Shanganagh Castle Housing Development

Appropriate Assessment Screening Report

Dún Laoghaire-Rathdown County Council

Project number: 606586614

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Quality information

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1. Introduction

1.1 Background

AECOM was commissioned by ABK Architects to produce this Appropriate Assessment (AA) Screening Report in relation to the proposed housing development (hereafter referred to as the 'Proposed Development') being progressed by Dún Laoghaire-Rathdown County Council (DLRCC) and/or the Land Development Agency at Shanganagh Castle, Shankill, Co. Dublin.

This document considers the potential effects of the Proposed Development on European designated sites, which include Special Areas of Conservation (SAC) and Special Protection Areas (SPA). It serves to 'screen' for Likely Significant Effects (LSE) on European designated sites from the Proposed Development, either alone or in combination with other plans or projects, and in view of best scientific knowledge.

1.2 Overview of the Proposed Development

The Development comprises:

- construction of 597 residential units (ranging from 1 – 6 stories in height with one block comprising a seventh storey setback) in a combination of housing, apartment and Build to Rent apartment units;
- provision of one detached unit; fourteen semi-detached units, 36 terraced houses; and 40 apartments and 506 Build to Rent apartments in eight blocks of development;
- provision of resident services and amenities including (a) gym; (b) residents lounge/cinema room; (c) function room; (d) gallery /community room; (e) two lounge areas; (f) business pods; and (f) co-working office units;
- provision of resident support facilities including (a) concierge facilities; (b) parcel / store room; (c) central energy centre; (d) waste management areas; and (e) bike storage rooms.
- construction of a (i) creche facility with capacity to accommodate 107 children; (ii) local shop of 103 m^2 (NFA) and (iii) local café of 125 m^2;
- provision of water services, foul and surface water drainage and associated connections across Shanganagh Park to the proposed Woodbrook residential scheme with attenuation proposals including permeable paving, green roofs and swales;
- extensive landscaping and public realm works including (a) regeneration of the existing pond within the Demesne; (b) provision of playground and kick about areas; and (c) new pedestrian and cycle connections through the adjoining parkland to the south to facilitate a future connection to the proposed Woodbrook DART station;
- works to the existing Shanganagh Castle entrance to the Dublin Road, including relocation of the existing entrance to the north; upgrade works to facilitate a signalised junction and provision of a separate pedestrian access. The existing Shanganagh Castle Entrance shall remain operational on a temporary basis to facilitate construction traffic;
- demolition of an existing house, and glass house and maintenance buildings located within the Parks Maintenance Depot; and,
- all associated and ancillary site development and infrastructural works, hard and soft landscaping and boundary treatment works.

1.3 Legislative context

Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, which is more commonly known as 'the Habitats Directive', requires Member States of the European Union (EU) to take measures to maintain or restore, at favourable conservation status, natural habitats and wild species of fauna and flora of Community interest. The provisions of the Habitats Directive require that Member States designate Special Areas of Conservation for habitats listed on Annex I and for species listed on Annex II.

Similarly, Directive 2009/147/EC on the conservation of wild birds (more commonly known as 'the Birds Directive') provides a framework for the conservation and management of wild birds. It also requires Member States to identify and classify SPAs for rare or vulnerable species listed on Annex I of the Directive, as well as for all regularly occurring migratory species. SACs and SPAs are collectively known as European sites.

Under article 6(3) of the Habitats Directive, any plan or project which is not directly connected with or necessary to the management of a European site, but would be likely to have a significant effect on such a site, either individually or in combination with other plans or projects, must be subject to an 'Appropriate Assessment' (AA) of its implications for the SAC / SPA and its nature conservation objectives.

In the Republic of Ireland, the requirements of Article 6(3) are transposed into national law by Part 5 of the European Communities (Birds and Natural Habitats Regulations) 2011 (S.I. No. 477 of 2011)) (more commonly referred to as the 'Habitats Regulations') and Part XAB of the Planning and Development Act 2000.

The competent authority which is responsible for carrying out the appropriate assessment is the relevant planning authority for each plan or project.

1.4 Overview of Appropriate Assessment process

The process required by Articles 6(3) and 6(4) of the Habitats Directive is stepwise and must be followed in sequence.

The first step in the sequence of tests is to establish whether an Appropriate Assessment is required. This is often referred to as Appropriate Assessment (or AA) screening. The purpose of AA screening is to determine, in view of best available scientific knowledge, whether a plan or project, either alone or in combination with other plans or projects, could have Likely Significant Effects on a European designated site, in view of that site's conservation objectives.

For this purpose and as a result of case law 'likely' means 'possible'. If the competent authority determines that there are no LSEs (including 'in combination' effects from other plans or projects), then no further assessment is necessary and the plan or project can, subject to any other issues, be taken forward. If, however, the Competent Authority determines that there are LSE, or if there is reasonable scientific doubt, then the next step in the process must be initiated and a detailed Appropriate Assessment undertaken.

