ALTEMAR
Marine & Environmental Consultancy

Appropriate Assessment Screening & Natura Impact Statement - Information for a Stage 1 (AA Screening) and Stage 2 (Natura Impact Statement) AA for a proposed residential development at Bridgegate, Rathgory & Mulladrillen, Drogheda Road, Ardee, County Louth.

14th March 2022

Prepared by: Bryan Deegan (MCIEEM) of Altemar Ltd.
On behalf of: The Ardee Partnership

Altemar Ltd., 50 Templecarrig Upper, Delgany, Co. Wicklow. 00-353-1-2010713. info@altemar.ie
Directors: Bryan Deegan and Sara Corcoran
Company No.427560 VAT No. 9649832U
www.altemar.ie

Document Control Sheet			
Project	Proposed residential development at Bridgegate, Rathgory & Mulladrillen, Ardee, County Louth		
Report	Appropriate Assessment Screening and Natura Impact Statement		
Date	14th March 2022		
Version	Author	Reviewed	Date
Draft 01	Bryan Deegan	JD/MT	8th June 2021
Planning	Bryan Deegan		14th March 2022

Table of Contents

Introduction

The following Appropriate Assessment (AA) (Screening Stage) has been prepared by **Altemar Ltd.** at the request of the Ardee Partnership for a proposed residential development on lands at Bridgegate, Rathgory & Mulladrillen, Drogheda Road, Ardee, County Louth.

An Appropriate Assessment is an assessment of the potential effects of a proposed project or plan, on its own, or in combination with other plans or projects, on one or more EUROPEAN sites. European sites are those sites designated as Special Areas of Conservation (SAC) or Special Protection Areas (SPA).

This AA Screening and Natura Impact Statement examines whether the plan or project, either alone, or in combination with other plans and projects, in the view of best scientific knowledge and in view of the sites' conservation objectives, will adversely affect the integrity of the European sites.

Altemar Ltd.

Since its inception in 2001, Altemar has been delivering ecological and environmental services to a broad range of clients. Operational areas include: residential; infrastructural; renewable; oil & gas; private industry; Local Authorities; EC projects; and, State/semi-State Departments. Bryan Deegan, the managing director of Altemar, is an Environmental Scientist and Marine Biologist with 20 years' experience working in Irish terrestrial and aquatic environments, providing services to the State, Semi-State and industry. He is currently contracted to Inland Fisheries Ireland ("IFI") as the sole "External Expert" to environmentally assess internal and external projects. He is also chair of an internal IFI working group on environmental assessment. Bryan Deegan (MCIEEM) holds a MSc in Environmental Science, BSc (Hons.) in Applied Marine Biology, NCEA National Diploma in Applied Aquatic Science and a NCEA National Certificate in Science (Aquaculture). Bryan Deegan carried out all elements of this Appropriate Assessment Screening.

Background to the Appropriate Assessment

Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive), together with the Directive 2009/147/EC of the European Parliament and of the Council on the conservation of wild birds (the Birds Directive), form the cornerstone of European nature conservation policy. The Directives protect over 1000 animals and plant species and over 200 *"habitat types"* which are of European importance. In the Habitats Directive, Articles 3 to 9 provide the legislative means to protect habitats and species of European Community interest through the establishment and conservation of an EU-wide network of conservation sites (European/Natura 2000 sites).

These are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Birds Directive. Article 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect European sites (Annex 1.1). Article 6(3) establishes the requirement for Appropriate Assessment:

"Any plan or project not directly connected with or necessary to the management of the [EUROPEAN] site but likely to have a significant effect thereon, either individually or in combination with other plans and projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implication for the site and subject to the provisions of paragraph 4, the component 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."

Furthermore, as outlined in the EC guidance document on Article 6(4) (January 2007)[1]:

"Appropriate assessments of the implications of the plan or project for the site concerned must precede its approval and take into account the cumulative effects which result from the combination of that plan or project with other plans or projects in view of the site's conservation objectives. This implies that all aspects of the plan or

[1] European Commission. (2007).Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission.

project which can, either individually or in combination with other plans or projects, affect those objectives must be identified in the light of the best scientific knowledge in the field.

Assessment procedures of plans or projects likely to affect European sites should guarantee full consideration of all elements contributing to the site integrity and to the overall coherence of the network, both in the definition of the baseline conditions and in the stages leading to identification of potential impacts, mitigation measures and residual impacts. These determine what has to be compensated, both in quality and quantity. Regardless of whether the provisions of Article 6(3) are delivered following existing environmental impact assessment procedures or other specific methods, it must be ensured that:

- *Article 6(3) assessment results allow full traceability of the decisions eventually made, including the selection of alternatives and any imperative reasons of overriding public interest.*
- *The assessment should include all elements contributing to the site's integrity and to the overall coherence of the network as defined in the site's conservation objectives and Standard Data Form, and be based on best available scientific knowledge in the field. The information required should be updated and could include the following issues:*
    - *Structure and function, and the respective role of the site's ecological assets;*
    - *Area, representativity and conservation status of the priority and nonpriority habitats in the site;*
    - *Population size, degree of isolation, ecotype, genetic pool, age class structure, and conservation status of species under Annex II of the Habitats Directive or Annex I of the Birds Directive present in the site;*
    - *Role of the site within the biographical region and in the coherence of the European network; and,*
    - *Any other ecological assets and functions identified in the site.*
- *It should include a comprehensive identification of all the potential impacts of the plan or project likely to be significant on the site, taking into account cumulative impacts and other impacts likely to arise as a result of the combined action of the plan or project under assessment and other plans or projects.*
- *The assessment under Article 6(3) applies the best available techniques and methods, to estimate the extent of the effects of the plan or project on the biological integrity of the site(s) likely to be damaged.*
- *The assessment provides for the incorporation of the most effective mitigation measures into the plan or project concerned, in order to avoid, reduce or even cancel the negative impacts on the site.*
- *The characterisation of the biological integrity and the impact assessment should be based on the best possible indicators specific to the European assets which must also be useful to monitor the plan or project implementation."*

Methodology

This Appropriate Assessment screening was undertaken in accordance with the European Commission Methodological Guidance on the provision of Article 6(3) and 6(4) of the 'Habitats' Directive 92/43/EEC (EC, 2001), Part XAB of the Planning and Development Act 2000, as amended, in addition to the December 2009 publication from the Department of Environment, Heritage and Local Government; 'Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities' and the European Communities (Birds and Natural Habitats) Regulations 2011 and the provision of Article 6 of the Habitats Directive 92/43/EEC (European Commission, 21 November 2018).

In order to comply with the above Guidelines and legislation, this Appropriate Assessment Screening and Natura Impact Statement must be structured as follows:

1) Screening Stage

- Description of the proposed project or plan;
- Identification of EUROPEAN sites potentially affected;
- Identification and description of individual in combination effects likely to result from the proposed project;
- Assessment of the likely significance of the effects identified above. Exclusion of sites where it can be objectively concluded that there will be no likely significant effects; and,
- Conclusions.

2) Appropriate Assessment (Natura Impact Statement)

• Description of the European sites that will be considered further;
• Identification and description of potential adverse impacts on the conservation objectives of these sites likely to occur from the project or plan;
• Identification and description of in combination effects likely to result from other plans and projects;
• Mitigation Measures that will be implemented to avoid, reduce or remedy any such potential adverse impacts;
• Assessment as to whether, following the implementation of the proposed mitigation measures, it can be concluded, beyond all reasonable scientific doubt, that there will be no adverse impact on the integrity of the relevant European Site in light of its conservation objectives"; and,
• Conclusions.

Stage 1: Screening Assessment

Management of the Site

The project is a commercial housing development and is not directly connected with, or necessary to, the management of a European site.

Description of the Proposed Project

The proposed development site extends to c. 13.03 ha at Bridgegate, Rathgory & Mulladrillen, Drogheda Road, Ardee, County Louth and adjoins Phases 1-3 at Bridgegate (under construction) on lands to the west, accessed from the N2 Drogheda Road. The proposals overlap the boundary of permitted development Reg. Ref.: 10174; ABP Ref: PL15.238053 (as amended) at the western boundary and will supersede granted development in this area which consists of 31 no. dwellings, crèche and community building and public open space.

The development will consist of:

A) The construction of 272 no. residential units comprising a mix of 206 no. 2, 3 and 4 bedroom houses (all 2 storeys) including 50 no. 2-bedroom houses (Type 1), 145 no. 3-bedroom houses (Types 2, 3, 6) and 11 no. 4-bedroom houses (Types 4, 5) all with private open space and car parking, alongside 66 no. duplex units (all 3 storeys) including 17 no. 1-bedroom units (Types D5, D8), 24 no. 2-bedroom units (Types D1, D3, D6) and 25 no. 3-bedroom units (Types D2, D4, D7), all with private open space in the form of terrace at upper floor level and external garden space, with 499 sqm of communal open space serving Duplex Blocks A-B (48 no. units) (served by 2 no. bin and bike stores [each c. 51 sqm] adjacent) at Bridgegate Avenue, providing a total residential gross floor area of c. 28,168.9 sqm;

B) A part 1, part 2 no. storey crèche (c. 484.1 sqm) and playground and a single storey community building (c. 165 sqm) located adjacent at a central community hub (with bin and bike store [c. 23 sqm]) accessed from Bridgegate Avenue served by car parking located on Bridgegate Green and Bridgegate Avenue;

C) A landscaped Public Park located in the northern part of the site extending to c. 3.6 ha accessed from the community hub and between duplex Blocks B & C at Bridgegate Avenue, with 2 no. pedestrian links to permitted public park adjoining to the west and 1 no. pedestrian footpath extending to the northern perimeter at Hale Street, with a reservation for a future link road to lands to the east facilitated in the northern section of the park;

D) Works to the Rathgory Tributary located to the south of Bridgegate Avenue comprising the realignment of the channel and regrading and reprofiling of land (as required), implementation of 2 no. vehicular crossings (including culverts and mammal passes) and the provision of a riparian corridor based around the open watercourse comprising landscaping and planting with safe access to the watercourse provided for maintenance purposes and 1 no. pedestrian and cyclist crossing;

E) A series of landscaped public open spaces provided throughout the site with Public Open Space 01 (c. 1.05 ha) and Public Open Space 2 (c. 0.43 ha) located within the linear park (including riparian corridor) adjacent to the Rathgory Tributary with Public Open Space 03 (c. 0.29 ha) centrally located in the southern part of the site; open spaces will provide a mix of hard and soft landscaping, pedestrian and cycle access (cycle lanes provided at POS 1 and POS 2) and a range of activities including fitness spaces, kickabout area, amphitheatre and nature based play areas;

F) Provision of shared surfaces, landscaped streetscapes including planting and landscaping at two neighbourhood streets in the southern part of the site, with roads provided to site boundaries to the east, south and west to facilitate possible future connections;

G) All landscaping including planting to consolidate treelines and hedgerows forming existing site boundaries with agricultural lands to the east and Cherrybrook residential development to the west and all boundary treatments;

H) Roads and access infrastructure taken from Bridgegate Avenue (permitted under Reg. Ref.: 10/174; ABP Ref: PL15.238053 [as amended]), the provision of a bus stop on the south side of Bridgegate Avenue adjacent to community hub and provision of cycle lanes at this location (continued through Public Open Space 01); a total of 480 no. car parking spaces (362 no. serving houses, 84 no. serving duplexes, 23 no. serving crèche and community building and 11 no. visitor and public open spaces), a total of 296 no. bicycle parking spaces (204 no. spaces serving duplexes [60 visitor spaces], 32 no. spaces at the community hub and 60 no. visitor spaces);

I) Provision of 2 no. ESB substations, all associated drainage and services infrastructure (surface water, foul and water supply), public lighting, SUDS drainage and works to facilitate the development.

The proposals overlap the boundary of permitted development Reg. Ref.: 10174; ABP Ref: PL15.238053 (as amended) at the western boundary and will supersede granted development in this area which consists of 31 no. dwellings, crèche and community building and public open space.

Site flora and fauna assessments were carried out and included two surveys of the site for bat presence and a bat emergent survey was also carried out. In summary, no terrestrial mammals or signs of mammals of conservation importance were noted on site. No flora of conservation importance were noted on site. No evidence of bats roosting within the trees on site was noted. However, foraging activity was noted along the watercourse and treelines. No invasive species were noted on site. The site is proximate to a Rathgory Tributary which is a tributary of the River Dee. Of particular relevance to the possible impact of the proposed development on European sites are the proposed diversion and culverting of the Rathgory Tributary , on site drainage (surface water and foul), excavation and landscaping works with potential for downstream impacts on Dundalk Bay SAC and Dundalk Bay SPA. The majority of the site has undergone disturbance in the past through being arable lands and through construction activities. The watercourse and perimeter hedgerows and treelines would be seen as the most important ecological elements of the site. A CEMP and ecological assessment prepared by Altemar Limited are being submitted in conjunction with the AA Screening/NIS.

The potential Zone of Influence ("ZOI") of the construction phase of the project was deemed by Altemar to be the site within the site outline with potential for downstream impacts on the Rathgory Tributary , River Dee and the European sites (Dundalk Bay SAC and Dundalk SPA) in the absence of standard construction phase controls or, mitigation measures.

Drainage

An Engineering Services Report for the proposed development has been prepared by Cronin & Sutton Consulting Engineers which describes the storm water drainage, foul drainage and potable water infrastructure which are referred to in further detail below.

Proposed Storm Water Arrangements

In relation to existing storm water drainage, the report outlines the following:

'*At present the subject lands does not have any engineered drainage system in place. The open nature of the site and the natural existing gradients has led the majority of the site to drain to the south into a tributary of the River Dee. As noted, the site does have an existing water course through the centre of the site*.'

It is proposed that storm water be managed in two phases:

'*The first aspect is to reduce any post development run-off to predevelopment discharge rates (i.e. greenfield runoff rates). The development is to retain storm water volumes predicted to be experienced during extreme rainfall events. This is defined as the volume of storm water generated during a 1-in-100-year storm event, increased by 20% to account for the predicted effects of climate change. The second aspect requires that storm water quality be improved before disposal and, where applicable, that storm water be permitted to infiltrate into the ground on site rather than discharging to the public drainage system or to watercourses*.'

'The QBar value (greenfield runoff rate) for the site has been established as 2.07 l/s/ha. As the application has three distinct areas (area A, area B and area C), the required discharge rate has been calculated for all three.'

'The proposed development is to retain storm water volumes predicted to be experienced during extreme rainfall events. This is defined as the volume of storm water generated during a 1-in-100-year storm event, increased by 20% to account for predicted climate change effects. The development's attenuation storage volume requirement for such an event has been calculated as 2,957m3. It is proposed to locate 4no. Stormtech attenuation systems in different areas of the development, providing a total attenuation storage volume of 2,951m3.'

'The outfall into the public system shall be into the adjacent storm sewers or into the River Dee's tributary. As noted above, the site has an existing open channel watercourse which is a tributary of the River Dee. It is proposed to re-align this water course to aid in the most sustainable use of the site to provide the required housing densities for the subject site area.'

It is proposed to include the following SUDS features:

- Low water usage sanitary appliances;
- Water-butts to retain rainwater for re-use for landscaping and maintenance purposes;
- Permeable paving for car-parking bays.

Proposed Foul Drainage Arrangements

In relation to existing foul drainage, the report outlines the following:

'*The current site is not currently developed and as such no sewers are located on the subject lands. All effluent generated in Ardee is conveyed to the Regional Wastewater Treatment Plant, (EPA Licence Number D0117/01). The Regional Treatment Plant is currently being up-graded with a predicated completion date of April 2019. The Plant will have an expanded capacity from its current 5000P.E. (population equivalent) to 10,000P.E.*' As outlined on the Irish water website[2] "Irish Water, working in partnership with Louth County Council, has completed essential upgrades to the wastewater infrastructure in Ardee, Co. Louth. Wills Brothers Limited and EPS Group delivered this project on behalf of Irish Water."

The estimated effluent generated upon completion is as follows:

- 446l/day per apartment
- 446 l/day/unit x 272 units = 123,980 l/day = 123.98 m^3/day
- 1.435 l/sec Average flow (1 DWF)
- 8.610 l/sec Peak Flow (6 DWF – Population between 0 and 750)

In terms of the proposed foul drainage networks, the report outlines the following:

'*The proposed development has been designed in accordance with the specifications and requirements of Irish Water. The proposed foul network system has been designed to drain into the granted foul drainage network under the amended planning application reference 19/336, located to the west of the subject site*.'

Proposed Potable Water System

'*The current site is not developed and as such it does not have a positive connection into the local watermain network. The site is located adjacent to the regional Irish Water reservoir which currently supplies Ardee*.'

Estimated water demand subsequent to completion is as follows:

- 405l/day per apartment
- 405 l/day/unit x 272 units = 110,160 l/day = 110.16 m3/day
- 1.275 l/sec Average water demand
- 6.375 l/sec Peak water demand (5 times average water demand)

'*The proposed watermain network system has been designed in accordance with the specifications and requirements of Irish Water. The proposed potable water network has been designed to be connected into the granted potable water network under the amended planning application reference 19/336, located to the west of the subject site*.'

