



Appropriate Assessment Screening Report & Natura Impact Statement

Housing Development

at

Glean Caoin,

Borrisoleigh

Co. Tipperary

Prepared for:

Tipperary County Council

Prepared by:

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1. Introduction

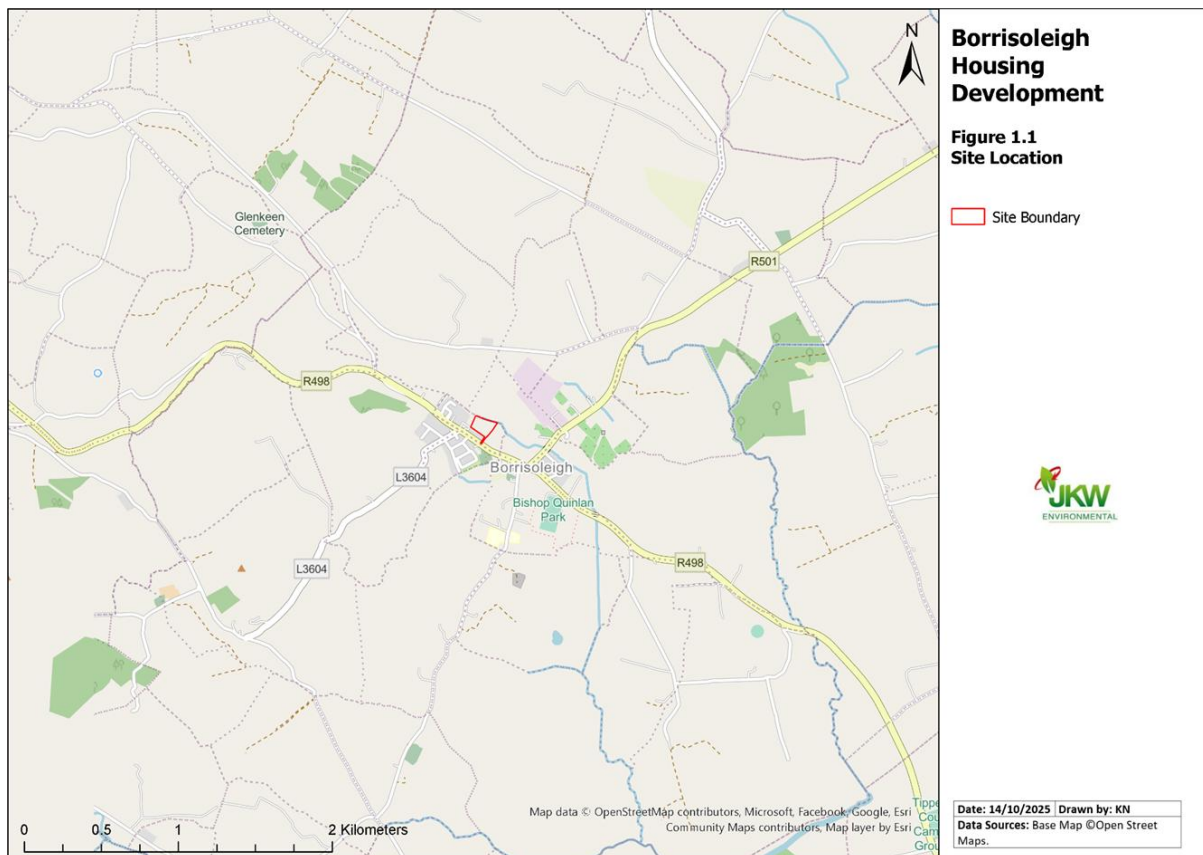
1.1 Background

This document has been prepared by JKW Environmental Ltd to allow the relevant competent authority to conduct an Appropriate Assessment in accordance with the requirements of Article 6(3) of the Habitats Directive (Directive 92/43/EEC).

Screening for Appropriate Assessment is required under Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive). Where it cannot be excluded that a project or plan, either alone or in combination with other projects or plans, would have a significant effect on a European Site then same shall be subject to an appropriate assessment of its implications for the site in view of the site's conservation objectives.

The current project is not directly connected with, or necessary for, the management of any European Site consequently the project has been subject to the Appropriate Assessment Screening process.

The proposed works site location (hereinafter referred to as “the Site”) is shown in Figures 1.1 & 1.2.





1.2 Characteristics of Proposed Development

The proposed development comprises the construction of 28 no. new dwellings consisting of 8 No. 1-Bed apartments in 2 No. two-storey blocks (4 No. at Ground level & 4 No. at First Level), 8 No. 1-Bed single storey houses, 4 No. 2-Bed two storey houses, 6 No. 3-Bed two storey houses and 2 No. 4-Bed two storey houses and new entrance, access roadway, bin storage, car-parking, pedestrian routes, landscaping, boundary treatments, drainage connection, related ancillary services and all associated site works on a 1.42 hectare greenfield site located at Glean Caoin, Borrisoleigh, Co. Tipperary.

The site lies within the ownership of Tipperary County Council and occupies the western portion of a larger 2.66-hectare Council-owned landholding. The site is bounded by the river to the north, private residential gardens to the south, agricultural lands to the east (also Council-owned), and a high boundary block wall separating it from a service station and associated parking area to the west. The site rises gently towards its centre and falls away towards the river.

The development will consist of 28 no. residential units and all associated site and infrastructural works. The proposed unit mix comprises:

- 8 No. 1 Bed apartments in 2 No. two storey blocks (4 No. at Ground level & 4 No. at First Level)
- 8 No. 1-Bed single storey houses
- 4 No. 2-Bed two storey houses
- 6 No. 3-Bed two storey houses
- 2 No. 4-Bed two storey houses

The development will also include a new estate pedestrian and vehicle access road, curtilage and visitor car-parking spaces, associated boundary treatments and landscaping, public amenity open spaces, site surface water treatment management, utilities, service connections including all associated site works. All dwellings will have direct own-door access and will be designed in accordance with the Quality Housing for Sustainable Communities Guidelines and Sustainable Urban Housing: Design Standards for New Apartments – Guidelines for Planning Authorities. The design will also reflect the principles of durable and low-maintenance materials, energy efficiency, and high architectural quality as required by Tipperary County Council.

Associated site works include new internal access roads, footpaths, car parking, public lighting, open-space landscaping, and utility connections. A new public open-space area will be provided centrally within the scheme, and a dedicated riverside walkway will be constructed along the northern site boundary adjacent to the existing river channel. The walkway will provide a public recreational amenity and will be designed with a minimum 5 m vegetated buffer between all constructed elements and the top of the riverbank to protect the riparian zone and maintain water quality. This buffer will be retained as natural grass and native riparian vegetation, with low-level fencing or bollards used to define the walkway route where necessary. No works will encroach into the river channel or the retained 5 m setback.

Foul drainage will connect to existing public networks in the locality, subject to confirmation of capacity by Uisce Éireann. A pre-connection enquiry (PCE) was submitted by Tipperary County Council in February 2025, with suitable capacity expected in the existing network. Surface water drainage will incorporate Sustainable Drainage System (SuDS) measures to control and treat runoff prior to discharge to the Borrisoleigh stream.

Utilities including water, electricity, telecommunications, and broadband are available in the vicinity. Existing overhead ESB lines are located along the northern and western site boundaries, and any required diversions will be carried out in consultation with ESB Networks.

The proposed development will also include all associated civil works, public lighting, signage, site landscaping, boundary treatments, and ancillary infrastructure required for a fully serviced residential scheme.

The development will be accessed from the R498 via the existing entrance. The scheme has been designed to provide a safe and accessible environment for residents and visitors while integrating with the surrounding urban fabric of Borrisoleigh.

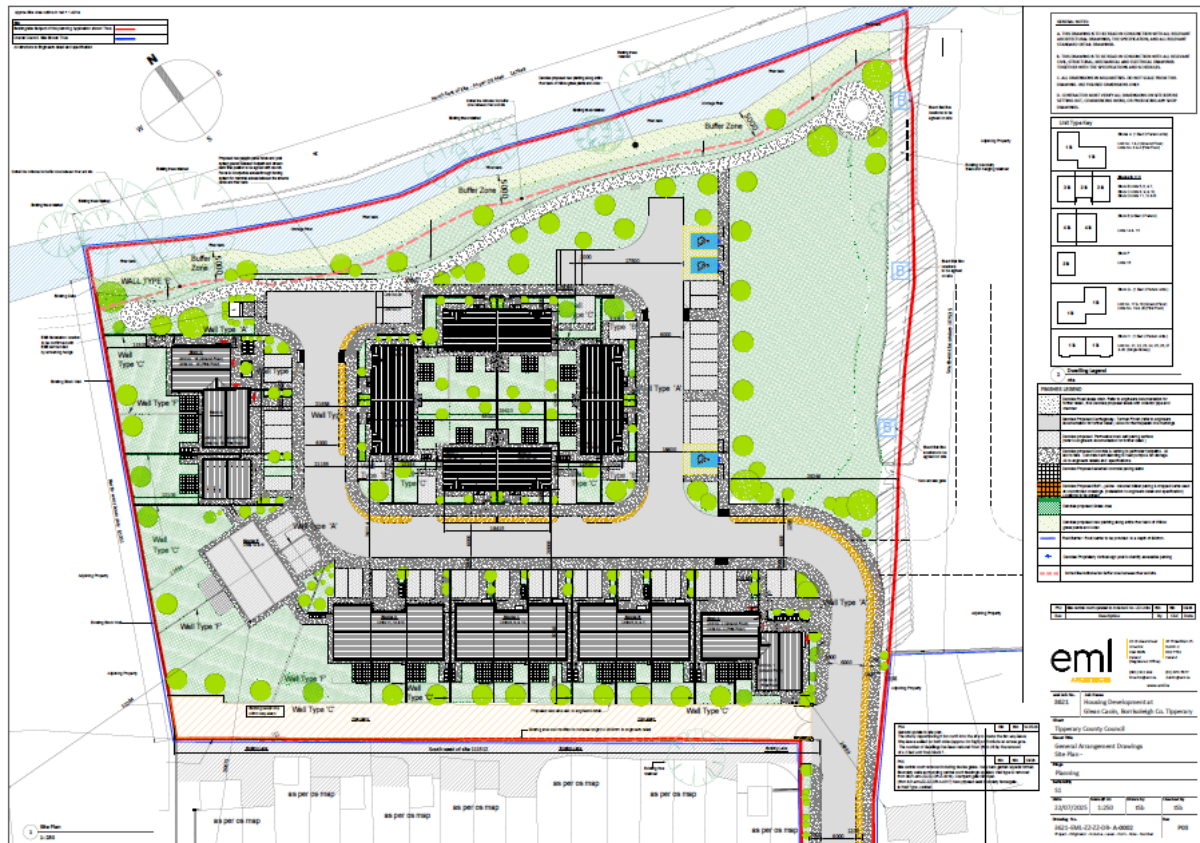


Figure 1.3: Site Layout

1.2.1 Site Investigations

A detailed geotechnical and environmental site investigation was undertaken by Site Investigations Ltd in 2025 to inform the design and construction of the proposed development and to assess subsurface, groundwater, and environmental conditions across the 1.42-hectare site. The works included the excavation of ten trial pits, two cable percussive boreholes, one rotary corehole, and one soakaway test carried out in accordance with BS 5930:2015 and Eurocode 7 standards.

Ground conditions across the site generally comprised topsoil overlying firm to stiff slightly sandy, gravelly, silty clay and silt, underlain by gravelly glacial deposits. Bedrock was encountered at approximately 3.2 m below ground level and is described as laminated mudstone and claystone with interbedded sandstone belonging to the Kiltorcan Formation. Localised made ground was recorded near the site boundaries, consisting mainly of gravelly clay with occasional brick and stone fragments; this material will be removed or reused as engineered fill where suitable. The shallow soils are well drained and of adequate bearing strength for standard housing construction.

