project is necessary for the conservation management of the European Site and assesses the likelihood of the project to have a significant effect, alone or in combination with other plans or projects, upon a European Site.

Stage 2 – Appropriate Assessment: If a plan or project is likely to have a significant affect an Appropriate Assessment must be undertaken. In this stage the impact of the plan or project to the Conservation Objectives of the European Site is assessed. The outcome of this assessment will establish whether the plan will have an adverse effect upon the integrity of the European Site.

Stage 3 – Assessment of Alternative Solutions: If it is concluded that, subsequent to the implementation of mitigation measures, a project has an adverse impact upon the integrity of a European Site it must be objectively concluded that no alternative solutions exist before the project can proceed.

Stage 4 – Where no alternative solutions exist and where adverse impacts remain but imperative reasons of overriding public interest (IROPI) exist for the implementation of a plan or project an assessment of compensatory measures that will effectively offset the damage to the European Site will be necessary.

1.4 Stage 2 Appropriate Assessment

The EC Guidance Assessment Criteria for a Stage Two Appropriate Assessment seeks the following information:

1. the collection of information on the project and on the European Sites concerned;

2. An assessment of the implications of the project in view of the site's conservation objectives, individually or in combination with other plans or projects;

3. An evaluation as to whether the project can have adverse effects on the integrity of European Sites;

4. The consideration of mitigation measures (including their monitoring).

This NIS addresses each of these items, through the following sections provided below.

1.4.1 Scientific Investigations

A range of scientific site investigations have been completed for the project and these are relied upon in this Natura Impact Statement. A detailed description of methods to undertake these scientific investigations are set out in the Ecological Impact Assessment Report[1] over 2025 and Engineering Service Reports[2] are provided in full under separate cover with the planning application.

The surveys aim to provide up to date information for habitats occurring at and bounding the project site as well as providing up to date information for rare and protected species that may be supported by the project site and adjacent sites. Table 1.1 presents a summary of the surveys undertaken and lead surveyor. An overview of the ecological surveys are presented below:

TABLE 1-1-DATES AND TYPES OF SITE INVESTIGATIONS AND SURVEYS

Survey	Date	Lead Surveyor
Habitat Survey	7th June 2024	Louis Peacock BSc
Bat Surveys	10th July to 23rd July	Ruth Minogue MCIEEM Static bat detector x 3 locations
	Static 1 10th to 23rd July	Located at young sycamore in rear yard (number 0233)
	Static 2 10th to 22nd July	Static 817 10th to 22nd scrub adjacent to St Patricks Hall.
	Static 3 24th July to 30th July	Static 818 -steep vegetated slope
	10th July 2024	Emergent survey at structures
	24th July 2024	Emergent Survey at structures
Bird Survey	8th and 30th of June 2024.	Louis Peacock BSc
Trail cameras	31st July to 8th August 2024	Jamie Wood MCIEEM 2 x locations

[1] Ecological Impact Assessment Report, MEC Ltd, 2025
[2] Engineering Services reports, CORA Engineering Ltd, 2025

2 Project description

Heka Developments Limited intends to apply for permission for development at a site of approximately 0.84 Ha located at St Patrick's Road, Marlton Road and Abbey Street in Wicklow Town, County Wicklow. The site includes the dwelling known as 'The Pines', Marlton Road and the builders' merchant retail store building known as 'SV Delahunt', Abbey Street. The site also incorporates parts of St Patrick's Road, Marlton Road and Abbey Street to facilitate water services infrastructure and road-related upgrades.

The proposed development principally consists of: the demolition of the existing dwelling known as 'The Pines' and the adjacent storage building (approximately 155 sq m); the change of use and refurbishment of the 2-storey builders' merchant retail store building (and yard) to office (631.3 sq m); and the construction of 27 No. residential dwellings (8 No. 1-bed, 9 No. 2-bed, 4 No. 3-bed and 6 No. 4-bed) as houses and duplexes in structures of 2 No. storeys to 3 No. storeys (plus habitable attic over) (2,653.9 sq m).

The development also comprises: refurbishment of the builders' merchant retail store building to include internal reconfigurations, external alterations to elevations and roof, and signage; new site access at Marlton Road, bridge to traverse existing watercourse and internal road, cycle and pedestrian network; upgrades to footpaths and junctions at St Patrick's Road, Marlton Road and Abbey Street, including a new uncontrolled pedestrian crossing at St Patrick's Road; 47 No. car parking spaces (incorporating 5 No. existing spaces); cycle parking spaces; refuse stores; hard and soft landscaping including public open space, communal amenity space and private amenity space (as gardens and balconies/terraces); boundary treatments; public lighting; and all associated works above and below ground.

2.1 Construction Phase and Working[3]

The range of works to which this Preliminary Construction & Environmental Management Plan will be integrated into during the design phase and construction phase of the site over an approximate 24 month period, are summarised as follows:-

- Demolition of the existing small buildings
- Site works including drainage and landscaping.
- Shallow excavations on the site for foundations and for drainage runs.
- Construction of new buildings.
- Waste Management during the Construction Phase.

It is proposed that this Preliminary Construction & Environmental Management Plan will be developed by the Contractor at the beginning of the construction phase of the works and include a detailed Sequencing and Phasing Schedule and Traffic and Parking Management Plan for the works.

The construction period and phasing is provided below:

Working hours will be as follows:

07:00hrs – 18:00hrs Monday to Friday

[3] Information provided by Cora Consulting Engineers Outline CEMP

07:00hrs – 14:00hrs Saturdays

Site closed on Sundays / Public Holiday

2.1.1 Proposed Methodology for the Bridge Construction

The main span of the bridge crossing over the watercourse is around 1.0m. To simplify the buildability and also to protect the watercourse from any construction processes the bridge shall be formed with prestressed hollowcore concrete units supported on foundation systems set well back from the edge of the watercourse. Trial holes on the site have proven that a weathered rock strata is located circa 1.0m below the existing ground level. Therefore, the foundations to the bridge system shall be formed with localised strip footings and rising walls to receive the prestressed hollowcore slabs. Loadings are relatively small. As the watercourse passes under the bridge at an angle the strip footings are set back so that the prestressed hollowcore units are all formed as a single size to facilitate the construction process and to assist in the protection of the watercourse during the construction process. The strip footings are located at no less than 1.0m from the edge of the footing to the watercourse.

The prestressed units are fabricated off site and can be delivered to the site and lifted into place in a very short period (likely to be less than one day) with the completion works on the bridge all contained within the footprint of the bridge and protection measures to the watercourse easily implemented.

2.2 RFI Item 5a: Construction details for diverted public sewer and proposed outfall

This technical note[4] addresses the construction details for the diverted public sewer and the newly proposed outfall only. The specific engineering details for the outfall are illustrated on CORA Consulting Engineers Drawing No: [2424/ CXXX].

The outfall will be constructed using a precast concrete Althon H42CB headwall (or similar). The design and installation will be carried out in accordance with Section 3.10 of the Greater Dublin Strategic Drainage Study (GDSDS). To ensure hydraulic integrity and public safety, the headwall will be equipped with a dual-protection system:

● Non-Return Flap Valve: An Althon 400mm HDPE/SS/DI Flap Valve (or similar) will be installed on the headwall. The valve plate and back plate are manufactured from High-Density Polyethylene (HDPE), with the hinge pin and ballast weight produced in Grade 316 Stainless Steel as standard.

This valve includes an EPDM lip seal to prevent backflow from the tidally linked Marlton Stream into the public sewer network.

● Security Grating: A close-coupled safety grating will be mounted to the headwall using integrated M16 threaded sockets. This grating is manufactured from 40 x 10 flat bar at 75mm centres, fully welded, and hot-dip galvanised. This prevents the entry of large debris and provides necessary security for a pipe of this diameter (375mm–400mm).

[4] Cora Consulting Engineers Technical Note: Response to Wicklow County Council RFI Item 5(a) 2026

2.2.1 Existing and proposed Surface Water [5]

The proposed application site is approximately 7,700m^2 . The southern end is overgrown and to the North has been built on previously and is now derelict. There is a significant level difference between St Patricks Road and the Northern boundary along the watercourse.

In order to comply with modern standards, stormwater shall be treated using nature-based solutions as far as possible in line with the Wicklow County Council Development Plan. For the purposes of stormwater management, the site is defined in 6 No. Sub-Catchments. All ground level surfacing shall be completed with permeable systems to parking, porous asphalt to access roads and the site shall have substantial soft landscaping. Table 1.1 below presents the stormwater management systems for each sub catchment.

