CAVAN COUNTY COUNCIL

PROVISION OF 45 No. UNITS

AT

PÁIRC NA TEILE

BECKSCOURT

BAILIEBOROUGH

CO. CAVAN

SCREENING FOR APPROPRIATE ASSESSMENT

JULY 2022

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DOCUMENT APPROVAL

PROJECT	Provision of 45 No. Units at Pairc na Teile, Beckscourt, Bailieborough, Co. Cavan	
CLIENT / JOB NO	Cavan County Council	6620
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CAVAN COUNTY COUNCIL

SCREENING FOR APPROPRIATE ASSESSMENT

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1. INTRODUCTION

1.1 BACKGROUND

Jennings O'Donovan & Partners Limited have been commissioned by Cavan County Council to carry out a Stage I Appropriate Assessment Screening under Article 6(3) of Council Directive 92/43/EEC (Habitats Directive) for the proposed provision of 45 No. Units at Beckscourt, Bailieborough, Co. Cavan, hereafter referred to as the 'Proposed Development'.

The purpose of this report is to assess the various elements of the project in terms of potential impacts to European Sites within the Zone of Influence (ZoI) of the project site. Potential cumulative impacts of the overall Proposed Development, individually and in-combination with other plans and projects within the area of the waterbody catchment were also assessed in relation to existing, or proposed elements of the project. Locations where works will be carried out were surveyed for the presence of protected habitats and species as set out in the Birds and Habitats Directives.

This proposal is not necessary for the conservation management of a European site.

1.2 AUTHOR'S QUALIFICATION AND EXPERTISE

This Stage I Appropriate Assessment Screening has been prepared by Dr. Monica Sullivan, Principal Environmental Scientist and Lead Ecologist at Jennings O'Donovan & Partners Limited. She is a full member of the Chartered Institute of Ecology and the Environmental Management. Dr. Sullivan has over 35 years' experience in the natural sciences, specialising in fisheries management, aquatic ecology and freshwater invertebrate taxonomy. She has lectured since the mid 1990's – 2017 in invertebrate zoology, ecology and environmental pollution control to both masters and degree students. She was the examiner for the freshwater biology module for the Institute of Fisheries Management, England. Monica's experience includes invasive species surveys, management plans, ecological studies, Environmental Impact Assessment (EIA) screenings, Appropriate Assessment (AA) screenings, Natura Impact Statements (NIS), otter surveys, badger surveys, freshwater macroinvertebrate and instream flora surveys.

Qualified to doctorate level, Monica previously worked as a partner in an environmental consultancy, undertaking fieldwork and specialising in Environmental Assessments of medium to large scale infrastructural projects and the coordination and management of AA and Environmental Impact Assessment processes. She has a clear understanding of the legislative framework governing the extent of environmental investigations, assessments and reports required to secure the necessary approvals on all types of projects. She has extensive experience in management of specialist sub-consultants and working in a team environment and a history of collaborating with participants on research projects. Dr. Sullivan was author and researcher on an Environmental Government Program on invasive species. She is chief author of a chapter in the book Zebra Mussels in Europe and has published many papers on the topic. She spent several years working as both English and Scientific editor for international scientific journals. In 2017, she was expert advisor for 'horizon scan' invasive species workshop.

1.3 REGULATORY CONTEXT

Under Section 177U (1) of the Planning Acts, a Screening for AA of the Proposed Development shall be carried out by the competent authority (in this case, Cavan County Council) to assess in view of best scientific knowledge, if that Proposed Development, individually or in combination with other plans or projects, is likely to have a significant effect(s) on any European sites.

Collectively, Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are referred to as the Natura 2000 Sites. The legal basis on which SACs are selected and designated is the EU Habitats Directive, 92/43/EEC transposed into Irish law by the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011), as amended. The designation features of SACs are referred to as Qualifying Interests (QI) and include both species (excluding birds) and habitats. Similarly, Special Protection Areas (SPA's) are legislated in the Birds Directive 2009/147/EC. The designation features of SPAs are referred to as Special Conservation Interests (SCIs) which comprise bird species as well as wetland bird habitats.

In general terms, SACs and SPAs are considered to be of exceptional importance in terms of rare, endangered or vulnerable habitats and species within the European Community.
Article 6, paragraph 3 of 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 statutory agency responsible for the European sites is the National Parks and Wildlife Service of the Department of Culture, Heritage and the Gaeltacht.

This report has been prepared in accordance with current guideline documents:

- Assessment of plans and projects significantly effecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (EC, 2001)
- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (DEHLG 2009, Revised February 2010)
- Appropriate Assessment of Plans and Projects in Ireland Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government (DoEHLG, 2009, revised 2010)
- OPR Practice Note PN01: Appropriate Assessment Screening for Development Management, March 2021, Office of the Planning Regulator
- Communication from the Commission on the Precautionary Principle. Office for Official Publications of the European Communities, Luxembourg, (EC, 2000a)
- European Communities (Birds and Natural Habitats) Regulations, 2011 (S.I. No.477 of 2011).

- Interpretation Manual of European Union Habitats. Version EUR 28. European Commission (EC, 2013).
- EU Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC (EC, 2007)
- Managing Natura 2000 Sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (EC, 2018)
- Strict Protection of Animal Species, NPWS, 2021

The following European Court and Irish High Court rulings have been considered:

- C-127/02 Waddenzee v Staatssecretaris
- C-258/11 Sweetman v An Bord Pleanála
- C-512/12 Briels
- C-387/12 & C388/15 Orleans and others v Vlaams Gewest
- C-142/15 Moorbug
- C-323/17 People Over Wind and Peter Sweetman v Coillte
- C-162/17 Grace and Sweetman
- C-883/18 Holohan and others v An Bord Pleanála
- IEHC 84 (2019) - Kelly v An Bord Pleanála

Relevant plans from national to local scales are critical to inform a robust assessment of in-combination impacts; these are listed below:

- National Biodiversity Action Plan, for the period 2017-2021
- River Basin Management Plan for Ireland 2018-2021
- Cavan County Development Plan 2022-2028

1.4 THE STAGES IN AN APPROPRIATE ASSESSMENT

There are 4 stages in an Appropriate Assessment as outlined in the European Commission Guidance document (2001). The following is a brief summary of these steps:

Stage 1 - Screening: This stage examines the likely effects of a project either alone or in- combination with other projects upon a European site and considers whether it can be objectively concluded that these effects will not be significant.

Stage 2 - Appropriate Assessment: In this stage, the impact of the project on the integrity of the European site is considered, with respect to the conservation objectives of the site and to its structure and function.

Stage 3 - Assessment of Alternative Solutions: Should the Appropriate Assessment determine that adverse impacts are likely upon the European site, this stage examines alternative ways of implementing the project that, where possible, avoid these adverse impacts.

Stage 4 - Assessment where no alternative solutions exist and where adverse impacts remain: Where imperative reasons of overriding public interest (IROPI) exist, an assessment to consider

whether compensatory measures will or will not effectively offset the damage to the European site will be necessary.

As part of this Screening for Appropriate Assessment, a desk-based study of the European site within the zone of influence (ZoI) of the Proposed Development is required.