[2] https://www.water.ie/projects/local-projects/ardee-wastewater-treatmen/

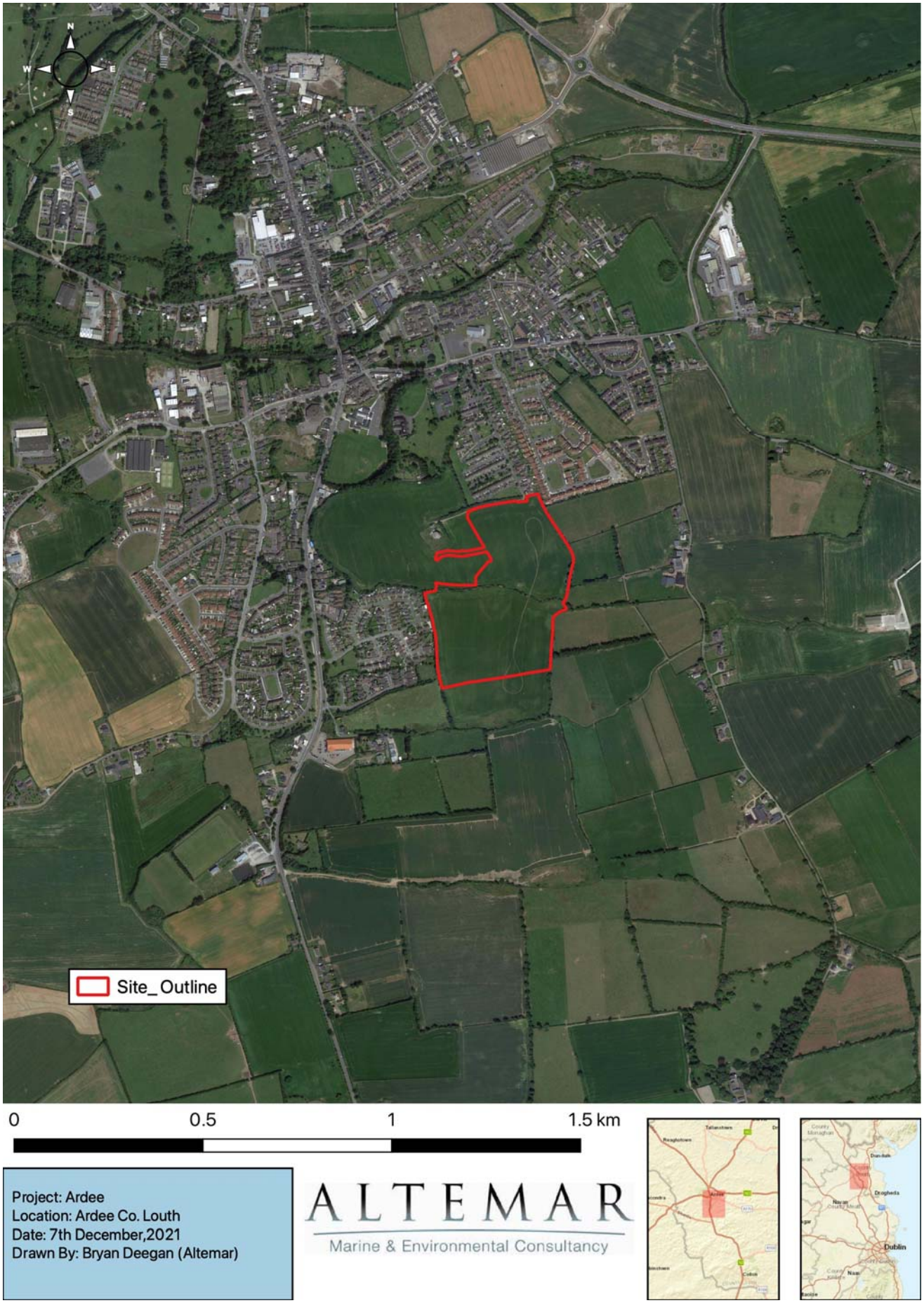

Figure 1. *Proposed site outline and location*

Figure 2. *Proposed site outline*

Figure 3. *Proposed site plan*

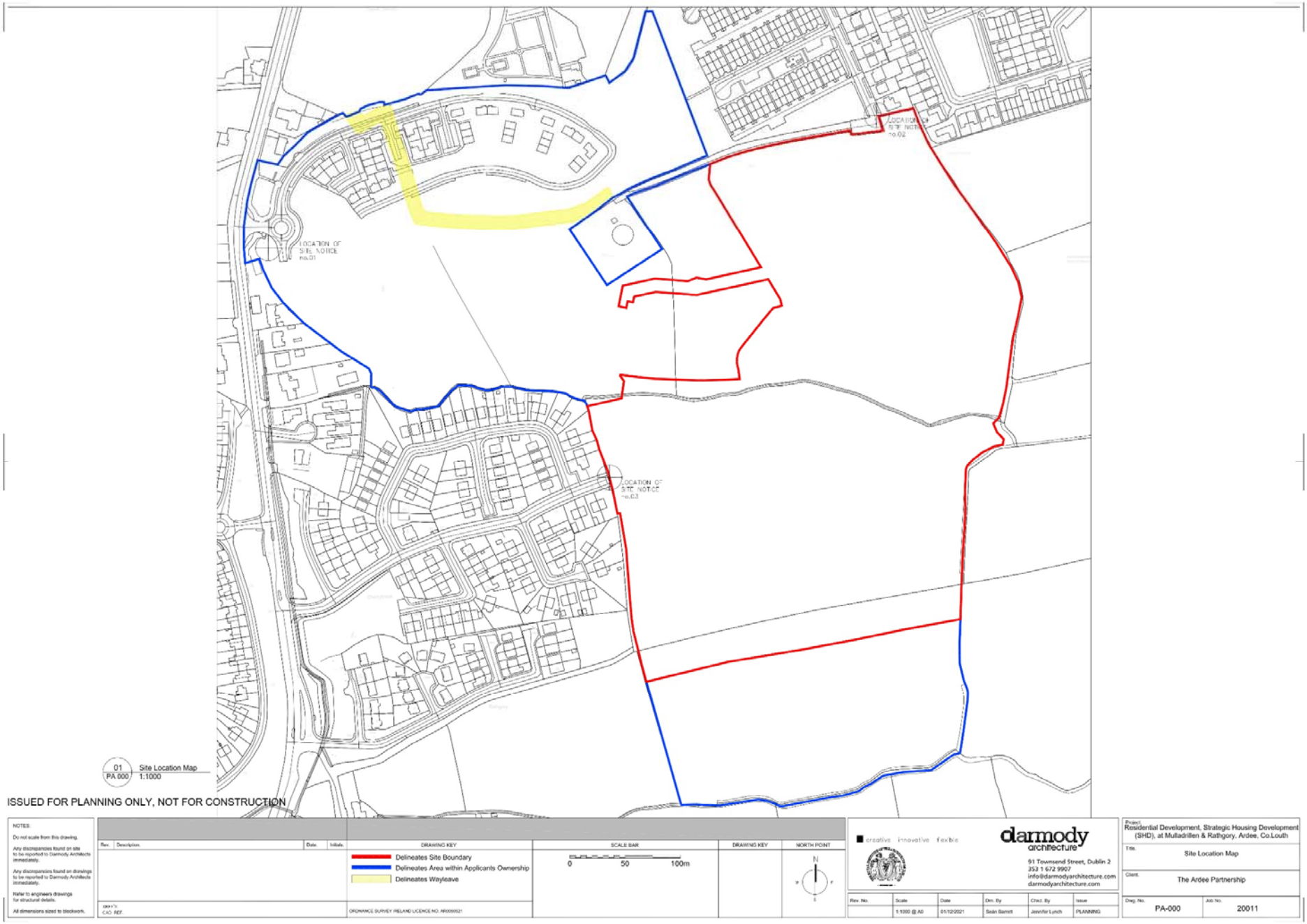

Figure 4. *Site location map*

Figure 5. *Proposed landscape masterplan*

Figure 7. *Proposed drainage layout*

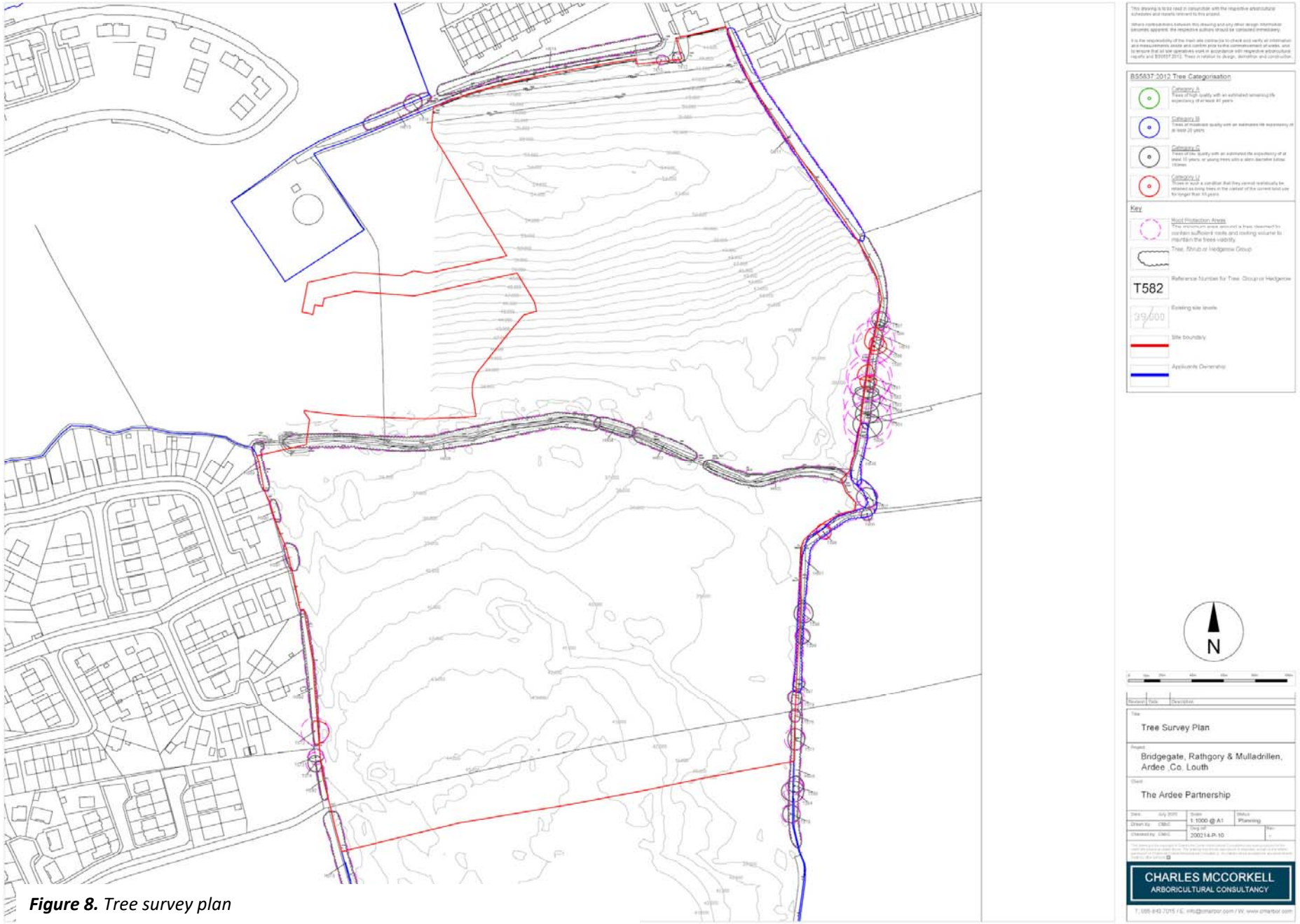

Figure 8. *Tree survey plan*

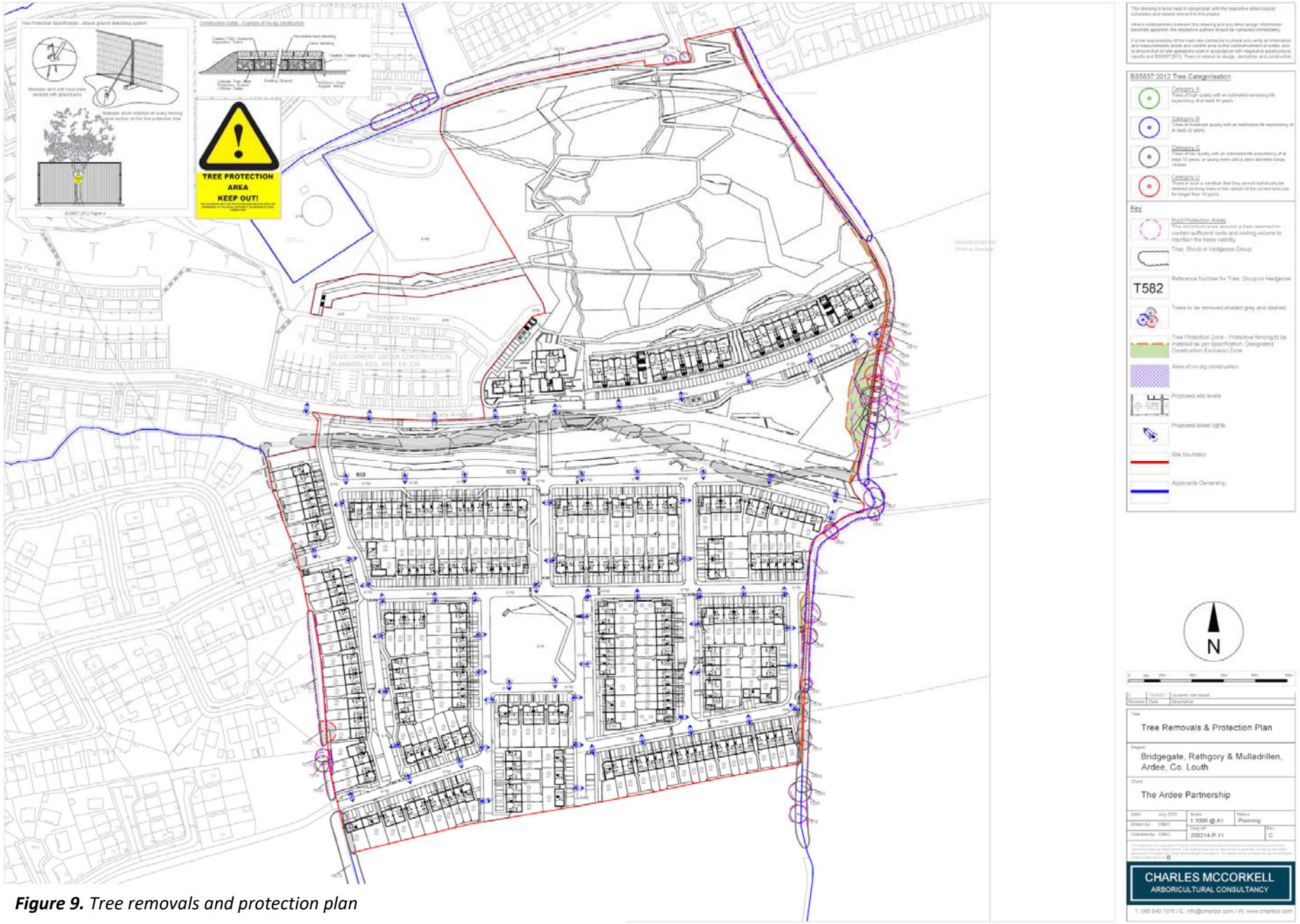

Figure 9. *Tree removals and protection plan*

Figure 10. *Public lighting layout*

Flood Risk Assessment

A Flood Risk Assessment Report, prepared by JBA Consulting, noted the following:

'The Rathgory River and the Mullameelan River are the main hydrological features in the area which are located immediately south and c. 425m south of the site respectively. The Rathgory River rises in the townland of Rathgory, east of the site and flows westwards along the southern boundary. The Mullameelan River flows from east to west, south of the site location. A small tributary known as the Rathgory Tributary flows from east to west through the site.'

'… in the local area there is a fall to west towards the Rathgory Tributary. This is confirmed by an existing site survey. The site falls from its northern boundary (approx. 54m OD) to its western boundary where the Rathgory tributary leaves the site (approx. 36m OD). There is also a fall from the southern boundary (approx. 45m OD) to where the Rathgory tributary leaves the site.'

'*The associated groundwater vulnerability is classified as 'Moderate' to 'Extreme' for the site which indicates that a high risk to the groundwater under the site and a bedrock depth of between 3 - 10m. These classifications are based on relevant hydrogeological characteristics of the underlying geological materials.'*

'… there is a risk of fluvial flooding in the eastern boundary of the site. The majority of the site is located in Flood Zone C with exception of lands to the east where there is significant out of bank flooding. This area of the site located in Flood Zone B (0.1% AEP event)… it is noted that there is some cross catchment flow resulting in flooding on the proposed development site that does not originate directly from the stream flowing through the site.'

The report concludes the following: '*The work undertaken in the FRA and by the CS Consulting stormwater design has demonstrated that there is no additional surface water runoff from the development and that the design appropriately manages flood risk from all sources.*

There are no instances of historic flooding on site but there are recorded events in the surrounding area. The Rathgory Tributary flows though the site and the Rathgory River and the Mullameelan River are located immediately south and c. 425m south of the site respectively. According to OPW Fluvial Flood Map the 1% AEP flood event (1 in 100 year) and the 0.1% AEP flood event (1 in1000 year) partially inundates the eastern border of part of the site.

The detailed hydrological and hydraulic analysis indicates that the eastern border of the site is located in Flood Zone A.

Risk to the site is managed by setting floor levels to the 1% AEP climate change water level, plus a freeboard allowance of at least 1.25m. Further, the finished floor level provide a minimum of 150mm above surrounding ground levels to provide protection against pluvial flooding. All residential buildings have also been located in Flood Zone C, further minimising the risk of inundation. The part of the site within Flood Zone A/B is kept as a meadow/open space and the riparian corridor is also provided. Overall there is a small decrease in the peak flood flows downstream of the site and there are no negative impacts elsewhere.