1.5 Sources of guidance

This Report has been prepared in accordance with the European Commission (EC) guidance document *Assessment of Plans and Projects Significantly affecting Natura 2000 Sites: Methodological Guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC* (EC, 2001) and the Department of the Environment, Heritage and Local Government (DoEHLG) guidance on the *Appropriate Assessment of Plans and Projects in Ireland* (DoEHLG, 2010).

In addition to the references above, the following relevant guidance was considered during the preparation of this report:

- *Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC* (EC, 2018); and,
- *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular Letter NPWS 1/10 & PSSP 2/10* (NPWS, 2010).

1.6 Purpose of this Report

Whilst the various steps involved in the assessment process must be carried out by a competent authority, consultants or project proponents may undertake a form of screening to establish if an Appropriate Assessment is required and provide advice or may submit the information necessary to allow the competent authority to conduct a screening of an application for consent. This Appropriate Assessment Screening Report has been prepared with regard to best scientific knowledge and an examination of potential impacts of the project on European Sites.

2. Relevant European sites

2.1 Identification of relevant European sites

When seeking to identify relevant European designated sites, consideration has been given primarily to identified impact pathways and the source-pathway-receptor approach, rather than adopting a purely 'zones'-based approach. The source-pathway-receptor approach is a standard tool in environmental assessment. In order for an effect to occur, all three elements of this mechanism must be in place. The absence or removal of one of the elements of the mechanism means there is no likelihood for an effect to occur. Furthermore, even where an impact is predicted to occur, it may not result in significant effects.

Department of the Environment, Heritage and Local Government (DoEHLG) (2010) guidance states that European sites with the potential to be affected by a plan or project should be identified taking into consideration the potential for direct, indirect and/or cumulative (in-combination) effects. It also states that the specific approach in each case is likely to differ depending on the scale and likely effects of the plan or project. However, it advises that the following sites should generally be included:

- all European sites within or immediately adjacent to the plan or project area;
- all European sites within the likely 'zone of impact' of the plan or project; and,
- adopting the Precautionary Principle, all European sites for which there is doubt as to whether or not such sites might be significantly affected.

The likely zone of impact (also referred to as the likely 'zone of influence') of a plan or project is the geographic extent over which significant ecological effects are likely to occur. The DoEHLG guidance document prescribes a 15 km distance threshold for European designated sites from the boundary of a plan area. In the case of projects, the guidance acknowledges that the zone of influence must be devised on a case by case basis with reference to the following criteria: the nature, size / scale and location of the project, sensitivity of ecological features under consideration and cumulative effects.

In the first instance, therefore, a search was made for European designated sites within 15 km of the Proposed Development. An overview of the fifteen SAC / SPA identified within this search area is given in Table 1.

Table 1. European designated sites within 15 km of the Proposed Development

Site name [site code]	Approximate distance from the Proposed Development	Summary of Qualifying Interest(s) / Special Conservation Interest(s)
Ballyman Glen SAC [000713]	2.7 km south-west	• Petrifying springs with tufa formation [7220] • Alkaline fens [7230]
Rockabill to Dalkey Island SAC [003000]	3.1 km north-east	• Reefs [1170] • Harbour porpoise *Phocoena phocoena* [1351]
Bray Head SAC [000714]	3.7 km south-south-east	• Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] • European dry heaths [4030]
Knocksink Wood SAC [000725]	4.3 km south-west	• Petrifying springs with tufa formation [7220] • Alluvial forests with alder *Alnus glutinosa* and ash *Fraxinus excelsior* [91E0]
Dalkey Islands SPA [004172]	5.2 km north-east	• Roseate tern *Sterna dougallii* [A192] • Common tern *Sterna hirundo* [A193] • Arctic tern *Sterno paradisaea* [A194]
Wicklow Mountains SAC [002122]	7.1 km west-south-west	• Oligotrophic waters containing very few minerals of sandy plains [3110] • Natural dystrophic lakes and ponds [3160] • Northern Atlantic wet heaths with cross-leaved heath *Erica tetralix* [4010] • European dry heaths [4030] • Alpine and boreal heaths [4060] • Species-rich mat-grass *Nardus stricta* grasslands, on siliceous substrates in mountain areas [6230] • Blanket bogs* [7130]