Groundwater was encountered at shallow depth, between approximately 1.5 m and 1.7 m below ground level, with moderate seepage observed within the gravelly horizons. The strata show moderate permeability, and infiltration testing confirmed their suitability for soakaway drainage. The site gently slopes towards the north where it adjoins a river, and it is likely that the shallow groundwater regime is in hydraulic continuity with this surface water feature. Accordingly,

construction practices will incorporate best-practice controls to prevent sediment or hydrocarbon ingress to the adjacent river.

A soakaway test undertaken in accordance with BRE Digest 365 recorded an infiltration rate of 8.97×10^{-5} m/s, demonstrating that the subsoils are appropriate for Sustainable Drainage System (SuDS) measures such as infiltration trenches or soak pits to manage surface water runoff. California Bearing Ratio (CBR) tests returned values of 13.2 % and 15.7 %, indicating that the subgrade is suitable for shallow foundations and standard pavement design. Foundations will generally consist of strip footings founded in firm clay or engineered granular fill at a minimum depth of 0.5 m below ground level to avoid frost effects, and no piling is anticipated.

Chemical analysis of soil samples confirmed that all tested materials are inert and non-hazardous, with no exceedances of Waste Acceptance Criteria for inert waste. The soils recorded neutral to slightly alkaline pH (6.8–8.0) and low sulphate concentrations, corresponding to a DS-1 classification under BRE SD1:2005. No asbestos fibres, hydrocarbons, or heavy-metal contamination were detected. The material is therefore suitable for reuse on site or, if exported, can be disposed of as inert waste in accordance with the Waste Management Acts.

The Environmental Protection Agency's radon risk mapping identifies the site as lying partly within a High Radon Area, where one in five homes may exceed the reference level; standard radon protection measures will therefore be incorporated into all dwellings in compliance with Technical Guidance Document C of the Building Regulations. No ground gas risk was identified, as no significant made ground or organic deposits were encountered.

In summary, the site investigations confirm that the soils are clean, stable, and possess adequate bearing capacity and infiltration potential. The site is geotechnically suitable for the proposed development, and no environmental or contamination constraints were identified that would preclude construction, subject to standard engineering design and the implementation of good construction and environmental management practices.

1.2.2 Drainage and SuDS Proposals

Surface water from the proposed housing development at Glean Caoin, Borrisoleigh will be managed through a fully attenuated drainage network designed in accordance with Uisce Éireann Code of Practice requirements and Tipperary County Council standards. The drainage layout has been prepared by WRD Consulting Engineers (Drawing Ref. G09900-WRD-EX-ZZ-DR-C-50001).

The proposed surface water drainage system comprises a network of conventional piped drains collecting runoff from roofs, roads and hardstanding areas. Surface water will be conveyed through a series of Sustainable Drainage Systems (SuDS) features prior to controlled discharge to the adjacent Borrisoleigh Stream. SuDS measures incorporated into the design include permeable paving within designated parking and hardstanding areas, swales and a below-ground attenuation system with a minimum storage volume of approximately 335.4m^3 . These measures will attenuate runoff generated during storm events and reduce the rate of discharge from the site.

The attenuated outflow from the site will be restricted through a hydrobrake flow control device, or equivalent approved system, to a maximum discharge rate of 4.5l/s prior to discharge to the Borrisoleigh Stream. This design ensures that post-development runoff rates will not exceed existing greenfield runoff conditions.

watercourse and strengthening the structural diversity of habitats along the river edge. Alder is well suited to riparian conditions and will contribute to long-term habitat value. The enhancement planting represents a net ecological gain in comparison to the existing condition of the riverbank.

A 1200 mm paladin panel fence is proposed between the footpath and the stream bank, with the final position to be agreed with the local authority. Importantly, the fencing system is designed to incorporate mammal access points between the scheme lands and the riverbank, thereby maintaining permeability for small mammals and preventing habitat severance along the corridor.

Throughout the development, a mix of native tree species is proposed including *Betula pubescens* (Downy Birch), *Betula pendula* (Silver Birch), *Prunus avium* (Wild Cherry), *Sorbus aucuparia* (Rowan), and *Alnus glutinosa* (Common Alder). The use of predominantly native species will enhance biodiversity value by providing nectar, pollen and berry resources for invertebrates and birds while also contributing to seasonal variation and visual amenity.

Shrub planting within communal and private garden areas includes species such as *Berberis darwinii*, *Spiraea cinerea* 'Grefsheim', *Viburnum tinus* and *Escallonia* 'Red Dream'. While some of these are ornamental rather than native species, they will provide year-round structure and additional nectar resources. The integration of shrub planting with boundary treatments and front garden walls will soften built form and enhance the overall streetscape.

Extensive grassed areas are proposed within open space and along the river corridor. These areas provide visual amenity and informal recreation space. There is potential, subject to detailed management proposals, for selected peripheral or riparian grass areas to be managed under a reduced mowing regime to increase structural diversity and biodiversity value.

The retained riparian corridor will continue to function as a dark corridor for commuting and foraging bats. Existing mature riverside vegetation, the retained buffer zone and the use of low-spill luminaires with integrated louvres will minimise artificial light intrusion into the river corridor. Consequently, the proposed lighting scheme is not expected to result in significant disturbance, habitat fragmentation or barrier effects for bats, otter or other nocturnal fauna associated with the Borrisoleigh Stream corridor.

The proposed lighting design is therefore considered to accord with current best practice guidance for bats and biodiversity and is not predicted to result in adverse effects on the ecological function of the riparian corridor.

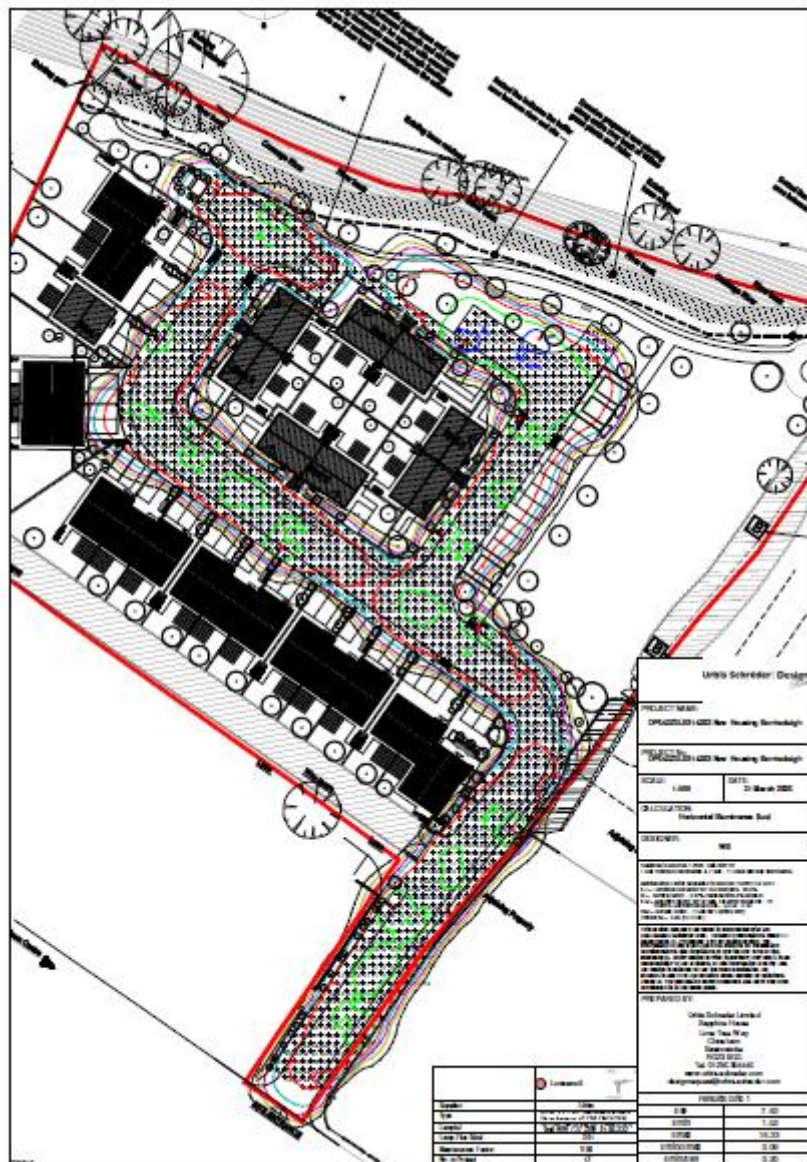


Figure 1.6: Proposed Lighting Plan

2. Relevant Legislation

European Nature Directives (Habitats and Birds)

The Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora) forms the basis for the designation of Special Areas of Conservation. Similarly, Special Protection Areas are classified under the Birds Directive (Council Directive 2009/147/EEC on the Conservation of Wild Birds). Collectively, Special Areas of Conservation (SAC) and Special Protection Areas (SPA) are referred to as the Natura 2000 network. In general terms, they are considered to be of exceptional importance for rare, endangered or vulnerable habitats and species within the European Community.

Under Article 6(3) of the Habitats Directive an appropriate assessment must be undertaken for any plan or project that is likely to have a significant effect on the conservation objectives of a Natura 2000 site. An appropriate assessment is an evaluation of the potential impacts of a plan or project on the conservation objectives of a Natura 2000 site¹, and the development, where necessary, of mitigation or avoidance measures to preclude negative effects.

Article 6, paragraph 3 of the EC Habitats Directive 92/43/EEC (“the Habitats Directive”) states that: *“Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public”*

The Habitats Directive is transposed into Irish law by the EC (Birds and Natural Habitats) Regulations 2011 – 2021. Part XAB of the Planning and Development Acts 2000 to 2024 transposes Article 6(3) and 6(4) of the Habitats Directive in respect of land use plans and proposed projects requiring development consent.

EC (Birds and Natural Habitats) Regulations 2011 to 2021 – Part 5

Part 5 of the EC (Birds and Natural Habitats) Regulations 2011 – 2021 sets out the circumstances under which an ‘appropriate assessment’ is required. Section 42(1) requires that *‘a screening for Appropriate Assessment of a plan or project for which an application for consent is received, or which a public authority wishes to undertake or adopt, and which is not directly connected with or necessary to the management of the site as a European Site, shall be carried out by the public authority to assess, in view of best scientific knowledge and in view of the conservation objectives of the site, if that plan or project, individually or in combination with other plans or projects is likely to have a significant effect on the European site.’* Section 42(2) expands on this, stipulating that a public authority must carry out a screening for Appropriate Assessment before consent for a plan or project is given, or a decision to undertake or adopt a plan or project is taken. To assist a public authority to discharge its duty in this respect, Section 42(3)(a) gives them the authority to direct a third party to provide a Natura Impact Statement and Section 42(3)(b) allows them to request any

¹ Also referred to as European Sites in the Planning and Development Acts 2000 – 2021.

additional information that is considered necessary for the purposes of undertaking a screening assessment.

Section 42(6) requires that ‘the public authority shall determine that an Appropriate Assessment of a plan or project is required where the plan or project is not directly connected with or necessary to the management of the site as a European Site and if it cannot be excluded, on the basis of objective scientific information following screening under this Regulation, that the plan or project, individually or in combination with other plans or projects, will have a significant effect on a European site’.

Planning and Development Acts 2000 to 2024 - PART XAB

The relevant sections of Part XAB of the Planning and Development Acts 2000 – 2024 are set out below.

Screening for appropriate assessment

Section 177U requires that— (1) A screening for appropriate assessment of a draft Land use plan or application for consent for proposed project shall be carried out by the competent authority to assess, in view of best scientific knowledge, if that Land use plan or proposed project, individually or in combination with another plan or project is likely to have a significant effect on the European site.

(2) A competent authority shall carry out a screening for appropriate assessment under subsection (1) before—

(a) a Land use plan is made including, where appropriate, before a decision on appeal in relation to a draft strategic development zone is made, or

(b) consent for a proposed project is given.

(3) In carrying out screening for appropriate assessment of a proposed project a competent authority may request such information from the applicant as it may consider necessary to enable it to carry out that screening, and may consult with such persons as it considers appropriate and where the applicant does not provide the information within the period specified, or any further period as may be specified by the authority, the application for consent for the proposed project shall be deemed to be withdrawn.