The stormwater system has been designed to manage surface water runoff from the site. The attenuation tank is designed to retain a 1 in 100-year flood event with a 20% allowance for climate change. The proposed stormwater attenuation system has been designed to limit any outflow from the site to the existing Greenfield Runoff Rate.

Residual risks have been identified as potential impacts of climate change and potential failure of the stormwater system.

The proposed culverts have been designed in accordance with Section 50 (of the Arterial Drainage Act) requirements and the channel design will similarly be subject to Section 9 requirements. The OPW has been consulted through the design process to agree the channel design requirements.

As a result of the mitigation details discussed above, it is concluded that the development proposal is in compliance with the core principles of the Planning System and Flood Risk Management Guidelines and has been subject to a commensurate assessment of risk.'

Identification of Relevant European Sites

The proposed works are not located within a European site. The European sites within 15 kilometres of the subject site are detailed in Table 1 and Figures 11 and 12. Their qualifying interests and the potential impact of the works on these qualifying interests are showcased in Table 2. As can be seen from the EPA Water Framework Directive (WFD) data in Figure 13, the River Dee network surrounds and passes directly through the proposed development.

Screening of all European sites within 15km and those with a direct/indirect pathway beyond 15km is carried out. It is found there are no European sites with a direct/indirect pathway beyond 15km. No other European sites outside of the 15km ZOI that could be impacted by the proposed development.

Table 1. The European sites within 15 kilometres of the subject site.

EUROPEAN Site	Distance	Direct Hydrological / Biodiversity Connection
Special Areas of Conservation		
Dundalk Bay SAC	12.1 Km	**Yes**
River Boyne and River Blackwater SAC	14.1 Km	No
Special Protection Area		
Stabannan-Braganstown SPA	5.1 Km	No
Dundalk Bay SPA	12.1 Km	**Yes**

The initial screening of European sites within 15km, their qualifying interests and the Source/Pathway/Receptor links between the works and the European site, with the potential to result in adverse effects (without mitigation measures) on each European site and qualifying interests, are seen in Table 2.

The distance of 15km was selected due to the proximity of the proposed project to a waterbody. SACs, SPAs, and waterbodies within 15km are shown in Figures 11 to 13.

There is no direct or indirect hydrological pathway from the proposed development site to the European sites beyond 15km and no impact is foreseen on these sites. Any silt or pollution from the proposed development would enter the marine environment where settlement, mixing and dilution would occur. No European sites beyond 15km would be seen to be impacted due to the settlement, mixing and dilution within the marine environment.

European sites screened in (Stage 2 Appropriate Assessment [NIS] required)

Table 2. Screening of European sites.

NIS Required for the following sites

NATURA Code	Name	Screened IN/OUT	Details/Reason
Special Areas of Conservation			
IE000455	Dundalk Bay SAC	**In**	**Conservation Objectives** To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected. **Qualifying Interests** Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] Perennial vegetation of stony banks [1220] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Mediterranean salt meadows (*Juncetalia maritimi*) [1410] **Potential Impact**

			The proposed works site is a minimum of 12.1 km from this SAC (Figure 11). There is a direct hydrological pathway from the proposed development site to this SAC via the Rathgory Tributary and the River Dee. Instream works are proposed including a diversion of the stream. Foul water from the development will be processed in the existing Regional Wastewater Treatment Plant. Any pollutants or silt will be treated in the WWTP under licence and existing compliance requirements, dispersed and diluted. There will be no significant impact via direct or indirect pathways. The indirect pathways of surface or foul water will not result in a significant effect on the European site. Surface water will discharge to the stream on site. In a strict application of the precautionary principle, it has been concluded that significant effects on the Dundalk Bay SAC are likely, in the absence of mitigation measures, from the proposed works. This is primarily as a result of the direct hydrological connection of Dundalk Bay SAC to the proposed project which involves instream works and a direct surface water connection to watercourses that lead to this SAC. For this reason, it is necessary to proceed to a NIS on the effects of the project on this site in view of its conservation objectives. **Significant effects are likely in the absence of mitigation measures. NIS is Required.**
Special Protection Areas			
IE004026	Dundalk Bay SPA	**In**	**Conservation Objectives** To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SPA has been selected. **Qualifying Interests** Great Crested Grebe (*Podiceps cristatus*) [A005] Greylag Goose (*Anser anser*) [A043] Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Shelduck (*Tadorna tadorna*) [A048] Teal (*Anas crecca*) [A052] Mallard (*Anas platyrhynchos*) [A053] Pintail (*Anas acuta*) [A054] Common Scoter (*Melanitta nigra*) [A065] Red-breasted Merganser (*Mergus serrator*) [A069] Oystercatcher (*Haematopus ostralegus*) [A130] Ringed Plover (*Charadrius hiaticula*) [A137] Golden Plover (*Pluvialis apricaria*) [A140] Grey Plover (*Pluvialis squatarola*) [A141] Lapwing (*Vanellus vanellus*) [A142] Knot (*Calidris canutus*) [A143] Dunlin (*Calidris alpina*) [A149] Black-tailed Godwit (*Limosa limosa*) [A156] Bar-tailed Godwit (*Limosa lapponica*) [A157] Curlew (*Numenius arquata*) [A160] Redshank (*Tringa totanus*) [A162] Black-headed Gull (*Chroicocephalus ridibundus*) [A179] Common Gull (*Larus canus*) [A182] Herring Gull (*Larus argentatus*) [A184] Wetland and Waterbirds [A999]

			Potential Impact The proposed works site is a minimum of 12.1 km from this SPA (Figure 12). There is a direct hydrological pathway from the proposed development site to this SPA via the Rathgory Tributary and the River Dee. Instream works are proposed including a diversion of the stream. Foul water from the development will be processed in the existing Regional Wastewater Treatment Plant. Any pollutants or silt will be treated in the WWTP under licence and existing compliance requirements, dispersed and diluted. There will be no significant impact via direct or indirect pathways. The indirect pathways of surface or foul water will not result in a significant effect on the European site. Surface water will discharge to the stream on site. In a strict application of the precautionary principle, it has been concluded that significant effects on the Dundalk Bay SPA are likely, in the absence of mitigation measures, from the proposed works. This is primarily as a result of the direct hydrological connection of Dundalk Bay SPA to the proposed project which involves instream works and a direct surface water connection to watercourses that lead to this SPA. For this reason, it is necessary to proceed to a NIS on the effects of the project on this site in view of its conservation objectives. **Significant effects are likely in the absence of mitigation measures. NIS is Required**

European sites screened out (NIS not required)

NATURA Code	Name	Screened IN/OUT	Details/Reason
Special Areas of Conservation			
IE002299	River Boyne and River Blackwater SAC	Out	**Conservation Objectives** To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected. **Qualifying Interests** Alkaline fens [7230] Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0] River Lamprey (*Lampetra fluviatilis)* [1099] Salmon *(Salmo salar)* [1106] Otter (*Lutra lutra)* [1355] **Potential Impact** The proposed works site is a minimum of 14.1 km from this SAC (Figure 11). There is no direct or indirect hydrological pathway from the proposed development site to this SAC. The qualifying interests will not be impacted by the proposed development. **No significant effects are likely**
Special Protection Areas			
IE004091	Stabannan-Braganstown SPA	Out	**Conservation Objectives** To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA. **Qualifying Interests** A043 Greylag Goose (*Anser anser)* **Potential Impact** The proposed works site is a minimum of 5.1 km from this SPA (Figure 12). There is no direct or indirect hydrological pathway from the proposed development site to this SPA. The qualifying interests will not be impacted by the proposed development. Breeding bird and wintering bird surveys were carried out on site. Greylag goose was not noted on site. **No significant effects are likely**

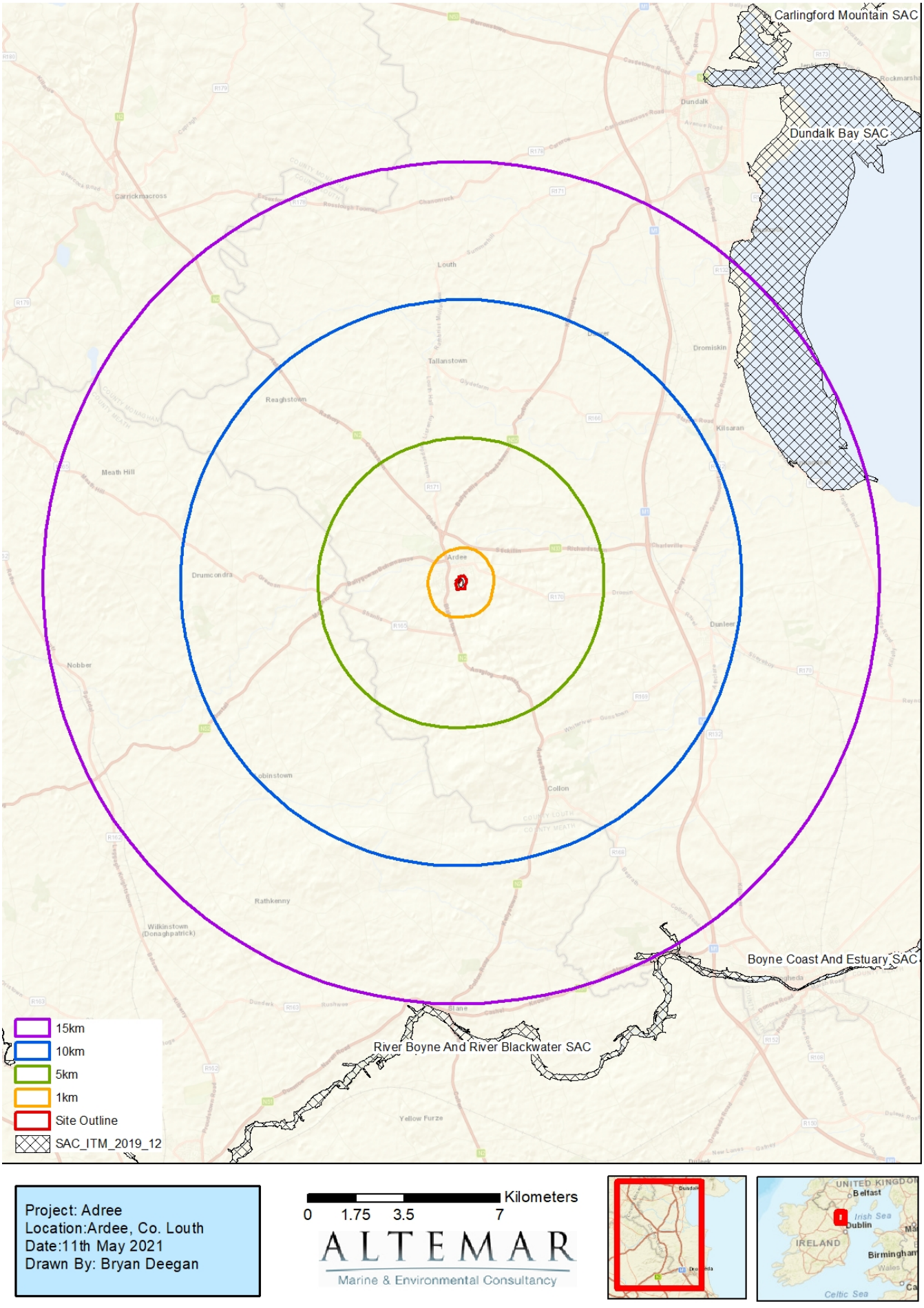

Figure 11. *Special Areas of Conservation (SAC) within 15km of proposed development*

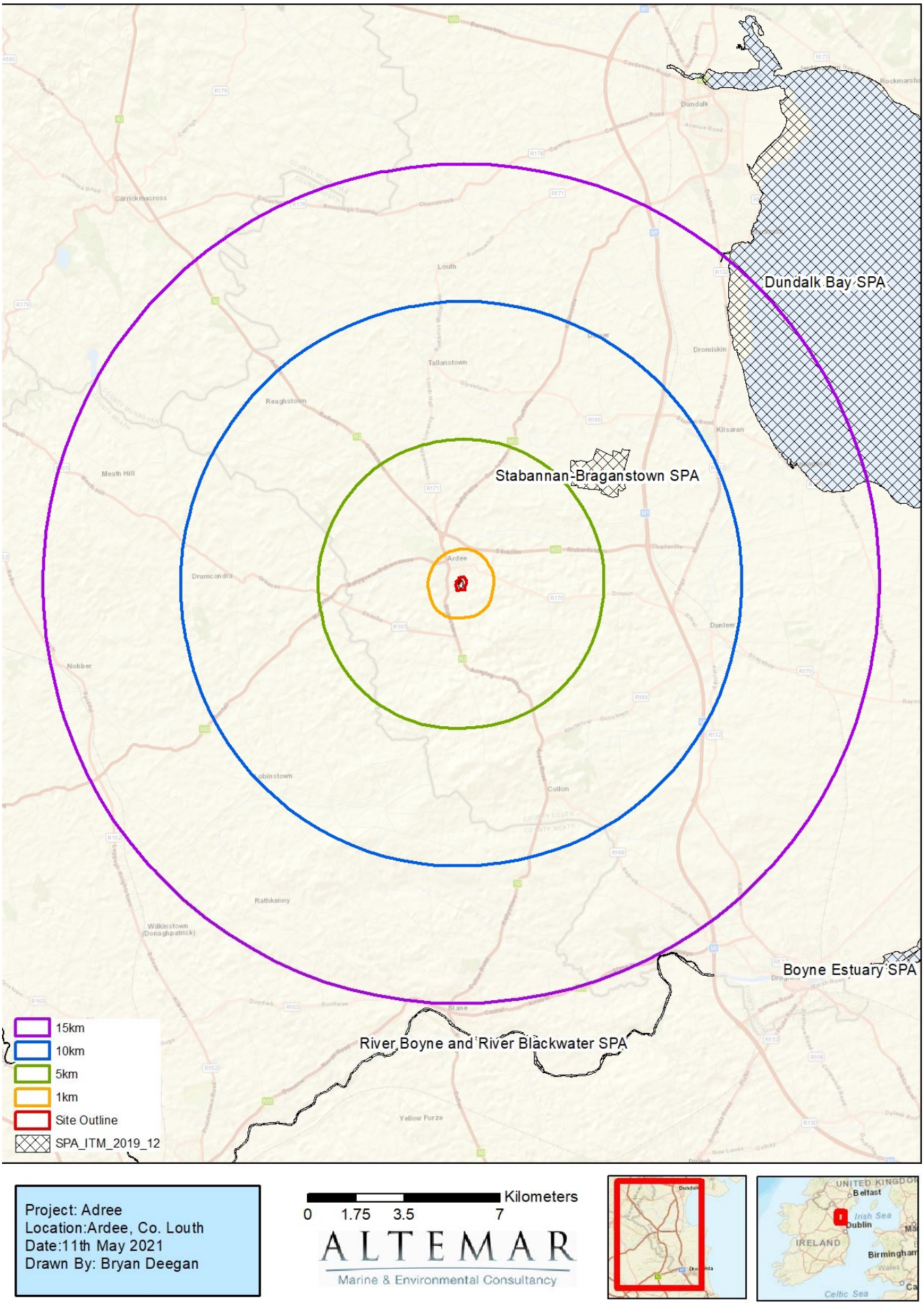

Figure 12. *Special Protection Areas (SPA) within 15km of proposed development*

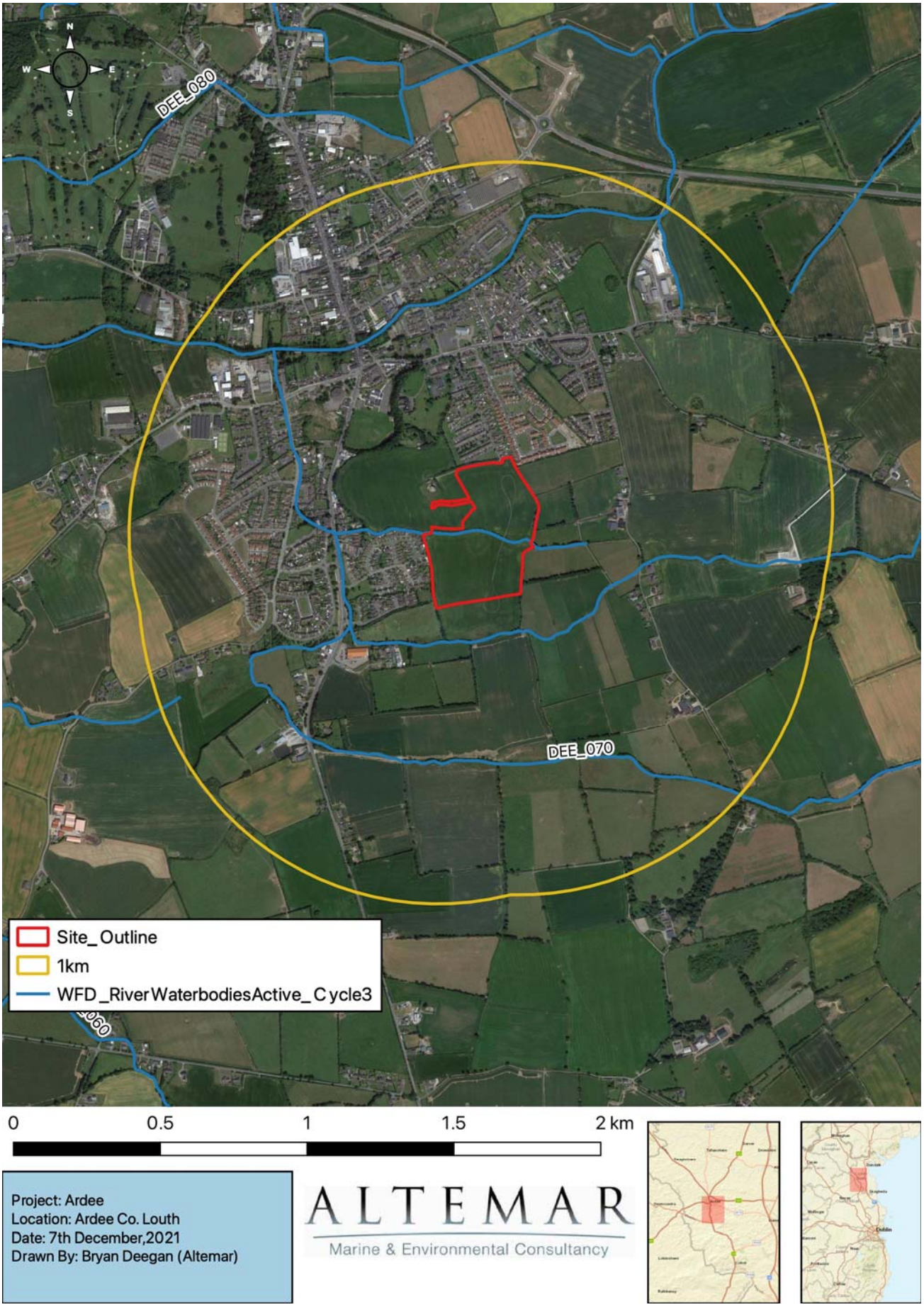

Figure 13. *Waterbodies within 1km of proposed development*

In-Combination Effects

There are several development proposals located in the area immediately surrounding the subject site that have been granted permission, including the original application for the wider scheme that the proposed development will form an additional phase of. The following is a list of planning application(s) as identified on the Department of Housing, Local Government and Heritage's 'National Planning Application Database' portal:

Planning Ref.	Address	Proposal
21535	Rathgory/Mulladrillen, Drogheda Road, Ardee, County Louth	EXTENSION OF DURATION for Residential Development permitted under Reference 10/174 (ABP PL15.238053) consisting of Permission for a 10 year permission for a development consisting of (i) a public park (4.91ha) including play areas & a MUGA (Multi Use Games Area), (ii) a total of 281 residential dwellings (14 no. apartments, 34 no. duplex type dwellings, 83 no. terrace dwellings, 72 no. semi-detached dwellings, 78 no. detached dwellings) ranging in height from 1-4 storeys (including split-level / semi-basement units) with solar panels & with balconies to serve apartment / duplex units (iii) A single storey community building (167m²), (iv) a three storey neighbourhood centre incorporating 2 no. retail units & 1 no. unit for sale of hot food for consumption off the premises at ground floor level (ground floor has gross floor area of 290m²), with associated signage & with duplex dwellings at first & second floor level; (v) construction of a section of new Local Collector Road (c.600m in length), (vi) 503 no. car parking spaces & 54 no. cycle parking spaces, (vii) Bring bank re-cycling facility, (viii) landscaping works to include the provision of local & neighbourhood open space areas, planting & augmentation of existing boundary hedgerows, (ix) new road junction access off Drogheda road (N2) including provision of nearside passing option, pedestrian refuge islands & road signage, (x) 5 no. ESB sub stations (xi) All associated site development works including construction of roads, cycle routes & pedestrian walkways, partial re-alignment & culverting of existing watercourse which bisects the application site, re-routing of existing water pipelines to/from the town reservoir located at the summit of Mulladrillen Hill & which traverse the application site, & provision of new water supply system, foul water drainage systems including connection in to the existing system on the N2 & on the access road in De La Salle Crescent Housing Estate, surface water drainage system including discharge (after attenuation) to the existing watercourses through & around the perimeter of the site, boundary treatments, public lighting, alterations to site levels & construction of retaining walls on a site extending to 19 hectares. A Master Plan pertaining to an area extending to 27.8 hectares & incorporating the application site accompanies the application. An Environmental Impact Statement (EIS) will be submitted to the Planning Authority with this application.
19319	Rathgory Tributary , Clonmore, Ardee	Permission to vary development permitted under P.A. Ref. 17330 & ABP Ref. PL15.300936, comprising 48 no. dwellings to provide a revised total of 55 no. dwellings comprising 8 no. 1 bedroom apartments, 11 no. 2 bedroom 2 storey houses, 32 no. 3 bedroom 2 storey houses and 4 no. 2 storey 4 bedroom houses in terraced and semi-detached format, an ESB substation and all associated landscaping, open space (which includes a playground for children), boundary treatments and all associated site development works. The variations include alterations to the permitted layout including repositioning and re-configuration of dwellings, including the 2 storey apartment building and the repositioning of public open space. The application site boundaries remain unaltered from that permitted.

Planning Ref.	Address	Proposal
211190	Cappocksgreen, Ardee, Co Louth	Permission for development that will consist of revision to planning permission reg. ref. 081220 (extended duration under planning reg. ref. 19/178) and previously amended by permission Ref No. 2120 comprising : 1. the omission of 5 No. apartment blocks totaling 48 no. approved residential units and their associated site works. The omission of 28 no. 2 storey dwelling houses consisting of 3&4 bedroom types and their associated site works 2. the provision of 48 no. revised residential dwelling types, ranging from 2-3 storeys in height and between 3-5 bedroom house types and their associated site works 3. Development and associated site works all on site of 4.6 hectares at Cappocksgreen, Ardee, Co Louth bounded at north by N33 Ardee Link Road and at south by Sean O Carroll street
19336	Bridgegate in the townland of Rathgory and Mulladrillen, Drogheda Road, Ardee.	The proposed development amends and will supersede elements of the development permitted under Reg. Ref.: 10/174 (An Bord Pleanála Ref. PL15.238053), which is presently under construction. The proposed development will consist of the construction of a total of 65 no. residential houses (replacing the previously permitted dwellings at the location), comprising of the following: • 18 no. 2-bed terrace two storey dwellings (Type 1); • 23 no. 3-bed detached and semi-detached two storey dwellings (Type 2); • 12 no. 3-bed detached and semi-detached two storey dwellings (Type 3); • 4 no. 4-bed semi-detached two storey dwellings (Type 4); • 2 no. 4-bed detached two storey dwellings (Type 5); • 6 no. 3-bed semi-detached two storey dwellings (Type 6). The proposed development also provides for a community facility extending to 176 sqm gross floor area and a crèche building with a gross floor area of 378 sqm gross floor area, which will replace previously granted crèche and commercial units at the location. Vehicular access for the residential units will be provided via the adjoining permitted residential development (Louth County Council Reg. Ref.: 10/174, currently under construction). The total gross floor area of the proposed development equals c. 7,348 sqm. The proposal includes all associated site works, internal roads, cycleways and footpaths, the provision of public open space, car parking, landscaping, boundary treatments, and foul and surface water drainage.
19353	Bridgegate in the townland of Rathgory and Mulladrillen, Drogheda Road, Ardee.	The proposed development amends and will supersede elements of the development permitted under Reg. Ref.: 10/174 (An Bord Pleanála Ref. PL15.238053), which is presently under construction. The proposed development will consist of the construction of a total of 52 no. residential houses (replacing previously permitted dwellings at the location) comprising of the following: • 11 no. 2-bed terrace two storey dwellings (Type 1); • 26 no. 3-bed semi-detached two storey dwellings (Type 2); • 7 no. 3-bed detached and semi-detached two storey dwellings (Type 3); • 8 no. 4-bed semi-detached two storey dwellings (Type 4).

Planning Ref.	Address	Proposal
		Vehicular access for the residential units will be provided via the adjoining permitted residential development (Louth County Council Reg. Ref.: 10/174, currently under construction). The total gross floor area of the proposed development equals c. 5,553 sqm. The proposal includes all associated site works, internal roads, cycleways and footpaths, the provision of public park area, car parking spaces, landscaping, boundary treatments, and foul and surface water drainage.

Permission was granted with a range of conditions for planning application reference number **19319**, which is located nearby the proposed development that is the subject of this report. The Planner's Report that assesses application reference number **19319** states the following in relation to European sites: *''Appropriate Assessment: The site is located a substantial distance from the nearest European site at Stabannan-Braganstown SPA to the NE and there would be no direct connection between the works and this or any other designated site.''*

Separate Irish Water upgrade works are needed to facilitate development in general in Ardee, including the subject lands, but do not form part of this application. As part of the conformation of feasibility CDS20003735 that forms part of this application Irish Water note the following ; '*The existing wastewater network will require upgrades to cater for the additional proposed load. The upgrade will involve upsizing of between 300 and 1000 meters of existing 225mm sewer along the public road. It is not expected that 3rd party permissions will be required outside the requirements for a road opening licence. The exact details of this upgrade can be agreed at connection application stage*.'

The replacement / upsizing of the sewerage supply by Irish Water to facilitate the proposed development would require works to the public road will involve the excavation of the existing pipeline and surround along the length of its route and will be replaced with upgraded pipelines with granular fill surrounding it. The top of the trench will comprise standard backfilled material and road coverings.

During excavation works for the pipeline there is potential for entry of sediment laden run-off to the Rathgory Tributary if appropriate mitigation measures are not put in place.

The construction of the pipelines will be to Irish Water specifications and the construction management (including the implementation of appropriate mitigation measures) will ensure that there are no significant impacts arising.

The above planning applications are the developments which are being considered on an in combination basis. No significant projects are proposed or currently under construction that could potentially cause in combination effects on European sites.

Given this, it is considered that in combination effects with other existing and proposed developments in proximity to the application area would be unlikely, neutral, not significant and localised. It is concluded that no significant effects on European sites will be seen as a result of the proposed development alone or combination with other projects.

No significant effects are likely from in combination effects

Conclusions

An initial screening of the proposed works, using the precautionary principle (without the use of any standard construction phase controls or mitigation measures) and the Source/Pathway/Receptor links between the proposed works and European sites with the potential to result in significant effects on the conservation objectives and qualifying interests of the European sites was carried out in Table 2. Based on best scientific knowledge and objective information and assessment, the possibility of significant effects caused by the proposed project was excluded for the following European sites:

Special Areas of Conservation

- River Boyne and River Blackwater SAC [002299]

Special Protection Areas

- Stabannan-Braganstown SPA [004091]

The project is limited in scale and extent and the potential zone of influence has the potential to extend downstream from the immediate site to discharge to European sites in Dundalk Bay SAC and Dundalk Bay SPA. As a result, potential impacts in the absence of standard construction phase or mitigation measures may result in impacts on the Dundalk Bay SAC [000455] and Dundalk Bay SPA [004026].

Acting on a strictly precautionary basis, NIS is required in respect of the effects of the project on the Dundalk Bay SAC and Dundalk Bay SPA (drainage and downstream impacts during construction) because it cannot be excluded on the basis of best objective scientific information following screening, in the absence of control or mitigation measures that the plan or project, individually and/or in combination with other plans or projects, will have a significant effect on the named European Site/s.

An NIS or Stage 2 Appropriate Assessment is not required for the effects of the project on all other listed European sites above because it can be excluded on the basis of the best objective scientific information following screening that the plan or project, individually and/or in combination with other plans or projects, will have a significant effect on the European Sites.

A Natura Impact Statement is required for the proposed development.

Stage 2: Natura Impact Statement

A Natura Impact Statement (NIS) is prepared at Stage 2 of the Appropriate Assessment process. A NIS is 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 one European site , in view of the conservation objectives of the site or sites. In the case of the proposed development in Ardee, acting on a strictly precautionary basis an NIS is required in respect of the effects of the project on the Dundalk Bay SAC [000455] and Dundalk Bay SPA [004026] (drainage and downstream impacts during construction in the absence of mitigation) because it cannot be excluded on the basis of best objective scientific information, in the absence of controls or mitigation measures, following screening that the project, individually and/or in combination with other plans or projects, will have a significant effect on the named European Site/s.

A Stage 2 Appropriate Assessment or NIS is not required for the effects of the project on all other Natura sites because it can be excluded on the basis of the best objective scientific information following screening that the plan or project, individually and/or in combination with other plans or projects, will have a significant effect on the European Site/s.

The NIS evaluates the potential for direct, indirect effects, alone or in combination with other plans and projects having taken into account the use of mitigation measures. The NIS is required under Section 177T of the 2000 Act to 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. The NIS Is also informed by the ecological report, CMP and CEMP including the proposed mitigation measures that are outlined to reduce the potential effects of the proposed project on species/habitats of conservation importance and the surrounding environment.

A further review of the Conservation Objectives and features of interest is necessary to determine if significant effects are likely to impact the SAC and/or SPA.

Dundalk Bay SAC (Site Code: 000455)

As outlined in the Dundalk Bay SAC Site Synopsis (NPWS, Version date 31.01.2014):

'*Dundalk Bay, Co. Louth, is a very large open, shallow sea bay with extensive saltmarshes and intertidal sand/mudflats, extending some 16 km from Castletown River on the Cooley Peninsula in the north, to Annagassan/Salterstown in the south. The bay encompasses the mouths and estuaries of the Rivers Dee, Glyde, Fane, Castletown and Flurry.*

Saltmarsh vegetation occurs in four main areas: at Lurgangreen, Marsh South, Dundalk Harbour and Bellurgan. Two types are represented – Atlantic and Mediterranean salt meadows. The Atlantic salt meadows are commonest and are characterised by Sea-purslane (Halimione portulacoides) (often as a dominant band), along with Common Saltmarsh-grass (Puccinellia maritima), Thrift (Armeria maritima), Red Fescue (Festuca rubra), Common Scurvygrass (Cochlearia officinalis), Sea Plantain (Plantago maritima) and Sea Rush (Juncus gerardi). Common Cord-grass (Spartina anglica) is frequent and often dominant over substantial areas. Glassworts (Salicornia spp.) occur on the lower zones of the saltmarshes, and in places extend out onto the sandflats. Mediterranean salt meadows are mostly confined to the upper levels of the saltmarshes or along stream sides where they merge with grassland habitats (though the transitional zone is now absent in many places). The habitat contains Sea Rush (Juncus maritimus), Sea Arrowgrass (Triglochin maritima) and Sea Aster (Aster tripolium). The saltmarshes at Lurgangreen and Marsh South are partially fenced and grazed by sheep.

Shingle beaches are particularly well represented in Dundalk Bay, occurring more or less continuously from Salterstown to Lurgan White House in the south bay, and from Jenkinstown to east of Giles Quay in the north bay. The shingle is mostly stable, occurring on post-glacial raised beaches. The shingle often occurs in association with intertidal shingle, saltmarsh and or shingle-based grassland. The shingle supports species such as Spear-leaved Orache (Atriplex prostrata), Sea Mayweed (Matricaria maritima), Sea Beet (Beta vulgaris subsp. maritima), Sea Rocket (Cakile maritima), Wild Carrot (Daucus carota), Sea-holly (Eryngium maritimum), Sea Sandwort (Honkenya peploides) and Sea Radish (Raphanus raphanistrum subsp. maritimus). Yellow Hornedpoppy (Glaucium flavum) and Lyme-grass (Leymus arenarius) occur here at their most northern locality on the east coast, while the Red Data Book species Sea-kale (Crambe maritima) has recently been recorded.

The extensive sandflats and mudflats (over 4,000 ha) occur and are comprised of ecological communities such as muddy fine sand communities and fine sand community complexes. In the centre of Dundalk Bay there is a gravel community dominated by polychaetes. These habitats host a rich fauna of bivalves molluscs, marine worms and crustaceans and are the main food resource of the tens of thousands of waterfowl (including waders and gulls) which feed in the intertidal area of Dundalk Bay. The saltmarshes are used as high-tide roosts by all of these species, while the grazing birds (notably Brent Goose and Wigeon) feed on the saltmarsh grasses, areas of Zostera and other grassland vegetation. Brent Goose also feed on the mats of green algae on the mudflats. At night the wintering Greylag and Greenland White-fronted Goose, and Whooper Swans, from Stabannan/Braganstown (inland from Castlebellingham) roost in Dundalk Bay.

The site is internationally important for waterfowl (numbers in brackets refers to the average maximum over the period 1994/95 to 1997/98) because it regularly holds over 20,000 birds (up to 57,000 have been recorded) and supports over 1% of the North-West European/East Atlantic Flyway populations of Brent Goose (366), Bartailed Godwit (2,312) and Knot (11,948). Additionally, it is nationally important for Golden Plover (4,266), Great Crested Grebe (193), Greylag Goose (312), Shelduck (463), Mallard (657), Pintail (100), Red-breasted Merganser (148), Oystercatcher (6,940), Grey Plover (218), Ringed Plover (133), Wigeon (565), Dunlin (9,112), Blacktailed Godwit (754), Curlew (1,593), Lapwing (4,822), Greenshank (20) and Redshank (1,455). Both Golden Plover and Bar-tailed Godwit are Annex I species. The site has been designated a Special Protection Area (SPA) under the E.U. Birds Directive and it is also a designated Ramsar site.

This is a site of significant conservation value because it supports good examples of a range of coastal habitats listed on Annex I of the E.U. Habitats Directive, as well as large numbers of bird species, some of which are listed in the Birds Directive.'

As outlined in the Conservation objectives supporting document:

'Dundalk Bay SAC is designated for a range of marine and coastal habitats including vegetated shingle and saltmarsh. The following four coastal habitats are included in the qualifying interests for the site:

- *Perennial vegetation of stony banks (1220)*
- *Salicornia and other annuals colonising mud and sand (1310)*
- *Atlantic salt meadows (Glauco-Puccinellietalia maritimae) (1330)*
- *Mediterranean salt meadows (Juncetaliea maritimi) (1410)*

The first habitat is associated with shingle, while the other three are found in saltmarshes, where they occur in complex mosaics.

