November 2023

Appropriate Assessment – Stage 1 Screening Report

Large Scale Residential Development at Broomfield West, Midleton, Co. Cork

On behalf of

Castle Rock Homes Midleton Ltd.

MALONE O'REGAN ENVIRONMENTAL

Form ES - 04

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Appropriate Assessment – Stage 1 Screening Report

Large Scale Residential Development at Broomfield West, Midleton, Co. Cork

Castle Rock Homes Midleton Ltd.

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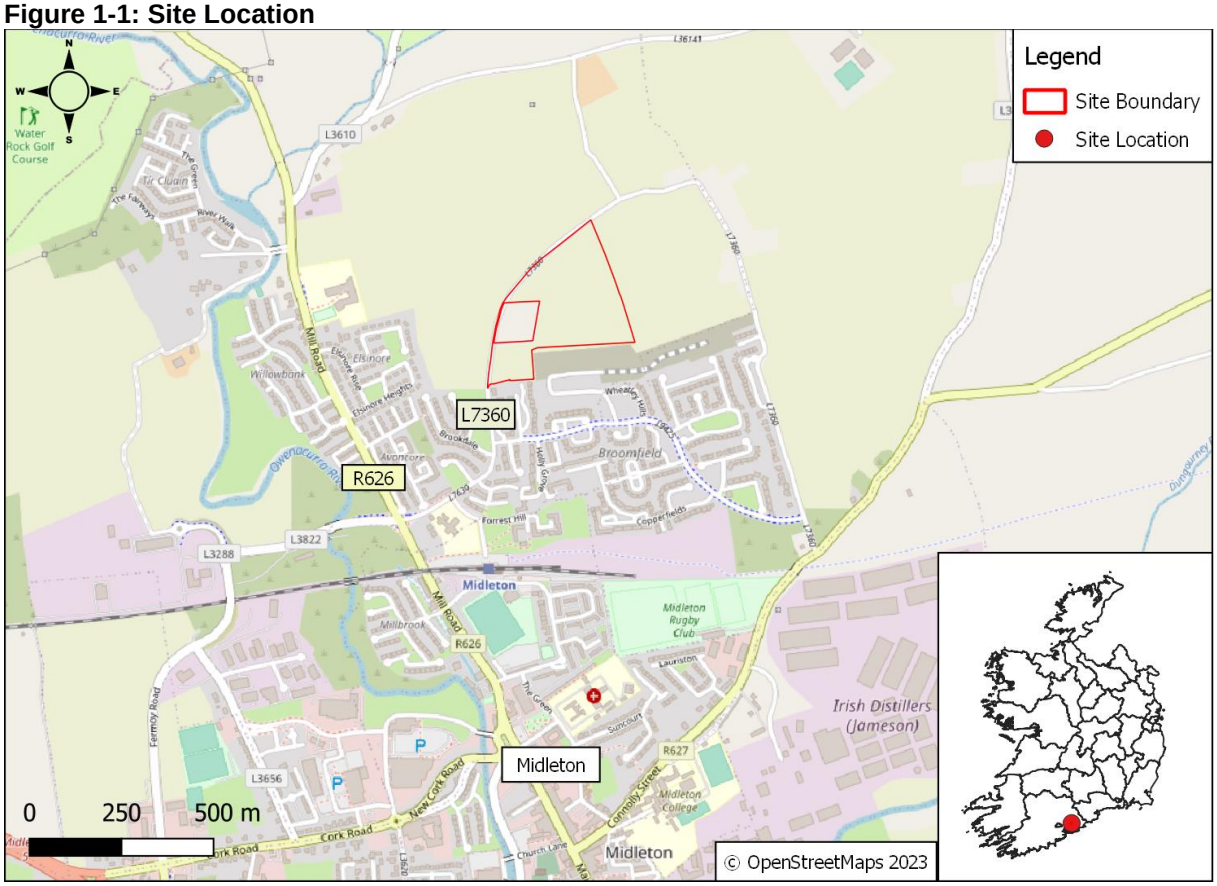
1 INTRODUCTION

Malone O'Regan Environmental (MOR) were commissioned by Castle Rock Homes (Midleton) Ltd. on behalf of Castle Rock Homes Midleton Ltd ('the Applicant') to undertake an Appropriate Assessment Screening Report (AA) to assess the potential adverse effects, if any, of both the construction and operational phased of the proposed Larger Residential Development (LRD) Housing on nearby sites with European conservation designations (i.e., European sites).

The Proposed Development, consisting of 272No. units (houses and apartments) and a childcare and community use facility, will be located on a site that is ca. 8.273 hectares (ha) in size and is located within the townland of Broomfield West, Co. Cork, ca. 1km north of Midleton town centre and is shown in Figure 1-1 ('the Site') (OS ITM Reference 588097 575082).

This report has been prepared to inform the Planning Authority with regard to Stage 1 Appropriate Assessment Screening Report of the Proposed Development through the research and interpretation of best scientific, geographic and engineering knowledge and in view of the conservation objectives of the surrounding European sites. This report seeks to determine whether the Proposed Development will, on its own or in-combination with other plans / projects have a significant effect on European sites within a defined zone of influence of the Site.

Figure 1-1: Site Location



1.1 Statement of Authority

The report was reviewed and approved by Ms. Kathryn Broderick, Principal Environmental Consultant. Kathryn has over 7 years' experience working in the ecological consultancy sector,

including the preparation of Appropriate Assessments, habitat surveys and specialist protected species surveys.

1.2 Regulatory Context

The following guidance documents were adhered to for the preparation of this AA report:

- OPR Practice Note PN01, *Appropriate Assessment for Screening for Development Management*, The Office of the Planning Regulator [1];
- *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*, European Commission [2];
- *Guidelines for Ecological Impact Assessment in the UK and Ireland*, Chartered Institute of Ecology and Environmental Management [3];
- *Managing Natura 2000 Sites:* The Provision of Article 6 of the Habitats Directive 92/43/EEC [4]*;*
- *Appropriate Assessment of Plans and Projects in Ireland, Guidance for Planning Authorities,* DoEGLH [5]; and,
- *Appropriate Assessment under Article 6 of the Habitats Directive; Guidance for Planning Authorities. Circular NPW 1/10 and PSSP 2/10*, DoEGLH [6].

This AA prepared in accordance with and in compliance with the following legislation:

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna better known as “The Habitats Directive”. This provides the framework for legal protection for habitats and species of European importance. Articles 3 to 9 provide the legislative means to protect habitats and species of community interest through the establishment and conservation of an EU-wide network of sites known as Natura 2000.