1.5 SCREENING METHODOLOGY

The function of the Screening Assessment is to identify whether or not the proposal will have a likely significant effect on any European Site. In this context "likely" refers to the presence of doubt with regard to the absence of significant effects (ECJ case C-127/02) and "significant" means not trivial or inconsequential but an effect that has the potential to undermine the site's conservation objectives (ECJ case C-127/02). In other words, any effect that compromises the functioning and viability of a site and interferes with achieving the conservation objectives for the site would constitute a significant effect.

The nature of the likely interactions between the project and the integrity of a European Site will depend upon the sensitivity of the European Site's qualifying features to potential impacts arising from the project; the current conservation status of the European Site and its qualifying features; and any likely changes to key environmental indicators (e.g. water quality) that underpin the conservation status of European Sites and their qualifying features, in-combination with other plans and projects.

The European Commission (2018) Guidelines outline the stages involved in undertaking a Screening Assessment of a project that has the potential to have likely significant effects on European Sites. The methodology adopted for this Screening Assessment is informed by these guidelines and was undertaken in the following steps:

1. Define the project and determine whether it is directly connected with or necessary for the conservation management of European Sites
2. Identify other plans or projects that, in-combination with the project, have the potential to effect European Sites
3. Assess whether or not the project is likely to have significant effects on European Sites in the view of its conservation objectives.

1.6 DESK STUDY

A desk study was carried out to collate the available information on the ecological environment of the proposed site. The National Parks and Wildlife Service (NPWS) database was consulted concerning designated conservation areas and records of rare and protected plant and animal species in the vicinity of the Proposed Development. The EPA Geoportal website was used when researching European designated sites and watercourses. Similarly, EPA Water Maps was accessed June 27th, 2022. The National Biodiversity Data Centre (NBDC) website was also consulted. One kilometre Grid square 'N6897' incorporates the entire Proposed Development site and contains the following four protected species: Common Frog (*Rana temporaria*), Smooth Newt (*Lissotriton vulgaris*), Red Kite (*Milvus milvus*) and the Eurasian Red Squirrel (*Sciurus carolinensis*). While the common frog was recorded on site at

GPS location ITM E668162.97 N797247.67, smooth newt, red kite or the red squirrel were not noted on site or utilising the site.

The Cavan County Development Plan 2022-2028 and the Cavan County Council planning enquiry website were reviewed to identify any proposed plans or projects which may have a direct, indirect or cumulative impact with this project.

1.7 FIELD STUDY

A site visit was carried out on June 7, 2022. The survey involved walking all aspects of the site and identifying habitats and surveying for small mammals along the treeline/hedgerows. Habitat classification followed Fossitt (2000) and the floral nomenclature used followed Parnell and Curtis (2012) and Scannell and Synnott (1987).

1.8 FLOODING

Office of Public Works (OPW) website and the CFRAM study were accessed (June 27, 2022) to determine flood areas within and near the Proposed Development. **Figure 1.1** shows the probability of flooding at the site, along with records of past flood events. The Proposed Development site itself has no surface or groundwater record of a flooding event (including winter 2015/2016 Geological Survey Ireland surface water flooding records). The nearest historical previous flood event is the Beckscourt, Bailieborough Recurring, located >430 m west of the Proposed Development site on the Bailieborough Relief Road. This flooding is deemed to be a localised Pluvial flooding event. Therefore it can be determined that there are no risks of flooding of adjacent lands / schemes as a result of this proposed development.

The Geological Survey Ireland flood probability mapping was examined (June, 2022) to determine if there was an existing risk from groundwater flooding at the site. Given that the main bedrock is Fine to coarse grained turbidite and Pyritic, graptolitic, black shale, there is little or no risk from groundwater flooding. The groundwater flood mapping confirmed that the site is 'not at risk' from groundwater flooding. In addition, there is 'no risk' of tidal or pluvial flooding. The site is in an area of poor aquifer '*bedrock which is generally unproductive except for local zones'* that is noted as being Moderate in vulnerability. The associated ground waterbody (GWB) is the Bailieborough GWB (EPA Code: IE_EA_G_006) which covers an area of approx. 472km². The Water Framework Directive (WFD) latest status for the Bailieborough GWB (2013-2018) is 'Good', indicating no change from the previous 2007-2012 and 2010-2015 records held. Status for near surface and sub surface nitrate susceptibility (IE_EA_07B010170) at the Site is 2, 4 and 5 respectively (1 is the highest ranking while 7 is the lowest ranking), while the status for near surface phosphate susceptibility (IE_EA_07B010170) at the Site is 2 and 3. The nearest groundwater well (Bailieborough Co-op 2629SWW203) was drilled in 1899 for industrial use and is located approx. 560 metres west of the proposed development site in the locality of Adelaide Row.

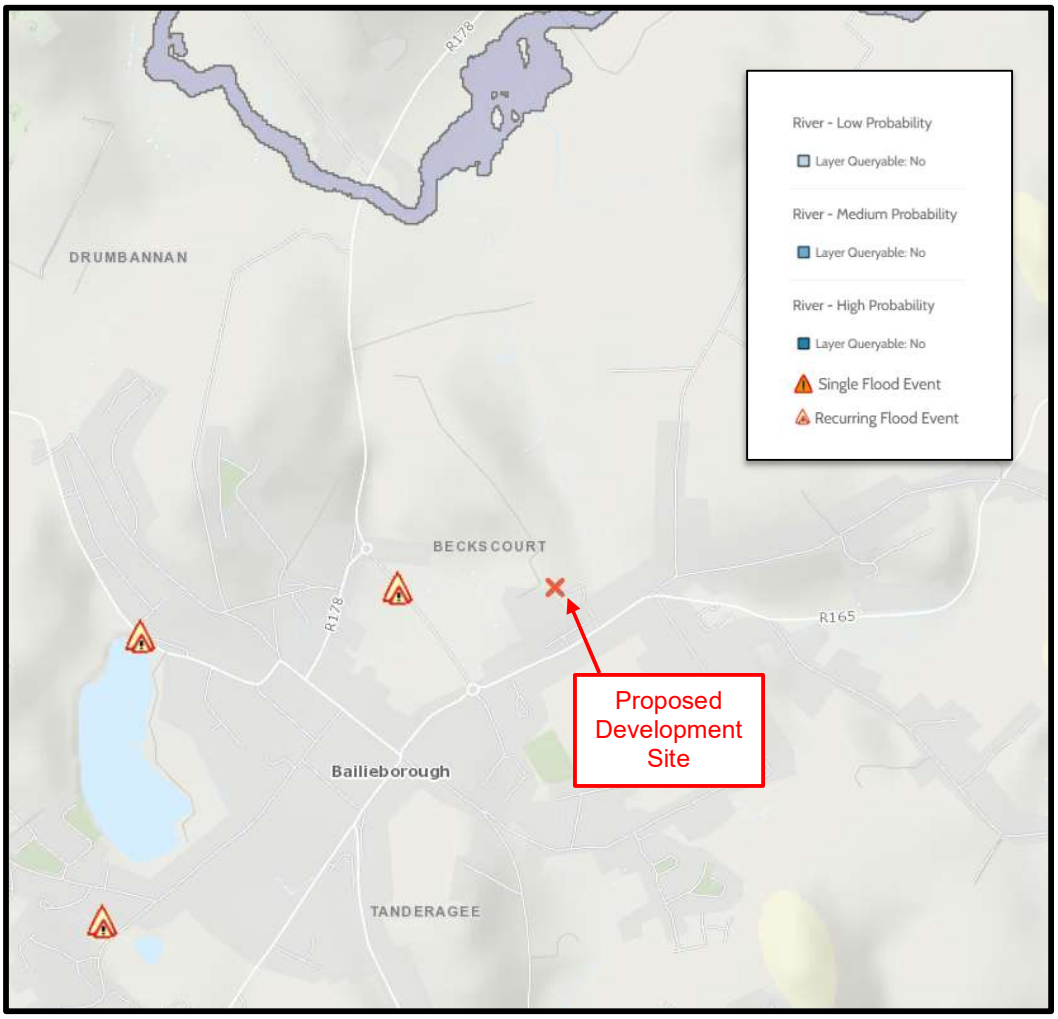

Figure 1.1 Flood Map for the Proposed Site (Source: FloodInfo.ie, 2022)