This backing document sets out the conservation objectives for the four coastal habitats listed above in Dundalk Bay SAC, which is defined by a list of parameters, attributes and targets. The main parameters are (a) Range (b) Area and (c) Structure and Functions, the latter of which is broken down into a number of attributes, including physical structure, vegetation structure and vegetation composition.

The targets set for the shingle is based in part on the findings of the National Shingle Beach Survey (NSBS), which was carried out in 1999 on behalf of the National Parks and Wildlife Service (NPWS) (Moore & Wilson, 1999). The targets set for the saltmarsh habitats are based primarily on the results of the Saltmarsh Monitoring Project (SMP) (McCorry, 2007; McCorry & Ryle, 2009) and this document should be read in conjunction with those reports.'

Dundalk Bay SPA (Site code: 004026)

As outlined in the Dundalk Bay SPA Site Synopsis (NPWS, Version date 07.07.2014):

'*Dundalk Bay is a large open shallow sea bay with extensive saltmarshes and intertidal sand/mudflats, extending some 16 km from Castletown River on the Cooley Peninsula, in the north, to Annagassan/Salterstown in the south.*

The extensive sand flats and mud flats have a rich fauna of bivalves, molluscs, marine worms and crustaceans which provides the food resource for most of the wintering waterfowl. The outer part of the bay provides excellent shallow-water habitat for divers, grebes and sea duck. In summer, it is thought to be a major feeding area for auks from the Dublin breeding colonies. The bay is used at night for roosting by wintering flocks of Greylag Goose, Greenland White-fronted Goose and Whooper Swan from Stabannan/Braganstown (inland of Castlebelligham) and other inland sites.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Great Crested Grebe, Greylag Goose, Light-bellied Brent Goose, Shelduck, Teal, Mallard, Pintail, Common Scoter, Redbreasted Merganser, Oystercatcher, Ringed Plover, Golden Plover, Grey Plover, Lapwing, Knot, Dunlin, Black-tailed Godwit, Bar-tailed Godwit, Curlew, Redshank, Black-headed Gull, Common Gull and Herring Gull. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

The site is of international importance because it regularly supports an assemblage of over 20,000 wintering waterbirds. It also qualifies as a site of international importance for supporting populations of Light-bellied Brent Goose (370), Knot (9,710), Black-tailed Godwit (1,100) and Bar-tailed Godwit (1,950) - all figures, unless stated otherwise, are five year mean peaks for the period 1995/96 to 1999/2000. A variety of other species occur in numbers of national importance, i.e. Great Crested Grebe (303), Greylag Goose (435), Shelduck (522), Teal (538), Mallard (765), Pintail (117), Common Scoter (581 - five year mean peak for the period 2000/01 to 2004/05), Red-breasted Merganser (121), Oystercatcher (8,746), Ringed Plover (151), Golden Plover (5,967), Grey Plover (204), Lapwing (4,892), Dunlin (11,518), Curlew (1,264) and Redshank (1,659). Other wintering species which occur include Red-throated Diver, Great Northern Diver, Cormorant, Grey Heron, Little Egret, Mute Swan, Wigeon, Goldeneye, Greenshank and Turnstone.

The site also supports nationally important populations of three wintering gull species - Black-headed Gull (6,643), Common Gull (551) and Herring Gull (754). In spring and autumn the site attracts a range of passage migrants, including Little Stint, Curlew Sandpiper and Ruff.'

The Qualifying Interests (QI) (Features of Interest), Special Conservation Interests (SCIs) for the SPA and SAC sites and the National conservation status of the QI of two European sites subject to the NIS are seen in Table 3. The site specific conservation Objectives for European sites are seen in Table 4.

Table 3. Qualifying Interests, Conservation Status, Management Objectives, Conditions underpinning site integrity for relevant European sites		
European Site Name & Code	Qualifying Interests	Current Conservation Status & Trend
Special Areas of Conservation (SAC)		
Dundalk Bay SAC (000455)	Estuaries [1130]	Unfavourable-Inadequate & Declining
	Mudflats and sandflats not covered by seawater at low tide [1140]	Unfavourable-Inadequate & Declining
	Perennial vegetation of stony banks [1220]	Unfavourable-Inadequate & Stable
	Salicornia and other annuals colonising mud and sand [1310]	Favourable & Stable
	Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330]	Unfavourable-Inadequate & Declining
	Mediterranean salt meadows (*Juncetalia maritimi*) [1410]	Unfavourable-Inadequate & Declining
Special Protection Areas (SPA)		
Dundalk Bay SPA (004026)	Great Crested Grebe (*Podiceps cristatus*) [A005]	Amber
	Greylag Goose (*Anser anser)* [A043]	Amber
	Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]	Amber
	Shelduck (*Tadorna tadorna*) [A048]	Amber
	Teal (*Anas crecca*) [A052]	Amber
	Mallard (*Anas platyrhynchos*) [A053]	Green
	Pintail (*Anas acuta*) [A054]	**Red**
	Common Scoter (*Melanitta nigra*) [A065]	**Red**
	Red-breasted Merganser (*Mergus serrator*) [A069]	Green
	Oystercatcher (*Haematopus ostralegus*) [A130]	Amber
	Ringed Plover (*Charadrius hiaticula*) [A137]	Green
	Golden Plover (*Pluvialis apricaria*) [A140]	**Red**
	Grey Plover (*Pluvialis squatarola*) [A141]	Amber
	Lapwing (*Vanellus vanellus*) [A142]	**Red**
	Knot (*Calidris canutus*) [A143]	Amber
	Dunlin (*Calidris alpina*) [A149]	**Red**
	Black-tailed Godwit (*Limosa limosa*) [A156]	Amber
	Bar-tailed Godwit (*Limosa lapponica*) [A157]	Amber
	Curlew (*Numenius arquata*) [A160]	**Red**
	Redshank (*Tringa totanus*) [A162]	**Red**
	Black-headed Gull (*Chroicocephalus ridibundus*) [A179]	**Red**
	Common Gull (*Larus canus*) [A182]	Amber
	Herring Gull (*Larus argentatus*) [A184]	**Red**
	Wetland and Waterbirds [A999]	

Table 4. The site specific conservation Objectives for European sites		
Dundalk Bay SAC (000455)		
Attribute	Measure	Target
1130 Estuaries - To maintain the favourable conservation condition of Estuaries in Dundalk Bay SAC		
Habitat Area	Hectares	The permanent habitat area is stable or increasing, subject to natural processes
Community Distribution	Hectares	The Subtidal fine sand community complex should be conserved in a natural condition
1140 Mudflats and sandflats not covered by seawater at low tide - To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide at Dundalk Bay SAC		
Habitat Area	Hectares	The permanent habitat area is stable or increasing, subject to natural processes
Community Distribution	Hectares	The Muddy fine sand community and Intertidal fine sand community complex should be conserved in a natural condition
1220 Perennial vegetation of stony banks - To maintain the favourable conservation condition of Perennial vegetation of stony banks in Dundalk Bay SAC		
Habitat Area	Hectares	Area stable, subject to natural processes, including erosion and succession
Habitat Distribution	Occurrence	No decline, subject to natural processes
Physical Structure: Functionality and sediment supply	Presence/absence of physical barriers	Maintain the natural circulation of sediment and organic matter, without any physical obstructions
Vegetation Structure: Zonation	Occurrence	Maintain range of habitat zonations including transitional zones, subject to natural processes including erosion and succession
Vegetation Composition: Typical species and sub-communities	Percentage cover at a representative sample of monitoring stops	Maintain the presence of species-poor communities with characteristic species: *Honckenya peploides, Beta vulgaris ssp. maritima, Crithmum maritimum, Tripleurospermum maritimum, Glaucium flavum and Silene uniflora*
Vegetation Composition: Negative indicator species	Percentage cover	Negative indicator species (including non-natives) to represent less than 5% cove
1310 Salicornia and other annuals colonizing mud and sand - To restore the favourable conservation condition of Salicornia and other annuals colonizing mud and sand in Dundalk Bay SAC		
Habitat Area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession. For sub-site surveyed: 35.00ha
Habitat Distribution	Occurrence	No decline, subject to natural processes
Physical Structure: Sediment supply	Presence/absence of physical barriers	Maintain/restore natural circulation of sediments and organic matter, without any physical obstructions
Physical Structure: Creeks and pans	Occurrence	Maintain/restore creek and pan structure, subject to natural processes, including erosion and succession
Physical Structure: Flooding regime	Hectares flooded; frequency	Maintain natural tidal regime
Vegetation Structure: Zonation	Occurrence	Maintain range of saltmarsh habitat zonations including transitional zones, subject to natural processes including erosion and succession
Vegetation Structure: Vegetation height	Centimetres	Maintain structural variation within sward

Vegetation Structure: Vegetation cover	Percentage cover at a representative sample of monitoring stops	Maintain more than 90% of area outside creeks vegetated
Vegetation Structure: Typical species and sub-communities	Percentage cover at a representative sample of monitoring stops	Maintain range of sub- communities with characteristic species listed in Saltmarsh Monitoring Project (McCorry & Ryle, 2009)
Vegetation Structure: Negative indicator species – *Spartina anglica*	Hectares	No significant expansion of Spartina. No new sites for this species and an annual spread of less than 1% where it is already known to occur.
1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) - To maintain the favourable conservation condition of Atlantic salt meadows in Dundalk Bay SAC		
Habitat Area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession. For the sub-site (357.57ha) and potential areas (22.42ha) mapped: 379.98ha.
Habitat Distribution	Occurrence	No decline, subject to natural processes.
Physical Structure: Sediment supply	Presence/absence of physical barriers	Maintain/restore natural circulation of sediments and organic matter, without any physical obstructions
Physical Structure: Creeks and pans	Occurrence	Maintain/restore creek and pan structure, subject to natural processes, including erosion and succession
Physical Structure: Flooding regime	Hectares flooded; frequency	Maintain natural tidal regime
Vegetation Structure: Zonation	Occurrence	Maintain range of saltmarsh habitat zonations including transitional zones, subject to natural processes including erosion and succession.
Vegetation Structure: Vegetation height	Centimetres	Maintain structural variation within sward
Vegetation Structure: Vegetation cover	Percentage cover at a representative sample of monitoring stops	Maintain more than 90% of area outside creeks vegetated
Vegetation Structure: Typical species and sub-communities	Percentage cover at a representative sample of monitoring stops	Maintain range of sub- communities with characteristic species listed in Saltmarsh Monitoring Project (McCorry & Ryle, 2009)
Vegetation Structure: Negative indicator species – *Spartina anglica*	Hectares	No significant expansion of Spartina. No new sites for this species and an annual spread of less than 1% where it is already known to occur
1410 Mediterranean salt meadows (*Juncetalia maritimi*) - To maintain the favourable conservation condition of Mediterranean salt meadows in Dundalk Bay SAC		
Habitat Area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession. For sub-site mapped: 0.045ha.
Habitat Distribution	Occurrence	No decline, subject to natural processes.
Physical Structure: Sediment supply	Presence/absence of physical barriers	Maintain/restore natural circulation of sediments and organic matter, without any physical obstructions
Physical Structure: Creeks and pans	Occurrence	Maintain/restore creek and pan structure, subject to natural processes, including erosion and succession

Physical Structure: Flooding regime	Hectares flooded; frequency	Maintain natural tidal regime
Vegetation Structure: Zonation	Occurrence	Maintain range of saltmarsh habitat zonations including transitional zones, subject to natural processes including erosion and succession.
Vegetation Structure: Vegetation height	Centimetres	Maintain structural variation within sward
Vegetation Structure: Vegetation cover	Percentage cover at a representative sample of monitoring stops	Maintain more than 90% of area outside creeks vegetated
Vegetation Structure: Typical species and sub-communities	Percentage cover at a representative sample of monitoring stops	Maintain range of sub- communities with characteristic species listed in Saltmarsh Monitoring Project (McCorry & Ryle, 2009)
Vegetation Structure: Negative indicator species – *Spartina anglica*	Hectares	No significant expansion of Spartina. No new sites for this species and an annual spread of less than 1% where it is already known to occur

Dundalk Bay SPA (004026)		
Attribute	Measure	Target
Great Crested Grebe (*Podiceps cristatus*) [A005]; Greylag Goose (*Anser anser)* [A043]; Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Shelduck (*Tadorna tadorna*) [A048]; Teal (*Anas crecca*) [A052]; Mallard (*Anas platyrhynchos*) [A053]; Pintail (*Anas acuta*) [A054] Common Scoter (*Melanitta nigra*) [A065]; Red-breasted Merganser (*Mergus serrator*) [A069]; Oystercatcher (*Haematopus ostralegus*) [A130] Ringed Plover (*Charadrius hiaticula*) [A137]; Golden Plover (*Pluvialis apricaria*) [A140]; Grey Plover (*Pluvialis squatarola*) [A141] Lapwing (*Vanellus vanellus*) [A142]; Knot (*Calidris canutus*) [A143]; Dunlin (*Calidris alpina*) [A149]; Black-tailed Godwit (*Limosa limosa*) [A156] Bar-tailed Godwit (*Limosa lapponica*) [A157]; Curlew (*Numenius arquata*) [A160]; Redshank (*Tringa totanus*) [A162] Black-headed Gull (*Chroicocephalus ridibundus*) [A179]; Common Gull (*Larus canus*) [A182]; Herring Gull (*Larus argentatus*) [A184]		
Population Trend	Percentage Change	Long term population trend stable or increasing
Distribution	Number and range of areas used by waterbirds	No significant decrease in the numbers or range of areas used by waterbird species, other than that occurring from natural patterns of variation
A999 Wetlands & Waterbirds - To maintain the favourable conservation condition of the wetland habitat in Dundalk Bay SPA as a resource for the regularly-occurring migratory waterbirds that utilise it		
Habitat Area	Hectares	The permanent area occupied by the wetland habitat is stable and not significantly less than the areas of 8136, 4374 and 649 hectares respectively for subtidal, intertidal, and supratidal habitats, other than that occurring from natural patterns of variation. S

Analysis of the Potential Impacts

The proposed development will involve the removal of the existing terrestrial habitats on site, excavations, landscaping and the construction of roads, dwellings and associated services. It is also proposed to realign the existing watercourse (known as the Rathgory Tributary and riparian corridor that currently runs through the site.

Construction Impacts

The construction of the proposed development would potentially impact on the existing ecology of the site and the surrounding area. These potential construction impacts would include impacts that may arise during the site clearance, re-profiling of the site, and the building phases of the proposed development. The proposed development of the new onsite buildings and infrastructure will entail the loss of certain habitats on site. Construction phase mitigation measures are required on site, particularly as significant reprofiling of the site and a diversion of the stream is proposed which can lead to silt laden and contaminated runoff. In addition, there are various drainage ditches adjacent to or within the site, including the Rathgory Tributary (06D27) which runs east to west through the site. It is proposed to install new culverts and realign the course of the existing stream (Rathgory Tributary stream [06D27]). There is potential for silt laden runoff and contamination to enter the watercourse with potential for downstream impacts. Mitigation Measures to prevent impacts on European sites are outlined in Table 6.

Designated European Sites

The proposed development is not within a designated conservation site. A potential pathway exists via surface water to the nearby European sites (Dundalk Bay SAC and Dundalk Bay SPA). The construction of the proposed development would potentially impact on the existing ecology of the site and the surrounding area. These potential construction impacts on European sites are seen in Table 5 and would include impacts that may arise during the site clearance, re-profiling of the site and the building of the proposed development. Runoff during excavation, re-profiling, in-stream works, the construction and operation of project elements could enter the surface water network which leads to the European sites. Compliance with the Water Pollution Acts and liaison with Inland Fisheries Ireland would be seen as the primary method of ensuring no significant impact on designated conservation sites. Mitigation measures are required to ensure compliance with the Water Pollution Acts.

Ecology

The impact of the development during construction phase will be a loss of existing habitats and species. During the site visit no flora, bird or terrestrial mammal species of conservation importance were recorded on site or in NPWS or NBDC records. However, bats were noted foraging along the hedgerow associated with the watercourse and treelines.

Small mammals such as long-tailed field mouse, house mouse, and brown rat are likely to be present. No evidence of mammal activity or badger setts were noted. Frogs and reptiles were not observed on site; however, given the presence of the Rathgory Tributary stream (06D27), frogs may be present. The common lizard may occur on site but was not observed. Some mortality may occur of species that are not of conservation significance during construction.

Operational Impacts

Once constructed all onsite drainage will be connected to separate foul and surface water systems. Surface water runoff will comply with SUDS and discharge to the Rathgory Tributary . The biodiversity value of the site would be expected to improve as the landscaping matures, particularly beside the watercourse.

Standard operational controls will be incorporated into the proposed development project to minimise the potential negative impacts within the Zone of Influence (ZoI) including the Rathgory Tributary stream (06D27), adjoining tributaries of the River Dee and downstream European sites (Table 6).

Designated Conservation Sites within 15km

As the main potential vector for impacts to European sites would be seen to be via the Rathgory Tributary and River Dee, no additional controls are required besides those outlined below (Table 6), during the construction and operational phases of the development, to mitigate against potential negative impacts on designated conservation sites. The mitigation has been designed and outlined in table 6 represent best practice to ensure that the project will comply with the Water Pollution Acts and standard IFI Conditions in relation to construction and drainage.