Site name [site code]	Approximate distance from the Proposed Development	Summary of Qualifying Interest(s) / Special Conservation Interest(s)
		• Siliceous scree of the montane to snow levels [8110] • Calcareous rocky slopes with chasmophytic vegetation [8210] • Siliceous rocky slopes with chasmophytic vegetation [8220] • Old sessile oak *Quercus petraea* woods with *Ilex* and *Blechnum* in the British Isles [91A0] • Otter *Lutra lutra* [1355]
Wicklow Mountains SPA [004040]	7.4 km west-south-west	• Merlin *Falco columbarius* [A098] • Peregrine *Falco peregrinus* [A103]
South Dublin Bay and River Tolka Estuary SPA [004024]	8.0 km north	• Light-bellied brent goose *Branta bernicla hrota* [A046] • Oystercatcher *Haematopus ostralegus* [A130] • Ringed plover *Charadrius hiaticula* [A137] • Grey plover *Pluvialis squatarola* [A141] • Knot *Calidris canutus* [A143] • Sanderling *Calidris alba* [A149] • Dunlin *Calidris alpina* [A149] • Bar-tailed godwit *Limosa lapponica* [A157] • Redshank *Tringa totanus* [A162] • Black-headed gull *Chroicocephalus ridibundus* [A179] • Roseate tern [A193] • Arctic tern [A194] • Wetland and waterbirds [A999]
South Dublin Bay SAC [000210]	8.0 km north	• Mudflats and sandflats not covered by seawater at low tide [1140] • Annual vegetation of drift lines [1210] • Salicornia and other annuals colonising mud and sand [1310] • Embryonic shifting dunes [2110]
Glen of the Downs SAC [000719]	9.0 km south	• Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0]
Carriggower Bog SAC [000716]	12.9 km south-west	• Transition mires and quaking bogs [7140]
The Murrough Wetlands SAC [002249]	13.1 km south-south-east	• Annual vegetation of drift lines [1210] • Perennial vegetation of stony banks [1220] • Atlantic salt meadows [1330] • Mediterranean salt meadows [1410] • Calcareous fens with great fen-sedge *Cladium mariscus* and species of the *Caricion davallianae* [7210] • Alkaline fens [7230]
North Bull Island SPA [004006]	13.4 km north	• Light-bellied brent goose [A046] • Shelduck *Tadorna tadorna* [A048] • Teal *Anas crecca* [A054] • Pintail *Anas acuta* [A054] • Shoveler *Anas clypeata* [A056] • Oystercatcher [A130] • Golden plover *Pluvialis apricaria* [A140] • Grey plover [A141] • Knot [A143] • Sanderling [A144] • Dunlin [A149] • Black-tailed godwit *Limosa limosa* [A156] • Bar-tailed godwit [A157] • Curlew *Numenius arquata* [A160] • Redshank [A162] • Turnstone *Arenaria totanus* [A169] • Black-headed gull [A179] • Wetland and waterbirds [A999]

Site name [site code]	Approximate distance from the Proposed Development	Summary of Qualifying Interest(s) / Special Conservation Interest(s)
North Dublin Bay SAC [000206]	13.4 km north	• Mudflats and sandflats not covered by seawater at low tide [1140] • Annual vegetation of drift lines [1210] • Salicornia and other annuals colonising mud and sand [1310] • Atlantic salt meadows [1330] • Mediterranean salt meadows [1410] • Embyonic shifting dunes [2110] • Shifting dunes along the shoreline with marram grass *Ammophila arenaria* (white dunes) [2120] • Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] • Humid dune slacks [2190] • Petalwort *Petalophyllum ralfsii* [1395]
The Murrough SPA [004186]	14.1 km south-south-east	• Red-throated diver *Gavia stellata* [A001] • Greylag goose *Anser anser* [A043] • Light-bellied brent goose [A046] • Wigen *Anas penelope* [A050] • Teal [A052] • Black-headed gull [A179] • Herring gull *Larus argentatus* [A184] • Little tern *Sterna albifrons* [A195] • Wetland and waterbirds [A999]

* Indicates a priority habitat.

Having identified the European sites within 15 km, consideration was next given to the potential impact sources from the Proposed Development at all stages[1] and pathways to European designated sites (including those located at distances of more than 15 km) by which effects could arise on relevant receptors[2].

Based on all possible impacts, pathways, and receptors, the zone of influence of the Proposed Development was estimated. A description of this process is given in Table 2.

[1] Note that the Proposed Development is a housing scheme which can reliably be expected to last in perpetuity, with no 'decommissioning' or 'restoration' phases. Consideration of impacts is therefore restricted in this Appropriate Assessment Screening Report to the construction and 'operational' (i.e. the period from which homes become occupied by residents) phases of the Development only.
[2] i.e. Qualifying Interests (QI) or Special Conservation Interests (SCI) or the ecological features or process which support them.