(4) The competent authority shall determine that an appropriate assessment of a draft Land use plan or a proposed project, as the case may be, is required if it cannot be excluded, on the basis of objective information, that the draft Land use plan or proposed project, individually or in combination with other plans or projects, will have a significant effect on a European site.

(5) The competent authority shall determine that an appropriate assessment of a draft Land use plan or a proposed project, as the case may be, is not required if it can be excluded, on the basis of objective information, that the draft Land use plan or proposed project, individually or in combination with other plans or projects, will have a significant effect on a European site.

(6) (a) Where, in relation to a proposed project, a competent authority makes a determination that an appropriate assessment is required, the competent authority shall give notice of the determination, including reasons for the determination of the competent authority, to the following—

- (i) the applicant,
- (ii) if appropriate, any person who made submissions or observations in relation to the application to the competent authority, or
- (iii) if appropriate, any party to an appeal or referral.

(b) Where a competent authority has determined that an appropriate assessment is required in respect of a proposed project it may direct in the notice issued under paragraph (a) that a Natura impact statement is required.

(c) Paragraph (a) shall not apply in a case where the application for consent for the proposed project was accompanied by a Natura impact statement.

(7) A competent authority shall, as soon as may be after making the Land use plan or making a decision in relation to the application for consent for proposed project, make available for inspection by members of the public during office hours at the offices of the authority, and may also publish on the internet —

(a) any determination that it makes in relation to a draft Land use plan under subsection (4) or (5) as the case may be, and reasons for that determination, and

(b) any notice that it issues under subsection (6) in relation to a proposed project.

(8) In this section ‘consent for proposed project’ means, as appropriate —

(a) a grant of permission,

(b) a decision of the Board to grant permission on a planning application or an appeal,

(c) consent for development under Part IX,

(d) approval for development that may be carried out by a local authority under Part X or Part XAB or development that may be carried out under Part XI,

(e) approval for development on the foreshore under Part XV,

(f) approval for development under section 43 of the Act of 2001,

(g) approval for development under section 51 of the Roads Act 1993, or

(h) a substitute consent under Part XA.

(9) In deciding upon a declaration or a referral under section 5 of this Act a planning authority or the Board, as the case may be, shall where appropriate, conduct a screening for appropriate assessment in accordance with the provisions of this section.

(10) In deciding upon an application under section 176A or a determination review or an application referral under section 176C, a planning authority or the Board, as the case may be, shall, where appropriate, conduct a screening for appropriate assessment in accordance with the provisions of this section.

Natura impact report and natura impact statement

Section 177T states that— (1) (a) A Natura impact report means a statement for the purposes of Article 6 of the Habitats Directive, of the implications of a Land use plan, on its own or in

combination with other plans or projects, for one or more than one European site, in view of the conservation objectives of the site or sites.

(b) A Natura impact statement means a statement, for the purposes of Article 6 of the Habitats Directive, of the implications of a proposed development, on its own or in combination with other plans or projects, for one or more than on European site, in view of the conservation objectives of the site or sites.

(2) Without prejudice to the generality of subsection (1), a Natura impact report or a Natura impact statement, as the case may be, shall include a report of a scientific examination of evidence and data, carried out by competent persons to identify and classify any implications for one or more than one European site in view of the conservation objectives of the site or sites.

(3) As respects a draft National Planning Framework, the Government shall prepare a Natura impact report in relation to a draft Land use plan and the following bodies shall also prepare a Natura impact report in relation to a draft Land use plan—

(a) as respects a draft regional spatial and economic strategy, the regional assembly for whose area the draft strategy is made,

(aa) as respects a draft National Planning Framework, the Minister

(b) as respects a draft planning scheme in respect of all or any part of a strategic development zone, the planning authority (which term shall be construed in accordance with section 168(5)) for whose area the draft scheme is made,

(c) as respects a draft development plan or draft variation of a development plan, the planning authority for whose area the draft plan or draft variation is made, and

(d) as respects a draft local area plan, the planning authority in whose area the local area concerned is situate.

(4) The applicant for consent for proposed development may, or if directed in accordance with subsection (5) by a competent authority, shall furnish a Natura impact statement to the competent authority in relation to the proposed development.

(5) At any time following an application for consent for proposed development a competent authority may give a notice in writing to the applicant concerned, directing him or her to furnish a Natura impact statement

(6) Where an applicant for consent for proposed development who, having been directed in accordance with subsection (5), fails to furnish a Natura impact statement within the period specified in the notice, or any further period as may be specified by the competent authority, the application for consent for the proposed development shall be deemed to be withdrawn.

(7) (a) Without prejudice to subsection (1) a Natura impact report or a Natura impact statement shall include all information prescribed by regulations under section 177AD.

(b) Where appropriate, a Natura impact report or a Natura impact statement shall include such other information or data as the competent authority considers necessary to enable it to ascertain if the draft Land use plan or proposed development will not affect the integrity of the site.

3. Methods

3.1 Desk Study

A desk study was carried out to collate information available on Natura 2000 sites within the potential zone of influence of the proposed development. The Site and the surrounding area were viewed using satellite imagery². Tipperary County Council planning portal³ was accessed for information on other permitted and proposed development within the zone of influence of the project. The National Parks and Wildlife Service (NPWS) website⁴ was accessed for information on Natura 2000 sites. Environmental Protection Agency (EPA) Maps⁵ was accessed for other environmental information relevant to preparation of this report.

The following documents were referenced during the desk-top study to inform the Appropriate Assessment and the baseline ecology information:

- Online data available on European sites and habitats/species as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie, including conservation objectives documents
- Online data available on protected species as held by the National Biodiversity Data Centre (NBDC) from www.biodiversityireland.ie, specifically related to the records recorded within the 2 km grid square (ITM) – S06I.
- Birds of Conservation Concern in Ireland (Gilbert et al, 2021), available at <https://birdwatchireland.ie/birds-of-conservation-concern-in-ireland/>
- Information on the surface water network and surface water quality in the area available from www.epa.ie
- Information on soils, geology and hydrogeology in the area available from the Geological Survey Ireland (GSI) online Spatial Resources service. Available from <https://www.gsi.ie/en-ie/data-and-maps/Pages/Groundwater.aspx>
- Ordnance Survey of Ireland mapping and aerial photography available from <https://tailte.ie/>
- GeoHive online mapping (<https://geohive.ie/index.html>)
- Tipperary County Development Plan 2022-2028

3.2 Field Survey

A multidisciplinary ecological walkover survey of the site was conducted on the on the 11th of August 2025 in line with NRA (2009) guidelines (Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes) and the methodology described in Best Practice Guidance for Habitat Survey and Mapping⁶. Habitats within the site boundary were classified using 'A Guide to Habitats in Ireland' (Fossitt, 2000)⁷. The dominant plant species present in each habitat were recorded during the field surveys and this is considered sufficient to allow accurate classification of the habitats present.

² www.google.ie/maps

³ <https://www.tipperarycoco.ie/planning-and-building>

⁴ <https://www.npws.ie/protected-sites>

⁵ <https://gis.epa.ie/>

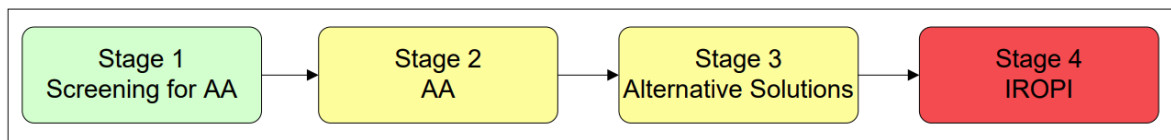
⁶ Smith, G.F., O'Donoghue, P., O'Hara, K. & Delaney, E. (2011) Best Practice Guidance for Habitat Survey and Mapping. The Heritage Council Church Lane, Kilkenny, Ireland.

⁷ Fossitt, J.A. (2000) A Guide to Habitats in Ireland. Heritage Council, Kilkenny

Incidental sightings or evidence of birds, mammals or amphibians were also noted during the Site survey. The habitats within the study area were evaluated for their potential to support protected species. The study area was searched for use of the area by mammals, features such as scat / latrines, feeding remains and hair, were noted where they occur within the study area. The field survey was carried out during suitable weather conditions and the Site was easily accessible.

3.3 Appropriate Assessment Process

The Department of the Environment Heritage and Local Government Guidelines (DELHG, 2009), outlines the European Commission's methodological guidance (EC, 2002). This guidance promotes a four-stage process in completing an AA. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required. Throughout the process, the precautionary principle must be applied, so that any uncertainties do not result in adverse impacts on a site. These guidance documents identify a staged approach to conducting an AA, as shown below.



Stage 1: Screening – Initial screening is the process that addresses and records the reasoning and conclusions in relation to the first two tests of Article 6(3):

- whether a plan or project is directly connected to or necessary for the management of the site, and
- whether a plan or project, alone or in combination with other plans and projects, is likely to have significant effects on a Natura 2000 site in view of its conservation objectives.

For those sites where potential adverse impacts are identified, either alone or in combination with other plans or projects, further assessment is necessary to determine if the proposals will have an adverse impact on the integrity of a European designated site, in view of the site's conservation objectives (i.e. the process proceeds to Stage 2).

Stage 2: Appropriate Assessment - This stage requires a more in-depth evaluation of the plan or project, and the potential direct and indirect impacts of them on the integrity and interest features of the European designated site(s), alone and in-combination with other plans and projects, taking into account the site's structure, function and conservation objectives. Where required, mitigation or avoidance measures will be suggested.

The competent authority can only agree to the plan or project after having ascertained that it will not adversely affect the integrity of the site(s) concerned. If this cannot be determined, and where mitigation cannot be achieved, then alternative solutions will need to be considered (i.e. the process proceeds to Stage 3).

Stage 3: Alternative Solutions - Where adverse impacts on the integrity of Natura 2000 sites are identified, and mitigation cannot be satisfactorily implemented, alternative ways of achieving the objectives of the plan or project that avoid adverse impacts need to be considered. If none can be found, the process proceeds to Stage 4.

Stage 4: Imperative Reasons of Overriding Public Interest (IROPI)/Derogation - This stage is required where an alternative solution is not available. In this situation, the project can only proceed for Imperative Reasons of Overriding Public Interest (IROPI), despite the plan or project resulting in adverse effects on European Site(s). This stage provides for an assessment of

compensation measures to maintain or enhance the overall coherence of the Natura 2000 network. The Commission must be informed of the compensatory measures. Compensatory measures must be practical, implementable, likely to succeed, proportionate and enforceable, and they must be approved by the Minister.

3.4 Zone of Influence

The 'zone of influence' for a project is the area over which ecological features may be affected by biophysical changes as a result of the proposed project and associated activities. This is likely to extend beyond the project site, for example where there are ecological or hydrological links beyond the site boundaries. The zone of influence will vary for different ecological features depending on their sensitivity to an environmental change (CIEEM, 2018).

Sites are screened out based on one or a combination of the following criteria:

- The existence of potential for pathways for significant effects, such as hydrological links, proposed project proposals and the site to be screened;
- The distance of the relevant site from the proposed project boundary; and
- The existence of a link between identified threats or vulnerabilities at a site to potential impacts that may arise from the proposed project.

Irish guidance (DoEHLG, 2010)⁸ states, for the zone of influence of plans, that “A distance of 15 km is currently recommended in the case of plans, as a potential zone of influence, and this distance is derived from UK guidance (Scott Wilson et al, 2006)”. The guidance goes on to state that “for projects, the distance could be much less than 15 km, and in some cases less than 100 m, but this must be evaluated on a case-by-case basis with reference to the nature, size and location of the project, the sensitivities of the ecological receptors, and the potential for in-combination effects.”

Guidance from the Office of the Planning Regulator (OPR)⁹ states that “The zone of influence of a proposed development is the geographical area over which it could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a European site. This should be established on a case-by-case basis using the Source-Pathway-Receptor framework and not by arbitrary distances (such as 15 km)”.

The zone of influence for this project was identified through a review of the nature of the project, the type of impacts and effects that could arise as a result, the distance between the project and European sites, and the qualifying interests of the European sites.