Table 5. Potential impacts on European sites.		
Potential for adverse effects on the qualifying interests and conservation objectives of European sites		
European Site & Site Code	Qualifying Interests	Potential for Adverse Effects
Dundalk Bay SAC [000455]	Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] Perennial vegetation of stony banks [1220] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Mediterranean salt meadows (*Juncetalia maritimi*) [1410]	In-stream works and surface water runoff on site during construction or operation may lead to silt or contaminated materials from site entering the Rathgory Tributary (06D27). Concrete, silt or pollution could enter watercourses during dewatering of foundations or drainage trenches, if required during construction. If on-site concrete production is required or cement works are carried out in the vicinity of watercourses there is potential for contamination of watercourses. Localised activity on site and noise may be generated during works. The use of plant and machinery, as well as the associated temporary storage of construction materials, oils, fuels and chemicals could lead to pollution on site or in adjacent watercourses. The storage of topsoil or works in the vicinity or the watercourse on onsite could lead to dust, soil or silt laden runoff entering adjacent watercourse. Given the nature of the works in all of these effects would be expected to be localised in nature restricted to the immediate vicinity of the site and would have little effect on European sites. However, without the presence of mitigation measures there is a potential for downstream effects if significant quantities of pollution or silt were introduced into the stream which leads to the River Dee and Dundalk Bay. Given the nature of the potential effects outlined above, the proposed project would not be expected to effect the: 1. Habitat Area; Habitat Distribution; Physical Structure: Functionality and sediment supply; Vegetation Structure: Zonation; Vegetation Composition: Typical species and sub-communities; Vegetation Composition: Negative indicator species of Perennial vegetation of stony banks [1220] 2. Habitat Area; Habitat Distribution; Physical Structure: Sediment supply; Physical Structure: Creeks and pans; Physical Structure: Flooding regime; Vegetation Structure: Zonation; Vegetation Structure: Vegetation height; Vegetation Structure: Vegetation cover; Vegetation Structure: Typical species and sub-communities; Vegetation Structure: Negative indicator species – Spartina anglica of Salicornia and other annuals colonising mud and sand [1310] 3. Habitat Area; Habitat Distribution; Physical Structure: Sediment supply; Physical Structure: Creeks and pans; Physical Structure: Flooding regime; Vegetation

		Structure: Zonation; Vegetation Structure: Vegetation height; Vegetation Structure: Vegetation cover; Vegetation Structure: Typical species and sub-communities; Vegetation Structure: Negative indicator species – Spartina anglica of Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] 4. Habitat Area; Habitat Distribution; Physical Structure: Sediment supply; Physical Structure: Creeks and pans; Physical Structure: Flooding regime; Vegetation Structure: Zonation; Vegetation Structure: Vegetation height; Vegetation Structure: Vegetation cover; Vegetation Structure: Typical species and sub-communities; Vegetation Structure: Negative indicator species – Spartina anglica of Mediterranean salt meadows (*Juncetalia maritimi*) [1410] However, there is a significant distance between the proposed development and Dundalk Bay and it would be expected that significant settlement, dilution and mixing would occur. However, out of an abundance of caution silt entering Dundalk Bay impacts in the absence of mitigation can't be ruled out for the: 1. Habitat Area; Community Distribution of Estuaries (1130) 2. Habitat Area; Community Distribution of Mudflats and sandflats not covered by seawater at low tide (1140) The mitigation measures outlined should be carried out to ensure that no silt or pollution enters the Rathgory Tributary from the construction or operation phases of the proposed project and create localised pollution. However, the level of effect on Dundalk Bay SAC, without the use of mitigation measures, is not deemed to be significant due to the small scale of the proposed development, the distance to the SAC and the significant mixing in the River Dee, prior to reaching habitats or species of conservation value more than 12km downstream..
Dundalk Bay SPA [004026]	Great Crested Grebe (*Podiceps cristatus*) [A005] Greylag Goose (*Anser anser)* [A043] Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Shelduck (*Tadorna tadorna*) [A048] Teal (*Anas crecca*) [A052] Mallard (*Anas platyrhynchos*) [A053] Pintail (*Anas acuta*) [A054] Common Scoter (*Melanitta nigra*) [A065]	The use of plant and machinery, as well as the associated temporary storage of construction materials, oils, fuels and chemicals could lead to pollution on site or in adjacent watercourses. The storage of topsoil or works in the vicinity or the watercourse on onsite could lead to dust, soil or silt laden runoff entering adjacent watercourses. Surface water runoff on site during construction or operation may lead to silt or contaminated materials from site entering the Rathgory Tributary Stream (06D27). Concrete, silt or pollution could enter watercourses during dewatering of foundations or drainage trenches, if required during construction. If on-site concrete production is required or cement works are carried out in the vicinity of watercourses there is potential

	Red-breasted Merganser (*Mergus serrator*) [A069] Oystercatcher (*Haematopus ostralegus*) [A130] Ringed Plover (*Charadrius hiaticula*) [A137] Golden Plover (*Pluvialis apricaria*) [A140] Grey Plover (*Pluvialis squatarola*) [A141] Lapwing (*Vanellus vanellus*) [A142] Knot (*Calidris canutus*) [A143] Dunlin (*Calidris alpina*) [A149] Black-tailed Godwit (*Limosa limosa*) [A156] Bar-tailed Godwit (*Limosa lapponica*) [A157] Curlew (*Numenius arquata*) [A160] Redshank (*Tringa totanus*) [A162] Black-headed Gull (*Chroicocephalus ridibundus*) [A179] Common Gull (*Larus canus*) [A182] Herring Gull (*Larus argentatus*) [A184] Wetland and Waterbirds [A999]	for contamination of watercourses. Localised activity on site and noise may be generated during works. Given the nature of the works all of these effects would be expected to be localised in nature restricted to the immediate vicinity of the site. However, in stream works are proposed and there is potential for downstream impacts. Without the presence of mitigation measures there is a potential for downstream effects if significant quantities of pollution or silt were introduced into the Rathgory Tributary Stream (06D27) with potential for downstream impacts on the Dee River and Dundalk Bay. Given the nature of the potential effects outlined above, the proposed project would not be expected to effect the: 1. Distribution, Number and Range of areas used by: Great Crested Grebe (*Podiceps cristatus*) [A005]; Greylag Goose (*Anser anser)* [A043]; Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]; Shelduck (*Tadorna tadorna*) [A048]; Teal (*Anas crecca*) [A052]; Mallard (*Anas platyrhynchos*) [A053]; Pintail (*Anas acuta*) [A054]; Common Scoter (*Melanitta nigra*) [A065]; Red-breasted Merganser (*Mergus serrator*) [A069]; Oystercatcher (*Haematopus ostralegus*) [A130]; Ringed Plover (*Charadrius hiaticula*) [A137]; Golden Plover (*Pluvialis apricaria*) [A140]; Grey Plover (*Pluvialis squatarola*) [A141]; Lapwing (*Vanellus vanellus*) [A142]; Knot (*Calidris canutus*) [A143]; Dunlin (*Calidris alpina*) [A149]; Black-tailed Godwit (*Limosa limosa*) [A156]; Bar-tailed Godwit (*Limosa lapponica*) [A157]; Curlew (*Numenius arquata*) [A160]; Redshank (*Tringa totanus*) [A162]; Black-headed Gull (*Chroicocephalus ridibundus*) [A179]; Common Gull (*Larus canus*) [A182]; and, Herring Gull (*Larus argentatus*) [A184] Large quantities of silt could enter the watercourse and lead to downstream impacts. It would be expected that over the 12.1 km to SPA that this would settle naturally within the watercourse. Out of an abundance of caution as there is a direct pathway to the European site in the absence of any mitigation the area of Wetlands [A999] may be impacted. However, these effects would not be expected to be significant but mitigation measures are proposed out of caution.

Table 6. Mitigation Measures.		
Sensitive Receptors	Potential Impacts	Designed-in Mitigation
Dundalk Bay SAC Dundalk Bay SPA River Dee and Rathgory Tributary	• Habitat degradation • Dust deposition • Pollution • Silt ingress from site runoff • Downstream impacts • Negative impacts on aquatic and bird fauna	**Construction Mitigation** • All in-stream works methodologies must have prior approval of Inland Fisheries Ireland. • Best available technology (BAT) mitigation measures designed by project ecologist • Staging of project to reduce risks to watercourses from contamination with all instream works being carried out in Phase 1 of the project, where the stream is diverted, landscaped and protected from all subsequent phases. • Local watercourses (Rathgory Tributary') must be protected from dust, silt and surface water throughout the works. • Local silt traps established throughout site. • Mitigation measures on site include dust control, stockpiling away from watercourse and drains • Stockpiling of loose materials will be kept to a minimum of 20m from watercourses and drains. • Stockpiles and runoff areas following clearance will have suitable barriers to prevent runoff of fines into the drainage system and watercourses. • Fuel, oil and chemical storage will be sited within a bunded area. The bund will be at least 50m away from drains, ditches or the watercourse, excavations and other locations where it may cause pollution. • Bunds will be kept clean and spills within the bund area will be cleaned immediately to prevent groundwater contamination. Any water-filled excavations, including the attenuation tank during construction, that require pumping will not directly discharge to the stream. Prior to discharge of water from excavations adequate filtration will be provided to ensure no deterioration of water quality. • The excavation of the diversion should be carried out in the dry with no connections to the existing watercourse, until the works are complete with the exception of the small areas where the stream is currently live. • De-stocking of the Rathgory Tributary' may need to be carried out prior to the commencement of works (if required by IFI) and upstream and downstream permeable barriers to remain in place until construction is completed. • In stream works to be carried out in full consultation with and to the advice of Inland Fisheries Ireland and the project ecologist. • Staging of project to initially stabilise, isolate, fence off watercourse on site • Mitigation measures on site include dust control, stockpiling away from watercourses and drains • Pollution control and mitigation on site • Stockpiling of loose materials will be kept away from watercourses and drains. A risk based approach will be taken. • Stockpiles and runoff areas following clearance will have suitable barriers to prevent runoff of fines into the drainage system and watercourses.

		• Fuel, oil and chemical storage will be sited within a bunded area. A risk based approach will be taken. • Bunds will be kept clean and spills within the bund area will be cleaned immediately to prevent groundwater contamination. • During the construction works silt traps will be put in place in the vicinity of all runoff channels the stream to prevent sediment entering the watercourse. • Petrochemical interception and bunds in refuelling area • Planting in the vicinity of the stream crossings should be put in place as soon as possible to allow biodiversity corridors to establish. • On-site inspections to be carried out by project ecologist. • Maintenance of any drainage structures (e.g. de-silting operations) must not result in the release of contaminated water to the surface water network. • No entry of solids to the associated stream or drainage network during the connection of pipework to the public water system • Landscaping of the Riparian corridor should be carried out to the satisfaction of IFI. **Operational Mitigation** During Operation mitigation measures will be in place to ensure silt and petrochemicals do not enter the watercourse with the potential to impact on the European sites downstream.
Watercourses	• Habitat Degradation • Dust deposition • Pollution • Silt ingress • Potential downstream impacts.	Measures outlined above in addition to: • During the works silt traps will be put in place • No discharges will be to the watercourse during and post works • Silt traps established throughout site including a double silt fence between the site and the watercourse. • Sufficient onsite cleaning of vehicles prior to leaving the site and on nearby roads, will be carried out, particularly during groundworks. • The Site Manager will be responsible for the pollution prevention programme and will ensure that at least daily checks are carried out to ensure compliance. A record of these checks will be maintained. • The site compound will include a dedicated bund for the storage of dangerous substances including fuels, oils etc. Refuelling of vehicles/machinery will only be carried out within the bunded area. • A project ecologist must be appointed and be consulted in relation to all onsite drainage during construction works. Consultation with the project ecologist will not involve the formulation of new mitigation measures for the purposes of protecting any European Site, and relate only to the implementation of those mitigation measures already stated in the submission or the formulation of mitigation for other purposes. • Dewatering of excavations may be necessary. Appropriate monitoring of groundwater levels during site works will be undertaken. Standard construction phase filtering of surface water for suspended solids will be carried out. Unfiltered surface water discharges or runoff are not permitted from the site into the Rathgory Tributary Stream or Dee River during the works. Trenched double silt fencing shall be put in place along

		boundary of the proposed development site with 10m buffer from the Rathgory Tributary Stream. This fencing must be in place as one of the first stages on site and prior to the full site clearance. The silt fencing will act as a temporary sediment control device to protect the watercourse from sediment and potential site water runoff but also act as a tree protection zone for the riparian buffer. The fencing will be inspected twice daily, based on site and weather conditions, for any signs of contamination or excessive silt deposits. • Concrete trucks, cement mixers or drums/bins are only permitted to wash out in designated wash out area greater than 50m from sensitive receptors including drains and drainage ditches. • Abstraction of water from watercourses is not to be permitted. • Spill containment equipment shall be available for use in the event of an emergency. The spill containment equipment shall be replenished if used and shall be checked on a scheduled basis. • All site personnel will be trained in the importance of good environmental practices including reporting to the site manager when pollution, or the potential for pollution, is suspected. All persons working on-site will receive work specific induction in relation to surface water management and run off controls. Daily environmental toolbox talks / briefing sessions will be conducted to outline the relevant environmental control measures and to identify any environment risk areas/works. • Environmental risks due to construction and operation of the proposed development do potentially exist, particularly in relation runoff from sloping site, drains that could lead to the Rathgory Tributary Stream. Ecological supervision will be required during diversion, excavation and enabling works stages. Silt interception measures will need to be in place to ensure that the watercourses are not impacted during works and in particular during the site clearance, in-stream works and reprofiling stages. Landscaping of the grassed areas of the site proximate to the Rathgory Tributary should take place immediately following re-profiling, to act as a buffer to protect the watercourse. • Daily turbidity monitoring of the Rathgory Tributary Stream (upstream, downstream of works) should take place during works in consultation with the project ecologist. This would be particularly important following high rainfall events. It is recommended that sufficient baseline readings are made prior to construction commencing to understand the existing turbidity on site particularly in the pond area as this appeared turbid during the site visit. **Air & Dust** Dust may enter the Rathgory Tributary Stream via air or surface water with potential downstream impacts. Mitigation measures will be carried out reduce dust emissions to a level that avoids the possibility of adverse effects on the Rathgory Tributary Stream. The main activities that may give rise to dust emissions during construction include the following: • Excavation of material; • Materials handling and storage; • Movement of vehicles (particularly HGV's) and mobile plant.

		• Contaminated surface runoff *Mitigation measures to be in place:* • Following the diversion works, maintain the existing 10m buffer with the Rathgory Tributary Stream with a double layer of silt fences • Consultation will be carried with an ecologist throughout the construction phase; • Trucks leaving the site with excavated material will be covered so as to avoid dust emissions along the haulage routes. • Speed limits on site (15kmh) to reduce dust generation and mobilisation. • The stream is to be protected from dust on site. This may require additional measures in the vicinity of the building during demolition e.g. placing of terram/protective material over the stream. *Site Management* • Regular inspections of the site and boundary should be carried out to monitor dust, records and notes on these inspections should be logged. • Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken. • Make the complaints log available to the local authority when asked. • Record any exceptional incidents that cause dust and/or air emissions, either on- or offsite, and the action taken to resolve the situation in the log book. *Monitoring* • Undertake daily on-site and off-site inspection, where receptors are nearby, to monitor dust, record inspection results, and make the log available to the local authority when asked. This should include regular dust soiling checks of surfaces within 100 m of site boundary, integrity of the silt control measures, with cleaning and / or repair to be provided if necessary. *Preparing and Maintaining the Site* • Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible. • Fully enclose specific operations where there is a high potential for dust production and the site is active for an extensive period. • Avoid site runoff of water or mud. • Keep site fencing, barriers and scaffolding clean using wet methods. • Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below.

		• Cover, seed or fence stockpiles to prevent wind whipping. • Hard surface roads will be swept to remove mud and aggregate materials from their surface while any un-surfaced roads will be restricted to essential site traffic. • Any road that has the potential to give rise to fugitive dust will be regularly watered, as appropriate, during dry and/or windy conditions. • Maintain a vegetated strip and vehicle exclusion zone between the works and the Rathgory Tributary Stream in consultation with the project ecologist. *Operations* • Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems. • Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate. • Use enclosed chutes and conveyors and covered skips. • Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate. • Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods. *Waste* • Avoid bonfires and burning of waste materials. *Measures Specific to Earthworks* • Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable. • Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable. • Only remove the cover in small areas during work and not all at once. • During dry and windy periods, and when there is a likelihood of dust nuisance, a bowser will operate to ensure moisture content is high enough to increase the stability of the soil and thus suppress dust. • Due to the proximity of the Rathgory Tributary Stream an ecologist will oversee works in particular the excavation of material from the perimeter of the site. • The Contractor will be required to consult with an ecologist prior to the beginning of works to identify any additional measures that may be appropriate and/or required. *Storage/Use of Materials, Plant & Equipment* • Materials, plant and equipment shall be stored in the proposed site compound location;

		• Plant and equipment will not be parked within 50m of the Rathgory Tributary at the end of the working day; • Hazardous liquid materials or materials with potential to generate run-off shall not be stored within 50m of the Rathgory Tributary Stream. • All oils, fuels and other hazardous liquid materials shall be clearly labelled and stored in an upright position in an enclosed bunded area within the proposed development site compound. The capacity of the bunded area shall conform with EPA Guidelines – hold 110% of the contents or 110% of the largest container whichever is greater; • Fuel may be stored in the designated bunded area or in fuel bowsers located in the proposed compound location. Fuel bowsers shall be double skinned and equipped with certificates of conformity or integrity tested, in good condition and have no signs of leaks or spillages; • Smaller quantities of fuel may be carried/stored in clearly labelled metal Jeri cans. Green for diesel and red for petrol and mixes. The Jeri cans shall be in good condition and have secure lockable lids. The Jeri cans shall be stored in a drip tray when not in use. They will not be stored within 50m of the Rathgory Tributary Stream; • Drip trays will be turned upside down if not in use to prevent the collection of rainwater; • Waters collected in drip trays must be assessed prior to discharge. If classified as contaminated, they shall be disposed by a permitted waste contractor in accordance with current waste management legal and regulatory requirements; • Plant and equipment to be used during works, will be in good working order, fit for purpose, regularly serviced/maintained and have no evidence of leaks or drips; • No plant used shall cause a public nuisance due to fumes, noise, and leakage or by causing an obstruction; • Re-fuelling of machinery, plant or equipment will be carried out in the site compound as per the appointed Construction Contractor re-fuelling controls; • The appointed Construction Contractor EERP will be implemented in the event of a material spillage; • All persons working will receive work specific induction in relation to material storage arrangements and actions to be taken in the event of an accidental spillage. Daily environmental toolbox talks / briefing sessions will be conducted for all persons working to outline the relevant environmental control measures and to identify any environment risk areas/works. • Consultation with Inland Fisheries Ireland will be carried out pre and post works is essential and to be led by the project ecologist.