For completeness, the Planning Acts state “European site” means:

a. A candidate site of Community Importance;
b. A site of Community Importance, F815 [(ba) a candidate Special Area of Conservation];
c. A Special Area of Conservation (SAC);
d. A candidate Special Area of Conservation (cSAC); or,
e. A Special Protection Area (SPA)

These are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79/409/EEC as amended 2009/149/EC) (better known as “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 [Natura 2000] 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 competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity*

of the site concerned and, if appropriate, after having obtained the opinion of the general public".

The Habitats Directive promotes a hierarchy of avoidance, mitigation and compensatory measures. First, the project should aim to avoid any negative impacts on European sites by identifying possible impacts early in the planning stage and designing the project in order to avoid such impacts. Second, mitigation measures should be applied, if necessary, during the Appropriate Assessment (AA) process to the point, where no adverse impacts on the site(s) remain. If the project is still likely to result in adverse effects, and no further practicable mitigation is possible, it is rejected. If no alternative solutions are identified and the project is required for imperative reasons of overriding public interest (IROPI test) under Article 6 (4) of the Habitats Directive, then compensation measures are required for any remaining adverse effect.

1.3 Stages of Appropriate Assessment

There are four distinct stages to undertaking an AA as outlined in current European Union (EU) and Department of Environment, Heritage and Local Government (DOEHLG) guidance:

Stage 1: Screening

This process identifies the potential impacts of a plan or project on a Natura site, either alone or in combination with other plans and projects and considers whether these impacts are likely to be significant. If potentially significant impacts are identified the plan or project cannot be screened out and must proceed to Stage 2.

Stage 2: Appropriate Assessment

Where potentially significant impacts are identified, an assessment of the potential mitigation of those impacts is required; this stage considers the appropriateness of those mitigation measures in the context of maintaining the integrity of the Natura 2000 sites. If potential significant impacts cannot be eliminated with appropriate mitigation measures, the assessment must proceed to Stage 3.

Stage 3: Assessment of Alternatives Solutions

This process examines alternative ways to achieve the objectives of the plan or project that avoid adverse impacts on the integrity of the Natura 2000 site if mitigation measures are deemed insufficient.

Stage 4: Imperative Reasons of Overriding Public Interest (IROPI)

Assessment where no alternative solution exists for a plan or project and where adverse impacts remain. This includes an assessment of compensatory measures, where in the case of projects or plans, can be considered necessary for IROPI.

2 SCREENING FOR APPROPRIATE ASSESSMENT

Screening determines whether Appropriate Assessment is necessary by examining:

1. Whether a plan or project can be excluded from AA requirements because it is directly connected with, or necessary to, the management of a European site; and,
2. Whether the project will have a potentially significant effect on a European site, either alone or in combination with other projects or plans, in view of the site's conservation objectives.

Screening involves the following:

i) Description of a plan or project;

ii) Identification of relevant European sites, and compilation of information on their qualifying interests and conservation objectives;

iii) Assessment of likely effects – direct, indirect, and cumulative – undertaken on the basis of available information as a desk study or field survey or primary research as necessary; and,

iv) Screening Statement with conclusions.

2.1 Methodology

2.2 Determining Zone of Influence

The starting point for this assessment was to determine the Zone of Influence. The Zone of Influence (ZoI) comprises of the area which the Proposed Development may potentially affect the conservation objectives (or qualifying interests) of a European Site.

Guidance in Appropriate Assessment of plans and projects in Ireland notes that a distance of 15km is recommended for the identification of relevant European sites [5]. However, guidance from the NPWS recommends that the distance should be evaluated on a case-by case basis with reference to the nature, size and location of the project, the sensitivities of the ecological receptors, and the potential for in-combination effects (cumulative) [6]. For some projects the distance could be greater than 15km, and in some cases less than 100m.

Definition of the zone of influence for the proposed works includes evaluating the following:

- Identification of the European sites that are situated within, in close vicinity or downstream within the zone of influence of the Proposed Development;
- Identification of the designated habitats and species and Conservation Objectives for the identified European sites;
- Identification of the environmental conditions that stabilise and increase the qualifying interests of the European sites towards favourable conservation status;
- Identification of the threats/impacts – actual or potential that could negatively impact the conservation objectives for the European sites;
- Identifying the activities of the proposed works that could give rise to significant adverse impacts; and,
- Identification of other plans or projects, for which in-combination impacts would likely have significant adverse effects.

2.2.1 Source-Pathway-Receptor Model

European sites are only at risk from significant effects where a source-pathway-receptor link exists between a Proposed Development and European sites. This can take the form of a

direct impact (e.g., where the Proposed Development is located within / in close vicinity to the boundary of a European site), or an indirect impact where impacts outside of the European site but affect ecological receptors within (e.g., impacts to water quality which can affect estuarine habitats at a distance from the impact source).

The likely effects of the Proposed Development on any European site have been assessed using a source-pathway-receptor model. A source-pathway-receptor model is a standard tool used in environmental assessment [7, 8]. The model comprises of:

- A *source*: any potential impacts from the Proposed Development, e.g., the runoff of sediment / construction pollution.
- A *pathway*: the means or route by which a source can affect the ecological receptor.
- A *receptor*: the qualifying interests and / or special conservation interests of the European sites.

In order to establish the Zone of Influence of the Proposed Development works, the likely key environmental impacts / changes associated with the Proposed Development were determined having regard to the project characteristics set out in Section 3.3 of this report. Zone of Influence for various potential impact pathways are discussed in Section 4.1.

2.3 Desk Based Studies

A desk-based review of information sources was completed, which included the following sources of information:

- Review of aerial maps of the Site and surrounding area;
- The National Parks and Wildlife Service (NPWS) website was consulted with regard to the most up to date detail on conservation objectives for the European sites relevant to this assessment [9];
- The National Biodiversity Data Centre (NBDC) website was consulted with regard to species distributions [10];
- The Environmental Protection Agency (EPA) Maps website was consulted to obtain details about watercourses in the vicinity of the Site [11];
- The Cork County Council Planning Portal to obtain details about existing / proposed developments in the vicinity of the Site [12]; and,
- The Department of Housing, Local Government and Heritage's planning portal – the National Planning Application Database to obtain details about existing / proposed developments in the vicinity of the Site [13].

2.4 Field Survey

A Site walkover was undertaken on the 14th of April 2023, by a suitably qualified and experienced MOR ecologist. This survey was undertaken with the Heritage Councils – '*A Guide to Habitats in Ireland'* [14]. This is the standard habitat classification system used in Ireland and includes both a desk based and field-based assessment.

The assessment was extended to also identify the potential for these habitats to support other features of nature conservation importance, such as species afforded legal protection under either Irish or European legislation.