Table 2-1 Stormwater Management systems

Sub-catchment No.	Description	Gross Plan Area (m^2)	Stormwater management systems
1	Semi-detached Dwellings fronting onto St. Patricks Road within their own individual site curtilages	1790	In-curtilage soakaways to front and rear
2	3 Storey Duplex Units plus part access Homezone.	2083	Soakaways in the sub base of the landscaped apron in front of the Duplex Units and to the access road finished with porous asphalt plus the parking bays. Surplus storage volumes provided to allow for extreme events where soakage to ground is too slow.
3	Access Homezone from Marlton Road	575	Soakaway within the sub-base of the porous asphalt finished road system. Surplus storage volumes provided to allow for extreme events where soakage to ground is too slow.
4	A single unit E and parking areas with all surfaced permeable paving	744	Soakaway systems within the ground level landscaping.
5	New Dwellings on the site of the existing derelict houses	157	Rainwater diverted to low level planters to the front and rear of each dwelling.
6	Existing External Disused builders merchants store	1290	Retain the existing storm water system as works are limited to shell and core internal and local external landscaping & general clean up.

2.2.2 Foul Water[6]

The site is served with Uisce Eireann Wastewater Assets on Marlton Road, Abbey St and Patrick's Road. Wastewater from Units A&B shall discharge by gravity to the rear via a service of backdrop manholes to a collector sewer which shall then fall via backdrop manholes to a wastewater sewer in the new Homezone. This wastewater sewer shall also be connected from the 2 blocks containing units C and D. The sewer in the Homezone shall remain in private ownership and be maintained by the site management company as the Homezone shall also remain under the site management company. A new connection shall be made to the 450mm diameter concrete UE sewer on Marlton Road. The proposed new units type E&F and units G and H shall have individual connections to the Uisce Eireann Wastewater asset on St Patricks Road. The existing external retail store unit shall retain the existing connection to the public sewers. All wastewater is

[5] Stormwater Management Plan Report November 2024 Cora Consulting Engineers
[6] Water Supply and Wastewater Report November 2024 Cora Consulting Engineers

discharge from the site is by gravity and new sewers within the red-line application boundary shall remain in private ownership. This development does not propose that Uisce Eireann shall take in charge any new assets. The wastewater discharge for the site is as follows:

- Total No. of units – 32 Wastewater loading = 150 litres per person per day.
- Allow for 2.7 person per unit.
- Average discharge = 32 x 2.7 x 150 = 12,960 litres
- DWF = 12,960/24 x 60 x 60 = 0.15 litres per day
- Peak discharge = 6DWF = 0.9litres per da

2.2.3 Water Supply[7]

Unit Types A & B on St Patricks road shall have individual connections to the 150 diameter Uisce Eireann uPVC asset on St. Patricks Road. Each unit is within its own curtilage. Further down St. Patricks Road, Units type E and F shall also be connected to the same UE water asset as will the 2 new units Type G & H, which are replacing two derelict houses on the same site. A new 100mm diameter PE water supply shall be taken from the 203.2 diameter cast iron UE asset on Marlton Road to serve the Homezone within the application site. This supply shall serve the 2 blocks with Units C&D and new fire hydrants provided in accordance with UE Water Codes of Practice. The existing external retail store requires a new water supply from the UE Assets on Abbey Street.

2.2.4 Flood Risk

According to the site-specific Flood Risk Assessment[8] carried out as part of the present application, there is no risk of flooding affecting the site from tidal, fluvial, pluvial or overground flooding given the topography and location of the site.

2.2.5 Lighting

The principal source of night-time lighting associated with the project will be public lighting along the roads. The proposed development will control the levels of light emitted by all public lighting associated with the development by implementing best practice approaches that aim to minimise light pollution.

2.2.6 Landscaping

The following elements informed by the key policies identified in the Wicklow CDP will form the overall landscape proposal which are included in the Landscape Plan, drawing No.240709 provided under separate cover.

• The inclusion of native Irish wildflowers sourced from Irish progeny only.

• Retention and protection as a wildlife corridor of existing stream at the base of the site along Marlton Road.

• Proposed native Irish tree species and suitable selected non-native tree species to integrate the development into the surrounding landscape.

[7] As above.
[8] Flood Risk Assessment Report November 2024 Cora Consulting Engineers

• Proposed Crataegus Monogyna 'Stricta' (Upright Hawthorn Trees), Sorbus aucuparia 'Fastigiata' (Upright Rowan), Pyrus calleryana 'Chanticleer' (Callery pear) as replacements for trees affected by Hymenoscyphus Fraxineus (Ash Dieback), invasive tree species and trees unsuitable for retention due to poor condition.

• Although Pyrus calleryana 'Chanticleer' (Callery pear) is a non-native tree species, it is included in the current All-Ireland Pollinator Plan, and is not a listed invasive species in the National Biodiversity Data Centres; Irelands Invasive Species. It has been chosen for this site due to the narrow spread of the canopy at under 8 meters at maturity, the ability to with-stand costal conditions, year-round interest and suitability as a pollinator.

• Exclusion of plant material with deep roots in close proximity to underground infrastructure.

• Proposed native mixed species hedge to provide privacy and enhance the existing biodiversity of the site.

• The exclusion of invasive plant material as outlined by the Department of Agriculture, Food and the Marine.

• Proposed private, semi-private, communal open spaces that exceed the requirements set out in the CDP.

• Proposed pocket park to enhance community use of adjacent Parochial Hall, St. Patricks School and St. Patrick's Church.

3 Baseline descriptions

3.1 Description of the Site location

The irregularly shaped site sits on a significant slope falling approximately 15 meters from south-west to north-east with St. Patricks Road at the highest point of the site and Marlton Road at the lowest.

The southern boundary of the subject site runs along St. Patricks Road and along the side and rear of the Parochial Hall (a Protected Structure) to the north-west and turns at a right angle to the north-east. This boundary continues northeast and follows the rear and side of existing dwelling next the Parochial Hall to rejoin St. Patricks Road. The north-east corner of the subject site comprises a two-storey dwelling and adjoining single storey building. Apart from the retail building to the north, formerly operating as SV Delahunt and Co. hardware the remainder of the site is generally undeveloped apart from some areas of hardstanding and a small private car park on the north-west edge made up 7 No. car parking spaces along Marlton Road. There are a number of commercial units directly north of the subject site which front on to Abbey Street. To the west and north-west, the subject site is bounded by a mix of primarily residential and some commercial units.

According to the National Bedrock Aquifer Map, the GSI classifies the bedrock aquifer beneath the subject site as a 'Poor Aquifer (Pl), i.e. Bedrock which is Generally Unproductive except for Local Zones'. The proposed development is within the 'Wicklow' groundwater body (GWB) and is classified as 'Poorly productive bedrock'. Presently, the groundwater body in the region of the site (Wicklow GWB) is classified under the WFD Status 2013-2018 (EPA, 2020) as 'Good status'. The WFD Risk Score is currently under review.

The GSI/ Teagasc (2021) mapping database of the quaternary sediments in the area of the subject site indicates the principal subsoil type in the area comprises till derived from granites (TGr).

3.1.1 Water Quality

The Environmental Protection Agency (EPA,2024) on-line mapping presents the available water quality status information for water bodies in Ireland. The proposed development site lies within the Avoca-Vartry Catchment 10 and Dargle-SC-010 WFD sub-catchment 10-5 (Shanganagh_010 WFD River Sub Basin). The nearest surface water feature is the Wicklow River (IE_EA_10W080880) which flows parallel to Marlet Road, and forms part of the project boundary where it has been canalised before flowing through Abbey ground and joining the Varty River approximately 410m north east of the project site. The Wicklow River under review in terms of risk of achieving good status by 2027 under the Water framework directive and most recent data shows the overall status is good but this is assigned low confidence. The Varty forms part of the Broad Lough Transitional water body (IE_EA_130_0100) .currently classified as moderate quality. This discharges into the coastal waters of the Southwestern Irish Sea – Killiney Bay (HA10) IE_EA_100_0000. The Wicklow River as it enters the Varty enters the Murrough Special Protection Area (SPA).

The Southwestern Irish Sea - Killiney Bay WFD coastal waterbody (WFD code IE_EA_100_0000) has been classified by the WFD (2013-2018 period) as having 'High' status and 'Not at risk'. This means this WFD is 'Unpolluted', i.e. there have been no breaches of the EPA's threshold values for nutrient enrichment, phytoplankton and invertebrate status/potential or disturbance of the level of phosphorous and dissolved oxygen normally present. This coastal waterbody hosts the nearest Natura 2000 Sites from the development site (The Murroughs SPA to the north and Wicklow Head SPA further south).

As noted in Section 1.2.4 above foul sewage generated by the proposed development will be directed to the Uisce Éireann Wicklow WWTP prior to discharge to South western sea -Killiney Bay.