3.5 Characterising Impacts

The methodology for the assessment of impacts is derived from the Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites (EC, 2002). When describing changes/activities and impacts on ecosystem structure and function, the types of impacts that are commonly presented include the following:

- direct and indirect effects,

⁸ Appropriate Assessment of Plans and Projects in Ireland -Guidance for Planning Authorities

⁹<https://www.opr.ie/wp-content/uploads/2021/03/9729-Office-of-the-Planning-Regulator-Appropriate-Assessment-Screening-booklet-15.pdf>

- short- and long-term effects,
- construction, operational and deconstruction / demolition effects, and
- isolated, interactive and cumulative effects.

Impacts that could potentially occur through the implementation of the project can be categorised under a number of impact categories as outlined in the EC 2002 document as follows:

- Loss/Reduction of habitat area,
- Disturbance to key species,
- Habitat or species fragmentation,
- Reduction in species density, and
- Changes in key indicators of conservation value such as decrease in water quality and quantity.

The concept of the 'integrity of the site' is explained in the EU publication Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, as follows;

'It is clear from the context and from the purpose of the directive that the 'integrity of the site' relates to the site's conservation objectives. For example, it is possible that a plan or project will adversely affect the integrity of a site only in a visual sense or only habitat types or species other than those listed in Annex I or Annex II. In such cases, the effects do not amount to an adverse effect for purposes of Article 6(3), provided that the coherence of the network is not affected. On the other hand, the expression 'integrity of the site' shows that focus is here on the specific site. Thus, it is not allowed to destroy a site or part of it on the basis that the conservation status of the habitat types and species it hosts will anyway remain favourable within the European territory of the Member State.'

As regards the connotation or meaning of 'integrity', this can be considered as a quality or condition of being whole or complete. In a dynamic ecological context, it can also be considered as having the sense of resilience and ability to evolve in ways that are favourable to conservation. The 'integrity of the site' has been usefully defined as 'the coherence of the site's ecological structure and function, across its whole area, or the habitats, complex of habitats and/or populations of species for which the site is or will be classified'

A site can be described as having a high degree of integrity where the inherent potential for meeting site conservation objectives is realised, the capacity for self-repair and self-renewal under dynamic conditions is maintained, and a minimum of external management support is required. When looking at the 'integrity of the site', it is therefore important to take into account a range of factors, including the possibility of effects manifesting themselves in the short, medium and long-term.

The integrity of the site involves its ecological functions. The decision as to whether it is adversely affected should focus on and be limited to the site's conservation objectives

3.6 Likely Significant Effects

The threshold for a likely significant effect is treated in the screening exercise as being above a *de minimis* level¹⁰. The opinion of the Advocate General in CJEU case C-258/11 outlines:

“the requirement that the effect in question be ‘significant’ exists in order to lay down a de minimis threshold. Plans or projects that have no appreciable effect on a European site are thereby excluded. If all plans or projects capable of having any effect whatsoever on the site were to be caught by Article 6(3), activities on or near the site would risk being impossible by reason of legislative overkill.”

In this report, therefore, ‘relevant’ European sites are those within the potential zone of influence of the construction and / or operation of the Proposed Development, and to which likely significant effect pathways were identified through the source-pathway-receptor model.

3.7 Guidance

Documents associated with the proposed development and relevant ecology databases were consulted as part of this assessment. Field assessments were also completed at the proposed development site between October 2024 and March 2025 in order to inform the Screening Assessment. The following guidelines and legal judgements were used in the completion of this assessment;

- Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites – European Commission Methodical Guidance on the provisions of Article 6(3) and 6(4) of the ‘Habitats’ Directive 92/43/EEC (European Commission 2001)
- Office of the Planning Regulator (OPR) Practice Note PN01, Appropriate Assessment Screening for Development Management (2021).
- Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities (DoEHLG 2009)
- Integrated Biodiversity Impact Assessment – Streamlining AA, SEA and EIA Processes: Practitioner’s Manual (EPA 2013)
- European Court of Justice Ruling 11th April 2013 Case C- 258/11 Peter Sweetman and Others v An Bord Pleanála - Criteria to be applied when assessing the likelihood that N6 Galway City Outer Bypass Road scheme will adversely affect the integrity of Lough Corrib SAC
- High Court Ruling 25th July 2014 by Ms. Justice Finlay Geoghegan; Neutral Citation [2014] IEHC 400; High Court Record No. 2013 802 JR; Kelly -v- An Bord Pleanála – Judicial review of grant of planning by An Bord Pleanála for two wind farm phases in County Roscommon
- High Court Ruling 24th November 2014 by Mr. Justice Hedigan; Neutral Citation [2014] IEHC 557; High Court Record No. 2014 320 JR; Rossmore Properties Limited & Anor -v- An Bord Pleanála
- High Court Ruling 25th February 2016 by Mr. Justice Barton. Neutral Citation [2016] IEHC 134; High Court Record No. 2013 450 JR; Balz & Anor -v- An Bord Pleanála.

¹⁰ Sweetman v. An Bord Pleanála (Court of Justice of the EU, case C-285/11). A *de minimis* effect is a level of risk that is too small to be concerned with when considering ecological requirements of an Annex I habitat or a population of Annex II species present on a European site necessary to ensure their favourable conservation condition. If low level effects on habitats or individuals of species are judged to be in this order of magnitude and that judgment has been made in the absence of reasonable scientific doubt, then those effects are not considered to be likely significant effects.

- European Court of Justice ruling 12th April 2018 in respect of Case C-323/17 (People Over Wind & Sweetman) - it is not appropriate for the purposes of Appropriate Assessment (AA), at the screening stage, to take account of the measures intended to avoid or reduce the harmful effects of a plan or project.
- European Court of Justice ruling 19th April 2018 in respect of Case C-164/17, Compensation vs Mitigation, Grace & Sweetman Vs ABP.
- High Court Ruling 8th February 2019 by Justice Barniville in respect of Kelly -v- An Bord Pleanála & anor. The Court concludes “as a matter of fact and law, that SUDS are not mitigation measures which a competent authority is precluded from considering at the stage 1 screening stage”. The Irish High Court ([2019] IEHC 84)
- Heather Hill Management Company CLG v An Bord Pleanála (Burkeway Homes Limited as Notice Party) [2019] IEHC 450. Mr. Justice Garrett Simons granted an order of certiorari setting aside the decision of the Board to grant permission for a residential development of 197 units at Bearna Co. Galway, on the basis that it was a material contravention of the Galway County Development Plan (the CDP), it failed to carry out a 'justification test' as required and failed to carry out proper Appropriate Assessment screening.
- European Commission. Managing Natura 2000 Sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, (21-11-18) C (2018) 7261 Final. Commission Notice Brussels

4. Description of Baseline Ecology

4.1 Desk Study

A desktop study was undertaken in advance of the field study walkovers to identify the ecological habitats present within the proposed walking trail footprint and adjacent areas. The desktop study was undertaken using the sources of information outlined above in section 3.1.

The areas surrounding the Site have been classified as Agricultural Areas – Pastures and Discontinuous urban fabric (Corinne, 2018).

A review of species records on the National Biodiversity Data Centre Ireland (NBDC) website shows records indicating the presence of rare and/or protected species: White-clawed Crayfish (*Austropotamobius pallipes*), Common Pipistrelle (*Pipistrellus pipistrellus*), Lesser Noctule (*Nyctalus leisleri*), Soprano Pipistrelle (*Pipistrellus pygmaeus*), European Otter (*Lutra lutra*), Pine Marten (*Martes martes*) and Red Squirrel (*Sciurus vulgaris*) within the 2km polygon S06I surrounding the Site.

With respect to regional hydrology, the proposed development is within the Suir WFD Catchment, the Fishmoyne_SC_010 WFD sub-catchment and the Borrisoleigh Stream_010 WFD River sub basin.

The Borrisoleigh Stream (EPA Code: 16B06), runs along the northern boundary of the site. The River Waterbody WFD Status 2019-2024 for this watercourse is 'Moderate'. The watercourse is listed as 'At Risk' under the WFD Risk 3rd Cycle.

The Site is located within the Templemore groundwater catchment. This groundwater body has been classified as having 'Good' status under the Ground Waterbody WFD Status 2019-2024 and 'At risk' as per the WFD risk 3rd Cycle.

The aquifer in the region here is a Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones with high groundwater vulnerability.

4.2 Field Survey

A field survey was undertaken to characterise habitats and ecological features within and adjoining the proposed development site. The site comprises a single large field classified as **GA1 Improved agricultural grassland**. The field had been recently mown for silage and supported a short, uniform sward dominated by perennial rye-grass (*Lolium perenne*). Other species present included dandelion (*Taraxacum officinale* agg.), white clover (*Trifolium repens*), silverweed (*Potentilla anserina*), and great willowherb (*Epilobium* spp.). The sward is species-poor and typical of intensively managed agricultural grassland of low ecological value.

A **WL1 Hedgerow** runs along the eastern boundary. It is primarily composed of hawthorn (*Crataegus monogyna*), with ash (*Fraxinus excelsior*), elder (*Sambucus nigra*), holly (*Ilex aquifolium*), bramble (*Rubus fruticosus* agg.), and blackthorn (*Prunus spinosa*) also recorded. The hedgerow provides some habitat structure and limited foraging potential for common bird and invertebrate species but is of moderate ecological value overall.

No open drains or field ditches were recorded within the site interior. The Borrisoleigh Stream, previously mapped by the EPA as flowing behind the existing houses to the south, has been

diverted historically and now flows along the northern boundary of the site. Based on field observations, the channel is classified as **FW2 Depositing/lowland river**. The stream is narrow, low-gradient, and slow-flowing, with a bed dominated by fine gravels, sand, and silt, and occasional embedded stones. The watercourse exhibits typical features of a managed lowland stream, including sediment deposition, sections of shading from riparian scrub, and visible nutrient enrichment.

The southern bank of the stream, adjoining the proposed development site, lacks riparian vegetation and is characterised by improved grassland (GA1) extending right up to the bank edge, indicating past management and mowing to the water's margin. The opposite bank supports a narrow but structurally diverse strip of riparian and scrub vegetation, including ash (*Fraxinus excelsior*), hawthorn (*Crataegus monogyna*), alder (*Alnus glutinosa*), willow (*Salix* spp.), elder (*Sambucus nigra*), bramble (*Rubus fruticosus* agg.), willowherb (*Epilobium* spp.), and common nettle (*Urtica dioica*). The stream channel is partially obstructed by fallen branches and accumulated debris, including discarded rubbish, which has created blockages and areas of localised ponding.

No evidence of protected or notable faunal species, such as badger, otter, or bat roost features, was recorded during the site visit. The habitats within the site are of low ecological value, dominated by intensively managed agricultural grassland and modified hedgerows.

No Third Schedule invasive alien plant species listed under the European Communities (Birds and Natural Habitats) Regulations 2011–2022 were recorded; however, cotoneaster is present at the site entrance. The stream and its associated riparian corridor represent the primary ecological feature of local importance, providing limited connectivity to the wider landscape and functioning as a minor hydrological receptor.

No Annex I habitats were recorded within or adjacent to the Site during the multidisciplinary site walkover.

5. Stage 1 - Appropriate Assessment Screening

This section of the report identifies the potential zone of influence of the proposed development, provides information on the Natura 2000 sites within the identified zone of influence and sets out the potential impacts and effects and the likelihood of significant effects.

5.1 Identification of Natura 2000 Sites

The first step in identification of Natura 2000 sites is to determine the potential zone of influence of the proposed works. When the zone of influence of the proposed works has been determined, Natura 2000 sites within this area can be identified. The potential for these sites to be affected can be evaluated by considering:

- Scale and type of the proposed works.
- Proximity to the proposed works.
- Qualifying interests.
- Ecological¹¹ and Landscape¹² connectivity.

A source-pathway-receptor model has been used to establish which European Sites could occur within the zone of influence of the project. Under such a model the project, as described above, represents the source. The receptors represent European Sites and their associated qualifying features of interest.