2.4.1 Winter Bird Survey

Two (2No.) wintering bird surveys were undertaken by one (1No.) suitably qualified and experienced MOR ecologist. The first was conducted on the 22nd of March 2023, and the

second was conducted on the 27th of March 2023. The date, time and weather conditions of each survey is described in Table 2-1.

Table 2-1: Winter Bird Survey Metadata

Date	Time	Temperature (°C) (Start – End)	Wind (Beaufort Wind Scale)	Rain	Cloud Cover
27/02/2023	11:45 – 14:45	7-9°C	1	No rain	100%
22/03/2023	06:00 – 09:00	7°C	2	Showers	0-100%

These surveys were conducted in adherence with the Winter Farmland Bird Survey methodology provided by the British Trust for Ornithology (BTO) [15] and, the Wintering and Migratory Wildfowl (especially geese and swans) survey methodology provided by the Scottish Natural Heritage (SNH) [16].

The surveys were timed to coincide with the high tide in Cork Harbour, or as close to high tide as possible in suitable weather conditions and during daylight hours, in order to ascertain whether or not wetland bird species utilising the nearby SPA utilise the proposed site for foraging or roosting purposes when favourable habitats (such as mudflats) are inaccessible.

All of the field boundaries located within the proposed site boundary were walked, and all of the open areas were observed for the presence of birds. Where a large number of birds feeding was encountered long stops were taken in order to ensure accurate species recording and counting. All birds were recorded using a standard BTO code through sight and sound and optical equipment, such as binoculars, was used to minimise disturbance to wintering birds. The behaviours and activities of the birds were recorded to identify whether the birds were roosting or feeding within the Site. Any roosts identified within the proposed site were recorded. All waterbird / designated bird species flying over the proposed site and the direction in which they were flying were recorded by the surveyors; however, all other bird species flying over the proposed site were not recorded unless the birds were clearly associated with the Site, i.e., had been flushed out.

The locations of all birds were recorded on an overview map of the proposed site, and the zone in which the birds were located was noted. The zone represents where they were first recorded and are described as follows:

- Boundary – birds located within or adjacent to treelines, hedgerows or other boundary structures;
- Margin – birds located within the outer 20m of fields; and,
- Interior – birds located within the field beyond the margin zone.

2.4.2 Breeding Bird Survey

Breeding bird transect surveys were undertaken on the 14th of April 2023, the 9th of May 2023 by suitably qualified MOR ecologists. The breeding bird survey was conducted in line with the methodology described in:

- BTO – *A Field Guide to Monitoring Nests* [27]; and,
- Common Bird Census in Bird Monitoring Methods [28].

These breeding bird surveys will continue for the month of June and July 2023.

In order to establish whether any breeding bird species were utilising the habitats onsite or the airspace above the Site, the Common Bird Census (CBC) methodology was

implemented. The transect survey was designed to cover all accessible habitat within and adjacent to the Site.

All birds were recorded through sight and sound. Optical equipment was used, including binoculars, in order to minimise disturbance to potentially breeding birds. Suitable vegetation onsite was examined for the presence of nests. During the survey, the behavioural activity of the recorded birds was noted using the BTO breeding status codes [2]. Birds that displayed non-territorial behaviours were recorded as well (i.e., birds that were flying over the Site, birds that were foraging and not calling, birds that were loafing).

Therefore, birds were classified as non-breeding, possibly breeding and confirmed breeding based on the behaviours exhibited. The criteria for each classification are described below:

- Non-breeding – Birds that were flying over the Site, birds that were foraging and not calling, birds that were loafing;
- Possible Breeding – Birds observed in suitable nesting habitat and displaying either territorial and / or courtship behaviours, nest building behaviours or observed visiting a possible nest; and,
- Confirmed Breeding – Birds observed either on nest or carrying faecal sac or food, sighting of a nest with eggs / chicks, used nests, eggshells or recently fledged young.

The metadata for the breeding bird survey are described in Table 2-2. This table will be completed once all surveys have been carried out.

Table 2-2: Breeding Bird Survey Metadata – to be completed

Date	Time	Temperature (°C) (Start – End)	Wind (Beaufort Wind Scale)	Rain	Cloud Cover
14/04/23	06:35 – 08:00	5°C - 6°C	2	No Rain	50%
09/05/23	07:20 – 08:40	11°C - 11°C	2	No Rain	80%
08/06/23	06:35 – 07:33	14°C - 16°C	4	No Rain	20%
27/07/23	07:20 – 08:30	16°C - 17°C	3	No Rain	100%

2.4.3 Invasive Species

The Site was also assessed for the presence of any noxious / invasive species such as Japanese knotweed (*Fallopia japonica*) and any other invasive species within the Site.

2.4.4 Other Species

In addition, as part of the overall ecological assessment for the proposed site, an assessment was carried out for the potential of the Proposed Development to support any other species considered to be of value for biodiversity, including those that were identified as occurring locally by the desktop study. This information was used as part of the AA to inform the assessment of potential adverse effects on both Annex I Species and Habitats identified as part of the study.

2.5 Survey Limitations

No survey limitations were encountered.

3 DESCRIPTION OF THE PROPOSED DEVELOPMENT

3.1 Site Context and Description

The Proposed Development is located on a ca. 8.273 hectares (ha) site within the townland of Broomfield West, Midleton, Co. Cork. The Site is located ca. 1.3km northeast of Midleton town centre and approximately 23km to the east of Cork City Centre.

The Site is predominately comprised of agricultural lands and is bordered by existing residential developments to the south, and further agricultural lands to north, east and west. Midleton Water Treatment Plant interjects into the western boundary and the L7360 provides the curved western boundary of the Site. There are also residential developments currently under construction to the southeast of the Site, and on the opposite side of the L7360, to west of the Site as shown in Figure 3-1.

The Site is accessed via Broomfield Road, L7360 on the western boundary via 2 no. access points.

Figure 3-1: Site Context

3.2 Watercourses within the Vicinity of the Site

The Site is located within the Lee, Cork Harbour and Youghal Bay catchment [Catchment_ID: 19] and the Owenacurra_SC_010 subcatchment [Subcatchment_ID: 19_13] [11].

As per EPA maps, there is one (1No.) hydrological feature of note within close proximity to the Site. No hydrological features were identified onsite.