The latest available Annual Environmental Report (AER) for the Wicklow WWTP published on the EPA website is for 2023[9] (published 12th March 2021). The 2023 AER reported no exceedances in the emissions limit values (ELVs) set in the Wastewater Discharge Licence for the WWTP. The design of the wastewater treatment plant allows for peak values and therefore the peak loads have not impacted on compliance with Emission Limit Values. The ambient monitoring results meet the required EQS (Environmental Quality Standards). The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009. The discharge from the wastewater treatment plant does not have an observable impact on the water quality. The discharge from the wastewater treatment plant does not have an observable negative impact on the Water Framework Directive status. The discharge from the wastewater treatment plant does not have an observable impact on the coastal/transitional water quality. The discharge from the wastewater treatment plant does not have an observable impact on the bathing water quality.

The AER states the Population Equivalent (P.E) of the WWTP as constructed is 34,000, the treatment type is 2 - Secondary treatment. The remaining PE capacity is 14,383 . The Section 2.1.4.2 Treatment Capacity Report Summary – Wicklow WWTP – 2023 states that the wastewater treatment capacity at the WWTP will not be exceeded in the next three years .

The results of the AER monitoring show that effluent from the WWTP does not negatively impact the Southwestern Irish Sea-Killiney Bay coastal waterbody. Given this result and the adequate capacity available at the WWTP to treat additional loads generated by the Project, all wastewater generated by the project will be adequately treated prior to discharge to the coastal water body and as such it will not have the potential to adversely affect the water quality of the catchment. There will be no potential for impacts arising from the foul water discharge to Wicklow WWTP.

The Southwestern Irish Sea - Killiney Bay WFD coastal waterbody (WFD code IE_EA_100_0000) has been classified by the WFD (2013-2018 period) as having 'High' status and 'Not at risk'. This means this WFD is 'Unpolluted', i.e. there have been no breaches of the EPA's threshold values for nutrient enrichment, phytoplankton and invertebrate status/potential or disturbance of the level of phosphorous and dissolved oxygen normally present.

The coastal waterbody hosts the Wicklow Harbour bathing area, this is named as a non designated bathing water (ie not listed under Bathing Water Regulations 2008.). Wicklow County Council monitors the water quality here and in 2024 bathing season was monitoring as 'Excellent[10]'. . The bathing area is located c. 400m to the south of the outlet for the WWTP.

[9] D0012-01_2023_AER.pdf accessed 18th December 2024
[10] Bathing Water Results | Wicklow.ie accessed 18th December 2024

FIGURE 3-1 PLAN AREA AND INDICATIVE SURFACE WATER FLOWS

3.1.2 Designated conservation area

There are no Natura 2000 sites within or directly adjacent to the boundaries of the proposed development site. The nearest Natura 2000 Site is the Murroughs SPA (NPWS code 003000) which is located c410m north east of the project site and connected hydrologically via the Wicklow River, that flows to the Vartry River at this distance. The project site within the Southwestern Irish Sea- Killiney Bay (HA10) WFD coastal waterbody (WFD code IE_EA_100_0000). There is a direct hydrological linkage between the proposed development site and this or any other Natura 2000 sites.

The location of the Murroughs SPA and all other Natura 2000 sites occurring in the wider area surrounding the project site are shown on Figures 3.1 and 3.2. overleaf.

Natural Heritage Areas (NHAs) are designated under the Wildlife Acts to protect habitats, species or geology of national importance. In addition to NHAs there are proposed NHAs (referred to as pNHAs), which are also sites of significance for wildlife and habitats and were published on a non-statutory basis in 1995 but have not since been statutorily proposed or designated. Proposed NHAs are offered protection in the interim period under county or city development plans which requires that planning authorities give due regard to their protection in planning policies and decisions.

There are no nationally designated sites within or directly adjacent to the boundaries of the proposed development site. The nearest pNHA is the Wicklow Town Sites within the Vartry River, c 410m northeast of the site.

FIGURE 3-2 SPECIAL AREAS OF CONSERVATION

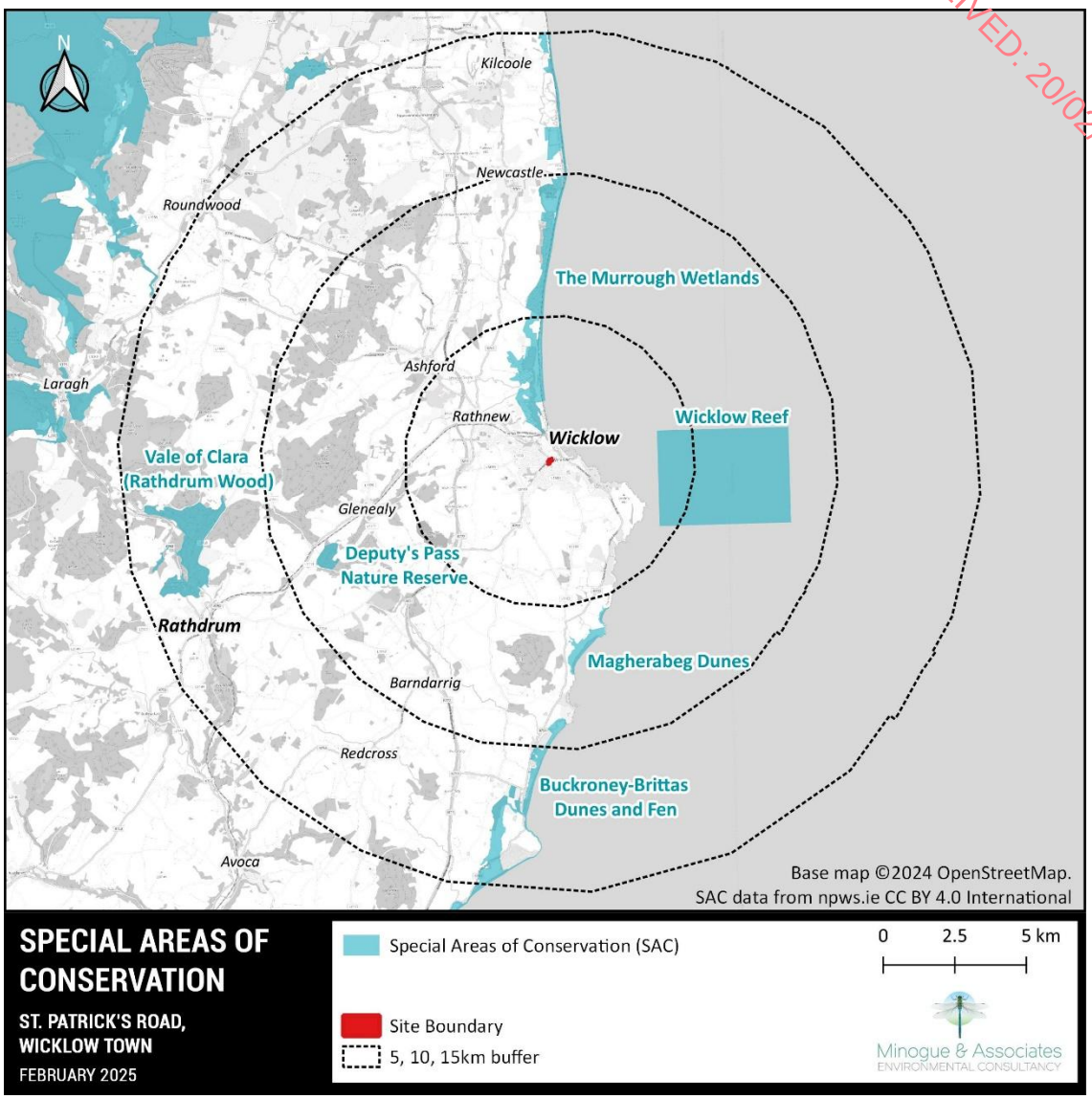
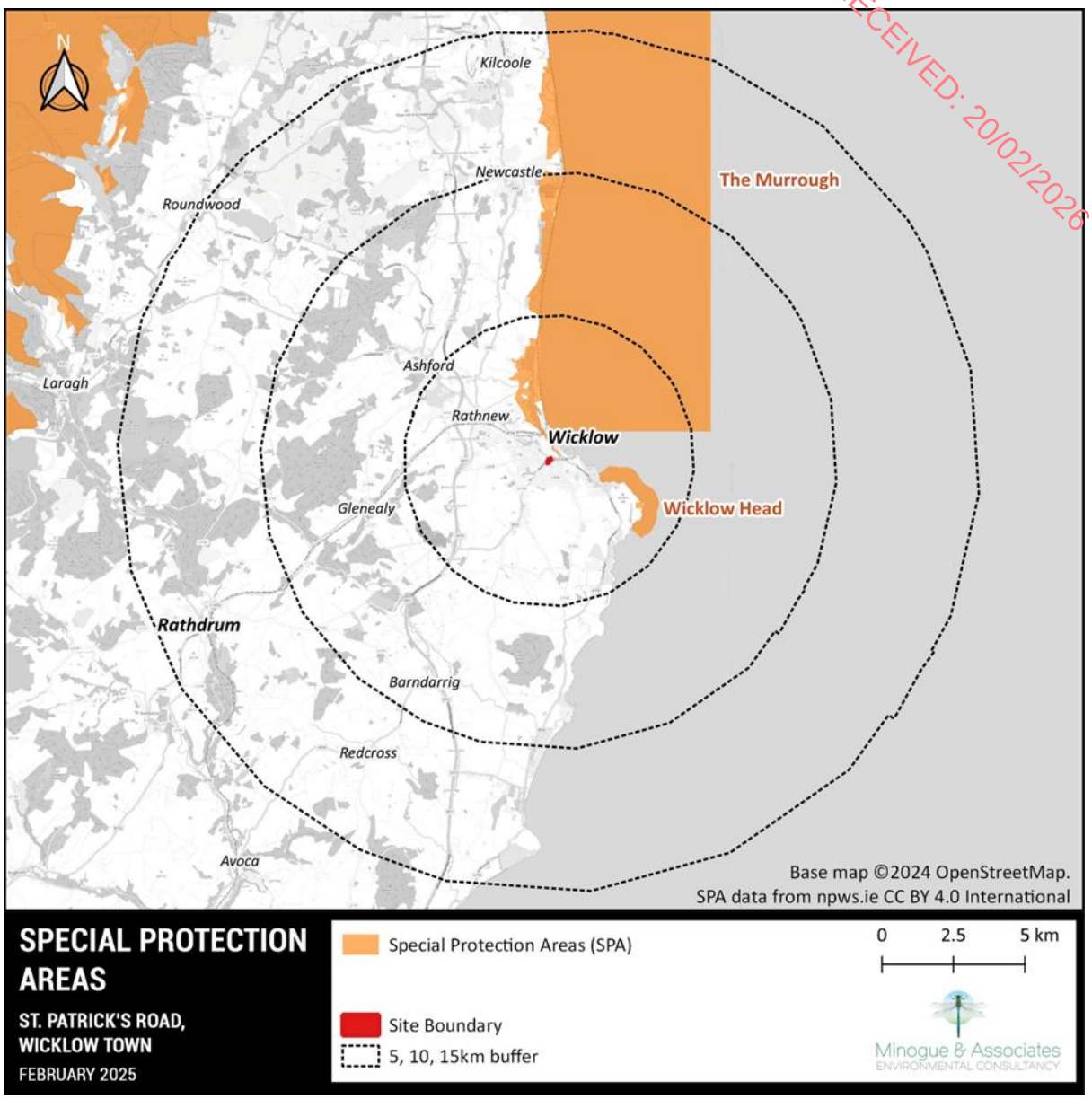