Potential impact pathways are restricted to hydrological pathways and disturbance/placement pathways as these represent the principal emissions generated by activities at the project site.

European Sites and their associated qualifying features are likely to occur in the zone of influence of the project only where the above pathways establish a link between the project site and European Sites or where the project site is likely to play an important role in supporting populations of mobile species that are listed as special conservation interests/qualifying species for surrounding European Sites.

Table 5.1 provides a determination as to whether each of the European Sites listed occur within the zone of influence of the project. Figure 5.1 show the locations of the Natura 2000 sites within 15km of the proposed project.

¹¹ Connectivity is defined as a measure of the functional availability of the habitats needed for a particular species to move through a given area. Examples include the flight lines used by bats to travel between roosts and foraging areas or the corridors of appropriate habitat needed by some slow colonising species if they are to spread (CIEEM, 2018)

¹² Landscape connectivity is a combined product of structural and functional connectivity, i.e. the effect of physical landscape structure and the actual species use of the landscape (Kettunen et al. 2007)

Table 5.1. Natura 2000 Sites within zone of influence

Natura 2000 Site Distance from Site ¹³	Qualifying Interests	Conservation Objectives	Pathway	Description of Potential Impacts from Proposed Development	Potential Pathways for Further Assessment
Special Areas of Conservation (SACs)					
Lower River Suir SAC [002137] c. 3.1 km south	Habitats: [1330] Atlantic Salt Meadows [3260] Floating River Vegetation [6430] Hydrophilous Tall Herb Communities [91A0] Old Oak Woodlands [91E0] Alluvial Forests* [91J0] Yew Woodlands* Species: [1029] Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>) [1092] White-clawed Crayfish (<i>Austropotamobius pallipes</i>) [1095] Sea Lamprey (<i>Petromyzon marinus</i>) [1096] Brook Lamprey	To maintain or restore the favourable conservation condition of habitats designated within the Lower River Suir SAC which is defined by a list of specific attributes and targets. Full details of the conservation objectives can be found at: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002137.pdf	The Borrisoleigh stream flows east and then south before joining the Fishmoynes stream which flows south before entering the SAC and joining with the Clodiagh river. The in-stream distance between the Site and the SAC is c. 8.3km. As such, a hydrological pathway exists between the Site and the SAC.	There is potential for indirect hydrological impacts on the Lower River Suir SAC during both the construction and operational phases of the Proposed Development. During construction, potential impacts may arise from the mobilisation of silt, sediment or other pollutants associated with ground disturbance and surface water runoff. Accidental spillages of fuels, oils or concrete washings could also enter downstream watercourses if not appropriately managed. During the operational phase, the proposed development will include a permanent attenuated surface water discharge to the Borrisoleigh	A potential hydrological connection exists between the site and the Lower River Suir SAC via the Borrisoleigh and Fishmoynes streams. Potential indirect effects on water quality and aquatic qualifying interests require further assessment to determine if significant effects can be ruled out.

¹³ Measured in a straight line between the Site and closest point of Natura 2000 site boundary

	(<i>Lampetra planeri</i>) [1099] River Lamprey (<i>Lampetra fluviatilis</i>) [1103] Twaite Shad (<i>Alosa fallax</i>) [1106] Atlantic Salmon (<i>Salmo salar</i>) [1355] Otter (<i>Lutra lutra</i>)			Stream. Stormwater and surface water runoff from the developed site, including treated surface water discharges to the Borrisoleigh Stream, could result in indirect effects on downstream receiving waters if not adequately controlled. Such effects could include changes in water quality, including increased suspended solids or pollutants, with the potential to affect aquatic habitats and species within the Lower River Suir SAC.	
Anglesey Road SAC [002125] c. 13.7km south west	Habitats: [6230] Species-rich Nardus Grassland*	To restore the favourable conservation condition of habitats and species designated within the Anglesey Road SAC which is defined by a list of specific attributes and targets. Full details of the conservation objectives can be found at https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002125.pdf	There will be no direct effects on this European Site as the proposed development is located entirely outside of and > 13km from the SAC. No hydrological connectivity between the Site and the SAC was identified. The SAC is designated for terrestrial habitats	There will be no effects on terrestrial habitats as the proposed development is located entirely outside of and over 13 km from the SAC. No direct, indirect, or secondary impacts on the qualifying habitat (6230 Species-rich Nardus Grassland) are anticipated.	No pathway for effect identified. No potential for likely significant effects on this European site was identified, when considered in the absence of any mitigation, individually or cumulatively with other plans or projects, and the site is not considered further.

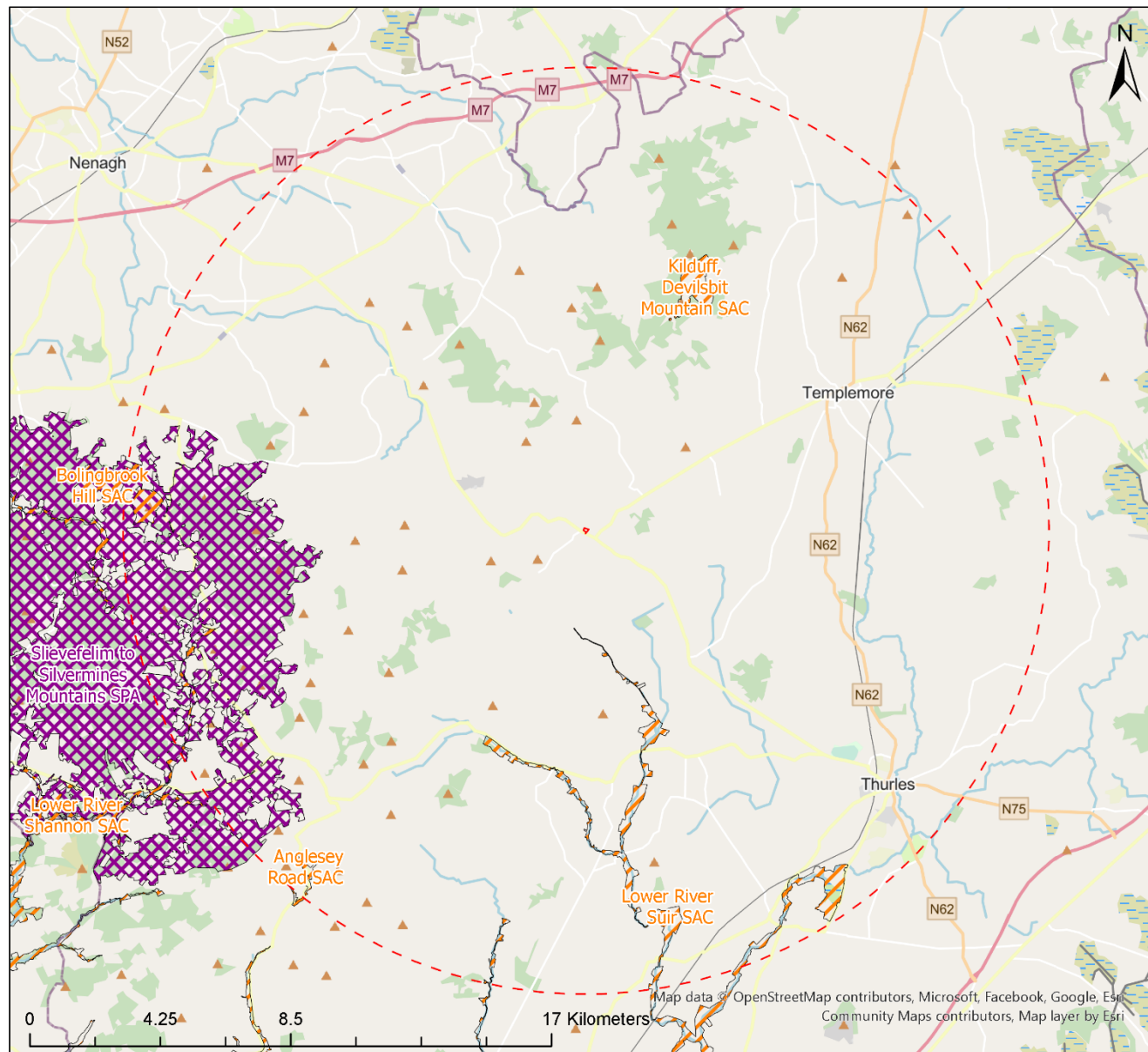
Kilduff, Devilsbit Mountain SAC [000934] c. 7.3km north	Habitats: [4030] Dry Heath [6230] Species-rich Nardus Grassland*	To maintain or restore the favourable conservation condition of habitats and species designated within the Kilduff, Devilsbit Mountain SAC which is defined by a list of specific attributes and targets. Full details of the conservation objectives can be found at: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000934.pdf	There will be no direct effects on this European Site as the proposed development is located entirely outside the SAC. No hydrological connectivity between the Site and the SAC was identified. The SAC is designated for terrestrial habitats.	There will be no effects on terrestrial habitats as the proposed development is located entirely outside of and over 7 km from the SAC. No direct, indirect, or secondary impacts on the qualifying habitats are anticipated.	No pathway for effect identified. No potential for likely significant effects on this European site was identified, when considered in the absence of any mitigation, individually or cumulatively with other plans or projects, and the site is not considered further.
Bolingbrook Hill SAC [002124] c.13.7 km west	Habitats: [4010] Wet Heath [4030] Dry Heath [6230] Species-rich Nardus Grassland*	To maintain the favourable conservation condition of habitats and species designated within the Bolingbrook Hill SAC which is defined by a list of specific attributes and targets. Full details of the conservation objectives can be found at: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002124.pdf	There will be no direct effects on this European Site as the proposed development is located entirely outside the SAC. No hydrological connectivity between the Site and the SAC was identified. No potential for indirect effects on the SAC due to deterioration of water quality was identified.	There will be no direct effects on this European Site as the proposed development is located entirely outside the SAC. There will be no direct loss of any Annex I habitat associated with this SAC. No hydrological connectivity between the Site and the SAC was identified. No potential for indirect effects on the SAC due to deterioration of water quality was identified. Given the distance of c. 9.9km between the development site	No pathway for effect identified. No potential for likely significant effects on this European site was identified, when considered in the absence of any mitigation, individually or cumulatively with other plans or projects, and the site is not considered further.

				and the SAC, and the lack of hydrological connectivity, no potential for indirect effects was identified.	
Lower River Shannon SAC [002165] c.12.5km west	Habitats: [1110] Sandbanks [1130] Estuaries [1140] Tidal Mudflats and Sandflats [1150] Coastal Lagoons* [1160] Large Shallow Inlets and Bays [1170] Reefs [1220] Perennial Vegetation of Stony Banks [1230] Vegetated Sea Cliffs [1310] Salicornia Mud [1330] Atlantic Salt Meadows [1410] Mediterranean Salt Meadows [3260] Floating River Vegetation [6410] Molinia Meadows [91E0] Alluvial Forests* Species: [1029] Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>)	To maintain or restore the favourable conservation condition of habitats and species designated within the Lower River Shannon SAC which is defined by a list of specific attributes and targets. Full details of the conservation objectives can be found at: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002165.pdf	There will be no direct effects on this European Site as the proposed development is located entirely outside the SAC. No hydrological connectivity between the Site and the SAC was identified.	There will be no direct effects on this European Site as the proposed development is located entirely outside the SAC. There will be no direct loss of any Annex I habitat associated with this SAC. No hydrological connectivity between the Site and the SAC was identified No potential for indirect effects on the SAC due to deterioration of water quality was identified. Given the distance of c. 12.5km between the development site and the SAC, and the lack of hydrological connectivity, no potential for indirect effects was identified.	No pathway for effect identified. No potential for likely significant effects on this European site was identified, when considered in the absence of any mitigation, individually or cumulatively with other plans or projects, and the site is not considered further.