1. The Owenacurra River

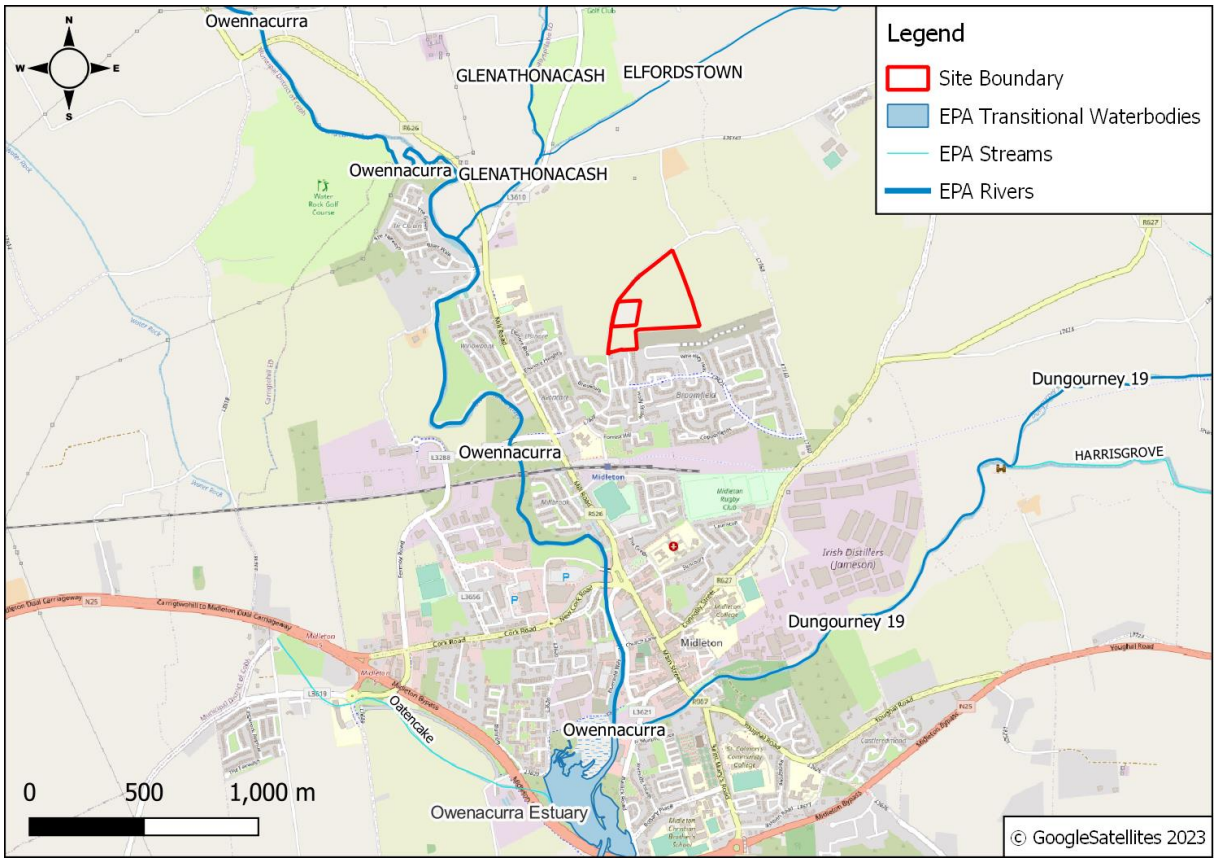
   This river is located ca. 475m to the southwest of the Site, at its closest point. The river flows in a southerly direction, and drains into the Owenacurra Estuary, ca. 930m

downstream of the Site. The Owenacurra Estuary flows in a south-westerly direction for ca. 2.4km before discharging into the North Channel and Great Island Estuary. The North Channel and Great Island Estuary continues for a further 3.7km before discharging into Cork Harbour.

Under the Water Framework Directive (WFD) 2000/60/EC, the EPA classifies the status and risk of not achieving a good water quality status for all waterbodies in Ireland. According to the WFD Status 2016-2021, the most up-to-date data at the time of writing this report, the Owenacurra River, Owenacurra Estuary, the North Channel and Great Island Estuary and Cork Harbour, all have a '*moderate'* water quality status, and are considered to be '*at risk'* [11].

The location of the key surface water features in the vicinity of the Site are illustrated in Figure 3-2 below.

Figure 3-2: Watercourses in the Vicinity of the Site



3.2.1 Drainage Ditches

The Site walkover did not identify any drainage ditches, or any other surface water features onsite. Therefore, no natural or existing hydrological link to the Owenacurra Estuary or any other watercourse in the surrounding area was identified.

As per EPA Flood Maps, the Site is not benefitted by any arterial drainage scheme or drainage district [17].

3.3 Proposed Development

The proposed development consists of 272No. units comprising of:

- 34No. 1-bedroom units;
- 122No 2-bedroom units;

- 94No. 3-bedroom units; and
- 22No. 4-bedroom units.

A mix of house types will be provided consisting of duplex style apartments, terraced and semi-detached units.

The proposed development also consists of a child creche and community use facility, and all associated site development works at Broomfield West, Midleton, Co. Cork.

Figure 3-3: Proposed Development Site Layout

The Proposed Development also provides for good pedestrian connection to the town centre, existing estates (Blossom Hill and Avoncore Place) to the south and future development on adjacent lands with the provision in pathways and cycle lanes throughout the site. The connection ensures good permeability for pedestrians and cyclists.

3.3.1 Infrastructure Details

An Engineering Infrastructure Report was prepared by Brian O Kennedy & Associates Ltd. and submitted as part of the overall planning application. The report outlines the proposed means of servicing the development with roads, surface water sewers, foul water sewers, mains water supply, and storm water attenuation.

3.3.2 Drainage

<u>Surface Water System</u>

The surface water sewer system serving the development will consist of a network of surface water drains operated by gravity flow. The sewers will discharge westward towards the existing L-7360 public roadway. This roadway is currently being upgraded as part of the Park Hill View Estate Ltd development to the west of this roadway (PP Ref:18/7236). The public road

upgrade includes installing a new surface water sewer to serve the Park Hill View Estate Ltd housing development site. The surface water sewers serving the subject proposed development will connect into this newly-laid storm sewer. These sewers have been increased in size to accommodate the proposed extra discharge from the subject development.

As part of the detailed design, SuDS measures have been incorporated on the surface water system to intercept water at source and reduce the run-off from the site. A series of attenuation tanks will be installed to limit the runoff from the site to the original greenfield run off level. See Drawings 22/6372-P-1321 + 1322 for layout of SuDS measures incorporated into the development as submitted as part of the Proposed Development.

A network of gravity sewers will be installed to service the Proposed Development. Surface water will be collected from all hardstanding and impermeable surfaces. The piping network will be appropriately designed using SuDS drainage software design to accommodate the discharge volumes.

Please refer to the Engineering Report for full details on the surface water system prepared by Brian O Kennedy & Associates Ltd. which has been submitted as part of this application.

Receiving Network

The surface water outfall pipe from the development will connect to an existing manhole at the junction of the L-7360 and the Broomfield Court spine road. This manhole is part of an existing surface water network which runs from this connection point through the existing Brookdale and Avoncore estates, crossing the R626 public roadway and discharging into the Owenacurra River.