FIGURE 3-3 SPECIAL PROTECTION AREAS



3.1.3 Land cover & Habitats

The following Sub-Sections describe the habitats occurring within and immediately adjacent to the project site. Each habitat described below has been identified to Level 3 of Fossitt's Guide to Habitats in Ireland. The alpha-numeric code for each habitat is also provided alongside the habitat name (e.g. Treeline WL2). The locations and extent of each habitat described below are illustrated in **Figure 3.3**: Habitat Map.

The nature conservation value of each of the habitats occurring within the project site is also outlined in the following sub-sections. The nature conservation value of habitats has been determined with reference to the methods outlined in Section 3 above.

The following habitat types of the Heritage Council classification system (Fossitt, 2000) were identified within the proposed development boundary: Habitat classification and mapping surveys (Smith et al, 2011) were conducted within the boundary of the Proposed Development.

3.1.4 WS1-Scrub

3 separate sections of this habitat were identified within the boundary of the proposed development.

One area of scrub was dominated by bramble and old man's beard where the scrub was too dense to form any significant ground layer, but nettle was noted here. Shrubs here included sycamore, ash and elder.

A section of dense herbaceous scrub was blended in with shrubs including elder, blackthorn and butterfly bush with herbs consisting of creeping thistle, nettle, spear thistle, common hogweed, lesser stitchwort, common poppy, fumitory, nipplewort, bush vetch, groundsel, fox glove, red clover, and red valerian.

One of the areas where scrub has colonised the previously built ground the herb species are limited to nipplewort and red & white valerian with shrubs including fuchsia, butterfly bush and non-native palm species. Old man's beard was abundant here while some sycamore saplings were also recorded.

Given the species mix present which is dominated by shrub species and common herbaceous scrub, the extent and location , this is evaluated as being of Local Importance (lower value) Rating E.

3.1.5 ED3- Recolonising bare ground

Recolonising bare ground was identified where the access to the site exists from St Patricks Rd. This area was previously cleared, and gravel was introduced however, it has since revegetated with mainly herb species but also some grasses and climbers.

Species here included scarlet pimpernel, black medick, common ragwort, red valerian, birds foot trefoil, nipplewort, coltsfoot, rough hawkbit, creeping buttercup, white clover, false oat grass, willowherb sp, dandelion, herb robert, Common hogweed, hedge bindweed, perennial sow thistle, nettle, groundsel, curled dock, alexanders, red clover, tufted vetch and rosebay willowherb. Given the species mix present which is dominated by shrub species and common herbaceous scrub, the extent and location , this is evaluated as being of Local Importance (lower value) Rating E.

3.1.6 WD1-Mixed broadleaf woodland

Three separate sections of this habitat were identified within the boundary of the project site. The predominant tree species Acer Pseudoplatanus (Sycamore), followed by Fraxinus Excelsior (Ash) Prunus Spinosa (Blackthorn) and Salix (Willow). Advanced stages of Hymenoscyphus Fraxineus (Ash Dieback) are present within the Ash trees on the site, leylandii sp is also present. .

Mature shrubs included elder, willow, blackthorn, holly with immature elm sp and bramble, ivy and honey suckle as climbers. The ground flora generally included nettle, alexanders, common hogweed, lords n ladies, herb robert, wood avens, wood dock, hedge woundwort, figwort, and cleavers with ivy dominating the ground layer in some parts. In the more shaded parts of the woodland areas male and harts' tongue were identified while bracken existed in areas with more light.

As Section 4.2.3 discusses, this is habitat does not include mature or older woodland habitat. However, given the species mix present, its location within an urban area and mix of tree and shrub species present. this is evaluated as being of Local Importance (higher value) Rating D.

3.1.7 FL2/FW3- Depositing lowland rivers

The Wicklow River runs along the northern boundary of the site. The river was surveyed at this location 52.98001,-6.04755 with upstream areas being unreachable. At this point the watercourse is approx. 2m wide shallow and exhibited a summer water level with the approx. average depth 10cm, and the river substrate consists of mix of gravel, pebbles and cobbles. The flow type consists of mainly riffle with some glide and pooling upstream of the survey point. Aquatic bryophytes were recorded within the channel and no signs of algal blooms were observed. The northern side of the river is directly adjoining the buildings with <0.5m of bank.

There were signs of undercutting on both banks with some artificial material within the channel. Bankside vegetation consisted of creeping buttercup, nettle, hemlock, bindweed, pendulous sedge with elder and sycamore saplings. Male fern was also noted on the banks. Some form of drainage is inputted into the river here.

There was signs of sedimentation and sand deposition slightly further upstream of the survey point.

The Wicklow River is classified as being of County Importance (Rating C) due to its role as an ecological corridor within the county and its hydrological links to the Varty River and to the Murroughs SPA.

3.1.8 BL3- Built land

The built land within the boundary of the proposed development includes a series of old warehouse buildings, an incomplete dwelling, concrete courtyard, residential housing and car parking. **This habitat is of low ecological value, and rated as local importance lower value (Rating E)**

3.1.9 BL1- Old stone walls and other stonework

An old stone wall borders St Patricks Rd at the southern side of the Proposed Development and other stonework exists within the boundary itself.

The stonework within the site included, colts foot, red valerian, creeping thistle, nettle, nipplewort while butterfly bush, willow and sycamore were observed growing from within the stonework. Old mans beard was recorded climbing over the stonework.

While the boundary wall included ivy, valerian, ivy-leaved toadflax, false oat grass, ragwort and willowherb sp along with maidenhair spleenwort.