Table 2. Potential impact sources and pathways for effects on European designated sites from Proposed Development

Potential impact source	Pathway to European designated site(s)	Potential for effect(s) on receptors*	European designated sites within potential zone of influence
Construction phase			
Disturbance as a result of increased noise, artificial lighting and/or the presence of personnel, plant and machinery.	The nearest designated site for which an animal species is a Qualifying Interest is the Rockabill to Dalkey Island SAC (3.1 km north-west), designated for harbour porpoise. SPAs designated for wintering waterbirds are all located well beyond the distance at which construction-related disturbance would be expected. However, it is possible that species listed as Special Conservation Interests could occur on the habitats within and immediately surrounding the Proposed Development.	Although this SAC is more than 3 km from the Proposed Development, the nearest point of the coast is approximately 750 m to the east. However, at this distance, there is no potential for noise or light disturbance of harbour porpoise, even when occurring outside of the SAC. There is no pathway for disturbance effects on birds occurring within the boundary of European designated sites due to the intervening distances. However, should SCI species occur in proximity to the Proposed Development, there is the potential for disturbance to be caused. Cutts *et al* (2013), in their Waterbird Disturbance Mitigation Toolkit, state that even 'high level' disturbance sources (including, for example, very noisy construction activities), are only likely to result in 'low level' disturbance at distances of more than 500 m. Ruddock and Whitfield (2007) state that the maximum distance at which disturbance of breeding merlin and/or peregrine** is likely is 750 m.	There is no pathway for effects to SCI bird species when present within any SPA. However, there is the potential for disturbance to birds occurring within 750 m of the Proposed Development during construction. The following SPAs are designated for bird species for which there is potentially suitable habitat present within this distance of the boundary of the Proposed Development: • Wicklow Mountains SPA; • South Dublin Bay and River Tolka Estuary SPA; • North Bull Island SPA; and, • The Murrough SPA.
Direct loss of or damage to qualifying or supporting habitat(s)	The nearest European designated site is situated more than 2 km from the Proposed Development.	Given the intervening distance, there is no potential for direct loss of or damage to qualifying or supporting habitats.	None.
Waterborne pollution of qualifying or supporting habitats.	The nearest watercourse to the Proposed Development is the Rathmichael, approximately 320 m south-east. However, water from the site may flow to the coast, more than 750 m east, through a series of ditches.	Even in a worse-case scenario, any waterborne pollution (i.e. water contaminated with, for example, sediment, fuel, oil, chemicals or concrete) originating from the construction of the Proposed Development will have no effect on any European site because of a) the distance between the Proposed Development and the marine areas encompassed by the relevant designations and b) the massive dilution effect which will occur upon entering the sea.	None.
Airborne pollution of qualifying or supporting habitats or QI species.	The nearest European designated site is situated more than 2 km from the Proposed Development.	Dust and/or other emissions generated during the construction phase are likely to be minimal, even without mitigation, and would be widely dispersed before reaching any European designated site.	None.
Spread of invasive non-native species.	There is no direct connection (e.g. hydrological) by which any invasive non-native species could be spread to any European designated sites.	Any viable parts of an invasive non-native plant species (e.g. seeds) which entered the sea would not persist due to the saline environment and could not establish.	None.

Disruption to flow of groundwater or reduction in volume of groundwater as a result of earthworks.	Earthworks could potentially interfere with groundwater and could affect qualifying or supporting habitats which rely on groundwater.	Excavations as part of the construction of the Proposed Development will be shallow and will result in very localised effects on groundwater. There is no possibility of effects to groundwater-dependent habitats of the Ballyman Glen SAC, which is the closest designated site with such features, or to any other site further afield.	None
Operational phase			
Disturbance as a result of increased number of people and corresponding increase in recreational pressure.	An increase in the number of local residents may result in increased visitor numbers to European designated sites. In addition, residents may also use habitats immediately surrounding the Proposed Development which could be utilised by SCI bird species outside of SPA boundaries. A recent study by Weitowitz *et al* (2019) found that increases in housing consistently results in more visitors to protected sites. They found that this is particularly the case for 'on-foot' visitors that originate from housing within 1.5 km of a protected site. At sites provided with car parking opportunities, increased housing within 15 km also saw an increase in visitor numbers, although this was dependent on habitats present. The authors concluded that housing allocations closer to protected sites are likely to have a greater impact in terms of recreational pressure from increased visitor numbers.	Increasing visitor pressure is unlikely to result in significant effects to the Qualifying Interest habitats of any SAC because existing access arrangements, including footpaths, will continue to be used. It is therefore very unlikely that there would be any significant increase in disturbance / damage to habitats as a result of, for example, trampling. The only QI species within 15 km of the Proposed Development are harbour porpoise (Rockabill to Dalkey Island SAC) and otter (Wicklow Mountains SAC). Changes to recreational pressure which could affect harbour porpoise (e.g. an increase in watersports) are unlikely to be sufficiently large to result in a significant effect. The Wicklow Mountains SAC is extremely large, covering an area of approximately 329 km^2. Visitors are therefore likely to be widely dispersed and not concentrated to a specific area where there could be a consequent significant disturbance effect. Both watersports and access to mountainous regions are also much less likely to be influenced by new housing developments than 'day-to-day' casual recreation such as dog walking. There are five SPAs within 15 km of the Proposed Development – the distance at which Weitowitz *et al* (2019) found there to be increases in recreational pressure on designated sites from new housing developments. In addition, residents using habitat immediately surrounding the Proposed Development, which may be suitable for SCI species occurring outside of the boundary of SPAs, may also result in increased disturbance effects.	There is no potential for Likely Significant Effects on any SAC as a result of increased number of residents and an increase in recreational pressure. However, increased recreational pressure could potentially result in LSE on the following SPAs designated for bird species: • Dalkey Islands SPA; • Wicklow Mountains SPA; • South Dublin Bay and River Tolka Estuary SPA; • North Bull Island SPA; and, • The Murrough SPA.
Waterborne pollution of qualifying or supporting habitats.	Water from the site flows through a network of ditches to the coast, more than 750 m east.	Surface water run-off from the Proposed Development could transport polluting materials. However, any waterborne pollution originating from the Proposed Development will have no effect on any European designated site as a result of the massive dilution effect which will occur upon entering the sea. In the short-term, foul water generated from homes will be routed through a new sewer connection to the Woodbrook Strategic Housing Development drainage system to the south. From there it	None.