2. PROJECT DESCRIPTION

2.1 SITE LOCATION

The Proposed Development (2.86 ha) is located due north of the R165 (Kingscourt Road) and approx. 520m northeast of Bailieborough town (**Figure 2.1**). The site slopes generally from a ground level of 152.14m at its most western point to 150.55m in the south at the centre of the road entrance, to 151.4m at its most easterly point and falling to 145.88m at its most northerly point. The site slopes sharply by 3 to 4m at its northeastern point towards a local stream. No houses are planned in this location. A transmission gas main runs through the site, from the entrance road to the northern boundary.

The majority of the western boundary of the site is adjacent to the existing Eastboro estate. The southern boundary of the site is adjacent to 2 No. detached dwelling houses. The eastern boundary of the site is adjacent to a stream and strong mature tree line, and similarly, the northern boundary of the site is also adjacent to a defined tree line/hedgerow. There is a mature lime tree specimen on the site that is over

100 years old and is a distinctive feature of this site, hence the proposed name of the estate as Páirc na Teile.

Figure 2.1 Location of the Proposed Development Site

2.2 PROPOSED WORKS

It is proposed to construct a new housing development consisting of 45 units total, with associated services, access roads, car parking and landscaping. The proposed construction is envisaged to consist of raft foundations and conventional pavement make up, local excavations for services and plant, a 29 x 12 x 1.05m attenuation tank, a temporary onsite WTTP and retaining walls along the to the east to north boundary and partially along the north to west boundary.

2.3 The Proposed Development

The proposal is for a residential development on a net site are of 2.86 ha. The proposal consists of the follow:

- Type A – 6 No. 1 Storey, Semi-detached, 2 bed / 3 person.
- Type B - 8 No. 2 Storey, Semi-detached, 2 bed / 4 person.
- Type C – 4 No. 1 Storey, Semi-detached, 3 bed / 5 person.
- Type D – 6 No. 2 Storey, Semi-detached, 3 bed / 5 person.
- Type E – 2 No. 1 Storey, Semi-detached, 4 bed / 7 person.
- Type F – 1 No. 2 Storey, Detached, 5 bed / 8 person.
- Type G – 14 No. 2 Storey, Semi-detached, 2 bed / 3 person.
- Type H – 2 No. 2 Storey, Block of 2 No. Apartments, 1 bed / 2 person per apartment.

• All associated site development works including landscaping, boundary treatments, public lighting, site services, drainage works and all associated infrastructure.
• 29x12x1.05m Graff Bloc Attenuation Tank or similar approved.
• On site waste water treatment plant Premier Tech CSAF 200N20 with final effluent standard 20-30-20 or similar approved.

Road Build Up and Car Parking

The road build up consists of 40mm dense bitumen macadam wearing course over 60mm dense bitumen binder course over 300mm subbase to clause 804 over 300 mm minimum of Class 6F1 capping material with geotextile separator. The sections for the road build up are shown in Drawing 6620-JOD-XX-ZZ-DR-P-2001.

It is proposed to provide 2 No. car parking spaces per unit of House Type B, G and H, and 2 No. spaces per unit of House Type A, C, D, E and F for a total of 62 No. spaces. There shall be 28 No. spaces of communal parking, 3 No. accessible car parking spaces and a provision for 3 No. electric car charging station spaces. The total provided car parking spaces is 96 No. The road layout is shown in Drawing 6620-JOD-XX-ZZ-DR-P-2000.

Surface Water Sewer

Storm water run-off from the internal roads, parking bays and footpaths will be collected by precast concrete gullies including lockable cast iron grating and frames connected to a piped system. Surface water run-off from roof areas will be collected via downpipe connections to the main surface water pipe network. Gullies are located as shown on Drawing 6620-JOD-XX-ZZ-DR-P-0001. Gullies are positioned in accordance with the 'Recommendations for Site Development Works'. Gullies are provided at a minimum rate of one gully per 200m^2.

It is proposed to install an attenuation tank after the storm manhole S05 as shown on Drawing 6620-JOD-XX-ZZ-DR-P-0001. The proposed attenuation tank dimensions are 29m long, 12m wide and 1.05m deep. The attenuation tank shall be assembled using GRAF EcoBloc maxx system, as shown on drawings 6620-JOD-XX-ZZ-DR-P-1000-1002. Alternative products can be submitted for approval prior to construction commencing.

A Hydro-Brake flow control device with a design depth of 0.5m and a design flow of 6.9 l/s, based on greenfield runoff rate, is proposed to be installed at the outlet of the attenuation tank. Alternative products can be submitted for approval prior to construction commencing.

The exact size and dimensions of the attenuation tank have been chosen in combination with the proposed Hydro-Brake to limit the discharge rate to an acceptable level and minimise the risk of flooding for all modelled flood events.

A class 1 petrol interceptor capable of a peak flowrate of 200 l/s and can treat a drainage area of greater than 10,100 m^2 is required to be installed upstream of the attenuation tank as per drawing 6620-JOD-XX-ZZ-DR-P-1000-1002. A Klargester Bypass Separator NSBE020 or similar approved is proposed.

Wastewater Sewer

The Bailieborough WWTP is currently over capacity and Irish Water is in the design stages of works to upgrade the capacity of the WWTP.

Until such time as the Bailieborough WWTP has completed its upgrade works, it is proposed to use an on-site wastewater treatment system located in the centre of the site to then discharge to the stream at the Northern point of the site, as shown in Drawing 6620-JOD-XX-ZZ-DR-P-0001

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The on-site wastewater treatment system proposed is a Conder CSAF 200N20 Sewage Treatment Plant with a final effluent standard BOD ≤ 20 mg/l, Suspended Solids ≤ 30 mg/l and Ammonium nitrogen (NH4-N) ≤ 20 mg/l. The proposed wastewater treatment plant are shown in Drawings 6620-JOD-XX-ZZ-DR-P-1003-1004.

Once the Bailieborough WWTP has completed its upgrade works, it is proposed to decommission the on-site wastewater treatment system and instead connect the foul water system to the existing foul water system at existing foul manhole F05_EXISTING, as shown in Drawing 6620-JOD-XX-ZZ-DR-P-0001.

Watermain

The water main has been designed in accordance with the Code of Practice for Water Infrastructure. A 110mm Outside Diameter (OD) Polyethylene (PE) connection is proposed to be made to the existing water main located in R165 Road at the Southern boundary of the site as shown on drawing 6620-JOD-XX-ZZ-DR-P-0002. A 50mm PE connection will be made to each dwelling/unit.