This habitat is of low ecological value, and rated as local importance lower value (Rating E)

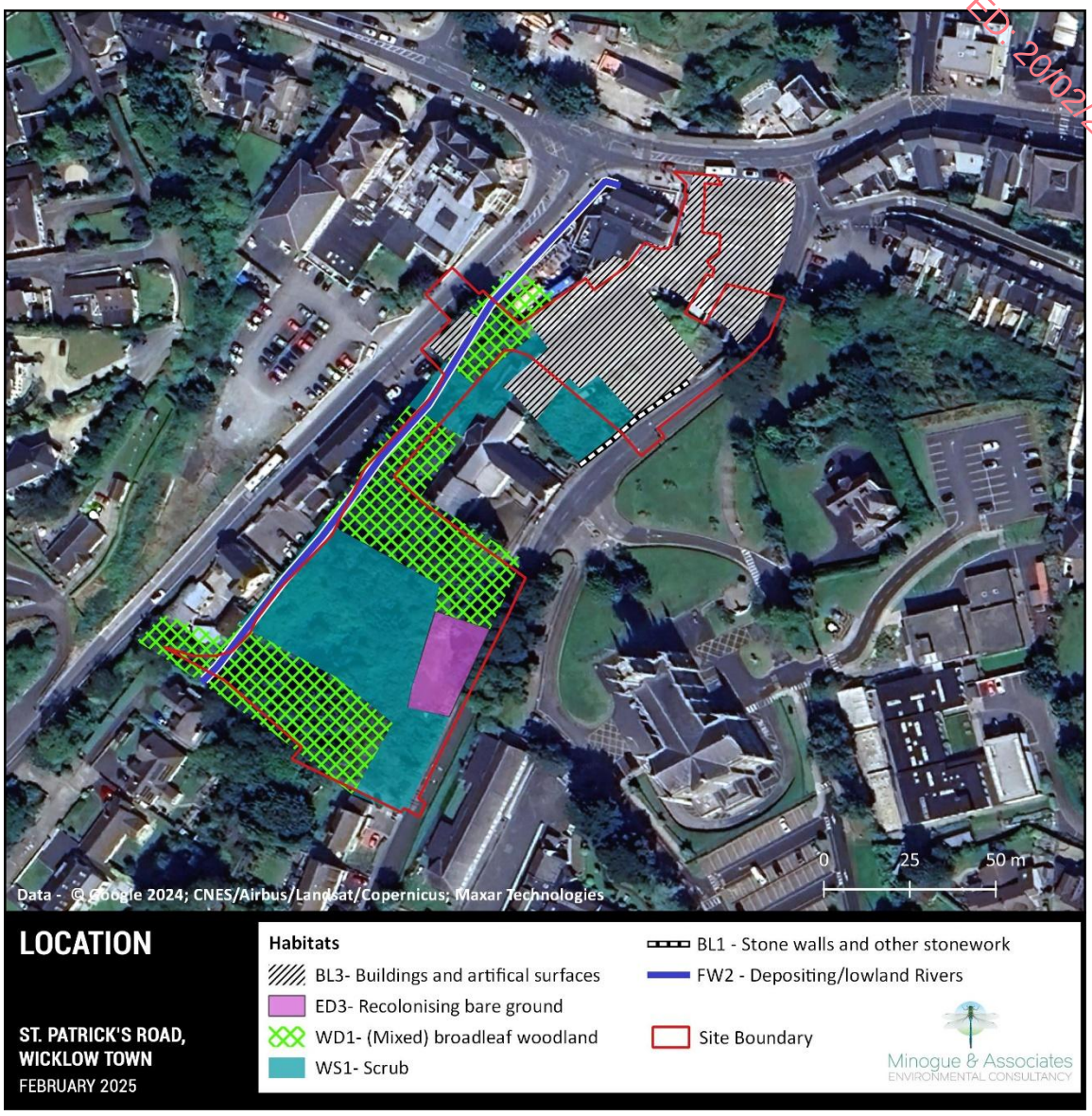
3.1.9.1 Rare & Protected Flora

A polygon search of the plan area using the National Biodiversity Centre database did not return any records of rare and protected flora within the plan area.

3.1.9.2 Invasive Species

Following the completion of the 2024 survey, it is confirmed that no non-native invasive species listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011 were recorded within the proposed development site during site visits in 2022.
Other impact invasive species were present in varying amounts with butterfly bush(medium impact) commonly observed along with snowberry (low impact) and Wilson's honeysuckle (not assessed). Winter heliotrope (low impact) was present but generally confined in distribution.

FIGURE 3-4 HABITAT MAP



3.1.10 Fauna

A series of trails were recorded throughout the site which were used regularly enough to cause the soil to be exposed and vegetation clearance. As detailed in Section 3.1.5 above 2 trail cameras were erected within the scrub and woodland habitat in the project site and monitored mammal activity.

3.1.10.1 Badger

A potential badger sett was identified on the 8th of June within the boundary of the Proposed Development. The sett had 2 entrances noted and occurred within scrub/woodland habitat in the centre of the site.

Entrance 1 was noted as being wider than it is tall which is typical of badgers due to their physical structure and was located under tree roots. This entrance connected with a series of trails which connect the site-up. Small amounts of spoil existed but no bedding observed. The ground in front of the entrance

was quite worn away with sandy soil substrate being exposed. This entrance was on the border of the woodland and the scrub.

Entrance 2 was recorded 2-3m further North but on the slope down to the river. This was less active looking with a larger drop down into the entrance and some old spoil with no bedding recorded. This entrance was in much denser scrub.

These entrances were revisited on the 30th of June to look for any fresh signs of badgers or use of the entrances. There was unidentifiable scat recorded on top of entrance 1 but aside from this no new other activity signs were noted from the previous visit. The 2nd entrance looked more active on the 2nd survey period than it did on the 1st visit. The ground outside the entrance was more eroded.

Trail cameras were deployed at the two locations for a period of 6 nights. No badger activity was recorded, a fox and cats were recorded in these locations.

A single fox den entrance was observed in dense herbaceous scrub during the 30th of June. This den entrance was narrow and taller which indicates fox use. No tracks or scat of fox was observed on the site. However, there was a few pieces of rubbish outside this den which indicates use by foxes in the urban area. The entrance to the den was located here 52.979442150058105, -6.04787774384021.

3.1.11 Birds

The results of the breeding bird surveys and corresponding Birds of Conservation Concern are presented in the table below.

Green listed birds confirmed breeding were Blackbrid, Gold finch, Great tit, Jackdaw and Rook. The amber listed house sparrow and starling were confirmed breeding.

Robin fledglings were recorded in two separate areas during the habitat surveys on the 30th of June and a juvenile dunnock was recorded on the 7th of June which indicates confirmed breeding on the site. Feral pigeons were observed to be nesting in the old warehouse in the eastern section of the site.

Other species observed during site visits include blackcap, pied wagtail, grey wagtail, buzzard, blue tit, and robin.

TABLE 3-1:BREEDING BIRD SURVEY RESULTS AND CORRESPONDING BOCCI CATEGORY

Common name	Scientific name	Breeding Status[11]	Total No.[12]		BoCCI[13]
			Visit 1	Visit 2	
Blackbird	*Turdus merula*	Confirmed	2	1	Green
Chaffinch	*Fringilla coelebs*	Possible	1	0	Green
Collard dove	*Streptopelia decaocto*	Probable	1	6	Green
Dunnock	*Prunella modularis*	Probable	2	1	Green
Goldcrest	*Regulus regulus*	Possible	1	2	Green
Goldfinch	*Carduelis carduelis*	Confirmed	2	14	Green
Great tit	*Parus major*	Confirmed	5	0	Green
Grey heron	*Ardea cinerea*	Non-breeding	0	2	Green
Herring gull	*Larus argentatus*	Non-breeding	6		Red

[11] This is the highest breeding status code achieved for each species, note, a species could obtain 'confirmed' breeding while also have been recorded as 'possible' breeding.
[12] This is the total number of observations of each specific species per visit.
[13] BoCCI refers to Birds of Conservation Concern in Ireland (Gilbert et al, 2021)

Hooded crow	*Corvus cornix*	Probable	0	2	Green
House sparrow	*Passer domesticus*	Confirmed	5	2	Amber
Jackdaw	*Corvus monedula*	Confirmed	4	3	Green
Long-tailed tit	*Aegithalus caudatus*	Probable	2	0	Green
Magpie	*Pica pica*	Probable	4	1	Green
Mistle thrush	*Turdus viscivorus*	Probable	0	1	Green
Red kite	*Milivus milivus*	Non-breeding	0	1	Red
Robin	*Erithacus rubecula*	Possible	0	1	Green
Rook	*Corvus frugilegus*	Confirmed	12	3	Green
Song thrush	*Turdus philomelos*	Possible	0	1	Green
Starling	*Sturnus vulgaris*	Confirmed	0	3	Amber
Swallow	*Hirundo rustica*	Possible	2	1	Amber
Swift	*Apus apus*	Non-breeding	6	2	Red
Wood Pigeon	*Columba palumbus*	Possible	1	5	Green
Wren	*Troglodytes troglodytes*	Possible	4	2	Green

No habitats recorded on site would be suitable for ex situ birds from SPAs within the projects zone of influence.