		will be routed to a collection tank, and pumped to the existing Irish Water system at St Anne's Park Housing Development via a proposed rising main. This then drains to the Shanganagh Waste Water Treatment Plant. However, in the longer-term, a new dedicated rising main will be constructed to pump foul water flows direct to the Shanganagh Waste Water Treatment Plant for treatment. Irish Water has confirmed in writing (letter dated 26 September 2019 to Punch Consulting Engineers), that based upon the drainage details provided, the Irish Water network has sufficient capacity to treat the foul water produced by the Proposed Development.	
Increase in number of predators, specifically domestic cats.	An increase in the number of cats, which are predators of various small mammal and bird species, is likely during operation of the Proposed Development.	The nearest European designated site designated for breeding bird species is more than 5 km from the Proposed Development. The maximum linear distance travelled by domestic cats has been referenced as being 3 km (Floyd and Underhill-Day, 2013). It is therefore highly unlikely that cats from the Proposed Development would be responsible for predation of any breeding SCI bird species. During the non-breeding season, SCI bird species may use the habitat surrounding the Proposed Development for feeding or roosting. However, these birds use open fields with a clear line of sight in order to reduce the risk of predation. In addition, the SCI species which may potentially occur are all relatively large waterbirds (e.g. waders and geese) and likely to be too big for a cat, which typically catch prey no larger than themselves (Floyd and Underhill-Day, 2013).	None.
Spread of invasive non-native species.	Planting of invasive non-native species in gardens and/or accidental spread of existing non-native species by people or pets (including dogs and cats (e.g. carrying seeds on their fur)).	As there is no direct connection (e.g. hydrological) by which invasive non-native species could spread to any European designated site, and given that the nearest European site is 2.7 km away, there is no potential for effects.	None.

* Receptors here means any Qualifying Interest(s) of SAC(s) or Special Conservation Interest(s) of SPA(s) or any other ecological features which support QI / SCI.

** Merlin and peregrine are both SCI species of the Wicklow Mountains SPA, within which area they are known to breed. There is no suitable breeding habitat for these species in the vicinity of the Proposed Development, although they could occur during the non-breeding season. These species are generally accepted to be less susceptible to disturbance outside of the breeding season, so this figure is likely to be conservative.

On the basis of the above, **the following impacts have been screened out** of further assessment on the basis that there is clearly no potential for them to occur or because any such impacts would clearly not result in any significant effects on any European designated sites:

- direct loss of or damage to qualifying or supporting habitats during the construction phase;
- waterborne pollution affecting qualifying or supporting habitats either during construction or operational phases;
- airborne pollution affecting qualifying or supporting habitats or QI species during construction;
- spread of invasive non-native species during construction or operational phases;
- disruption to flow of groundwater or reduction in volume of groundwater during construction phase;
- disturbance to harbour porpoise (QI species of the Rockabill to Dalkey Island SAC) and otter (QI species of the Wicklow Mountains SAC); and,
- increased predation due to higher numbers of domestic cats during operation of the Proposed Development.

It is therefore possible to **screen out any Likely Significant Effects on all Special Areas of Conservation**.

The only impacts identified which could result in LSE relate to disturbance of SCI bird species of SPAs within 15 km of the Proposed Development, either during the construction phase or the operational phase. Further consideration is therefore given in the remainder of this Screening Report to the potential for disturbance impacts to result in adverse effects on the integrity of the identified SPAs.

2.2 Dalkey Islands SPA

This site encompasses Dalkey Island, Lamb Island and Maiden Rock, the intervening rocks and reefs and the surrounding sea to a distance of 200 m. The SPA is used both for breeding and as a staging site for tern species. A summary of the SCI tern species is provided in Table 4.