Hydrants will be positioned within the site such that:

- The distance from each building is not less than 6m or more than 46m.
- The distance from a hydrant to a vehicle access road or hard-standing area for fire appliances is not more than 30m.
- They are distributed around the perimeter of the buildings, having regard to the provision of access for fire appliances (as per Building Regulations 2006 Technical Guidance Document B).

The hydrants shall be capable of delivering a minimum of 35 litres per second through any single hydrant as per Water UK – National Guidance Document on the Provision of Water for Fire Fighting.

In accordance with Irish Water standards a Water meter, Logging Device (Larson Type) and sluice valves are proposed at the connection into the Proposed Development site. All water mains will be

commissioned, and pressure tested to Irish Water Standards. The typical connection details and meter details are shown in Revision 4 of Irish Water standard details.

3. RECEIVING ENVIRONMENT

3.1 GEOLOGY AND SOILS

The quaternary sediments at the site of the Proposed Development are classified as *'till derived from Lower Palaeozoic sandstones and shales'*.

The north of the development site contains bedrock of Shercock Formation with underlying fine to coarse grained turbidite. The south of the development site contains bedrock of Laragh Formation with underlying pyritic, graptolitic and black shale. A report carried out by Ground Investigations Ireland (GII) in December 2019 noted that the sequence of strata encountered were consistent across the site and generally comprised of dense gravel, gravel, very stiff glacial till, firm glacial till and stiff glacial till.

3.2 HYDROLOGY AND HYDROGEOLOGY

The Proposed Development site is located within the Water Framework Directive (WFD) wider catchment area of the Boyne, covering approx. 2,696km^2, the Blackwater [Kells]_SC_010 sub catchment (c.124.41km^2) and the Blackwater (Kells)_020 River Sub basin, covering an area of approx. 11km^2.

A historic stream (present on 25" Ordnance Survey Maps) approx. 1m in width, flows north along the extent of the eastern site boundary, leaves the site and continues in a general northerly direction for approx. 840 metres before forming a potential hydrological connection with the order 3 Blackwater (Kells) river (Segment Code: 07_2156). The Blackwater (Kells) River flows northwest for approx. 1.6km and enters the eastern shores of Castle Lough. After passing through this lake for approx. 660 metres, the outflowing Blackwater (Kells) River flows south and then west for approx. 2.9km and enters Parker's Lough. After flowing through the extent of this lake (approx. 234 metres) the outflowing Blackwater (Kells) river continues southwest for approx. 3km and enters the northern shores of Galloncurra Lough. The hydrological connection briefly flows through this lake (approx. 221 metres) with the outflowing Blackwater (Kells) river continuing for a further approx. 7.1km and entering Gallon Lough. The Blackwater (Kells) river passes through the extent of this lake (approx. 312 metres) and flows south for approx. 7.9km and enters the north-eastern shores of Lough Ramor. The hydrological connection flows through this lake for approx. 4.8km and enters both the River Boyne and River Blackwater SAC (002299) and the River Boyne and River Blackwater SPA (004232) (both approx. 30km downstream of the Proposed Development). The Blackwater (Kells) River continues for approx. 40km before flowing into the order 6 River Boyne (Segment Code: 07_1534) near Navan, Co. Meath. The River Boyne continues to flow through these designated sites for approx. 35km before entering the Boyne Coast and Estuary SAC (001957) (approx. 105km downstream of the Proposed Development). The Boyne River flows east for a further approx. 4km and subsequently discharges to the Irish Sea east of Drogheda, Co. Louth.

Figure 3.1 Watercourses and waterbodies proximate to the Proposed Development.

The nearest watercourse is the Corkish stream which is located approx. 1.6km east of the Proposed Development. Due to the intervening distance and associated landscape, the Proposed Development is not hydrologically connected to this watercourse. The site overlies bedrock which is classified as a *'Poor Aquifer – Bedrock which is Generally Unproductive except for Local Zones*'. The groundwater vulnerability at the site is classified as 'Moderate' '*M*'. The Bailieborough Waterbody (IE_EA_G_006) which underlies the Proposed Development site currently has a water quality classification of '*Good*'. There are no springs or wells within the vicinity of the site.

Currently, the groundwater in the area has no significant underlying pressures, including waste abstraction, agriculture, anthropogenic, aquaculture, atmospheric, extractive industry, hydro morphology, invasive species, urban runoff or otherwise (EPA Water Maps, accessed July 1st 2022). The EPA Maps (Water) was also accessed (July 2022) to examine the Proposed Development Site and local area for nitrate and phosphorus loading and Pollutant Impact Potential (PIP). PIP maps for Nitrogen (N) and Phosphorus (P) have been generated by the EPA to show the highest risk areas in the landscape for losses of N and P to waters. The PIP model estimates the annual nutrient losses from agricultural land at specific locations, using spatial data from farm management, soils and hydrogeology. This model estimates loads at an annual temporal resolution.

The Development Site is located proximate to an existing housing estate to the west, a private residential dwelling to south and improved agricultural grasslands to the east and north.

The grasslands/habitats associated with the Proposed Development Site have been intensely modified as the Site has undergone soil movement and turnover by JCB (or other) machinery. The Development Site is denoted as having the following Phosphorus rankings; the centre strip running north-south has a

lower PIP ranking range of 4 and also 7 (7 is the lowest impact ranking) while the outer Development Site boundaries due west and east have a higher PIP ranking of 3. The overall ranking likely reflects fertiliser use on the land in the past, with possible livestock. Adjacent lands due east are ranked 7 and 3 respectively, with a general consistency of a 3-4 ranking moving southward, as land has been modified over the years. Lands due west of the Development Site have a ranking of 1 and 4 suggesting fertiliser use as well as areas with no rankings as the land is now developed for housing estates. Further west, lands rank at 1, 2, 3 and 4 as land moves away from residential areas and under significant agricultural practices.

PIP N for the Proposed Development Site has a ranking of 4 in the centre strip (as above) with marginal lands ranking the lowest impact at 7. Adjacent lands moving southward are also generally low ranking, at 6-7.

Overall, the Critical Source Areas Maps for the Proposed Development Site and adjacent lands do not indicate a Site where either phosphorus or nitrates are a significant issue.
As noted earlier in Section 3.2, the Proposed Development Site is within the WFD sub basin Blackwater (Kells)_020. Since the Site has not been subject to farming or other agricultural practices in the past 5 years, there are currently no significant pressures from the Development Site on this River sub basin.

3.3 HABITATS

A site visit was carried out on July 18, 2022 on a warm (20oC) dry day. The survey area consists of approximately 2.86 ha on a largely greenfield site (smaller brownfield area where roads are present) along the R1465 Riverview Road approx. 520m from Bailieborough town centre. The northern-most point of the site is approximately located at ITM Grid Ref E668126.77 N797313.24, while the southern-most point lies approx. 250m directly south, at ITM Grid ref E668155.00 N797069.63.

Figure 3.1 Aerial view of the Proposed Development Site at Bailieborough, Co. Cavan

Figure 3.1 above gives an orthographic overview of the site location and surrounding landscape. The site is located at the northern outskirts of the Bailieborough urban outfall from the town centre. Underlying soils are comprised of sandstone and shale till (Lower Paleozoic). Corine 2018 denotes the majority of the site as an 'agricultural area' '(pastures)', with some of the site denoted as 'artificial surfaces or Urban fabric'. The latter habitat includes the roadways currently onsite.