An assessment of the capacity of the receiving network has been made. Catchment areas for the network have been calculated and sizes and invert levels of the pipes have been assessed. Contributing volumes from existing properties, public roads, the under-construction Park Hill View Estate Ltd Development and the Midleton Water Treatment Plant discharge volumes have been taken into account in these calculations. The receiving network has appropriate capacity to accept the additional surface water discharge from the proposed development. These capacity calculations are attached in Appendix 'C' of the Engineering Report prepared by BOK.

Attenuation details

Underground Storage Tanks are favoured over proprietary cellular structures on account of the high soil infiltration levels and down-slope existing housing development and infrastructure. On account of the topography and the location of the Midleton Water Treatment Plant, the surface water network serving the Site is divided up into separate segments with three separate attenuation tanks provided for adequate protection against downstream river flooding. The tanks will be constructed of reinforced concrete cast in situ and fully sealed.
The surface water drainage network is shown on Drawings 22/6372-P-1303 +,1321 + 1322 and details of the attenuation tank design is shown on Drawings 22/6372-P-1323 as submitted as part of the overall planning application.

Foul Sewer System

The foul sewer system serving the Proposed Development will operate by gravity flow. The sewers will discharge westward towards the existing: -73160 public roadway. At the time of writing this report, this roadway is currently being upgraded as part of the Park Hill View Estate Ltd development (Planning Ref: 18/7236) to the west of this road. This road upgrade includes installing new surface and foul water sewers to serve the Park Hill View Estate Ltd development site. It is proposed to connect into these newly-laid sewers. These sewers have been upgraded to accommodate the proposed extra discharge from the Proposed

Development. Please see Drawings 22/6372-P-1301 + 1302 submitted as part of the overall planning application.

Please note all sewers will be designed and installed in accordance with Irish Water Code of Practice infrastructure Rev July 2020.

Please refer to the Engineering Infrastructure Report for full details on the foul water sewer design and details prepared by Brian O Kennedy & Associates Ltd. which has been submitted as part of this application.

3.3.3 Water Supply

Pre-Connection query

A pre-connection query was lodged with Irish Water. The Irish Water response confirms that a water connection is feasible without infrastructure upgrade by them. The requirement to potentially divert the 12" Ductile Iron watermain is noted on the Irish Watermain is noted on the Irish Water Response. A copy of this response has been included in the Engineering Report prepared by BOK.

Proposed Network

Irish water have an existing 12" Ductile Iron watermain running through the south-west corner of the Site. It will be necessary to relocate this main to suit the proposed arrangement of roads and houses on the Site, subject to an agreement with Irish Water.

The proposed water supply network will be an internal watermain network of 150mm diameter spine with 100mm diameter branch mains. All watermain installations details will be in accordance with Irish Water – Water Infrastructure Standard Details – July 2020.

Fire hydrants will be installed such that all dwellings are within 45m of a hydrant.

A bulk water meter will also be installed at the principal watermain connection location. All dwellings will also have individual meters. Details of the water supply network are shown on Drawings 22/6372-P-1331 +1332 submitted as part of the overall planning application.

Please refer to the Engineering Infrastructure Report for full details on the water supply design and details prepared by Brian O Kennedy & Associates Ltd. which has been submitted as part of this application.

3.4 Site Access

Existing access to the subject site can currently only be achieved via L-7630 Broomfield Road which runs along the north-western boundary of the site and connects to the R626 via Avoncore Place. The site is currently used as agricultural land and generates limited if any vehicle trips on a daily basis.

3.5 Earthworks

Earthworks will include the excavation of level platforms and foundations for each residential building and the importation of stone material for access roads etc. The design of road levels and finished floor levels has been carried out in such a way as to minimize cut/fill type earthworks operations.

A CEMP will be prepared and submitted as part of this application.

3.6 Landscaping

Landscaping drawings have been prepared by Forest Bird Design and will be submitted as part of this application.

3.7 Construction Procedures

During the construction phase, the methods of working will comply with all relevant legislation and best practice guidelines in reducing the environmental adverse effects of the works. Although construction phase adverse effects are generally of a short-term duration and are localised in nature, the adverse effects will be reduced as far as practicable through compliance with current construction industry guidelines.

A Construction Environmental Management Plan (CEMP) will be prepared by the appointed contractor and will be submitted to the planning authority in advance of works commencing at the Site. The following guidance will be referred to and will be followed during the construction phase of the Proposed Development to prevent water pollution that may occur within the area:

- C532 – Control of Water Pollution from Construction Sites. Guidance for Consultants and Contractors [18]; and,
- C741 - Environmental Good Practice on Site (4th edition) [19];

The proposed works will aim to be completed in approximately 36 months from the grant of planning conditions. Working hours will generally be restricted to between 08.00 – 18.00 hours Monday to Friday inclusive and between 08:00-17.00 hours on Saturdays. Construction work will not be permitted on Sundays, public holidays or at night-time except where safety concerns necessitate it or if agreed in advance with the Planning Authority.

The timeline will be developed in accordance with the phasing plan submitted as part of this application.

3.8 Monitoring Works

An Environmental Clerk of Works (ECoW) will inspect the Site in advance of works commencing and will undertake Site inspections as required during the works to ensure that they are completed in line with the mitigation measures detailed within the CEMP, and that the mitigation measures are effective.

The ECoW will also either deliver or provide the resident engineer with sufficient environmental information to deliver a Site induction to all personnel working onsite.

4 IDENTIFICATION OF EUROPEAN SITES

In accordance with the European Commission Methodological Guidance [20] a list of European sites that can be potentially affected by the Proposed Development has been compiled. Guidance for Planning Authorities prepared by the Department of Environment Heritage and Local Government [5] states that defining the likely zone of impact for the screening and the approach used will depend on the nature, size, location and the likely significant effects of the project. The key variables determining whether or not a particular European site is likely to be negatively affected by a project are:

- The physical distance from the Site to the European site;
- The presence of impact pathways;
- The sensitivities of the ecological receptors; and,
- The potential for in-combination effects.

Guidance in Appropriate Assessment of plans and projects in Ireland notes that a distance of 15km is recommended for the identification of relevant European sites [5]. However, guidance from the NPWS recommends that the distance should be evaluated on a case-by case basis with reference to the nature, size and location of the project, the sensitivities of the ecological receptors, and the potential for in-combination effects (cumulative) as outlined in Section 2.

In accordance with Methodology detailed in Section 2.1, as part of the assessment of the Proposed Development, as a starting point for the screening process, all SPAs and SACs within 15km have been considered to assess their ecological pathways and functional links.