Adverse Effects on the conservation objectives of European sites likely to occur from the project (post mitigation)

A robust series of standard construction and operational mitigation measures are proposed. These would ensure that water entering the Rathgory Tributary , Dee River and Dundalk Bay is clean and uncontaminated. However, given the proximity of numerous sensitive receptors and a watercourse leading to the European sites, it should be noted that the early consultation with IFI and the implementation of ecological supervision on site at initial enabling works is seen as an important element to the project, particularly in relation to the implementation of surface water runoff mitigation and the instream works.

With the successful implementation of standard mitigation measures to limit surface water impacts on the Rathgory Tributary and the successful installation and initiation of the foul treatment system, no significant impacts on the downstream European site are foreseen from the construction or operation of the proposed project. Residual impacts of the proposed project will be localised to the immediate vicinity of the proposed works.

The construction and operational mitigation proposed for the development satisfactorily addresses the mitigation of potential impacts on European sites through the application the standard construction and operational phase controls as outlined above. In particular, mitigation measures to ensure compliance with Water Pollution Acts and prevent silt and pollution entering the stream will satisfactorily address the potential impacts on downstream European sites. The mitigation measures outlined are considered best practice and will prevent significant effects on the watercourse and downstream European sites. No significant adverse impacts on the conservation objectives of European sites are likely following the implementation of the mitigation measures outlined above.

It is essential that these measures outlined are complied with, to ensure that the proposed development does not have 'downstream' environmental impacts. These measures are to protect the groundwater/surface water, which are potentially the primary vectors of impacts from the site, and ensure that it is not impacted during construction and /or operational phases of the proposed development.

In-combination Effects

The proposed development site is located in a suburban environment. Construction on this site will create localised light, dust and noise disturbance with potential for downstream impacts. Projects considered for in combination effects are as follows:

Planning Ref.	Address	Proposal
21535	Rathgory/Mulladrillen, Drogheda Road, Ardee, County Louth	EXTENSION OF DURATION for Residential Development permitted under Reference 10/174 (ABP PL15.238053) consisting of Permission for a 10 year permission for a development consisting of (i) a public park (4.91ha) including play areas & a MUGA (Multi Use Games Area), (ii) a total of 281 residential dwellings (14 no. apartments, 34 no. duplex type dwellings, 83 no. terrace dwellings, 72 no. semi-detached dwellings, 78 no. detached dwellings) ranging in height from 1-4 storeys (including split-level / semi-basement units) with solar panels & with balconies to serve apartment / duplex units (iii) A single storey community building (167m²), (iv) a three storey neighbourhood centre incorporating 2 no. retail units & 1 no. unit for sale of hot food for consumption off the premises at ground floor level (ground floor has gross floor area of 290m²), with associated signage & with duplex dwellings at first & second floor level; (v) construction of a section of new Local

		Collector Road (c.600m in length), (vi) 503 no. car parking spaces & 54 no. cycle parking spaces, (vii) Bring bank re-cycling facility, (viii) landscaping works to include the provision of local & neighbourhood open space areas, planting & augmentation of existing boundary hedgerows, (ix) new road junction access off Drogheda road (N2) including provision of nearside passing option, pedestrian refuge islands & road signage, (x) 5 no. ESB sub stations (xi) All associated site development works including construction of roads, cycle routes & pedestrian walkways, partial re-alignment & culverting of existing watercourse which bisects the application site, re-routing of existing water pipelines to/from the town reservoir located at the summit of Mulladrillen Hill & which traverse the application site, & provision of new water supply system, foul water drainage systems including connection in to the existing system on the N2 & on the access road in De La Salle Crescent Housing Estate, surface water drainage system including discharge (after attenuation) to the existing watercourses through & around the perimeter of the site, boundary treatments, public lighting, alterations to site levels & construction of retaining walls on a site extending to 19 hectares. A Master Plan pertaining to an area extending to 27.8 hectares & incorporating the application site accompanies the application. An Environmental Impact Statement (EIS) will be submitted to the Planning Authority with this application.
19319	Rathgory Tributary , Clonmore, Ardee	Permission to vary development permitted under P.A. Ref. 17330 & ABP Ref. PL15.300936, comprising 48 no. dwellings to provide a revised total of 55 no. dwellings comprising 8 no. 1 bedroom apartments, 11 no. 2 bedroom 2 storey houses, 32 no. 3 bedroom 2 storey houses and 4 no. 2 storey 4 bedroom houses in terraced and semi-detached format, an ESB substation and all associated landscaping, open space (which includes a playground for children), boundary treatments and all associated site development works. The variations include alterations to the permitted layout including repositioning and re-configuration of dwellings, including the 2 storey apartment building and the repositioning of public open space. The application site boundaries remain unaltered from that permitted.

Permission was granted with a range of conditions for planning application reference number **19319**, which is located nearby the proposed development that is the subject of this report. The Planner's Report that assesses application reference number **19319** states the following in relation to European sites: *''Appropriate Assessment: The site is located a substantial distance from the nearest European site at Stabannan-Braganstown SPA to the NE and there would be no direct connection between the works and this or any other designated site.''*

Separate Irish Water upgrade works are needed to facilitate development in general in Ardee, including the subject lands, but do not form part of this application. As part of the conformation of feasibility CDS20003735 that forms part of this application Irish Water note the following ;

'*The existing wastewater network will require upgrades to cater for the additional proposed load. The upgrade will involve upsizing of between 300 and 1000 meters of existing 225mm sewer along the public road. It is not expected that 3rd party permissions will be required outside the requirements for a road opening licence. The exact details of this upgrade can be agreed at connection application stage.*'

The replacement / upsizing of the sewerage supply by Irish Water to facilitate the proposed development would require works to the public road will involve the excavation of the existing pipeline and surround along the length of its route and will be replaced with upgraded pipelines with granular fill surrounding it. The top of the trench will comprise standard backfilled material and road coverings.

During excavation works for the pipeline there is potential for entry of sediment laden run-off to the Rathgory Tributary if appropriate mitigation measures are not put in place.

The construction of the pipelines will be to Irish Water specifications and the construction management (including the implementation of appropriate mitigation measures) will ensure that there are no significant impacts arising).

T**he proposed development in combination with other plans or projects is unlikely to have a significant effect on the European sites. .**

Conclusion

In a strict application of the precautionary principle, it has been concluded that significant effects on the Dundalk Bay SAC and Dundalk Bay SPA are likely from the proposed works in the absence of standard control or mitigation measures, primarily as a result of direct hydrological connection to the site via the Rathgory Tributary and River Dee and possible downstream impacts from the project during the in-stream, construction landscaping and drainage works. For this reason, a NIS was carried out to assess whether the proposed project, either alone or in combination with other plans or projects, in view of best scientific knowledge and in view of the sites conservation objectives, will adversely affect the integrity of the European Site. All other European sites were screened out at initial screening.

We conclude that we have demonstrated on the basis of the best scientific information available which we consider is adequate to make this conclusion that the project alone or in combination with other plans or projects will not have an adverse effect on the integrity of the Dundalk Bay SAC and Dundalk Bay SPA in view of their conservation objectives. No in combination effects are foreseen. In combination effects have been excluded.

Construction on this site will create localised light and noise disturbance. Mitigation measures must be in place to ensure there are no significant impacts on the surface water that leads to conservation sites. Surface water discharge from site will be developed in accordance with the requirements of Louth County Council and in accordance with: The Greater Dublin Strategic Drainage Study Volume 2; The Greater Dublin Regional Code of Practice for Drainage Works; BS EN – 752:2008, Drains and Sewer Systems Outside Buildings; and, Part H, Building Drainage of the Building Regulation.

The proposed in-stream works will be carried out in consultation with Inland Fisheries Ireland and a project ecologist will be appointed to oversee diversion works in relation to the watercourses and crossings on site. The implementation of standard construction and operational phase mitigation measures including the measures outlined above and in the IFI Guidelines on protection of fisheries during construction works, which will be followed, will be sufficient to prevent adverse effects on the integrity of European sites.

Following the implementation of the mitigation measures outlined, the construction and presence of this development would not be deemed to have a significant impact. No significant impacts are likely on European sites, alone in combination with other plans and projects based on the implementation of standard construction phase mitigation measures.

This report presents a Stage 1 Appropriate Assessment Screening and Stage 2 NIS for the Proposed Development, outlining the information required for the competent authority to screen for appropriate assessment and to determine whether or not the Proposed Development, either alone or in combination with other plans and projects, in view of best scientific knowledge, is likely to have a significant effect on any European or European site.

On the basis of the content of this report, the competent authority is enabled to conduct an assessment for Appropriate Assessment and consider whether, in view of best scientific knowledge and in view of the conservation objectives of the relevant European sites, the Proposed Development, individually or in combination with other plans or projects is likely to have a significant effect on any European site.

On the basis of the content of this report, the competent authority is enabled to conduct an Appropriate Assessment and consider whether, either alone or in combination with other plans or projects, in view of best scientific knowledge and in view of the sites conservation objectives, will adversely affect the integrity of the European site.

No significant effects are likely on European sites, their qualifying interests or conservation objectives. The proposed project will not will adversely affect the integrity of European sites.

Data used for the AA Screening/NIS Assessment

NPWS site synopses and Conservation objectives of sites within 15km were examined. No European sites beyond 15km has a direct pathway to the proposed development site. The most recent SAC and SPA boundary shapefiles were downloaded and overlaid on ESRI terrain maps and satellite imagery. A site visit was carried out, which included a bat survey, to determine if the site contained possible threats to a European site or any European species or habitats. An Ecology report, CMP and CEMP and accompany this AA Screening and NIS.

References

The following references were used in the preparation of this AA screening report.

1. Department of Environment Heritage and Local Government Circular NPW 1/10 and PSSP 2/10 on Appropriate Assessment under Article 6 of the Habitats Directive – Guidance for Planning Authorities March 2010.

2. Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities, Department of the Environment, Heritage and Local Government 2009; http://www.npws.ie/publications/archive/NPWS_2009_AA_Guidance.pdf

3. Managing Natura 2000 Sites: the provisions of Article 6 of the Habitats Directive 92/43/EEC, European Commission 2000; http://ec.europa.eu/environment/nature/Natura2000/management/docs/art6/provision_of_art6_en.pdf

4. Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC; http://ec.europa.eu/environment/nature/Natura2000management/docs/art6/Natura_2000_assess_en.pdf

5. Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission; http://ec.europa.eu/environment/nature/Natura2000/management/docs/art6/guidance_art6_4_en.pdf

6. Guidance document on the implementation of the birds and habitats directive in estuaries and coastal zones with particular attention to port development and dredging; http://ec.europa.eu/environment/nature/Natura2000/management/docs/guidance_doc.pdf

7. The Status of EU Protected Habitats and Species in Ireland. http://www.npws.ie/publications/euconservationstatus/NPWS_2007_Conservation_Status_Report.pdf

8. NPWS (2011) Conservation Objectives: Dundalk Bay SAC 000455 and Dundalk Bay SPA 004026. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

9. NPWS (2021) Conservation objectives for River Boyne and River Blackwater SAC [002299]. Generic Version 1. Department of Housing, Local Government and Heritage.

10. NPWS (2022) Conservation objectives for Stabannan-Braganstown SPA [004091]. Generic Version 9.0. Department of Housing, Local Government and Heritage.

11. Fossitt, J.A. (2000), A Guide to Habitats in Ireland, The Heritage Council.

12. Inland Fisheries Ireland: 'Planning for Watercourses in the Urban Environment: A Guide to the Protection of Watercourses through the use of Buffer Zones, Sustainable Drainage Systems, Instream Rehabilitation, Climate / Flood Risk and Recreational Planning'

Appendix 1

Bird Evaluation at Bridgegate, Rathgory & Mulladrillen, Drogheda Road, Ardee, County Louth and an Evaluation of Potential Impacts Brought About by a Proposed Housing Development

Brian Keeley B.Sc. (Hons) in Zool.

Survey November 2020 to May 2021

Birds are a significant, widespread, and vital element of the natural heritage of Ireland. As part of the European Union, biodiversity conservation in the Republic of Ireland is protected within a single legislative directive (European Communities (Birds and Natural Habitats) Regulations 2011-2015) that is the Birds Directive of 1979 and the Habitats Directive of 1992. Bats and birds are afforded varying degrees of protection under Irish and EU law.

Bird protection is most comprehensive during the nesting and breeding season. Birds and their nests are protected under the Wildlife Act within the officially designated nesting period; March 1st to August 31st. Protection outside of this period more complicated as some species are considered sufficiently abundant to allow killing for sport and recreation or to reduce crop damage, building deterioration or health risk (e.g., large numbers of roosting pigeons may be deemed to create a risk of Histoplasmosis and removed under licence) .

In the urban and suburban environment, the need to protect and enhance biodiversity may be challenging where the need to house and provide recreational facilities may involve the modification of the vegetation and landscape elements and may have an immediate effect upon the biodiversity of the area or of adjoining and surrounding areas. Bird may lose nest sites through hedgerow removal in addition to the feeding opportunities provided by the presence of vegetation and cover in addition to loss in commuting corridors that allow movement between good night roost sites and good feeding areas and the network of roosts that birds avail of throughout the year including nest sites and night perches.

The proposed development site extends to c. 13.03 ha at Bridgegate, Rathgory & Mulladrillen, Drogheda Road, Ardee, County Louth and adjoins Phases 1-3 at Bridgegate (under construction) on lands to the west, accessed from the N2 Drogheda Road. The proposals overlap the boundary of permitted development Reg. Ref.: 10174; ABP Ref: PL15.238053 (as amended) at the western boundary and will supersede granted development in this area which consists of 31 no. dwellings, crèche and community building and public open space.

The development will consist of:

The construction of 272 no. residential units comprising a mix of 206 no. 2, 3 and 4 bedroom houses (all 2 storeys) including 50 no. 2-bedroom houses (Type 1), 145 no. 3-bedroom houses (Types 2, 3, 6) and 11 no. 4-bedroom houses (Types 4, 5) all with private open space and car parking, alongside 66 no. duplex units (all 3 storeys) including 17 no. 1-bedroom units (Types D5, D8), 24 no. 2-bedroom units (Types D1, D3, D6) and 25 no. 3-bedroom units (Types D2, D4, D7), all with private open space in the form of terrace at upper floor level and external garden space, with 499 sqm of communal open space serving Duplex Blocks A-B (48 no. units) (served by 2 no. bin and bike stores [each c. 51 sqm] adjacent) at Bridgegate Avenue, providing a total residential gross floor area of c. 28,168.9 sqm;

A more complete breakdown of this proposal is given in the **Proposed Development** section of this report. This assessment examines the existing bird fauna of the site in summer and winter and identifies potential impacts and proposes mitigation for these impacts where available.

Methodology

The site was examined by one surveyor with Nikon Aculon 8 x 42 binoculars and an Opticron Spotting scope on the following dates: November 20, 28, December , January, February, March, May 4 and finally May 26th, 2021. These assessments allowed the potential to identify the presence of overwintering birds, daily foraging and ultimately breeding birds.

This involved a walkover of the site following each perimeter feature, each line of vegetation, walls and assessing free-standing trees and scrub, in addition to traversing open terrain within the site to determine whether there were territories of breeding birds, the presence of feeding and overwintering birds and to observe any other birds within the site that were feeding or commuting through the site. Surveying was based on visual identification and identification of calls and songs. Surveying continued until the entire site had been covered over a two-hour period. Any bird activity was noted including the presence of singing birds or nests in the two visits in May 2021.

Survey constraints for bird assessment

The survey period was highly suited to an examination of nesting birds and winter birds in addition to the transition spring period. There were no constraints to the assessment on any survey date with the exception of reduced activity on one date when snow fell, and bird movement ceased. Perched birds and some flying birds were observed on this visit and bird numbers were relatively high irrespective of weather conditions.

Results

The wintering and breeding bird species list within the site is given in Table 1. The number of birds observed on each visit between November and March are shown in Table 2 while the breeding birds and species feeding within the site in the nesting season are shown in Table 3. Many of the species noted are very common in Ireland. However, there were red-listed and amber-listed species that would merit greater consideration for their protection due to modifications to this site (see * below for clarification of these categories) . One red listed species was noted nesting within the site. There were two displaying Meadow pipits in the field north of the east-west hedge. One red list species may have been nesting within adjoining hedgerow (or potentially within the eastern boundary of the site.

There was a single singing yellowhammer in the hedge running east from the north-eastern edge of the site.

Herring gulls (amber listed) were feeding both in winter and early summer but do not nest within the site. No amber listed species were breeding within the site based on the surveys on May 4th and 26th 2021.