	[1095] Sea Lamprey (<i>Petromyzon marinus</i>) [1096] Brook Lamprey (<i>Lampetra planeri</i>) [1099] River Lamprey (<i>Lampetra fluviatilis</i>) [1106] Atlantic Salmon (<i>Salmo salar</i>) [1349] Bottle-nosed Dolphin (<i>Tursiops truncatus</i>) [1355] Otter (<i>Lutra lutra</i>)				
Special Areas of Protection (SPAs)					
Slievefelim to Silvermines Mountains SPA [004165] c. 8.5km west	Hen Harrier (<i>Circus cyaneus</i>) [A082]	To restore the favourable conservation condition of the bird species listed as Special Conservation Interests for Slievefelim to Silvermines Mountains SPA. Full details of the conservation objectives can be found at: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004165.pdf	There will be no direct effects on this European Site as the proposed development is located entirely outside the SPA. No surface water pathway between site and SPA. The Site does not provide any suitable breeding or foraging habitat for Hen Harrier. The Site is located over 8km from the SPA. No disturbance or displacement related effects are expected.	There will be no direct effects on this European Site as the proposed development is located entirely outside the SPA. There will be no direct loss of any Special Conservation Interest species associated with this SPA. Based on Scottish Natural Heritage guidance ¹⁴ a buffer distance of 300m-750m, during the breeding and non breeding season, is recommended to prevent disturbance. The SPA is located over 8km from the	No pathway for effect identified. No potential for likely significant effects on this European site was identified, when considered in the absence of any mitigation, individually or cumulatively with other plans or projects, and the site is not considered further.

¹⁴ SNH (2022) Disturbance Distances in selected Scottish Bird Species – NatureScot Guidance

				Site. As such, the development will not result in habitat loss or disturbance to key foraging areas used by SPA species.	
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Borrisoleigh Housing Development

Figure 5.1
European Sites within 15km of Proposed Development

- Site Boundary
- 15km Buffer
- SACs
- SPAs

5.2 Description of Natura 2000 Sites

Lower River Suir SAC:

The Lower River Suir SAC encompasses the freshwater and tidal stretches of the River Suir from south of Thurles to the confluence with the Barrow/Nore estuary near Cheekpoint, including numerous tributaries across counties Tipperary, Kilkenny, and Waterford. The site is designated for a range of Annex I habitats and Annex II species under the EU Habitats Directive.

The SAC supports several significant and priority habitats, including alluvial forests and Yew woodlands. Other key habitats present include old oak woodlands, Atlantic salt meadows, floating river vegetation, and eutrophic tall herb communities. Notable examples of these habitats are found at sites such as Fiddown Island, Portlaw Wood, Cahir Park, and Inchinsquillib Wood.

Annex II animal species recorded within the site include Freshwater Pearl Mussel (*Margaritifera margaritifera*), White-clawed Crayfish (*Austropotamobius pallipes*), Sea, Brook, and River Lamprey, Atlantic Salmon (*Salmo salar*), Twaite Shad (*Alosa fallax*), and Otter (*Lutra lutra*). The site contains one of only three known Twaite Shad spawning grounds in Ireland.

The SAC also supports a range of nationally important bird populations, including several species listed on Annex I of the Birds Directive, such as Kingfisher and Greenland White-fronted Goose. Cabragh Marshes and other wetland areas provide valuable wintering and breeding habitat for wildfowl and waders.

Land use in the SAC includes intensive agriculture, fishing, and recreation. The river system is vulnerable to pollution from agricultural runoff and industrial discharges. Nevertheless, the Lower River Suir contains some of the best remaining examples of priority habitats in Ireland and supports several rare and legally protected plant and animal species, contributing significantly to the site's ecological value.

5.3 Conclusions of Screening for Appropriate Assessment

In accordance with Article 6(3) of the Habitats Directive, this Screening for Appropriate Assessment has examined the details of the Proposed Development and its relationship with Natura 2000 sites within the potential zone of influence.

The Proposed Development is not directly connected with or necessary to the management of any Natura 2000 site. There will be no direct loss, fragmentation, or degradation of habitats within any designated site, as the Application Site does not overlap with or adjoin any European site boundary.

A potential hydrological connection exists between the site and the Lower River Suir SAC via the Borrisoleigh Stream and the downstream Fishmoyne Stream. During the construction phase, potential indirect effects may arise in the absence of appropriate controls due to the mobilisation of silt, sediment or other pollutants associated with ground disturbance and surface water runoff. Accidental spillages of fuels, oils or concrete washings could also reach downstream watercourses if not adequately managed. During the operational phase, stormwater and surface water runoff from the developed site, including treated surface water discharges to the Borrisoleigh Stream, represent a potential indirect pathway for effects on water quality.

Given the presence of this potential indirect hydrological pathway, and the sensitivity of aquatic qualifying interests within the Lower River Suir SAC, potential indirect effects on water quality and aquatic habitats cannot be ruled out at the screening stage. On the basis of the information available, it is not possible to exclude the likelihood of significant effects on the qualifying interests of the Lower River Suir SAC.

In line with the requirements of Article 6(3) of the Habitats Directive and relevant national guidance, it is therefore concluded that the Proposed Development must proceed to Stage 2 Appropriate Assessment (Natura Impact Statement) to determine whether the project, individually or in combination with other plans or projects, is likely to adversely affect the integrity of Lower River Suir SAC [002137].

6. Stage 2 - Natura Impact Statement

The competent authority will be required to carry out an appropriate assessment to determine whether the proposed development would adversely affect the integrity of Lower River Suir SAC. The ‘integrity of the site’ can be defined as ‘the coherence of the site’s ecological structure and function, across its whole area, or the habitats, complex of habitats and / or populations of species for which the site is or will be classified.

The headings within the appropriate assessment report template provided in the European Commission guidance document ‘Assessment of plans and projects significantly affecting Natura 2000 sites’ have been used to provide a framework to examine the potential impacts of the proposed project on Lower River Suir SAC.

6.1 Assessment of the effects of the project on the integrity of Natura 2000 Sites

This section of the report sets out the potential effects of the project (either alone or in combination with other projects or plans) on the integrity of Lower River Suir SAC with respect to the conservation objectives of this site and to its structure and function. The focus is on demonstrating, with supporting evidence, that there will be no adverse effects on the integrity of Lower River Suir SAC should the proposed development proceed as planned and with appropriate mitigation.

6.1.1 Elements of the project or plan (alone or in combination with other projects or plans) that are likely to give rise to significant effects on the environment

The proposed development comprises 28 residential units and associated infrastructure on a 1.42-hectare greenfield site at Glean Caoin, Borrisoleigh, Co. Tipperary. Works include internal access roads, footpaths, car parking, public lighting, open-space landscaping, foul and surface-water drainage infrastructure, and a new public walkway along the northern boundary adjacent to the existing river. The site lies within the Fishmoyne_SC_010 WFD sub-catchment and the Templemore Groundwater Body.

The northern boundary adjoins a stream, creating a surface-water hydrological connection to the Suir system. Site investigations recorded a shallow water table at approximately 1.5–1.7 m below ground level in moderately permeable gravelly horizons, indicating likely hydraulic continuity between shallow groundwater beneath the site and the adjacent watercourse. A minimum 5 m vegetated buffer will be maintained between all works, including the proposed walkway, and the top of the riverbank; no works will encroach into the channel or buffer.

The elements of the project that have the potential to give rise to significant effects are primarily associated with construction-phase ground disturbance, excavation, and material handling. The key components that could influence the receiving environment, and thereby indirectly affect the conservation condition of downstream European sites, include:

- Site clearance, topsoil stripping, and excavation for dwellings, services, and access roads, which will temporarily expose soils and increase the potential for sediment mobilisation and runoff towards the river.
- Construction of the riverside walkway, which will take place in proximity to the riparian zone. Although set back by a minimum of 5 m from the riverbank, any ground disturbance, compaction, or vegetation removal near the buffer could increase the risk of sediment release during rainfall events if not carefully managed.

- Temporary storage of excavated material and topsoil, which, if not adequately contained or covered, may result in silt-laden or nutrient-rich runoff entering the local drainage network or infiltrating to shallow groundwater.
- Storage and handling of fuels, lubricants, concrete, and other construction materials, where accidental leaks or spills could contaminate soil or groundwater, with potential migration to the adjacent river.
- Operation of construction plant and vehicles, which may result in minor hydrocarbon emissions, accidental leaks, or soil compaction, thereby reducing local infiltration capacity and increasing surface runoff.
- Concrete works for foundations, hard surfaces, and the walkway, where uncured concrete residues could raise local pH levels if not properly contained and managed.
- Dewatering or temporary drainage of excavations, if required, which may generate turbid water requiring settlement and filtration prior to discharge.

These activities have the potential to cause short-term deterioration in water quality through the release of suspended solids or hydrocarbons, which could be transported downstream to the Lower River Suir SAC if unmitigated.

During the operational phase, all foul water will discharge to the public foul sewer under Uisce Éireann approval for treatment at Borrisoleigh WWTP. All surface water will be managed via a fully attenuated SuDS network providing both quality treatment and flow control prior to discharge to the Borrisoleigh stream.

6.1.2 Conservation Objectives of the Natura 2000 sites

The conservation objectives for the Lower River Suir SAC, the list of specific attributes and the targets defining the conservation objectives for each qualifying interest (likely to be affected), are listed within the supporting information available on the NPWS website. These conservation objectives were considered when preparing this report.

The conservation objectives for the Lower River Suir SAC can be broadly summarised as:

- To maintain or restore the favourable condition of the habitats and species for which the SAC has been designated.

6.1.3 Site Specific Pressures and Threats

As per the Natura 2000 Data Form, for the Lower River Suir SAC, the site-specific threats, pressures and activities with potential to impact on the European Site were reviewed and considered in relation to the Proposed Development. These are provided in the tables below.

Table 6.1: Site-Specific Pressures and Threats for Lower River Suir SAC

Rank	Negative Threats and Pressures		Inside/Outside
High	A08	Fertilisation	Outside
High	E01	Urbanised areas, human habitation	Both
High	E03	Discharges	Both
High	H01	Pollution to surface waters (limnic, terrestrial, marine & brackish)	Both
High	J02.12.02	dykes and flooding defense in inland water systems	Inside
Low	A01	Cultivation	Inside
Low	B	Sylviculture, forestry	Outside

Low	D03.01	port areas	Both
Low	I01	Invasive non-native species	Inside
Low	J02.01.02	reclamation of land from sea, estuary or marsh	Inside
Medium	J02.01	Landfill, land reclamation and drying out, general	Both

6.1.4 How the Project will affect key species and habitats.

The Qualifying Interests of the Lower River Suir SAC (Site Code: 002137) that have the potential to be affected by the Proposed Development are those that are aquatic or groundwater-dependent and therefore sensitive to changes in surface water quality, sediment load or hydrological regime. These include:

- Floating River Vegetation [3260]
- Hydrophilous Tall Herb Communities [6430]
- White-clawed Crayfish (*Austropotamobius pallipes*) [1092]
- Sea Lamprey (*Petromyzon marinus*) [1095]
- Brook Lamprey (*Lampetra planeri*) [1096]
- River Lamprey (*Lampetra fluviatilis*) [1099]
- Twait Shad (*Alosa fallax*) [1103]
- Atlantic Salmon (*Salmo salar*) [1106]
- Otter (*Lutra lutra*) [1355]

The remaining Qualifying Interests of the Lower River Suir SAC, namely Atlantic Salt Meadows [1330], Old Oak Woodlands [91A0], Alluvial Forests* [91E0] and Yew Woodlands* [91J0], are terrestrial habitats or are located at a substantial downstream distance from the Proposed Development. As the Application Site does not overlap with or adjoin the SAC boundary, these habitats are not susceptible to direct effects such as land take, fragmentation or physical disturbance arising from the Proposed Development.

The Freshwater Pearl Mussel (*Margaritifera margaritifera*) [1029] population of the Lower River Suir SAC is confined to the Clodiagh catchment, which is hydrologically and hydrogeologically separate from the Proposed Development. The site is located within the Templemore Groundwater Body and the Fishmoyné_SC_010 WFD sub-catchment, whereas the Clodiagh system lies within the Comeragh Groundwater Body. There is no surface water or groundwater pathway linking the site to the habitat of this species.