Due to type and size and extent and characteristics of emissions of the Proposed Development, is not considered to have zone of influence extending to 15km, nonetheless, due to the above convention, all SPAs and SACs in 15km have been identified for consideration as part of the screening.

There are four (4 No.) European sites located within 15km of the Site - these are identified in Figure 4-1 and Table 4-1.

Figure 4-1: European sites within 15km of the Site

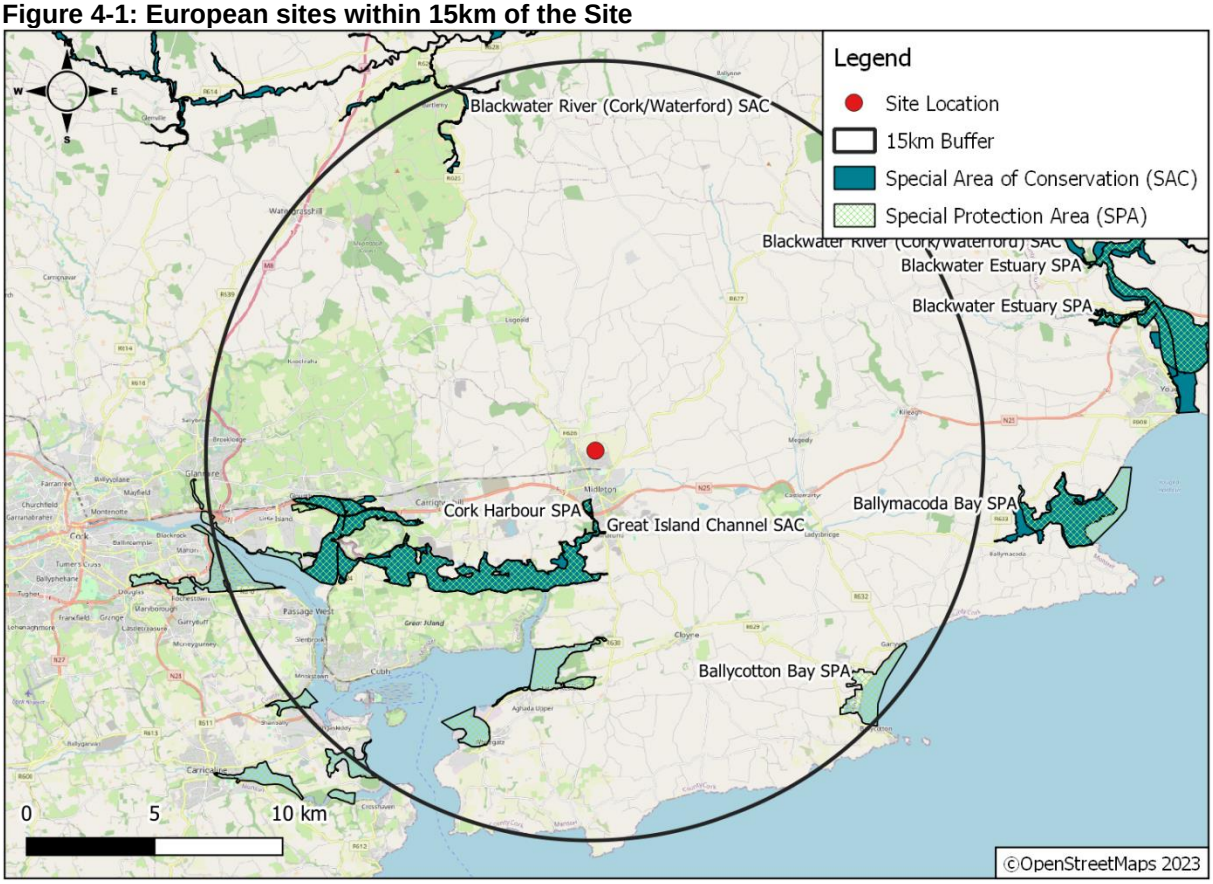


Table 4-1: European Designated Sites within 15km of the Site

Site Name	Code	Distance (km)	Direction from the Site
Special Areas of Conservation (SAC)			
Great Island Channel SAC	001058	1.6km	S
Blackwater River SAC	002170	12km	NW
Special Protection Area (SPA)			
Cork Harbour SPA	004030	1.6km	S
Ballycotton Bay SPA	004022	13km	SE

4.1 Identification of European Sites within ZoI

The Zone of Influence (ZoI) comprises the area in which the Proposed Development may potentially affect the conservation objectives (or qualifying interests) of a European site. The definition of the zone of influence for the proposed works evaluates multiple factors as outlined in Section 2.1 and discussed below. Please note that extent of ZoI differs for different environmental aspects, e.g., air, water, etc.

Habitat Loss / Degradation

The Site Boundary is not located within any European Sites, however, the boundaries of the two (2No.) SACs and two (2No.) SPAs, as listed above are located within 15km from the Site.

The Site is currently comprised primarily of agricultural grassland (GA1) along with hedgerow / treelines (WL1/ WL2). No designated habitats were identified within the Site Boundary.

Therefore, it is concluded that there will be no direct impacts associated with designated habitat loss / degradation to any of the Annex I habitats as a result of the Proposed Development given the distance separating the Site from the European sites and the absence of impact pathways.

Water Quality Impairment

Potential water quality impacts would typically be associated with the release of sediment and other pollutants to surface water during the construction phase of the Proposed Development, therefore the ZoI would be considered to include the receiving waterbodies adjacent to and downstream of the Site during the construction phase within 5km.

The Site walkover did not identify any drainage ditches, or any other surface water features onsite. Therefore, no natural or existing hydrological link to the Owenacurra Estuary or any other watercourse in the surrounding area was identified. Furthermore, as outlined in section 3.3.1, all surface water will drain into the existing public infrastructure.

Therefore, it is concluded that there will be no direct impacts associated with water quality impairment as a result of the Proposed Development given the distance separating the Site from the European sites and the absence of impact pathways.

Air Quality Impairment

According to the Institute of Air Quality Management (IAQM) Guidelines, potential adverse effects from dust arising from construction to ecological receptors occurs within 50m of a construction Site [21]. This is a temporary nuisance impact only.

No European sites were identified within the zone of influence for dust arising from construction, and therefore a detailed dust assessment is not required. It is not considered that the Proposed Development will result in any significant effects on the any European Sites as a result of construction dust.

Noise / Disturbance

Noise from the construction activity has the potential to cause disturbance to resting, foraging and commuting qualifying species of the European sites. As there will be no piling or in-river works required for the Proposed Development, there is no potential for underwater noise impacts beyond the immediate vicinity of the Site.

Individual species will provoke different behavioural responses to disturbances at different distances from the source of disturbance.