4 Baseline description of the SPA screened in for Appropriate Assessment.

4.1.1 The Murrough SPA

The Murrough SPA comprises a coastal wetland complex that stretches for 13 km from Kilcoole Station, east of Kilcoole village in the north to Wicklow town in the south, and extends inland for up to 1 km in places. The site includes an area of marine water to a distance of 200m from the low water mark. A shingle ridge runs along the length of the site and carries the Dublin-Wexford railway line. Beside the shingle shore is a stony ridge supporting perennial vegetation. Driftline vegetation on the seaward side includes species such as Sea Rocket (Cakile maritima), Sea Sandwort (Honkenya peploides), Sea Holly (Eryngium maritimum) and Yellowhorned Poppy (Glaucium flavum). Low sand hills occur at Kilcoole, with Marram (Ammophila arenaria) and Lyme-grass (Leymus arenarius). In other areas and further inland a rich grassy sward, which is most extensive in the south end of the site, has developed. A community dominated by Silverweed (Potentilla anserina) and Strawberry Clover (Trifolium fragiferum) occurs in some of the wetter, grassy areas. In some places, particularly at the south of the site, a Gorse (Ulex) heath has developed on the stony ridge. At the southern end of the site, Broad Lough, a brackish, partly tidal lake, has a welldeveloped saltmarsh community. Common Reed (Phragmites australis) is abundant along the western shore, along with some Sea Club-rush (Scirpus maritimus). Saltmarsh is also present in the northern end of the site in the vicinity of the Breaches. An area of fen occurs at Five Mile Point. Here, Black Bog-rush (Schoenus nigricans) is dominant. Fen Sedge (Cladium mariscus) is present where the ground is wetter. This merges into areas dominated by Common Reed. A wide range of freshwater and brackish marsh habitats occur within the site. These vary from reed-marsh dominated by reeds and rushes (Juncus spp.), to those of sedges (Carex spp.) with other areas supporting a mixture of sedges and Yellow Iris (Iris pseudacorus) also occurring. The marshes merge into wet grassland in many areas and where grazing pressure is low, a herb-rich sward occurs. Sedges are abundant in the wetter areas. Where drains have been cut, there are many other species such as Greater Spearwort (Ranunculus lingua), Bogbean (Menyanthes trifoliata) and Reed Sweet-grass (Glyceria maxima). The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species:

- Red-throated Diver (Gavia stellata) [A001]
- Greylag Goose (Anser anser) [A043]
- Light-bellied Brent Goose (Branta bernicla hrota) [A046]
- Wigeon (Anas penelope) [A050]
- Teal (Anas crecca) [A052]
- Black-headed Gull (Chroicocephalus ridibundus) [A179]
- Herring Gull (Larus argentatus) [A184]
- Little Tern (Sterna albifrons) [A195]
- Wetland and Waterbirds [A999]

The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds. There is a hydrological pathway between the project site and the wetland habitats of the Murrough SPA that support the wetland bird species listed above. As such these wetland bird species and their associated wetland habitats, as well as other waterbirds are considered to lie within the zone of influence of the project.

Conservation objectives have been published for the Murrough SPA (NPWS, 2024[14]). The conservation objectives attributes and targets pertaining to the special conservation interests of the SPA are set out in Section 5 below

4.2 Examination of impacts

The potential impacts that could arise as a result of the project relate to the generation and emission of contaminated waters from the project site and downstream to the Murrough SPA via the Wicklow Stream and Vartry River. The pathways for such emissions relate to groundwater and surface water pathways. An examination of the project's potential to result in adverse effects to the Murrough SPA by way of these impact pathways is provided below.

4.2.1 Hydrological emissions

The potential impacts that may arise as a result of the project relate to the discharge of contaminated surface water from the project site during the construction phase (in the event of contamination of groundwaters and surface waters) and the operation phase (in the event that polluted surface water runoff is generated). Under such scenarios polluted groundwater and/or surface water will drain from the project site to the Wicklow and Vartry River via natural flow pathways for groundwater or for surface water via the proposed surface water drainage infrastructure or during the construction of the bridge over the Wicklow River.

The discharge of any contaminated waters from the project site to the Wicklow River will in turn be conveyed downstream to Vartry River with potential to contribute to existing pressures to the water quality at the Murrough SPA. While it is noted that the uncontrolled release of contaminated surface drainage waters to the Wicklow River and downstream to the Murrough SPA is likely to be rapidly diluted and distributed within this mature and depositing watercourse, the contribution of contaminants such as hydrocarbons downstream could in turn contribute to the contamination of surface waters of the Murrough SPA. The toxic effect of such contaminants, particularly hydrocarbons, on feeding, growth, development and reproduction are known to cascade and bioaccumulate throughout the food chain affecting benthic fauna, fish, birds (such as the special conservation interest bird species of the SPA) and mammals (Ferrando, 2015). The significance of the impact of the uncontrolled release of contaminants from the project site to the Varty River and its transitional habitats and associated fauna will depend upon the frequency of the release and the concentration of contaminating materials in surface water discharging from the site. In a worst-case scenario the ongoing discharge of waters with high concentrations of contaminating substances could over time lead to the deposition of such contaminants in wetland intertidal habitats. Revitt et al. (2014) demonstrated the potential of car parking areas to result in a build-up of diffuse pollution loads on their surfaces with subsequent mobilization and direct discharge to receiving waters. In the absence of appropriate design safeguards (such as the inclusion of hydrocarbon interceptors) the discharge of such contaminated surface water from car parking area during the operation phase could represent a source of ongoing contamination to surface drainage waters being discharged to the Varty River. Accidental spillages of contaminating materials during the construction phase and/or operation phase could also represent sources of acute pollution to the Wicklow River and its conveyance downstream to the Varty river and the Murrough SPA. The exposure of fauna, including birds, to such contaminants can result in disturbance and stress effects. Upon detection of such contaminants mobile

[14] NPWS (2024) Conservation Objectives: The Murrough SPA 004186. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government
and Heritage

species such as birds and mammals may simply move away from the affected area, with the potential to result in a decline in the distribution of these species within the European Site. For sessile benthic fauna, upon which special conservation interest bird species of the SPA rely, there will be limited potential for escape and their exposure to contaminants may result in biological changes designed to aid survival. In some cases these benthic species may acclimatise to contaminated conditions, while in others the contaminants may lead to mortality and changes in the population and community structure of the rivers invertebrate population. Such an effect would have the potential to undermine the conservation status of the sections of the Murrough SPA downstream of the project site.

4.3 In combination effects

4.3.1 Plans

The Wicklow County Development Plan 2022 to 2028 represents the key plan for the management and development of lands within County Wicklow. The draft Wicklow Rathnew Local Area Plan is under preparation. The project site forms part of the lands included within the landuse zonings 'Town Centre:. The Wicklow CDP and draft Wicklow Rathnew LAP associated zonings were subject to Appropriate Assessment and it was determined that the implementation of the Plan, alone or in-combination with other plans or projects, will not have the potential to result in adverse effects to European Sites.

4.3.2 Recently approved/live planning applications

A review of Wicklow County Council's and An Bord Pleanála's online planning portals was completed in February 2025 to identify other granted or recently approved (i.e. within five years) planning applications within the vicinity of the project site. The following planning applications have been identified and an examination of the potential for this project to combine with these other projects is set out for each below. The only recent planning application in or adjacent to the site within the past three years is as follows:

24201:BDOZ88 Limited	*(1) proposed change of roof profile at side entrance from gable to mansard-style, to match existing. (2) Construction of a new single-storey extension, to enclose existing external seating area to side of existing two-storey pub. Along with associated site works' at O'Shea's Corner' Abbey St.*

The project above is the only project within or adjacent the project site for the past three years and no other projects are identified within the past three years upstream of the project site within 1km of project site. The project will not have the potential to result in direct, indirect, or secondary impacts to Natura 2000 sites arising from the above project that relates to a single storey extension and is downstream of the project. The project is not identified as resulting in cumulative significant effects to the local environment or Natura 2000 sites occurring in the wider surrounding area.

4.4 The implication of potential impacts for conservation objectives

An NIS is required to assess the potential for impacts to the integrity of a European Site, with respect to the site's structure and function and its Conservation Objectives. The structural and functional elements of a European Site to maintain the favourable conservation status of qualifying features of interest are embedded into the list of detailed SSCOs for each of the site's interest features. As such a European Sites' SSCOs represent the parameters against which a project's potential to adversely affect the integrity of a European Sites should be considered. Table 4.1 lists the Conservation Objectives attributes and targets for each of special conservation interests of the Murrough SPA and assesses the potential for the project to result in adverse effects to these attributes and targets. It is noted that the appraisal outlined in Table 4.1 has been completed without any regard to the mitigation measures that will be implemented as part of the project. These mitigation measures are considered later in Section 5 below.

TABLE 4-1 CONSIDERATION OF POTENTIAL IMPACT TO THE SITE-SPECIFIC CONSERVATION OBJECTIVES FOR FEATURES OF INTEREST OCCURRING WITHIN THE ZONE OF INFLUENCE OF THE PROJECT.