Table 4. Special Conservation Interests of the Dalkey Islands SPA

Species	SPA population*	Conservation condition
Roseate tern [A192]	• 11 breeding pairs • 200 individuals (migration)	Not provided
Common tern [A193]	• 65 breeding pairs • 1,000 individuals (migration)	Not provided
Arctic tern [A194]	• 30 breeding pairs • 1,000 individuals (migration)	Not provided

* Population size taken from Natura 2000 Standard Data Form for the site.

The sole conservation objective of the Dalkey Islands SPA is to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests.

The favourable conservation status of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats;
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future; and,
- there is, and will probably continue to be, a sufficiently large habitat to maintain its population on a long-term basis.

The definition of ‘favourable conservation status’ for a species is applicable to the remainder of this Report.

2.3 Wicklow Mountains SPA

The Wicklow Mountains SPA is very large, comprising a substantial part of the Wicklow Mountains area. The site is designated for breeding merlin and peregrine, as summarised in Table 5.

Table 5. Special Conservation Interests of the Wicklow Mountains SPA

Species	SPA population*	Conservation condition
Merlin [A098]	Between 5 – 10 breeding pairs	Not provided
Peregrine [A103]	Maximum of ten breeding pairs	Not provided
* Population size taken from Natura 2000 Standard Data Form for the site.		

The conservation objective of the Wicklow Mountains SPA is to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests.

2.4 South Dublin Bay and River Tolka Estuary SPA

The South Dublin Bay and River Tolka Estuary SPA comprises a substantial part of Dublin Bay. It includes the intertidal area between the River Liffey and Dún Laoghaire, and the estuary of the River Tolka to the north of the River Liffey, as well as Booterstown Marsh. A portion of the shallow marine waters of the bay is also included. The site is important for wintering waterfowl. Common and Arctic tern breed in Dublin Docks on manmade structures and south Dublin Bay is an important staging post for tern species. A summary of the SCI species of the SPA is given in Table 6.

Table 6. Special Conservation Interests of the South Dublin Bay and River Tolka Estuary SPA

Species	Baseline SPA population (1995/96 – 1999/2000)	Recent population estimates (2006/07 – 2010/11)	Conservation condition
Light-bellied brent goose [A046]	1,548	3,443	Favourable
Shelduck [A048]	1,259	913	Intermediate Unfavourable
Teal [A054]	953	921	Favourable
Pintail [A054]	233	156	Intermediate Unfavourable
Shoveler [A056]	141	123	Unfavourable
Oystercatcher [A130]	1,784	1,772	Favourable
Golden plover [A140]	2,033	1,094	Unfavourable
Grey plover [A141]	517	380	Unfavourable
Knot [A143]	2,837	3,542	Favourable
Sanderling [A144]	141	271	Favourable
Dunlin [A149]	4,146	3,734	Favourable
Black-tailed godwit [A156]	367	873	Favourable
Bar-tailed godwit [A157]	1,529	1,627	Favourable
Curlew [A160]	937	918	Favourable
Redshank [A162]	1,431	2,356	Favourable
Turnstone [A169]	157	238	Favourable
Black-headed gull [A179]	2,196	1,527	Unfavourable
Wetland and waterbirds [A999]	N/A	N/A	Not provided
All population data taken from the Conservation Objectives Supporting Document provided (NPWS, 2014).			

The conservation objectives in relation to the SCI species of the South Dublin Bay and River Tolka Estuary SPA are:

- to maintain the favourable conservation condition of the Special Conservation Interest species:
  - to be favourable, the long-term population trend for each waterbird Special Conservation Interest species should be stable or increasing;
  - to be favourable, there should be no significant decrease in the range, timing or intensity of use of areas by the waterbird species of Special Conservation Interest, other than that occurring from natural patterns of variation; and,
- to maintain the favourable conservation condition of the wetland habitat in South Dublin Bay and River Tolka Bay SPA as a resource for the regularly-occurring migratory waterbirds that utilise it:
  - the permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 2,192 ha, other than that occurring from natural variation.

Existing pressures on the SPA are described in the Conservation Objectives Supporting Document, published by NPWS (NPWS, 2014). This document identifies that Dublin Bay is subject to significant recreational pressure as a consequence of its proximity to a major population centre. Recreational activity in the form of walkers, both with and without dogs, is known to be widespread across the SPA and of a 'highly active level' in certain areas. A study carried out in the Irishtown area of south Dublin Bay (Phalan and Nairn, 2007) found that dogs off the leash accounted for nearly half of all disturbance events recorded. However, it also identified in NPWS (2014) that human recreational activities at coastal areas occur less frequently during winter months.

2.5 North Bull Island SPA

North Bull Island SPA covers all of the inner part of north Dublin Bay, with a seaward boundary extending from the Bull Wall Lighthouse across to Drumleck Point at Howth Head. It is of international importance for its assemblage of waterfowl, regularly supporting more than 20,000 birds. A summary of the SCI species of the SPA is given in Table 7.