*Birds of Conservation Concern in Ireland (BoCCI) is an assessment of the conservation status of all regularly occurring birds on the island of Ireland. The criteria on which the assessment is based include international conservation status, historical breeding declines, recent population declines (numbers and range in breeding and nonbreeding seasons), European conservation status, breeding rarity, localised distribution, and the international importance of populations. These criteria assess a number of important characteristics of populations such as changes in range and population size in Ireland, Europe and globally. Meeting one or more of these criteria qualifies a species for the relevant list with each species being listed according to the highest category for which they qualify. Red-listed species are those of highest conservation priority, being globally threatened, declining rapidly in abundance or range, or having undergone historic declines from which they have not recently recovered. Amber-listed species have an unfavourable status in Europe, have moderately declined in abundance or range, a very small population size, a localised distribution, or occur in internationally important numbers.

Those species which are Green-listed do not meet any of these criteria and therefore require little direct conservation action.

Nesting was noted within and adjacent to the site in the trees and scrub by typical garden species. Birds were present in an abundance and distribution that would be expected for a rural / semi-urban site that has been modified by construction. The southern field has undergone much soil movement due to the construction of housing in adjoining lands. Work in adjoining areas has led to some soil disturbance but

little hedgerow or tree removal except within the areas previously approved for development and undergoing construction work.

Meadow pipits were typically in very low numbers or absent with one peak in numbers on 28th November 2020 of 23 birds. This species was present south of the west-east hedge on areas of short grass / cereal in winter and absent in the spring / early summer period (nesting period). Males were present within the field north of the west-east hedge in May 2021.

Yellowhammers were present during all winter and spring visits and their numbers were highest between the late December and January visits when both their number and the number of lesser redpolls were high. Yellowhammers were greatly reduced in May 2021, with one male noted on the eastern edge of the site.

Formerly a widespread breeding species in Ireland, it is now restricted mainly to the east and south where it is strongly linked with the cultivation of cereals and has declined in areas where these are no longer grown. This species has undergone a continued decline in Britain and Ireland due to changes in land use. It is largely resident, but flocks may form in favoured feeding areas, such as winter stubble fields. Within the site, the lands directly north of the west-east hedge were the favoured feeding area. The field south of the hedge has been greatly altered by soil movement and there was less established crop here.

Another species, the tree sparrow that was present in very low numbers (3 individuals were present on 21st January 2021). This Amber listed species (for breeding birds only) is rather local in Ireland, especially in the west and south. Similar to the yellowhammer, it is largely associated with cereal production. Tree sparrows are primarily sedentary but young birds may disperse to new areas.

Snipe were occasionally encountered feeding within the site, with a maximum of 2 in late January 2021. These are not likely to be nesting within the site given the level of disturbance.

Proposed development

Proposed development approximate layout see Landscape report for final layout

Ardee SHD Description

The development will consist of residential development on lands at Bridgegate, Rathgory & Mulladrillen, Drogheda Road, Ardee, County Louth.

The site extends to c. 13.16 ha and adjoins Phases 1-3 at Bridgegate (under construction) on lands to the west, accessed from the N2 Drogheda Road. The development will consist of:

The construction of 278 no. residential units comprising a mix of 212 no. 2, 3 and 4 bedroom houses (all 2 storeys) including 43 no. 2-bedroom houses (Type 1), 158 no. 3-bedroom houses (Types 2, 3, 6) and 11 no. 4-bedroom houses (Types 4, 5) all with private open space and car parking, alongside 66 no. duplex units (all 3 storeys) including 17 no. 1-bedroom units (Types D5, D8), 24 no. 2-bedroom units (Types D1, D3, D6) and 25 no. 3-bedroom units (Types D2, D4, D7), all with private open space in the form of terrace at upper floor level and external garden space, with 499 sqm of communal open space serving Duplex Blocks A-B (48 no. units) (served by 2 no. bin and bike stores [each c. 51 sqm] adjacent) at Bridgegate Avenue, providing a total residential gross floor area of c. 28,851 sqm;

A part 1, part 2 no. storey crèche (c. 483 sqm) and playground and a single storey community building (c. 165 sqm) located adjacent at a central community hub (with bin store [c. 22 sqm]) accessed from Bridgegate Avenue served by car parking located on Bridgegate Green and Bridgegate Avenue;

A landscaped Public Park located in the northern part of the site extending to c. 3.6 ha accessed from the community hub and between duplex Blocks B & C at Bridgegate Avenue, with 2 no. pedestrian links to permitted public park adjoining to the west and 1 no. pedestrian footpath extending to the northern perimeter at Hale Street, with a reservation for a future link road to lands to the east facilitated in the northern section of the park;

Works to the Rathgory Tributary located to the south of Bridgegate Avenue comprising the realignment of the channel and regrading and reprofiling of land (as required), implementation of 2 no. vehicular crossings (including culverts and mammal passes) and the provision of a riparian corridor based around the open watercourse comprising landscaping and planting with safe access to the watercourse provided for maintenance purposes and 1 no. pedestrian and cyclist crossing;

A series of landscaped public open spaces provided throughout the site with Public Open Space 01 (c. 1.05 ha) and Public Open Space 2 (c. 0.43 ha) located within the linear park (including riparian corridor) adjacent to the Rathgory Tributary with Public Open Space 03 (c. 0.29 ha) centrally located in the southern part of the site; open spaces will provide a mix of hard and soft landscaping, pedestrian and cycle access (cycle lanes provided at POS 1 and POS 2) and a range of activities including fitness spaces, kickabout area, amphitheatre and nature based play areas;

Provision of 3 no. home-zones in the southern part of the site including shared surfaces, landscaped streetscapes including planting and landscaping, with roads provided to site boundaries to the east, south and west to facilitate possible future connections;

All landscaping including planting to consolidate treelines and hedgerows forming existing site boundaries with agricultural lands to the east and Cherrybrook residential development to the west and all boundary treatments;

Roads and access infrastructure taken from Bridgegate Avenue (permitted under Reg. Ref.: 10/174; ABP Ref: PL15.238053 [as amended]), the provision of a bus stop on the south side of Bridgegate Avenue adjacent to community hub and provision of cycle lanes at this location (continued through Public Open Space 01); a total of 497 no. car parking spaces (381 no. serving houses, 84 no. serving duplexes, 21 no. serving crèche and community building and 11 no. visitor and public open spaces), a total of 188 no. bicycle parking (108 no. spaces serving duplexes, 60 no. visitor spaces and 20 no. spaces at the community hub);

Impacts of The Proposed Development

Loss of nesting sites for birds

There will be a reduction in the vegetation cover and removal of the scrub and some of the mature trees that offer nest sites for the bird species noted within the site. Trees that are retained will be under considerable pressure from disturbance for the duration of construction and from human presence into the future. This will arise from the level of noise and lighting associated with construction and following this from lighting associated with residents. This will be a long-term moderate negative impact as there will be a loss in established vegetation.

Disturbance from lighting

Lighting may be increased for two different functions:

Access and safety and Security

The former is to allow ease of use for residents at night. The latter is to ensure that residents feel a higher level of security. Lighting can affect resting, feeding and commuting behaviour for some species and for many individuals of species that are considered more light-tolerant.

Reduced Feeding

Reduced vegetation will lead to reduced insect abundance. There will be clearance of much of the current crop and adjoining perimeter vegetation in the clearance of the site for construction. This will be a permanent slight negative impact on birds.

Cumulative Impacts

Changes throughout Ardee reducing the availability of green space will have a cumulative impact on invertebrates, cereal crops and consequently birds. This will be a long-term to permanent slight negative impact upon the bird fauna of the site.

Tree removal and protection zones within the site

The east-west running hedge will be removed as will much of the current vegetation. Mature trees to the east and north of this hedge will be retained. This is an area of good nesting activity and winter roosting for yellowhammers.

Mitigation Measures

Pre-Construction:

Avoidance of the bird nesting period for tree removal and hedgerow clearance

All clearance operations shall avoid the bird nesting period; March 1st to August 31st. This will ensure that no birds are directly lost from these procedures and that the impact upon breeding birds is minimised. In a situation where trees must be removed prior to the end of the nesting season, an assessment for nesting birds shall be carried out by an ecologist.

Operation:

Planting for birds

Planting must provide suitable cover for nesting birds and encourage insect diversity that would sustain birds. This can be achieved both by availing of native species and non-native non-invasive plant species. Nesting birds require dense cover to hide nests and to avoid predation from cats, crow species etc. Planting should be examined by an ecologist and where supplementary planting is considered necessary; this should be incorporated.

The following measures are proposed to reduce impacts upon yellowhammers:

Provide important winter-feeding habitat by spraying and cultivating stubbles as late as possible. Where overwinter stubbles are not a viable option, create seed-rich wild bird cover crops (or wild bird seed mixtures). An annual crop established each spring with a high proportion of spring cereals (wheat, barley and/or triticale) in the seed mix will be best for yellowhammers and other buntings. Linseed or a brassica, such as rape or mustard, will broaden the benefits for finches and other seed-eating birds.

Create grass margins around arable fields to increase food and nesting habitat for yellowhammers. If you can maintain flower-rich margins, then this will be better for wildlife. Yellowhammers are more likely to use margins which have a short, thick hedge and an adjacent ditch.

Provide important winter-feeding habitat by spraying and cultivating stubbles as late as possible. Where overwinter stubbles are not a viable option, create seed-rich wild bird cover crops (or wild bird seed mixtures). An annual crop established each spring with a high proportion of spring cereals (wheat, barley and/or triticale) in the seed mix will be best for yellowhammers and other buntings. Linseed or a brassica, such as rape or mustard, will broaden the benefits for finches and other seed-eating birds.

Create grass margins to increase food and nesting habitat for yellowhammers. If you can maintain flower-rich margins, then this will be better for wildlife. Yellowhammers are more likely to use margins which have a short, thick hedge and an adjacent ditch.

Provide hedgerows of differing sizes around the farm. Yellowhammers favour hedgerows less than two metres tall.

All hedge, ditch and field margin management should be avoided between 1st March and 31st August because of nesting birds. Yellowhammers nest well into August, and later nests tend to be the most successful, so delaying cutting until at least 1st September is particularly important for them.

Trim hedgerows only once every two to three years. Avoid trimming all hedges in the same year.

Maintain a thick base to hedgerows. Management such as laying, or coppicing can restore a dense structure at the base of a hedge.

Avoid laying or coppicing all hedges in the same year. Undertake management on a long rotation.

The landscape design for the proposed development shall incorporate the policies and objectives of the All-Ireland Pollinator Plan.

Grass-cutting and management of the park shall ensure that species such as Meadow pipit and yellowhammer are provided with suitable areas of cover in summer and winter.

Bird boxes and wall access points for birds

Bird boxes shall be provided. These shall include boxes suitable for robins and blue tits. Vegetation will provide continued nest sites for other bird species.

Lighting

Lighting shall be for safety and mobility and not for ornamental purposes. Light falling upon any areas of benefit to birds such as hedgerow must not exceed 3 lux to ensure that resting and nesting species are not unnecessarily disrupted.

Motion-activated sensor lighting shall be employed where practicable. Such lighting shall have a short "activated time" to ensure that it is responding to human activity rather than bats, birds or passing foxes or badgers and to return to darkness quickly. Human presence would continue to re-trigger the lights while occasional bat or bird passage would be less likely to do so.

Impacts Following Mitigation

There will be a reduction in green space that will reduce feeding for birds. The impact of this will be reduced by a planting regime that encourages insect diversity but there is potential for a long-term slight negative impact due to the loss of cereal crop availability and hedgerow loss.

Table 1: Bird species noted within the site

Red text = Red Conservation Status Orange – Amber Conservation Status

BTO abbreviation	Species	Scientific name
BC	Blackcap	Sylvia atricapilla
CC	Chiffchaff	Phylloscopus collybita
BT	Blue Tit	Cyanistes caeruleus
LTT	Long-tailed tit	Aegithalos caudatus
BZ	Buzzard	Buteo buteo
K	Kestrel	Falco tinnunculus
CF	Chaffinch	Fringilla coelebs
BF	Bullfinch	
GF	Greenfinch	Chloris chloris
LI	Linnet	Linaria cannabina
LR	Lesser redpoll	Acanthis cabaret
Y	Yellowhammer	Emberiza citrinella
RB	Reed bunting	Emberiza schoeniclus
MP	Meadow pipit	Anthus pratensis
D.	Dunnock	Prunella modularis
GC	Goldcrest	Regulus regulus
GO	Goldfinch	Carduelis carduelis
GT	Great Tit	Parus major
R.	Robin	Erithacus rubecula
ST	Song Thrush	Turdus philomelos
MT	Mistle Thrush	Turdus viscovorus
FE	Fieldfare	Turdus pilaris
RE	Redwing	Turdus iliacus
SG	Starling	Sturnus vulgaris
BB	Blackbird	Turdus merula
WP	Wood Pigeon	Columba palumbus
CD	Collared dove	Streptopelia decaocto
BTO abbreviation	Species	Scientific name
FP	Feral Pigeon	Columba livia domestica
WR	Wren	Troglodytes troglodytes
HG	Herring gull	Larus argentatus
LBB	Lesser black-backed gull	Larus fuscus
BHG	Black-headed gull	Chroicocephalus ridibundus
RK	Rook	Corvus frugilegus
HC	Hooded crow	Corvus corone
JD	Jackdaw	Corvus monedula
MG	Magpie	Pica pica
CA (flying over) (Amber)	Cormorant	Phalacrocorax carbo

BTO abbreviation	Species	Scientific name
SL	Swallow	Hirundo rustica
HS	House sparrow	Passer domesticus
TS	Tree Sparrow	Passer montanus
PH	Pheasant	Phasianus colchicus
PW	Pied wagtail	Motacilla alba
GL	Grey wagtail	Motacilla cinerea
SN	Common snipe	Gallinago gallinago

Table 2: Birds noted during each visit to the site November 2020 to March 2021

Site	Date	Weather conditions	Blackbird	Mistle thrush	Song thrush	Redwing	Fieldfare	Woodpigeon	Collared dove	Feral pigeon	Rook	Hooded crow	Jackdaw	Magpie	Wren	Starling	Black headed gull	Herring gull	Chaffinch	Greenfinch	Bullfinch	Goldfinch	Linnet	Lesser Redpoll	Yellowhammer	Meadow Pipit	Goldcrest	Pied wagtail	Blue tit	Great tit	Coal tit	House sparrow	Tree sparrow	Grey wagtail	Buzzard	Kestrel	Raven	Grey Heron	Dunnock	Reed bunting	Snipe	Robin	Pheasant	Cormorant	Blackcap	Chiffchaff	Swallow
	20/11/		11					24	in neighb ouring		28	10	15	3	7	2	2	13	9		2	3	100	6	15	2	5	2	4	0					0		0	0	0	0		0	0					
	28/11	Dry, cool,	14					12	0		10	6	2	9	6	3	2	4	8		2	6	80	11	20	23	1	3	14	3		1		1	1		2	1	2	3		3	1					
	17/12/	Dry, windy						12									2	10				30																										
	29/12	Dry,	3		1			10	2		4	2		10			2	1	4	4		12		98	46			2	5			4	2	1	1				21			2					
	07/01/2	Dry, cold			6			4			1	1		2	1			4	12			11	22	200 combined with		1			5	1	1								5			1					
	21/0		3		1		4	3	1		5		3	6		3		3	4	5	2	32		112	8	1			4		1	6	3		1		3		8	2							
	10/02/2	Snowin	1			40 (flying)					30	1		2	1				11	4		1	2	40								1				1			11									
	0	D ry	4	1						6	90		1	5	1	1					4	5			20				1			1			1	1					1						
	15/0	Dry,	1	1				78	1		5	1		1		30			5	2		1		1	10				2	2		1						2	1		2						
	29/03/21	Dry, cloudy,	3					2			4	4	2	2	7	1		63	1	1		1					6		2	1					2	1					3	1					

Table 3: Birds noted during the breeding bird assessment 4th May 2021

Date	Weather conditions		Blackbird	Song thrush	Woodpigeon	Hooded crow	Wren	Chaffinch	Goldfinch	Goldcrest	Blue tit	Great tit	Dunnock	Robin	Blackcap	Chiffchaff
04/05/ 2021	Dry, windy															
Area																2
Centre Hedge			2		2		6			1			2			
East Hedge			1	1	3	1	6	1			2				1	2
Southeast hedge					3		5	4					1		2	
South hedge			1				1				1		1	1	2	
Southwest hedge			1		2		5		3		2	2	1	1		

Swallows were noted feeding within the site but are not nesting here. Rooks were present throughout the site in but were most numerous to the south of the site. Two buzzards were noted in mature trees south of the site and this may be a nest site. Species such as lesser black-backed gull were noted (individuals) on 4th May 2021 but are not nesting within the site.

Table 4: Birds noted during the breeding bird assessment 4th May 2021

Date	Weather conditions	Blackbird	Song thrush	Woodpigeon	Hooded crow	Wren	Chaffinch	Goldfinch	Goldcrest	Greenfinch	Blue tit	Great tit	Dunnock	Robin	Blackcap	Chiffchaff	Yellowhammer	Meadow pipit
26/05 /2021	Dry, calm	7	1	18	1	19	6	1	1	1	3	2	4	2	3	2	1	2

Swallows were feeding within the site and several species were noted on the periphery but not nesting within the site including collared dove, jackdaw, magpie, rook, House Sparrow, starling, and pheasants

Goldfinch resting on the ground (top left) Lesser redpolls (top right and middle left) are present throughout the winter and often are mixed with yellowhammers when perched (bottom). A greenfinch (middle right) was noted within the hedgerow. This species was much more numerous up to the last decade.



Buzzards are present much of the time either within the site or in neighbouring hedgerow and trees (top). Yellowhammer male in trees along eastern edge. Blue tits feed throughout all hedgerows.

Tree sparrow (above) Amber conservation status (BOCCI) and House sparrow (below)