Seven habitats (according to Fossitt, 2000) were noted within the survey area, namely WL1: Hedgerow/WL2: Treeline, WS1: Scrub, FW1: Eroding /upland rivers, ED2: Spoil or bare ground, ED2: Recolonising bare ground and BL3: Artificial Surfaces. No Annex I habitat occurs within the area of proposed works. The dominant habitat onsite is ED2: Spoil or bare ground.

No rare, threatened, or protected species of plants as per the Red Data Book (Curtis and McGough, 1988) were found. No species listed in the Flora Protection Order (2022) were found to be growing within the proposed site of works.

Hedgerow/Treeline (WL1/WL2)

This is a conspicuous habitat type along the northwestern, northern and eastern margins of the site. The hedgerow/treeline is variable in both structure and management. Maximum height is accomplished by native mature ash (*Fraxinus excelsior*) trees, some reaching approximately 15+m tall along the eastern boundary. Unfortunately, it is apparent that the mature ash specimens, as well as all other ash trees adjacent to the site, have contracted the die-back fungal disease (Hymenoscyphus fraxineus) and are in varying stages of a declining state of health. Branches of these trees are overhanging the local stream and the Site.

Much of the hedgerow/treeline habitat is associated with the delineation of land boundaries. This habitat is generally dense and continuous. In general, the hedgerow/treeline has not been maintained with average height of mature trees approx. 10m. The foliage of the trees is dense and overlapping.

Plate 3.1 Treeline (WL2) habitat along the eastern site boundary

Marginal native trees both semi-mature and mature include alder (*Alnus glutinosa*), hawthorn (*Crataegus monogyna*), blackthorn (*Prunus spinosa*), ash (*Fraxinus excelsior*), elder (*Sambucus nigra*) and willow (Salix spp.), while non-natives include sycamore (*Acer pseudoplantanus*), beech (*Fagus sylvatica*) and fruiting apple trees. Dominant tree species are ash (*Fraxinus excelsior*), hawthorn (*Crataegus monogyna*), and sycamore (*Acer pseudoplantanus*), with the latter species reaching up to 12m in places. The primary root system to the trees (primarily ash) on the eastern perimeter are located on the eastern bank of the stream and not within the site where the housing development is proposed. Hawthorn have developed as an understorey to the taller mature ash trees. A natural break between the Development and the eastern treeline is provided by a stream with an average width of approx. 1.5m.

Treelines/hedgerows are also quite distinct along the northern and northwestern borders and are located along a manmade ditch (dry on day of site visit). The drainage ditch was dry on the day of the site visit in July and there were no signs of it supporting wetland vegetation; therefore this drainage ditch was not considered as a separate habitat on this occasion.

Ivy (*Hedera hibernica*), bramble (*Rubus fruitcosus* agg.) and native honeysuckle (*Lonicera periclymenum*) are utilising these taller plant structures to gain height and spread into the hedgerow/treeline habitat. A non-native creeping plant, bindweed (*Calystegia sepium*) is quite prolific in places gaining strength from the dense foliage of supporting vegetation; white flowers were in blossom.

In places, the undergrowth of the treeline /hedgerow spreads out under the overhead canopy and includes dense impenetrable areas of bramble (*Rubus fruitcosus* agg.) and nettles (*Urtica dioica*). Male fern (*Dryopteris filix-mas*) forms clumps on shaded embankments under treelines (especially in riparian zone by the stream). Other plants in this area include willowherb (*Epilobium* spp.) and cow parsley (*Anthriscus sylvestris*).

WS1: Scrub

This habitat dominates the northeastern section of the Site on uneven ground, rising over 5m from base ground level and generally distributed over three distinct mounds (147-152 range). This area is dominated by at least 50% cover of shrubs, stunted trees and bramble. The canopy height is generally less than 5m. The scrub has developed on three main areas of spoil that have been left unmanaged and saplings of local trees/shrubs have gained a foothold, namely, willows (*Salix* spp.) which dominate, with birch (*Betula pendula*) and some ash (*Fraxinus excelsior*), gorse (*Ulex europaeus*) and the deciduous broom (*Cytisus scoparius*). The canopy of these trees does not form a distinct continuous canopy as they are randomly scattered. The scrub habitat is generally open, but is difficult to penetrate in areas where the spinose shrubs cluster.

Plate 3.2 Scrub (WS1) habitat in the northeast of the site

Overall, the field layer is generally impoverished and poorly-developed and exposes some of the underlying bare, dried-out soils atop the mounds. Plants supported in more shaded, wetter areas

include foxglove (*Digitalis purpurea*), meadowsweet (*Filipendula almaria*) and common spotted orchids (*Dactylorhiza fuchsia*). A stand of floating sweetgrass (*Glyceria fluitans*) remains in the northeast corner despite recent drainage works in this area.

FW1: Eroding/upland rivers

This habitat only exists on the eastern site boundary as a small, narrow, unstable stream with an average width of approx. 1.5m, depth of 30cm (approx.) and had a good flowrate on the day of site visit in July 2022. The stream slopes downhill (northwards) along the site boundary and generally has a low riffle along its course. The substrate is generally comprised of rock, cobble and gravel with minimum fine sediments. The adjacent eastern embankment is up to 3m tall and supports large trunks of mature trees, predominantly ash. The embankment to the west is lower-lying and only reaching up to 1m in places. The dense overhanging trees with a heavy canopy create a tunnelling effect over much of the northeastern end of the stream, restricting light penetration; the stream is devoid of instream vegetation in this area, but carries fallen leaf litter. Both embankments are generally covered with ground ivy (*Hedera* sp.) interspersed with ferns (including the evergreen hart's tongue *Asplenium scolopendrium*) and on occasion bramble (*Rubus fruitcoscus* agg.) (Plate 3.3).

Plate 3.3 Eroding stream (FW1) along the eastern boundary

Fontinalis antipyretica (willow moss) was present on some stones in the more open southern end of the stream. *Asellus aquaticus*, the freshwater crustacean was recorded in amongst this vegetation. Further instream fauna included dense colonies of *Simulium* (black-fly larvae) adhered to submerged cobbles and rocks in riffle areas. Gastropods included the river limpet (*Ancylus fluviatilis*).

ED2: Spoil and Bare ground

Spoil and bare ground (ED2) is the main habitat within this site. This habitat has evolved as a result of soils being moved/upturned around the site. Subsequently, natural local colonisation has readily occurred (Plate 3.4). The spoil is also likely associated with drainage activities onsite.
This habitat is variable in its degree of colonisation and composition, but is largely based on heaps of deposited spoil and rubble. In general, the spoil heaps have >80% cover. The original vegetation of the site shows remnants of wet grassland (GS4) species with some lower-lying areas (especially in the north-eastern section of the site) still supporting dense clusters of the soft rush (*Juncus effusus*), tall stands of bright purple loosestrife (*Lythrum salicaria*) and marsh thistle (*Cirsium palustre*).