Table 7. Special Conservation Interests of the North Bull Island SPA

Species	Baseline SPA population	Recent population estimates (2006/07 – 2010/11)	Conservation condition
Light-bellied brent goose [A046]	525*	854*	Favourable
Oystercatcher [A130]	1,263*	1,965*	Favourable
Ringed plover [A137]	161*	345*	Unfavourable
Grey plover [A141]	45^	N/A#	Unfavourable
Knot [A143]	1,151*	1,934*	Favourable
Sanderling [A144]	349*	466*	Favourable
Dunlin [A149]	2,753*	3,383*	Favourable
Bar-tailed godwit [A157]	866*	446*	Favourable
Redshank [A162]	713*	633*	Favourable
Black-headed gull [A179]	3,040*	2,023*	Unfavourable
Roseate tern [A192]	500	N/A#	Not provided
Common tern [A193]	3,000	N/A#	Not provided
Arctic tern [A194]	2,000	N/A#	Not provided
Wetland and waterbirds [A999]	N/A	N/A	Not provided

* Population size taken from the Conservation Objectives Supporting Document provided (NPWS, 2014).
^ Population size taken from the Natura 2000 Standard Data form for the site, in the absence of such information on the Conservation Objectives supporting document.
# The only population information available is that presented on the Natura 2000 Standard Data form for the site.

The conservation objectives in relation to the SCI species of the North Bull Island SPA are:

- to maintain the favourable conservation condition of the Special Conservation Interest species:

  - to be favourable, the long-term population trend for each waterbird Special Conservation Interest species should be stable or increasing;
  - to be favourable, there should be no significant decrease in the range, timing or intensity of use of areas by the waterbird species of Special Conservation Interest, other than that occurring from natural patterns of variation; and,
- to maintain the favourable conservation condition of the wetland habitat in North Bull Island SPA as a resource for the regularly-occurring migratory waterbirds that utilise it:
  - the permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 1,713 ha, other than that occurring from natural variation.

Identified pressures upon the North Bull Island SPA are described by NPWS in the same Conservation Objectives Supporting Document as for South Dublin Bay and River Tolka Estuary SPA, described above (NPWS, 2014). The pressures being exerted on both sites are broadly consistent due to their close proximity within Dublin Bay.

In terms of recreational pressure, North Bull Island is an important amenity area and is managed as a public park and Nature Reserve by Dublin City Council. A Management Plan, commissioned by Dublin City Council in 2009, sets out a range of management issues and recommendations. These include managing vehicles on Dollymount Strand, which was previously used for driving practice by learner-drivers, and restricting access along the beach via bye-laws. Various watersports occur on Dollymount Strand and, due to their potential impacts on wildlife, measures have been taken to regulate them, including restricting their occurrence to certain areas. People are requested to keep dogs on leads, via Dublin City Council bye-laws. In addition, Sutton Beach, which is managed by Fingal County Council, is also subject to by-laws which specify restrictions to dog walking and horse riding, as well as the use of powered watercraft.

2.6 The Murrough SPA

The Murrough SPA comprises a coastal wetland complex that stretches for 13 km, extending up to 1 km inland in places. The site includes an area of marine waters to a distance of 200 m from the low water mark. The site is designated for non-breeding waterbirds, in addition to breeding little tern. A summary of the SCI species of the SPA is given in Table 8.

Table 8. Special Conservation Interests of the Murrough SPA

Species	SPA population*	Conservation condition
Red-throated diver [A001]	32	Not provided
Greylag goose [A043]	300	Not provided
Light-bellied brent goose [A046]	859	Not provided
Wigeon [A050]	1,209	Not provided
Teal [A052]	644	Not provided
Black-headed gull [A179]	None provided	Not provided
Herring gull [A184]	506	Not provided
Little tern [A195]	40 breeding pairs	Not provided
Wetland and waterbirds [A999]	N/A	N/A

* Population size taken from Natura 2000 Standard Data Form for the site.

The objectives of the Murrough SPA are:

- to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA; and,
- to maintain or restore the favourable conservation condition of the wetland habitat at the Murrough SPA as a resource for the regularly-occurring migratory waterbirds that utilise it.

3. Baseline conditions

3.1 Data sources and field survey methods

The baseline conditions relevant to this Appropriate Assessment screening have been established by AECOM through desk-based study and targeted field survey.