The Proposed Development is located entirely outside the boundary of the Lower River Suir SAC and therefore will not result in direct impacts such as habitat loss, fragmentation or alteration of designated habitats within the SAC. However, a small river forms part of the northern boundary of the site and drains to the River Suir system via the Borrisoleigh Stream and the downstream Fishmoyné Stream. This creates a hydrological linkage between the site and the Lower River Suir SAC.

Potential effects on key species and habitats may arise where activities associated with the construction or operation of the Proposed Development result in changes to surface water quality or flow characteristics within this receiving water environment. Construction activities such as site clearance, excavation, soil handling, and the use of plant and machinery have the potential, in the absence of controls, to increase suspended solids or introduce contaminants to surface waters. Any deterioration in water quality could be conveyed downstream and indirectly

affect aquatic Qualifying Interests of the SAC. Species and habitats dependent on clean, well-oxygenated water and stable hydrological conditions, including Floating River Vegetation, White-clawed Crayfish, lamprey species, Twaite Shad, Atlantic Salmon and Otter, are particularly sensitive to increased turbidity, sedimentation, nutrient enrichment or chemical pollution.

During the operational phase, surface water runoff from the developed site will continue to discharge to the local surface water network draining to the Borrisoleigh Stream. Changes in the quality or quantity of surface water entering this system could, in principle, give rise to indirect effects on downstream aquatic habitats and species within the Lower River Suir SAC, given the hydrological connectivity between the site and the SAC.

Overall, the potential effects associated with the Proposed Development are indirect in nature and relate to possible changes in surface water quality or hydrological conditions that could be transmitted downstream to the Lower River Suir SAC. These potential interactions are considered further in the following sections, which examine the implications for individual qualifying interests in detail.

6.1.5 How is the integrity of the Natura 2000 site likely to be affected by the project

In accordance with Article 6(3) of the Habitats Directive, the potential for the Proposed Development to adversely affect the integrity of the Lower River Suir SAC has been assessed in view of the site's conservation objectives and the ecological requirements of its Qualifying Interests. The integrity of the site relates to the coherence of its ecological structure and function across its entire area, including the maintenance of water quality, hydrological regime, habitat structure and species populations at favourable conservation condition.

The Proposed Development is located outside the boundary of the Lower River Suir SAC and will not result in any direct habitat loss, fragmentation, land take or physical disturbance within the designated site. The only potential pathway for effect is indirect and hydrological in nature, via the Borrisoleigh Stream and downstream Fishmoynes Stream, which ultimately connect to the River Suir system within the SAC.

In the absence of mitigation, the integrity of the Lower River Suir SAC could potentially be affected through deterioration in water quality, changes to hydrological conditions and disturbance associated with both the construction and operational phases of the Proposed Development.

During the construction phase, site clearance, excavation works, soil stripping, stockpiling of materials, installation of drainage infrastructure and operation of construction plant have the potential to mobilise sediment and fine particulate matter. In the absence of appropriate controls, rainfall events could result in sediment-laden runoff entering the adjacent Borrisoleigh Stream. Accidental spillages of fuels, lubricants, hydraulic oils, concrete washings or other contaminants could also enter the receiving water environment through overland flow or drainage pathways.

Such inputs could result in elevated suspended solids, increased turbidity, localised nutrient enrichment, reduced dissolved oxygen concentrations and chemical contamination of receiving waters. These effects could be transported downstream through the hydrological network to the Lower River Suir SAC.

During the operational phase, the development will introduce additional impermeable surfaces including roofs, roads, parking areas and other hardstanding surfaces. In the absence of

appropriate attenuation and treatment measures, runoff from these surfaces could result in increased peak flows, increased runoff volumes and the mobilisation of pollutants including hydrocarbons, heavy metals, nutrients, suspended solids and microplastics to the receiving watercourse.

An increase in runoff rates could alter local flow characteristics and increase the potential for channel erosion and sediment transport downstream. Poorly treated surface water runoff could contribute to deterioration in physicochemical water quality parameters within downstream waterbodies connected to the SAC.

The operational phase will also result in a permanent discharge of surface water runoff to the Borrisoleigh Stream. In the absence of appropriate treatment and attenuation measures, pollutants associated with residential development and vehicle movements could enter the receiving watercourse during rainfall events. Routine residential occupation may also give rise to accidental pollution events associated with vehicle use, domestic chemicals or failures within the surface water drainage network. Without appropriate maintenance of drainage infrastructure, deterioration in treatment efficiency could result in adverse effects on downstream water quality.

In addition, the completed development will introduce artificial lighting and increased human activity adjacent to the river corridor. In the absence of an appropriate lighting design, artificial lighting adjacent to the river corridor could potentially reduce the ecological function of riparian habitats used by nocturnal fauna and contribute to localised disturbance effects.

Any sustained deterioration in water quality, alteration of hydrological conditions or reduction in habitat quality could affect the ecological structure and function of aquatic habitats and species within the Lower River Suir SAC. The potential implications for the relevant Qualifying Interests are outlined below.

[3260] Floating River Vegetation

This habitat is dependent upon maintaining high water quality and natural hydrological conditions. Elevated suspended solids arising from sediment runoff could increase turbidity and reduce light penetration within the water column, affecting aquatic vegetation communities. Nutrient enrichment associated with sediment inputs or contaminated runoff could alter species composition and promote algal growth. Long-term deterioration in water quality could adversely affect the structure and function of floating river vegetation communities within the SAC and undermine the achievement of the site's conservation objectives.

[6430] Hydrophilous Tall Herb Communities

This habitat occurs within riparian and floodplain environments that depend upon natural hydrological processes and appropriate nutrient conditions. Although not present within or adjacent to the site, it occurs downstream within the River Suir catchment. Sediment deposition, nutrient enrichment or contamination arising from unmitigated construction or operational runoff could alter soil and water conditions supporting these communities. Such effects could adversely affect vegetation composition and habitat quality within the SAC.

White-clawed Crayfish (*Austropotamobius pallipes*) [1092]

White-clawed Crayfish is highly sensitive to pollution, sedimentation and reductions in water quality. Sediment inputs could smother refuges and reduce habitat quality, while chemical

contamination could adversely affect survival and reproduction. The species requires clean, well-oxygenated water and any deterioration in water quality associated with construction activities or long-term operational runoff could reduce habitat suitability and adversely affect population viability within the SAC.

Sea Lamprey (*Petromyzon marinus*) [1095], Brook Lamprey (*Lampetra planeri*) [1096] and River Lamprey (*Lampetra fluviatilis*) [1099]

All three lamprey species require clean, well-oxygenated water and suitable spawning and nursery habitats. Sediment mobilisation entering the river network could increase turbidity and smother spawning gravels, reducing oxygen availability and affecting larval development. Pollution events could impair water quality and reduce the suitability of downstream habitats used by these species. In the absence of mitigation, deterioration in water quality could compromise the conservation objectives for lamprey species within the SAC.

[1103] Twaite Shad (*Alosa fallax*)

Twaite Shad is a migratory fish species that depends upon good water quality and unobstructed migration routes. Sediment inputs, hydrocarbon contamination or other pollutants entering the hydrological network could adversely affect migration behaviour, spawning success and habitat quality. Consequently, unmitigated pollution events have the potential to adversely affect this species downstream within the SAC.

Atlantic Salmon (*Salmo salar*) [1106]

Atlantic Salmon requires high water quality and well-oxygenated habitats throughout all life stages. Increased suspended solids, nutrient enrichment and chemical contamination associated with unmitigated construction activities could affect spawning gravels, egg survival and juvenile recruitment. Hydrocarbon or chemical pollutants may also have acute toxic effects on sensitive life stages. During the operational phase, deterioration in water quality arising from untreated or inadequately treated surface water runoff could reduce the suitability of downstream habitats used for migration, spawning and juvenile development. Consequently, deterioration in water quality could compromise the ecological conditions required to maintain favourable conservation status for this species.

Otter (*Lutra lutra*) [1355]

Otters depend upon healthy aquatic ecosystems that support sufficient prey resources and provide suitable commuting and foraging habitat. Indirect deterioration in water quality within the River Suir catchment could reduce prey availability through impacts on fish and crayfish populations. In addition, increased human activity and artificial lighting associated with the completed development could reduce the ecological function of adjacent riparian habitats if such effects were to extend to connected watercourses. While no direct habitat loss or disturbance will occur within the SAC, indirect effects on prey species and habitat quality could influence the capacity of the site to support viable otter populations.

6.1.6 Likely Cumulative Impact of the Proposed Works on European Sites, in-combination with other plans and projects

Likely Cumulative Impact of the Proposed Works on European Sites, in-combination with other plans and projects

A search and review in relation to other projects and/or plans that may have the potential to result in cumulative and/or in-combination impacts on European Sites was conducted. This assessment focuses on the potential for cumulative in-combination effects on the European Sites where potential for adverse effects was identified. This included a review of online Planning Registers, development plans and other available information and served to identify past and future projects and/or plans, their activities and their predicted environmental effects.

Assessment material for this in-combination impact assessment was compiled on the relevant developments within the vicinity of the proposed project and was verified in November 2025. The material was gathered through a search of relevant online Planning Registers, reviews of relevant documents, planning application details and planning drawings, and served to identify past and future projects and/or plans, their activities and their environmental impacts. All relevant projects and/or plans were considered in relation to the potential for in-combination effects. Relevant data was reviewed (e.g. individual EISs/EIARs, NISs, layouts, drawings etc.) for all relevant projects and/or plans where available.

The following plans have been reviewed and taken into consideration as part of this assessment:

- Tipperary County Development Plan 2022 – 2028
- 4th National Biodiversity Action Plan 2023-2027

The review focused on policies and objectives that relate to European Designated Sites.

In addition to these strategic plans, a review of planning applications within a 2 km radius of the proposed site over the past five years was undertaken using the online planning portal maintained by Tipperary County Council. The review identified a small number of applications typical of a rural village setting, including extensions, refurbishments, replacement dwellings, small-scale infrastructure, and local amenity upgrades. None of these developments are of a scale or nature likely to give rise to significant hydrological or ecological effects on downstream European Sites.

While the proposed housing development at Glean Caoin, Borrisoleigh has a direct hydrological connection to the Suir catchment, potential effects are limited to the construction phase and are confined to localised water-quality risks, which will be fully mitigated through best-practice environmental controls and implementation of Sustainable Drainage Systems (SuDS). No residual effects are predicted once these measures are in place.

Given the limited scale of other projects in the local area, the absence of any overlapping construction programmes or direct pathways to the same receiving watercourse, and the stringent environmental protection policies set out in the Tipperary County Development Plan, there is no potential for significant in-combination effects with other plans or projects on the Lower River Suir SAC [002137] or any other European Site.

In summary, having regard to the nature, scale, and location of the proposed development; the limited extent of other nearby projects; and the implementation of effective pollution prevention and SuDS measures, the proposed works will not result in any likely cumulative or in-combination impacts on European Sites.

6.1.7 Mitigation Measures

Roles and Responsibilities

The main contractor will be required to designate a member of staff, or engage a specific person, with demonstrable experience of environmental management and monitoring on construction sites. The appointed individual will assume responsibility for overseeing the implementation of all environmental protective measures.

The contractor will be responsible for ensuring all mitigation measures set out in this document, CEMP and any site-specific method statements are fully and correctly implemented. The contractor will be responsible for employing good working practice during all phases of the project. The appointed contractor will be responsible for providing a briefing on environmental protection measures and ecological sensitivities of the Site to all site personnel in advance of commencement of works.

The names and contact details of the individuals with responsibility for implementation and supervision of mitigation measures during all phases of the development will be clearly identified and displayed on notice boards at the site office as well as set out in documents such as the site-specific method statements as appropriate.

Construction Environmental Management Plan (CEMP)

A Construction Environmental Management Plan (CEMP) will be prepared and agreed prior to the commencement of any works on site. The purpose of the CEMP will be to ensure that all construction activities are carried out in a manner that minimises environmental risks, prevents pollution, and protects nearby European Sites, in particular Lower River Suir SAC.