The spoil supports local young individual saplings but does not create scrub habitat. Overall, grasses dominate this habitat and most were in flower during the site walkover. Common ruderals included nettles (*Urtica dioica*), dandelions (*Taraxacum* spp.), willow-herbs (*Epilobium* spp.) and ragworts (*Senecio* spp.). Tutson (*Hypericum androsaemum*), Ox-eye daisies (*Leucanthemum vulgare*), common figwort (*Scrophularia nodosa*), ribwort plantain (*Plantago lanceolata*), broad-leaved dock (*Rumex obtusifolius*), narrow-leaved dock (*Rumex stenophyllus*), meadow thistle (*Cirsium dissectum*), field thistle (*Cirsium discolor*), spear thistle (*Cirsium vulgare*), common sow thistle (*Sonchus oleraceus*), yellow rattle (*Rhinanthus minor*), native yarrow (*Achillea millefolium*), both white clover (*Trifolium repens*) and red clover (*T. pratense*) and both creeping and meadow buttercup (*Ranunculus repens* and *R. acris*) were all present. Conspicuous tall umbellifers such as the common hogweed (*Heracleum sphondylium*) and meadowsweet (*Filipendula ulmaria*) were in flower during the survey and reached up to approx. 1.5m in places. Cow parley (*Anthriscus sylvestris*) had just gone over.

Creepers amongst the erect flora include bedstraw *Galium aparine*, herb-Robert (*Geranium robertianum*), hedge bindweed (*Calystegia sepium*) and creeping buttercup (*Ranunculus repens*). The sprawling native yellow perennial, ladies bedstraw (*Galium verum*) was abundant in one area, near the lime tree, where the habitat was favourable and it was not being outcompeted by other vegetation, especially taller grasses. The branched tendrils of the native scrambling bush vetch (*Vicia sepium*) were noted using the plentiful erect vegetation for support. Silverweed (*Potentilla anserina*) was present at the more exposed spoil margins, but was not common. Eyebright (*Euphrasia officinalis*) was present where the vegetation was shorter.

Plate 3.4 Densely colonised Spoil habitat (ED2) dominates the Proposed Development Site at Páirc na Teile, Beckscourt, Bailieborough, Co. Cavan

On occasion, coltsfoot (*Tussilago farfara*) was noted atop or on the slopes of some of the spoil mounds where competition was limited.

Low-lying meadow grass (*Poa annua*) was common along the roadside margin with broadleaf plantain (*Plantago major*) and daisies (*Bellis perennis*). Tufts of Red fescue (*Festuca rubra*) were present on occasion.

ED3: Recolonising Bare Ground

This habitat exists adjacent to the existing roads and hardcore areas onsite (BL3). They are marginal areas transitioning between the hardcore artificial surfaces and the adjacent habitat (generally spoil). These areas have not been maintained and have subsequently become naturally colonised by herbaceous plants over time. Colonisation is limited in places where the ground is particularly dry and stoney, reducing the chances of germination (Plate 3.5). Other areas are more densely colonised with over 50% cover, when conditions are more favourable.

Plate 3.5 Recolonising Bare ground (ED3) habitat between BL3 habitat and ED2

Small tussocks of grasses particularly Yorkshire fog (*Holcus lanatus*), crested dog's tail (*Cynosurus cristatus*) and low-lying meadow grass (*Poa annua*) have gained a foothold. Individual stands of willowherb (*Epilobium* sp.) are sometimes present. Pineapple weed (*Matricaria discoidea*), ragwort (*Senecio jacobea*), daisy (*Bellis perennis*), broad-leaved plantain (*Plantago major*), creeping and meadow buttercup (*Ranunculus repens* and *R. acris*) and selfheal (*Prunella vulgaris*) comprise some of the more common herbaceous component of this habitat. Willow (*Salix* sp.) also feature in this area. The short toad rush (*Juncus bufonius*) was also conspicuous in more open areas.

BL3: Artificial Surfaces

This habitat incorporates all hardcore areas where artificial surfaces exist onsite including roads and buildings. This surface is wholly devoid of vegetation cover.

3.4 INVASIVE SPECIES

No invasive alien species as listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations, 2011 (S.I. No. 477 of 2011) Part 1 or 2 were recorded within the site under survey at Beckscourt, Bailieborough, Co. Cavan.

4. SCREENING FOR APPROPRIATE ASSESSMENT

This AA Screening examined the likely significant effects of the Proposed Development, either alone or in-combination with other projects or plans on European sites, that were situated within a Zone of Influence (ZoI), or a distance that has a potential source-pathway-receptor (SPR), both direct and indirect with the Proposed Development.

4.1 EUROPEAN SITES WITHIN THE ZONE OF INFLUENCE (ZOI) OF THE PROPOSED DEVELOPMENT

The European Sites identified as being within the Proposed Development's ZoI's using the SPR principle will be assessed (**Table 4.1, Figures 4.1 and 4.2**) to examine the likelihood of significant effects of the Proposed Development either alone or in-combination with other plans or projects, on any European Sites.

The zone of influence (ZoI) is the area over which ecological features may be affected by changes arising from the proposed project and its associated works. European sites occurring within or adjacent to the proposed Development Site were identified as having the potential to occur within the zone of influence. For European Sites at a greater distance and/or hydrologically connected to the project site were also included in the initial list of European Sites that could possibly be located within the zone of influence of the project.

The Proposed Development Site is not located within the boundary of any European site.
The nearest European site is the Killyconny Bog (Cloghbally) SAC (000006) which is located a terrestrial separation distance of approx. 13.7km southwest of the Proposed Development (QI include Active raised bogs [7110] and Degraded raised bogs still capable of natural regeneration [7120]) (Figure 4.1). The project site is potentially hydrologically connected to 3 European sites downstream namely the River Boyne and River Blackwater SAC (002299), River Boyne and River Blackwater SPA (004232) (both approx. 30km downstream) (Figure 4.2), and Boyne Coast and Estuary SAC (001957) (approx. 105km downstream). The latter European Site were determined to be outside the ZoI due to the hydrological separation distance of 105km, the size and scale of the works, and the assimilative capacity of the intervening waters including five lakes of varying sizes, and notable rivers including the Blackwater (Kells) river and the River Boyne.

There will be minimal risk to groundwater during construction as all construction methods proposed are to be of standard construction. There is no deep excavation required, nor will there be the use of piled foundation in the proposed development.