- Transport Infrastructure Ireland (formally the National Roads Authority) has produced a series of best practice planning and construction guidelines for the treatment of certain protected mammal species (i.e., otter), which indicate that disturbance to terrestrial mammals would not extend beyond 150m [22]; and,
- Studies have noted that different types of disturbance stimuli are characterized by different avifaunal reactions, however, in general a distance of 300m can be used to represent the maximum likely disturbance distance for waterfowl [23].

The ZoI for noise / disturbance is therefore established as the Site with a 300m buffer. No European sites were identified within the zone of influence for noise/disturbance.

Great Island Channel SAC, Blackwater River SAC and Ballycotton Bay SPA are located outside of the 300m buffer zone. These European sites have been scoped out from further consideration in relation to potential noise impacts.

However, the Cork Harbour SPA is located ca.1.6km from the Site at its closest point and given that bird species are highly mobile, as a precautionary approach, further consideration

will be given to assess potential adverse effects resulting from the Proposed Development on this Natura 2000 site.

Identification of European Sites

The Site is not located within or directly adjacent to any European sites, however, the boundaries of four (4No.) are located within 15km from the Site.

Given the localised nature of the works, lack of impact pathways, along with the distance separating the Site from the Great Island Channel SAC, Blackwater River SAC and Ballycotton Bay SPA it is considered that the Proposed Development will not result in adverse effects to these European sites, and they have therefore been screened out from further consideration.

The following Natura 2000 site listed in Table 4-2 has been screened in for further consideration to assess potential adverse effects resulting from the Proposed Development.

Table 4-2: European Designated Sites within ZoI

Site Name	Code	Distance at closest point and source-pathway-receptor link
Cork Harbour SPA	004030	The Site is located 1.6km west of the Cork Harbour SPA. Given that the species in which the Site is designated for are highly mobile, this Natura 2000 site will be taken forward for further consideration.

The screening assessment for individual designated habitats and species for each of the screened in Natura 2000 sites and the potential for them to be adversely affected by the Proposed Development are presented in Section 6 below.

Further information on the screened in Natura 2000 sites is provided below.

4.2 Cork Harbour SPA (Site Code: 004030)

Cork Harbour is a large, sheltered bay system, with several river estuaries - principally those of the Rivers Lee, Douglas, Owenboy and Owennacurra. The SPA site comprises most of the main intertidal areas of Cork Harbour, including all of the North Channel, the Douglas River Estuary, inner Lough Mahon, Monkstown Creek, Lough Beg, the Owenboy River Estuary, Whitegate Bay, Ringabella Creek and the Rostellan and Poulnabibe inlets.

The site is a SPA under the E.U. Birds Directive, of special conservation interest for a number of species including Little Grebe, Great Crested Grebe, Cormorant, Grey Heron, Shelduck, Wigeon, Teal, Mallard, Pintail and Shoveler (Refer to Table 4-3). 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.

Cork Harbour is of major ornithological significance, being of international importance both for the total numbers of wintering birds (i.e., > 20,000) and also for its populations of Black-tailed Godwit and Redshank. In addition, it supports nationally important wintering populations of 22 species, as well as a nationally important breeding colony of Common Tern.

Cork Harbour is also a Ramsar Convention site, part of Cork Harbour SPA, and is a Wildfowl Sanctuary.

Table 4-3: Qualifying Annex I Species of Birds for Cork Harbour SPA

Species Name	Scientific Name	Code
Little Grebe	*Tachybaptus ruficollis*	A004
Great Crested Grebe	*Podiceps cristatus*	A005

Species Name	Scientific Name	Code
Cormorant	*Phalacrocoraax carbo*	A017
Grey Heron	*Ardea cinerea*	A028
Shelduck	*Tandorna tadorna*	A048
Wigeon	*Anas penelope*	A050
Teal	*Anas crecca*	A052
Pintail	*Anas acuta*	A054
Shoveler	*Anas clypeata*	A056
Red-breasted Merganser	*Mergus serrator*	A069
Oystercatcher	*Haematopus ostralegus*	A130
Golden Plover	*Pluvialis apricaria*	A140
Grey Plover	*Pluvialis squatarola*	A141
Lapwing	*Vanellus vanellus*	A142
Dunlin	*Calidris alpine*	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
Lesser Black-backed Gull	*Larus fuscus*	A183
Common Tern	*Sterna hirundo*	A193
Wetland and Waterbirds		A999

4.3 Conservation Objectives

European and national legislation places a collective obligation on Ireland and its citizens to maintain a favourable conservation status in areas designated as Special Areas of Conservation. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

According to the EU Habitats Directive, favourable conservation status of a habitat is achieved when:

- Its natural range, and the area it covers within that range, is stable or increasing;

- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future; and,
- The conservation status of its typical species is favourable as defined below.

The favourable conservation status of a species is achieved when:

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

5 SCREENING AND ASSESSMENT OF POTENTIAL IMPACTS

Using professional experience, guidance and judgement, the following factors have been taken into account in identifying potential significant impacts on the identified European sites:

- Qualifying Interests;
- Special Conservation Interests;
- Conservation Objectives;
- The nature of the onsite habitats;
- The location of the Site; and,
- The scale of the Proposed Development.

Based on these factors, the following two potential significant impacts have been taken forward for further consideration:

- Disturbance to species; and,
- Potential Impairment of Water Quality.

The screening exercise did not identify any other factors that will result in any direct or indirect loss or disturbance to any of the Annex I habitats or Annex I or II species for which the Natura 2000 sites are designated.

5.1 Disturbance to Species During the Construction Phase

It is considered that the Proposed Development will not result in any direct or indirect loss or disturbance to any of the Annex I or II species for which the Cork Harbour SPA is designated. This conclusion is based on the location, scale of the Proposed Development and the intervening land between separating the Site from the European Site including for Midleton Town comprised of residential and commercial properties along with extensive road infrastructure.

Furthermore, the onsite habitats which consist predominantly of agricultural grassland are not considered to be of high suitability for any of the species for which the SPA is designated due to the agricultural practices on the Site. In addition, no signs of active or previous nesting activities were identified onsite during the Site walkover.

On the basis of the Source-Pathway-Receptor (SPR) risk assessment principle there is no ecological or functional link between the Proposed Development and any Natura 2000 site in 15km. Therefore, there is no potential for any adverse effects to occur as result of disturbance from the Proposed Development on the Cork Harbour SPA or any other Natura 2000 Sites or any of the qualifying species of interest.

Additionally, due to the nature of the Proposed Development, within an existing residential area, there is no potential for the proposed development to result in any adverse effects on any species during the operational phase.

Therefore, taking into account the distance separating the Site from the Natura Sites, the localised nature of the works, the nature of the Proposed Development, it can be concluded that the proposed works will not have any adverse effects on the Cork Harbour SPA or any of the species of interest.