The CEMP will outline the contractor's responsibility to adhere to best practice construction and environmental protection methods throughout the duration of the works. It will include detailed measures relating to:

Surface Water Management: Measures to prevent surface water runoff containing sediment, hydrocarbons, or other contaminants from entering the drainage network. This will include the use of silt fences, sediment traps, temporary bunding, and designated refuelling areas away from drainage pathways.

Pollution Prevention: Strict protocols for the storage and handling of fuels, oils, concrete, and other hazardous substances. Spill response procedures will be detailed, including the provision of spill kits and staff training.

Groundwater Protection: Measures to prevent accidental infiltration of contaminants during any excavation or subsurface works, including the rapid containment and clean-up of any spills.

Dust and Air Quality Management: Measures such as water spraying of exposed soils and stockpiles during dry conditions, vehicle speed restrictions, and regular road cleaning to prevent dust generation.

Noise and Vibration Management: Implementation of appropriate working hours, maintenance of machinery, and the use of low-noise equipment where possible to minimise disturbance to sensitive receptors.

Waste Management: Procedures for the proper segregation, temporary storage, removal, and disposal of construction waste in accordance with legislative requirements.

Monitoring and Reporting: Provisions for the regular inspection of environmental protection measures, and prompt rectification if any failures or breaches occur. A site environmental officer will be nominated to oversee implementation of the CEMP.

The CEMP will be a live document, reviewed and updated as necessary throughout the construction period to reflect any changes in activities or conditions on site. It will also incorporate any specific requirements arising from planning conditions or consultation with relevant authorities.

Good Working Practice

Good working practices such as those set out in, but not limited to the following will be followed at all times:

- CIRIA Report C741 Environmental Good Practice on Site (4th Edition, 2015)
- CIRIA Report C532 Control of Water Pollution from Construction Sites (2001)
- Environment Agency Pollution Prevention Guidelines (PPGs), specifically PPG1, PPG5, and PPG6
- Uisce Éireann Code of Practice for Wastewater Infrastructure
- Greater Dublin Strategic Drainage Study (GDSDS) Volume 2: New Developments
- IFI (2016) Guidelines on protection of fisheries during construction works in and adjacent to waters

Riparian Buffer and Stream Corridor

- A minimum 5 m vegetated buffer will be maintained between all construction activities and the top of the riverbank. This buffer will be clearly demarcated on site with robust high-visibility fencing prior to commencement of works and treated as a no-entry zone for personnel, machinery, or materials.
- No excavation, storage of materials, or construction activity will take place within this 5 m zone. The area will remain vegetated throughout the works to provide filtration and attenuation of any incidental runoff.
- Temporary silt fencing will be installed along the inner edge of the buffer to intercept and trap any sediment-laden runoff from the active construction area.
- These barriers and the buffer fence will be inspected weekly and after rainfall events, with maintenance or replacement carried out immediately if damage or sediment accumulation is noted.
- All surface water from active working areas will be directed away from the buffer and stream via temporary swales, silt traps, or settlement ponds to allow suspended solids to settle before controlled discharge.
- Dewatering, if required, will only occur via silt bags or settlement tanks. No pumping of water directly to the stream will be permitted.
- Works will not take place during or immediately following periods of heavy rainfall. Activities will be scaled back or suspended if forecasted weather conditions could result in runoff to the stream.

Refuelling, Storage, and Handling of Hazardous Materials

- Where possible, all plant refuelling will occur off-site at authorised facilities. On-site refuelling will only be undertaken when strictly necessary, by trained and competent personnel, using drip trays and fuel-absorbent mats. Refuelling operations shall never be left unattended.
- All refuelling, storage, and maintenance of plant will occur at least 50 m from the stream and outside the 5 m buffer.
- Fuel, oils, and other hazardous materials will be stored within a secondary containment system capable of holding at least 110% of the total stored volume (e.g., bunded tanks or drip trays).
- Spill kits, absorbent booms, and hydrocarbon pads will be maintained on site and readily available at all times. Any spill will be contained immediately, and contaminated material will be collected and disposed of at an authorised facility.
- Mobile fuel bowzers will be parked on hardstanding or impermeable surfaces and locked when not in use.
- All machinery will be subject to regular inspection and maintenance to prevent leaks of oil, diesel, or hydraulic fluid.
- There shall be no concrete batching or washout on site. Any concrete used will be delivered ready-mixed and poured under supervision, with washout occurring off site.

Excavations, Earthworks, and Temporary Stockpiles

- Excavations will be carried out in phases to minimise the area of exposed soil at any one time.
- Where feasible, excavated material will be reused on site for backfilling and landscaping. Any material unsuitable for reuse will be disposed of at an authorised inert waste facility.
- Temporary soil stockpiles will be located away from the stream and outside the 5 m buffer. Stockpiles will be bunded or covered with tarpaulin or geotextile to prevent erosion and sediment transport.
- Runoff from excavation areas will be directed through sediment-control measures (e.g., silt fences, straw bales, or settlement ponds) before discharge.
- All exposed areas will be re-vegetated as soon as practicable following completion of earthworks to stabilise soils and reduce erosion potential.

Operation Phase Mitigation

During the operational phase, the proposed development will incorporate a range of permanent mitigation and management measures designed to maintain water quality, hydrological function, and ecological integrity within the adjoining stream and downstream receiving waters connected to the Lower River Suir SAC. These measures are summarised below.

Surface Water and SuDS Management

- All surface water runoff from the development will be collected and treated through a fully integrated Sustainable Drainage System (SuDS) network designed to the standards of Uisce Éireann and Tipperary County Council.
- The SuDS system will incorporate a combination of permeable paving, infiltration trenches, filter drains, and an underground attenuation tank sized to accommodate the 1-in-100-year storm event with an additional 20% allowance for climate change.

- Runoff will be discharged at greenfield runoff rates via a hydrobrake flow-control device to the adjacent stream.
- A petrol interceptor will be installed at the final outfall to remove residual hydrocarbons prior to discharge.
- The SuDS components will collectively provide treatment for suspended solids, hydrocarbons, and nutrients through filtration, sedimentation, and infiltration processes.
- Routine inspection and maintenance of SuDS features will be carried out ensuring continued functionality and water-quality protection. Maintenance will include periodic clearance of sediment traps, inspection of inlets and outlets, and removal of debris or vegetation growth obstructing flows.
- Any damage to the SuDS infrastructure during the lifetime of the scheme will be promptly repaired to prevent untreated discharge to the stream.

Riparian Buffer Protection and Management

- The 5 m vegetated riparian buffer along the northern site boundary will be retained permanently and maintained as a natural grassed and shrubby strip to protect the adjoining stream.
- This buffer will act as a filtration zone for any diffuse runoff, allowing infiltration and trapping of fine sediment before water reaches the stream.
- No hardstanding, buildings, or lighting columns will be installed within this buffer. It will remain free from mowing (except for occasional maintenance) to encourage natural vegetation growth and maximise ecological value.
- The buffer will be incorporated into the long-term site management plan to ensure its integrity and ecological function are maintained throughout the life of the development.
- Where possible, the buffer will be planted with native riparian species such as willow (*Salix* spp.), alder (*Alnus glutinosa*), and meadowsweet (*Filipendula ulmaria*) to enhance filtration capacity, stabilise banks, and provide local biodiversity benefits.
- Drainage outfalls will be designed and maintained to avoid erosion or scour of the riverbank, with energy-dissipating measures (e.g., stone aprons) installed as required.

Lighting Design

- Public lighting for the housing estate and walkway will be designed in accordance with Guidelines for Artificial Lighting in the Countryside (Bat Conservation Trust, 2018) and The Institute of Lighting Professionals GN08/23 Guidance Note on Bats and Artificial Lighting.
- Low-spill, directional LED lighting with full cut-off lanterns will be used to minimise light trespass onto the stream and riparian vegetation.
- Lighting columns adjacent to the northern boundary and walkway will be fitted with cowls or hoods to direct light downward and away from the watercourse.
- Illumination levels along the riparian corridor will be kept below 1 lux at the water surface, ensuring no disturbance to foraging bats, otters, or other nocturnal wildlife.
- All lighting will be positioned and installed under the supervision of the project design engineer to ensure compliance with best-practice ecological lighting standards.

Landscaping and Biodiversity Enhancement

- The site landscaping plan will use native and locally appropriate plant species to strengthen ecological connectivity with the surrounding landscape.
- Species selection will prioritise native trees and shrubs such as hawthorn (*Crataegus monogyna*), rowan (*Sorbus aucuparia*), alder (*Alnus glutinosa*), hazel (*Corylus avellana*), and dog rose (*Rosa canina*), providing habitat and foraging opportunities for birds and pollinators.
- Non-native invasive or ornamental species with potential for spread will not be planted.
- Tree and shrub planting will be concentrated along site boundaries and open-space areas to provide screening and ecological corridors while maintaining open views across the riparian buffer.
- All planted areas will be subject to a five-year establishment and maintenance period, including replacement of any failed specimens.
- The riparian buffer and landscaped areas will be managed collectively as a biodiversity corridor, linking the housing development to the adjoining stream and enhancing the ecological value of the site.

Wastewater and Utility Management

- All foul effluent generated during operation will discharge to the public foul sewer under licence from Uisce Éireann for full treatment at the municipal wastewater treatment plant. No foul or greywater will be discharged to ground or surface water.
- All utilities and service connections will be maintained in accordance with the relevant authority's specifications to prevent leakage or contamination of surface water or groundwater.

7. Concluding Statement

This report has examined whether, in view of best scientific knowledge and applying the precautionary principle, the Proposed Development, either individually or in combination with other plans or projects, may have an adverse effect on the integrity of any Natura 2000 site.

One Natura 2000 site, the Lower River Suir SAC [002137], was identified during the Appropriate Assessment Screening stage as having potential to be indirectly affected by the Proposed Development due to the presence of a hydrological connection between the site and the SAC via the Borrisoleigh Stream and Fishmoyne Stream. As it was not possible to rule out the likelihood of significant effects at screening stage, a Natura Impact Statement (NIS) was required.

The assessment identified the potential for indirect effects on the Lower River Suir SAC arising from deterioration in water quality associated with construction activities, including sediment mobilisation and accidental pollution events, together with the long-term discharge of surface water runoff from the completed development to the Borrisoleigh Stream. Potential indirect effects on aquatic habitats and species within the SAC were therefore assessed in detail.

No direct habitat loss, habitat fragmentation, disturbance or hydrological alteration will occur within the Lower River Suir SAC as a result of the Proposed Development. The only identified pathway for effect relates to the potential for indirect impacts on water quality within hydrologically connected watercourses.

Having assessed the potential effects on the relevant Qualifying Interests of the Lower River Suir SAC, it was determined that, in the absence of mitigation, there is potential for indirect effects on water quality during both the construction and operational phases of the Proposed Development. These effects could arise through sediment release, accidental pollution events or contaminated surface water runoff entering the receiving watercourse.

The Proposed Development incorporates a range of mitigation measures designed to protect receiving waters during both the construction and operational phases. These include the implementation of best-practice construction environmental controls, strict pollution prevention measures, retention of the 5 m riparian buffer, and the provision of a comprehensive Sustainable Drainage System incorporating permeable paving, swales, attenuation storage and controlled discharge to the Borrisoleigh Stream. The proposed lighting design has also been developed to minimise disturbance to the adjacent riparian corridor through the use of warm-spectrum lighting, directional fittings and retention of the vegetated river corridor.

With the implementation of the mitigation measures outlined in Section 6.1.7, the potential for adverse effects on water quality, aquatic habitats and aquatic species within the Lower River Suir SAC will be avoided. The Proposed Development will not adversely affect the conservation objectives, ecological structure, ecological function or overall integrity of the Lower River Suir SAC.

Therefore, having regard to the nature and scale of the Proposed Development, the identified impact pathways, the mitigation measures proposed, the conservation objectives of the Lower River Suir SAC [002137], and the best available scientific knowledge, it can be concluded that the Proposed Development will not have an adverse effect on the integrity of the Lower River Suir SAC

[002137], either alone or in combination with other plans or projects. Accordingly, no adverse effects on the integrity of any European Site are predicted.

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