Attribute number	Attribute	Measure	Target	Consideration of likely significant effects	Mitigation required yes/no?
	The Murrough SPA				
	Red-throated Diver Gavia stellata				
1	Non-breeding population size	Non-breeding population size	Long term SPA population trend is stable or increasing	The discharge of contaminated surface waters to Varty River downstream will have the potential to contribute to existing pressures to water quality at the River and within the SPA. Any contribution to perturbed water quality at the Varty River will in turn have the potential to undermine the habitats and the associated prey resource upon which the wetland bird species of the SPA rely. Such adverse effects could, over time, result in a decline in the long-term population trend supported by the sections of the SPA surrounding the project site and discharge locations.	Yes
2	Spatial distribution	Hectares, time and intensity of use	Sufficient number of locations, area, and availability (in terms of timing and intensity of use) of suitable habitat to support the population targe	For reasons outlined for Attribute No. 1 and in Section 4.2.1 above the discharge of inadequately treated and contaminated surface water will have the potential to undermine the targets for this attribute.	Yes
3	Disturbance across the site	Intensity, frequency, timing and duration	Disturbance occurs at levels that do not significantly impact the achievement	The project is outside the SPA and no habitats are present on site that support the SCI of the Murrough SPA. No disturbance effects due to distance and absence of habitats identified.	No

Attribute number	Attribute	Measure	Target	Consideration of likely significant effects	Mitigation required yes/no?
			of targets for population trend and spatial distribution		
4	Barriers to connectivity and site use	Number, location, shape and hectares	Barriers do not significantly impact the site population's access to the SPA or other ecologically important sites outside the SPA	For reasons outlined for Attribute No 3, the project does not undermine the targets for this attrribute	No
5	Forage spatial distribution, extent and abundance	Location, hectares, and forage biomass	Sufficient number of locations, area of suitable habitat and available forage biomass to support the population target	For reasons outlined for Attribute No. 1 and in Section 4.2.1 above the discharge of inadequately treated and contaminated surface water will have the potential to undermine the targets for this attribute.	Yes
6	Roost spatial distribution and extent	Location and hectares of roosting habitat	Sufficient number of locations, area and availability of suitable roosting habitat to support the population target	For reasons outlined for Attribute No. 1 and in Section 4.2.1 above the discharge of inadequately treated and contaminated surface water will have the potential to undermine the targets for this attribute.	Yes
Greylag Goose Anser anser. Light-bellied Brent Goose Branta bernicla hrota. Wigeon Anas Penelope. Teal Anas crecca. Black-headed Gull Chroicocephalus ridibundus. Herring Gull Larus argentatus					
7	Winter population trend	Percentage change in number of individuals	Long term winter population trend is stable or increasing	For reasons outlined for Attribute No. 1 and in Section 4.2.1 above the discharge of inadequately treated and contaminated surface water will have the potential to undermine the targets for this attribute.	Yes

Attribute number	Attribute	Measure	Target	Consideration of likely significant effects	Mitigation required yes/no?
8	Winter spatial distribution	Hectares, time and intensity of use	Sufficient number of locations, area, and availability (in terms of timing and intensity of use) of suitable habitat to support the population target	For reasons outlined for Attribute No. 1 and in Section 4.2.1 above the discharge of inadequately treated and contaminated surface water will have the potential to undermine the targets for this attribute.	Yes
9	Disturbance at wintering site	Intensity, frequency, timing and duration	Disturbance occurs at levels that do not significantly impact the achievement of targets for population trend and spatial distribution	The discharges associated with the project will not have the potential to result disturbance at wintering site.	No
10	Barriers to connectivity and site use	Number, location, shape and hectares	Barriers do not significantly impact the wintering population's access to the SPA or other ecologically important sites outside the SPA	The discharges associated with the project will not have the potential to give rise to barriers to connectivity or site use. .	No
11	Forage spatial distribution, extent and abundance	Location, hectares, and forage biomass	Sufficient number of locations, area of suitable habitat and available forage biomass to support the population target	For reasons outlined for Attribute No. 1 and in Section 4.2.1 above the discharge of inadequately treated and contaminated surface water will have the potential to undermine the targets for this attribute.	Yes

Attribute number	Attribute	Measure	Target	Consideration of likely significant effects	Mitigation required yes/no?
12	Roost spatial distribution and extent	Location and hectares of roosting habitat	Sufficient number of locations, area and availability of suitable roosting habitat to support the population target	For reasons outlined for Attribute No. 1 and in Section 4.2.1 above the discharge of inadequately treated and contaminated surface water will have the potential to undermine the targets for this attribute.	Yes
13	Supporting habitat: area and quality	Hectares and quality	Sufficient area of utilisable habitat available in ecologically important sites outside the SPA	For reasons outlined for Attribute No. 1 and in Section 4.2.1 above the discharge of inadequately treated and contaminated surface water will have the potential to undermine the targets for this attribute.	Yes
Little Tern Sterna albifronsa					
14	Breeding population size	Number of Apparently Occupied Nests (AON)	Long term SPA population trend is stable or increasing	Little Tern in this SPA nest on a 400m stretch of shingle beach on the northern section of the SPA (Johnson et al., 2023). This is upstream of the project site and not within the zone of influence of the project.	No
15	Productivity rate	Number of fledged young per AON	Sufficient to maintain a stable or increasing population	For reasons outlined for Attribute No. 14 no likely significant effects are identified for Little Tern..	No
16	Distribution: extent of available nesting options within the SPA	Numbers and spatial distribution	Sufficient availability of suitable nesting sites throughout the SPA to maintain a stable or increasing population	For reasons outlined for Attribute No. 14 no likely significant effects are identified for Little Tern..	No
17	Forage spatial distribution, extent, abundance and availability	Location and hectares, and forage biomass	Sufficient number of locations, area of suitable habitat and available forage biomass to support the	For reasons outlined for Attribute No. 14 no likely significant effects are identified for Little Tern..	No

Attribute number	Attribute	Measure	Target	Consideration of likely significant effects	Mitigation required yes/no?
			population target		
18	Disturbance at the breeding site	Intensity, frequency, timing and duration	Disturbance occurs at levels that do not significantly impact on birds at the breeding site	For reasons outlined for Attribute No. 14 no likely significant effects are identified for Little Tern..	No
19	Disturbance at areas ecologically connected to the colony	Intensity, frequency, timing and duration	Disturbance occurs at levels that do not significantly impact on breeding population	For reasons outlined for Attribute No. 14 no likely significant effects are identified for Little Tern..	No
20	Barriers to connectivity	Number; location; shape; area (hectares)	No significant increase	For reasons outlined for Attribute No. 14 no likely significant effects are identified for Little Tern..	No
Wetlands					
21	Wetland habitat area	Hectares	No significant loss to wetland habitat within the SPA, other than that occurring from natural patterns of variation	For reasons outlined for Attribute No. 1 and in Section 4.2.1 above the discharge of inadequately treated and contaminated surface water will have the potential to undermine the targets for this attribute.	Yes
22	Wetland habitat quality and functioning	Quality and function of the wetland habitat	No significant impact on the quality or functioning of the wetland habitat within the SPA, other than that occurring from natural patterns of variation	For reasons outlined for Attribute No. 1 and in Section 4.2.1 above the discharge of inadequately treated and contaminated surface water will have the potential to undermine the targets for this attribute.	Yes

5 A description and evaluation of mitigation measures

Targeted mitigation measures are provided to safeguard against the potential effects of the project to the water quality of the Wicklow River, the Vartry River downstream during the construction phase and operation phase of the project. All operation phase mitigation measures shall be required to be implemented by site management during the operation phase of the proposed development.

All construction works, relating to the activities and construction sequence outlined in Section 2 above, will be undertaken in accordance with the following:

- Inland Fisheries Ireland's *Requirements for the Protection of Fisheries Habitat during Construction and Development Works.*
- GE-ENV-01104 The Management of Invasive Alien Plant Species on National Roads – Standard (TII)
- GE-ENV-01105 The Management of Invasive Alien Plant Species on National Roads – Technical Guidance (TII)
- CIRIA (Construction Industry Research and Information Association) Guidance Documents
    - Control of water pollution from construction sites (C532)
    - Control of water pollution from linear construction projects: Technical Guidance (C648)
    - Control of water pollution from linear construction projects: Site Guide (C649)
    - Environmental Good Practice on Site (C692)
    - Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes
    - Guidelines for the Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads
    - Guidelines for the Protection and Preservation of Trees, Hedgerows and Scrub Prior to, during and Post Construction of National Road Schemes.

5.1 Site Operations

The construction phase of the project will adhere to best practice guidance, particularly the CIRIA guidance document C532 Control of water pollution from construction sites. During site operations key requirements for control of pollution risk will include measures that will be put in place for the safe storage of potentially polluting materials and the collection, filtration and treatment of surface water runoff prior to discharge from the site.