5.2 Potential Impairment of Water Quality During the Construction and Operational Phase

It is not anticipated that during the construction or operational phase of the Proposed Development will result in any adverse effects to designated species, habitats or to the integrity of the Cork Harbour SPA or any other Natura 2000 sites.

All construction work associated with the Proposed Development will take place within the existing area agricultural grassland and will be confined to the boundary of the Site.

No hydrological connection was identified between the Site and any European sites. Furthermore, the Proposed Development area will be separated from all watercourses by the existing urban infrastructure including residential properties, roads, areas of hardstanding. There will be no direct discharges from the Proposed Development to any watercourse during the construction phase of the Proposed Development and all surface water will drain into existing public infrastructure.

All works will be carried out in accordance with best practice guidelines. Appropriate measures in relation to the storage of fuels and other materials and general Site maintenance will be implemented on the Site, including the refuelling of vehicles, addition of hydraulic oil / lubricants to vehicles and the storage of hazardous construction materials shall take place in designated bunded areas. Pollution control kits will also be maintained on the Site and all Site personnel will be trained in their use and made aware of their location.

During the operational phase of the Proposed Development, surface water and foul drainage will be directed through the proposed drainage networks onsite as outlined in Section 3, and also in the drawings prepared by BOK & Associated that will be submitted in support of this planning application.

It can therefore be concluded that the Proposed Development will not have any adverse effects on water quality within any European site or any of their designated species or habitats.

5.3 Analysis of 'In-Combination' Effects

The Habitats Directive requires competent authorities to make an appropriate assessment of any plan or project which is likely to have a significant effect alone or in-combination with other plans and projects.

As described above, the proposed work alone is unlikely to have any direct or indirect adverse effects on any of the European sites located with 15km of the Site.

A review of the Cork County Council Planning ePlan website shows that there is no planning history within the subject site, however the Proposed Development is one of multiple similar housing developments in the area. Please refer to Table 5-1.

Table 5-1: Planning Applications within the vicinity of the Site

Application Ref and Location	Decision	Development Description	Appropriate Assessment and Conclusions
18/7236 Located to the northwest of the Proposed Development	Granted 25/09/2019	Demolition of existing sheds and construction of 41 no. residential units. The proposed development includes the demolition of existing sheds (2 no. agricultural sheds) and the construction of 2 and 3 storey detached and semi-detached houses and the provision of landscaping, car parking all associated infrastructural and site development works. All associated infrastructure and services to include the widening of	• Appropriate Assessment Screening – No impacts to European sites.

Application Ref and Location	Decision	Development Description	Appropriate Assessment and Conclusions
		the existing L-7630 Broomfield Road including the provision of a pedestrian footpath. The proposed development includes provision for internal roads and footpaths and 2 no. new vehicular entrance off the L-7630 Broomfield Road to serve the development.	
21/5664 Located to the northwest of the Proposed Development	Granted 20/10/2021	A temporary wastewater treatment system to serve the permitted housing consent 18/7236 (a consent for 41 houses at Broomfield West, Midleton, Co. Cork), including ancillary links, connections to the public foul system, local servicing and access off the L7630 local road	• Appropriate Assessment Screening – No impacts to European sites.
16/6818 An Bord Pleanála Ref: PL04.249008 Located to the south of the Proposed Development	22/01/2018	Construction of 100 no. dwellings, a crèche and all ancillary site development works. The proposed development will consist of 31 no. detached dwellings, 46 no. semi-detached dwellings, 2 no. 3 storey blocks consisting of 8 no. apartments and 15 no. terraced dwellings with a total of 7 no. ancillary bin stores. A single storey crèche is also proposed. The ancillary site development works will include the relocation of the existing ESB pylon to the north of the site and associated cabling. Access to the proposed development will be via the existing estate road networks	• It was concluded by ABP that no impacts to European sites would occur.
18/6553 Located to the south of the Proposed Development Change of plan to planning granted under Planning Ref. No. 16/6818	Granted 26/02/2019	Construction of 26 no. dwelling houses consisting of 8 no. 5 bedroom detached dwelling houses and 18 no. 3 bedroom semi –detached dwelling houses and all ancillary site works. The proposed development is a change of plan from that permitted under An Bord Pleanála Reference Pl 04.249008 and Cork County Council Planning Reference 16/6818 and will result in the construction of 2 no. additional residential units. Access to the proposed development will be provided via the Broomfield Village primary estate road as previously permitted.	
22/5841 Located to the south of the Proposed Development Extension of Duration to Permission granted	02/11/2022	The construction of 87 no. residential units at Broomfield Village, Broomfield East and Broomfield West, Midleton, Co. Cork.	• Appropriate Assessment Screening - No impacts to European sites.

Application Ref and Location	Decision	Development Description	Appropriate Assessment and Conclusions
under Planning Ref. No. 16/6818			

All other developments within the vicinity of the Site involved the construction of new residential dwellings or extensions to existing dwellings. It is not considered that these residential developments or those listed above will have any potential for in-combination effects with the Proposed Development. This conclusion is based on the small-scale nature of these developments, the works involved and the date of grant.

Due to the localised nature of both the Proposed Development and the proposed projects listed in Table 5-1, it is considered unlikely to have any cumulative impacts on any European sites in the context of the existing infrastructure and associated activities taking place at the Site.

This statement is supported by:

I. The distances separating the Site from European sites;

II. The lack of hydrological connection;

III. The urban and residential setting of the local environment; and,

IV. The localised nature of the proposed works.

Taking the above into account, it is concluded that there will not be any significant in-combination contribution by the Proposed Development to possible adverse effects on any European sites.

6 SCREENING CONCLUSIONS AND STATEMENT

The screening process has examined the details of the Proposed Development and has considered the potential for causing adverse effects on European sites and their qualifying features of interests within a 15km radius of the Site.

Four (4No.) designated sites - the Great Island Channel SAC, Blackwater River SAC, Cork Harbour SPA, Ballycotton Bay SPA - are located within a 15km radius of the Site. However, given scale and localised nature of the Proposed Development, and the lack of impact pathways between the Site and European sites, as described in Section 4 and Section 5, it can be concluded that the Proposed Development will not result in any significant impacts either directly or indirectly on the conservation objectives or status of the listed European sites and will not result in the direct loss or disturbance of any Annex I habitats and / or Annex II species for which the European sites are designated.

In conclusion, activities associated with the Proposed Development either alone, or in-combination with other projects or land uses, will not have any direct or indirect significant effects on the conservation objectives of any European European Designated sites.

Accordingly, the progression to Stage 2 of Appropriate Assessment process (i.e., preparation of a Natura Impact Statement) is not considered necessary.

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