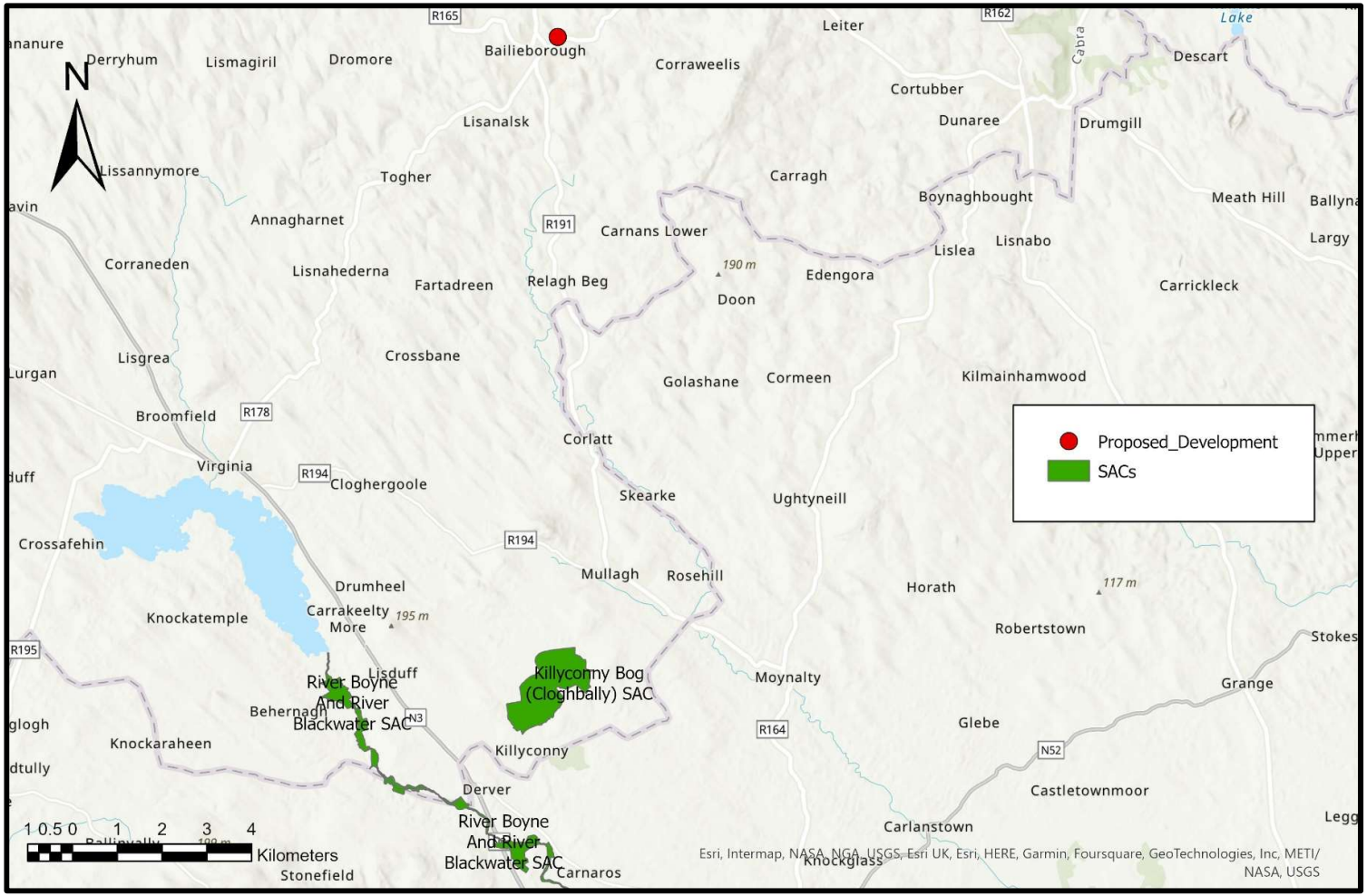

Figure 4.1 Location of the nearest European SAC to the Proposed Development

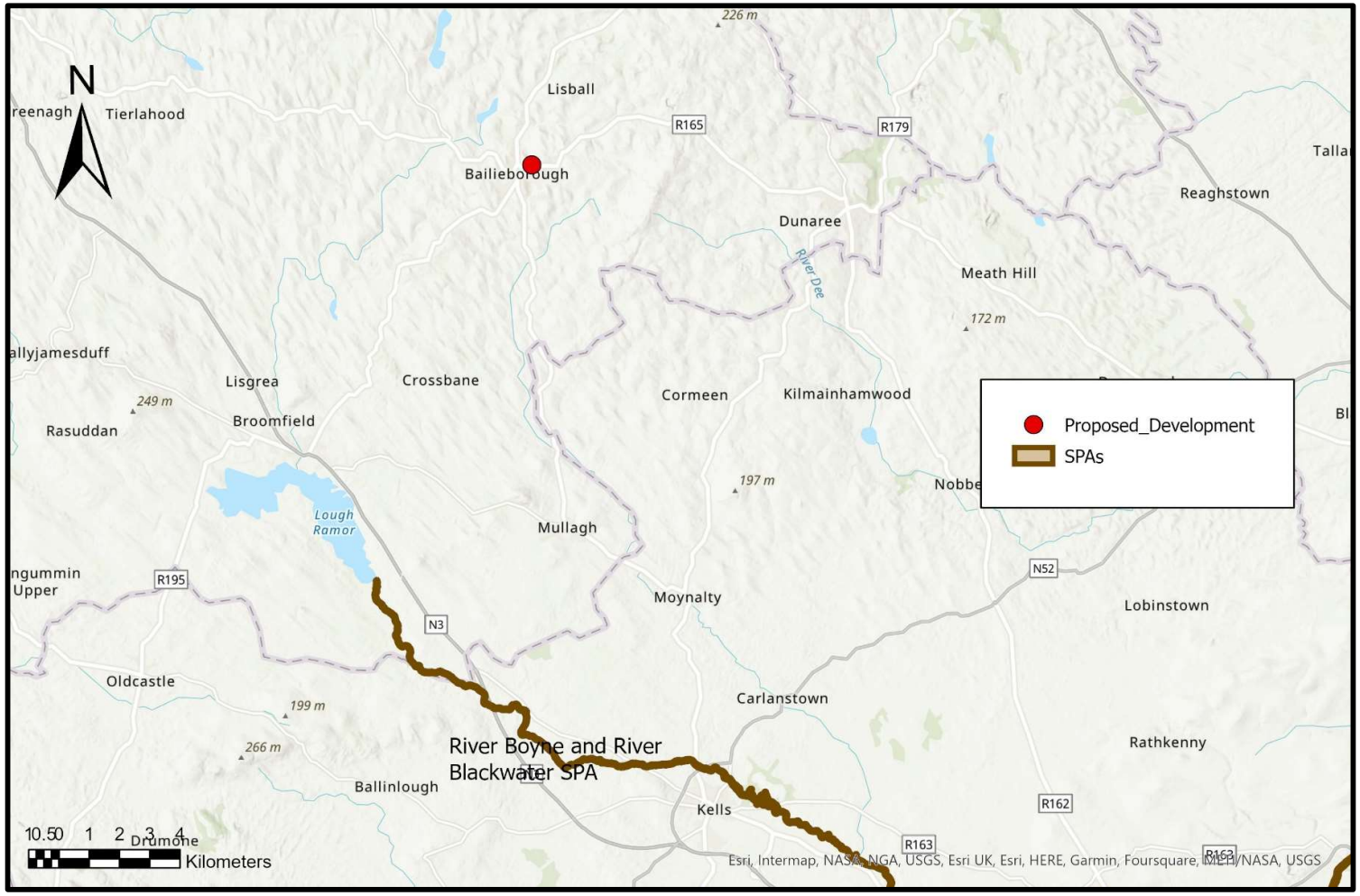

Figure 4.2 Location of the nearest European SPA from the Proposed Development

Table 4.1 List of Relevant European Sites within a 15km Zone of Influence radius

Designated Site	Distance from Development (km)
SACs	
Killyconny Bog (Cloghbally) SAC (000006)	approx. 13km southwest
River Boyne And River Blackwater SAC (002299)	approx. 15km south
SPAs	
River Boyne and River Blackwater SPA (004232)	approx. 15km south