Disposal of Wastewater from Site Discharge from any vehicle wheel wash areas is to be directed to on-site settlement ponds, debris and sediment captured by vehicle wheel washes are to be disposed off-site at a licensed facility. Foul drainage discharge from the construction compound will be tankered off site to a licensed facility until a connection to the public foul drainage network has been established.

The construction management of the site will take account of the recommendations of the CIRIA guides *Control of Water Pollution from Construction Sites* (2001) and *Control of Water Pollution from Linear Construction Projects* (2006) and Inland Fisheries Ireland's (IFI's) *Requirements for the Protection of Fisheries Habitat during Construction and Development Works*.

- Chemical, fuel and oil stores will be sited on impervious bases and within a secured bund of 110% of the storage capacity, within the lay down area;
- As fuels and oils are classed as hazardous materials, any on-site storage of fuel/oil, all storage tanks and all draw-off points will be bunded (or stored in double-skinned tanks) and located in the dedicated site compound. Provided that these requirements are adhered to and site crew are trained in the appropriate refuelling techniques, it is not expected that there will be any fuel/oil wastage at the site.
- Oil and fuel stored on site for construction should be stored in designated areas. These areas shall be bunded and should be located away from surface water drainage and features.
- The integrity and water tightness of all the bunding structures and their resistance to penetration by water or other materials stored therein shall also be tested and demonstrated.
- All fuel oil fill areas will have an appropriate spill apron.
- Vehicles and refuelling – standing machinery will have drip trays placed underneath to prevent oil and fuel leaks causing pollution. Where practicable, refuelling of vehicles and machinery will be carried out on an impermeable surface in designated areas, well away from any surface watercourse and surface water drains;
- Maintenance – maintenance to construction plant will not be permitted on site, unless vehicles have broken down necessitating maintenance at the point of breakdown. All necessary pollution prevention measures will be put in place prior to commencement of maintenance in this instance;
- Concrete - Wet concrete operations would not be carried out within watercourses or adjacent to watercourses or surface drains. Runoff from wastewaters or contaminated storm water will be directed to drains installed as part of the surface water management plan;
- Weather conditions and seasonal weather variations will also be taken account of when planning excavations, with an objective of minimizing soil erosion.
- Concrete batching will take place off site or in a designed area with an impermeable surface.
- Concrete wash down and wash out of concrete trucks will take place off site or in an appropriate facility.
- A designated impermeable cement washout area will be provided.

- Any in-situ concrete work to be lined and areas bunded (where possible) to stop any accidental spillage.
- All new infrastructure is to be installed and constructed to the relevant codes of practice and guidelines.
- All surface water infrastructure is to be pressure tested by an approved method during the construction phase and prior to connection to the public networks, all in accordance with Local Authority Requirements.
- Connections to the public network are be carried out to the approval and / or under the supervision of the Local Authority prior to commissioning.
- All new sewers are to be inspected by CCTV survey post construction; to identify any possible physical defects for rectification prior to operational phase.
- Care will be required for the environmental management of the site to ensure that no potential contamination issues are experienced.
- Mess, sanitation and welfare facilities will be required during construction and will be located at the construction compound. Foul effluent will make use of chemical facilities with periodic removal for offsite disposal.
- Run-off water containing silt will be contained on-site via settlement tanks and treated to ensure adequate silt removal. Silt reduction measures on site will include a combination of silt fencing, settlement measures (silt traps, silt sacks and settlement tanks / ponds).
- 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. Soil from works will be stored away from existing drainage features to avoid any potential impact.
- All excavated materials will be visually assessed 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 possible contaminants in order 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 disposed of by a licensed waste disposal contractor.

Surface water generated at the project site will be discharged via the operation phase surface water management system as described in *Section 2.1.1 Surface Water* above. The surface water management system has been designed to capture surface water generated at the project site and discharge water at greenfield runoff rates. A suitable level of surface water attenuation has been catered for within the management system. Following attenuation and prior to release all surface water will be treated via a combine silt and hydrocarbon interceptor so that only treated surface water is discharged to the receiving stream and storm water network.

The provision of these design features will ensure that surface water emitted from the project site during the operation phase is adequately treated and will eliminate any risk of polluted surface water being discharged from the project site during operation.

5.1.1 Measures to avoid accidental spills and leaks

All oils, fuels, paints and other chemicals will be stored in a secure bunded construction hardstand area located at the site compound. Refuelling and servicing of construction machinery will take place in a designated hardstand area which is also remote from any surface water features and ditches (when not possible to carry out such activities off site). A response procedure will be put in place to deal with any accidental pollution events and spillage kits will be available and construction staff will be familiar with the emergency procedures and use of the equipment

Concrete batching will take place off site, wash down and wash out of concrete trucks will take place off site and any excess concrete is not to be disposed of on site. Pumped concrete will be monitored to ensure there is no accidental discharge. Mixer washings are not to be discharged into surface water drains.

5.1.2 Rfi item 5a:.

Installation and Environmental Protection

In accordance with the manufacturer's specification and environmental best practices:

● Foundation: The headwall unit will be bedded on a minimum of 100mm semi-dry concrete.

● Silt Control: During construction, the outfall area will be isolated using coffer dams or sandbagging to allow for "dry" installation. This prevents the discharge of silt or wet concrete into the Marlton Stream, protecting the downstream Murrough SPA and SAC

Stormwater Management and Flood Risk

● Catchment Analysis: The catchment area for this 375mm public storm sewer is located entirely outside the application site.

● Discharge Rates: Because the contributing catchment remains unchanged, there is no increase in the peak discharge rate or volume entering the Marlton Stream. Consequently, this diversion has no hydraulic impact on the site-specific Stormwater Management Plan.

● Flood Risk: The impact of this outfall and the regional hydrology have been fully considered within the Flood Risk Assessment (FRA) submitted by IE Consulting Engineers

5.1.3 Measures to avoid sedimentation and erosion

The adjacent watercourses/groundwater need to be protected from sedimentation and erosion due to direct surface water runoff generated onsite during the construction phase. To prevent this from occurring surface water discharge from site will be managed and controlled for the duration of the construction works until the permanently attenuated surface water drainage system of the proposed site is complete. A temporary drainage system shall be installed prior to the commencement of the construction works to collect surface water runoff by the site during construction. The temporary surface water management facility will include throttle runoff and allow suspended solids to be settled out and removed before being

discharged in a control manner to the agreed outfall. All inlets to the cascading settling basins will be riprapped to prevent scour and erosion in the vicinity.

All wastewater generated during the construction phase will be directed to the Irish Water sewer network and then to the existing Irish Water Wastewater Treatment Plant (WWTP).

5.1.4 Ecological Clerk of Works

An appropriately qualified Environmental/Ecological Clerk of Works (ECoW) will be employed for the duration of the Construction Contract. The ECoW must be a member of the Chartered Institute of Ecology and Environmental Management (CIEEM) or equivalent body.

The ecologist performing the ECoW role will attend the site at monthly intervals and during the preparation of works and installation of bridge to check that all works are being completed to the appropriate standards. This will form a key element in the delivery of the environmental protection measures as listed above at project stage.

5.1.5 Operation Phase

A description of the proposed surface water management system to be provided for the operation phase of the project has been provided at Section 2.1.1 above. The implementation of the surface water management system will ensure that all surface water generated at the site throughout the operation phase will be adequately managed and treated and will ensure no pollution threat to the Wicklow River, Varty River downstream and the Murrough SPA. All wastewater generated during the operation phase will be directed to the Irish Water sewer network and then to the existing Irish Water Wastewater Treatment Plant (WWTP) as described in Section 2.1.2

6 CONCLUSION

This Natura Impact Statement presents an analysis of the potential for the project to result in adverse impacts to one Special Protection Area and its special conservation interests as set out in Section 1 and Section 4 above. An evaluation of the potential impacts that could arise as a result of the project to these special conservation interests has been completed.

During the evaluation of potential impacts associated with the Project it was found that the Project will have the potential to undermine the conservation objectives of the Murrough SPA and the relevant special conservation interests occurring within the zone of influence of the development.

A range of mitigation measures have been prescribed that, once implemented in full, will remove the risk of adverse effects posed by the proposed development to these special conservation interests. **These have been updated to reflect the response to RFI Item 5a prepared by Cora Consulting Engineers as shown in Section 5.1.2[15].**

Based upon the information provided in this **updated** NIS, it is the considered view of the authors of this NIS that it can be concluded by Wicklow County Council that the project will not, alone or in-combination with other plans or projects, result in adverse effects to the integrity and conservation

[15] Technical Note: Response to Wicklow County Council RFI Item 5(a) Cora Consulting Engineers, 2026

status of The Murrough SPA in view of their Conservation Objectives and on the basis of best scientific evidence and there is no reasonable scientific doubt as to that conclusion.

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