Table 4.2 Relevant European Sites, reason for designation and SPR rationale

Designated Site	Reasons for designation (information correct as of 12th May 2021) (*denotes a priority habitat)	Distance from Proposed Development (km)	Potential adverse effect: Source-Pathway-Receptor Linkage
SPECIAL AREAS OF CONSERVATION (SACs)			
Killyconny Bog (Cloghbally) SAC (000006)	**Habitats** 7110 Active raised bogs* 7120 Degraded raised bogs still capable of natural regeneration According to this SAC's site Conservation Objectives document (Version 1. Department of Housing, Local Government and Heritage, 2015), for the listed QI, the Conservation Objective is to maintain the favourable conservation condition of the Annex I habitats for which the SAC has been selected.	The proposed development is located approx. 13km southwest	[7110] There is no possibility for significant effects on Active raised bogs due to: • a terrestrial separation distance of 13km between the project site and this SAC • the terrestrial nature of this habitat, fed by rainwater • no potential for drainage effects •proposed works will be contained within the project site • the size and scale of the project works within a project area of 2.86 hectares
			[7120] There is no possibility for significant effects on Degraded raised bogs still capable of natural regeneration due to: • a terrestrial separation distance of 13km between the project site and this SAC • no potential for habitat loss or threat from natural regeneration of conifers or invasive species

Designated Site	Reasons for designation (information correct as of 12th May 2021) (*denotes a priority habitat)	Distance from Proposed Development (km)	Potential adverse effect: Source-Pathway-Receptor Linkage
			• proposed works will be contained within the project site • the size and scale of the project works within a project area of 2.86 hectares
River Boyne And River Blackwater SAC (002299)	**Species** 1355 Otter(*Lutra lutra*) 1106 Salmon(*Salmo salar*) 1099 River Lamprey(*Lampetra fluviatilis*) **Habitats** 7230 Alkaline fens 91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, *Alnion incanae*, *Salicion albae*)* According to this SAC's site Conservation Objectives document (Version 1. Department of Housing, Local Government and Heritage, 2021), for the listed QI, the Conservation Objective is to maintain the favourable conservation condition of the Annex I habitats and Annex II species for which the SAC has been selected.	The proposed development is located approx. 14km south	[1355] There is no possibility for significant effects on Otter due to: • no hydrological connection • no potential for water quality impacts that may affect prey availability • a terrestrial separation distance of 14km between the project site and this SAC • no potential for disturbance effects • proposed works will be contained within the project site • the size and scale of the works within a project area of 2.86 hectares
			[1106] There is no possibility for significant effects on Salmon due to: • no hydrological connection • proposed works will be contained within the project site • the size and scale of the works within a project area of 2.86 hectares
			[1099] There is no possibility for significant effects on the River Lamprey due to: • no hydrological connection • no potential for change in the hydrological site characteristics • no potential for water pollution impacts due to project works • proposed works will be contained within the project site

Designated Site	Reasons for designation (information correct as of 12th May 2021) (*denotes a priority habitat)	Distance from Proposed Development (km)	Potential adverse effect: Source-Pathway-Receptor Linkage
			• the size and scale of the works within a project area of 2.86 hectares
			[7230] There is no possibility for significant effects on Alkaline fens due to: • no hydrological connection • no modification to existing drainage networks • no potential for diffuse groundwater pollution from proposed works • no infilling of ditches, dykes, ponds, pools, marshes or pits • a terrestrial separation distance of 14km between the project site and this SAC • no depletion of habitat or threat from natural regeneration of conifers or invasive species • proposed works will be contained within the project site • the size and scale of the works within a project area of 2.86 hectares
			[91E0] There is no possibility for significant effects on Alluvial woodlands due to: • no hydrological connection • no changes to the hydrological regime supporting the habitat • no potential for water pollution impacts due to project works • a terrestrial separation distance of 14km between the project site and this SAC • no potential for loss of habitat or habitat fragmentation, or threats from invasive native or non-native species

Designated Site	Reasons for designation (information correct as of 12th May 2021) (*denotes a priority habitat)	Distance from Proposed Development (km)	Potential adverse effect: Source-Pathway-Receptor Linkage
			• proposed works will be contained within the project site • the size and scale of the works within a project area of 2.86 hectares
SPECIAL PROTECTION AREAS (SPAs)			
River Boyne and River Blackwater SPA (004232)	**Birds** A229 Kingfisher(*Alcedo atthis*) According to this SPA's site Generic Conservation Objectives document (Department of Arts, Heritage and the Gaeltacht, 2021) for the listed SCI, the Conservation Objective is to maintain or restore the favourable conservation condition of the bird species for which the SPA has been selected.	The proposed development is located approx. 14km south	[A229] There is no possibility for significant effects on Kingfisher due to: • no hydrological connection • a terrestrial separation distance of 14km between the project site and this SPA (i.e. >500m recommended disturbance distance (BES, 2020)) • proposed works will be contained within the project site • the size and scale of the works within a project area of 2.86 hectares

The storm drainage for the entire development will be designed in accordance with the Recommendations for Site Development Works for Housing Areas and also the recommendations of the Greater Dublin Strategic Drainage Study (GDSDS). The storm water drainage design has been designed to cater for surface water from hard surfaces in the proposed development including roadways, footpaths, and the proposed buildings. The proposed storm network will discharge surface water run-off into the stream adjacent to the eastern boundary of the proposed site. The proposed attenuation tank is located within the central area of the proposed site within a green area. It is proposed that all storm water generated by the site will gravity flow to the proposed attenuation tank via a class one oil interceptor.

There is no SPR direct or indirect linkage from the Proposed Development to any European site. Due to the location of the Proposed Site Development, the scale and scope of the Proposed Development, it is considered that negative impacts would not occur on any European Site.

There will be no SPR linkage from the Proposed Development to any European Site during the construction and /or operation phases.

Therefore, with due consideration, significant effects on the conservation objectives of the designated European Sites outlined above in **Table 4.1** were not considered likely.

4.2 IN-COMBINATION EFFECTS

Planning Permission Applications

While effects on European Sites were not expected as a result of the construction and operation of the Proposed Development, the potential for cumulative effects on these designated sites due to other plans and projects acting in-combination with the Development were considered. The Cavan County Council on-line planning application portal was used to search planning applications close to the Proposed Development. A five-year search timeframe was assessed. Retention, refused and withdrawn planning applications were excluded. **Table 4.2** shows the planning applications in close proximity to the Proposed Development (circa 500m).

Table 4.3 Planning applications in close proximity to the Proposed Development.

Planning Reference	Description of Development	Site Address	Decision Date	Distance from Site
21715	For development consisting of a storey and a half style dwelling, connection to all existing public services, new entrance walls and piers and all ancillary site development works	Beckscourt, Bailieborough, Co. Cavan	16/02/2022	approx. 100 metres from proposed development
18512	For a proposed new vehicular entrance onto a public road, closure of the existing vehicular entrance and all ancillary site development works	Beckscourt, Bailieborough, Co. Cavan	08/03/2019	approx. 260 metres from proposed development

There were no other planning applications in the area at the time of writing (July 2022).

The AA Screening assessment has shown there will be no likely significant effects to any European Site during the construction of the Proposed Development. Therefore, there will be no in-combination impacts from any local planning application.

5. SCREENING ASSESSMENT – CONCLUSION

Following an evaluation of the information set out in this report, it is concluded beyond reasonable scientific doubt, in view of best scientific knowledge, on the basis of objective information and in light of the conservation objectives of the relevant European sites, that the Proposed Development at Páirc na Teile, Beckscourt, Bailieborough, Co. Cavan, individually or in combination with other plans and projects, will not have a significant effect on any European Site.

Based on this information, it has been determined that a Stage 2, Appropriate Assessment is not required.

6. REFERENCES

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APPENDIX A

DRAWINGS