The following sources of information were reviewed as part of the desk study:

- Environmental Protection Agency (EPA) maps website (https://gis.epa.ie/EPAMaps/);
- NPWS Protected Sites in Ireland website (https://www.npws.ie/protected-sites);
- The Status of EU Protected Habitats and Species in Ireland (Article 17 Report) (https://www.npws.ie/publications/article-17-reports/article-17-reports-2019);
- information on local watercourses (www.catchments.ie) and water quality (www.epa.ie);
- information on soils, geology and hydrology in the local area (www.gsi.ie);
- records of QI / SCI species held online by the National Biodiversity Data Centre (NBDC).
- information on distribution of SCI bird populations from Bird Atlas 2007 – 11 (Balmer *et al*, 2013), excluding birds of prey, whose distribution were determined with reference to Hardey *et al* (2013);
- Dún Laoghaire-Rathdown County Council Development Plan 2016 – 2022, including Natura Impact Report of March 2016;
- Woodbrook – Shanganagh Draft Local Area Plan 2017 – 2023, including Appropriate Assessment Screening Statement of March 2017;
- Proposed Strategic Housing Development (SHD), Woodbrook (Phase 1), Co. Dublin, Information for Screening for Appropriate Assessment report (BSM, 2019); and,
- National Biodiversity Action Plan 2017 – 2022.

BirdWatch Ireland was consulted on 18 February 2019 to request information on wintering bird usage of the Proposed Development and adjacent football pitches within Shanganagh Park.

In addition, targeted field survey was carried out to establish the use of the Proposed Development and immediate surrounds by non-breeding birds during the winter period. Survey of the habitats within the Proposed Development boundary and the grass fields in Shanganagh Park, to the immediate south, was carried out at high and/or low tide over four visits in February and March 2019. High and low tide surveys were carried out on 26 and 27 February, high tide survey on 06 March and low tide survey on 15 March (totalling six surveys). All waterbird species which are Special Conservation Interests of SPAs within 15 km were the target species.

3.2 Occurrence of SCI bird species at the Proposed Development

BirdWatch Ireland responded to AECOM's consultation request on 27 September 2019, stating that they do not hold any data relating specifically to Shanganagh castle. In their email response, they suggested that it is unlikely that any 'rare' species would occur, but that winter flocks of thrush species, including redwing *Turdus iliacus* and fieldfare *Turdus pilaris*, may use the habitats present.

Non-breeding wintering bird surveys were carried out for the Woodbrook housing development, to the south of the Proposed Development at Shanganagh Castle, between 01 February and 14 October 2019. These surveys recorded no light-bellied brent geese (SCI species of South Dublin Bay and the River Tolka Estuary SPA, North Bull Island SPA and The Murrough SPA). A single lapwing *Vanellus vanellus* was observed and a flock of 25 curlew was present on 01 March 2019. No other waterbirds were recorded during any of the other survey visits. It was concluded that the habitats present are unsuitable for grazing light-bellied brent geese.

For surveys carried out for the Proposed Development at Shanganagh Castle, no waterbirds which are SCI species of the five SPAs within 15 km were identified within the project boundary. Survey of the grass fields in Shanganagh Park, to the south of the Proposed Development, identified relatively low numbers of three gull species, only, as summarised in Table 9.

Table 9. Summary of non-breeding bird survey results

Species	Peak count in Shanganagh Park
Black-headed gull	4
Great black-backed gull *Larus marinus*	2
Herring gull	26

The Proposed Development and its immediate surrounds are therefore apparently only rarely used by small numbers of a limited assemblage of wintering bird species.

4. Test of Likely Significant Effects

For each of the five SPAs considered in more detail as part of this screening exercise, the potential impacts of the Proposed Development are considered below, with reference to the conservation objectives of each European designated site, to test for Likely Significant Effects.

The test of Likely Significant Effects was carried out with cognisance of the ruling of the Court of Justice of the European Union (CJEU) in November 2018 in the case of *Holohan and Others v An Bord Pleanála (C-461/17)*. The conclusions of the Court in that case now require that during the course of Appropriate Assessment, consideration must be given to:

- Likely Significant Effects on the qualifying habitats and/or species of a SAC / SPA, outside the boundary of the designated site, if these are relevant to the site meeting its conservation objectives; and,
- effects on non-qualifying habitats and/or species on which the qualifying habitats and/or species depend and which could result in Likely Significant Effects on the qualifying features.

The test of Likely Significant Effects in this Appropriate Assessment screening is compliant with the requirements of the Holohan ruling.

4.1 Disturbance of SCI bird species during the construction phase

As set out in Table 2, due to the distances between the Proposed Development and the nearest SPAs, there is no potential for construction-related disturbance of birds within the boundaries of the designated sites.

Should any SCI bird species occur within 500 – 750 m of the Proposed Development, there is potential for disturbance of these birds as a result of construction activities (e.g. from noise, lighting or the presence of personnel, plant or machinery).

However, BirdWatch Ireland hold no data on wintering bird usage of the area surrounding the Proposed Development. Moreover, field surveys carried out for the Proposed Development and for neighbouring housing schemes have recorded low numbers of only three SCI species: black-headed gull, herring gull and curlew (see Section 3.2 of this Report). Table 10 below shows the proportion of the populations of SPAs within 15 km of the Proposed Development represented by the recorded peak counts of SCI species.

Table 10. Peak counts of SCI species around the Proposed Development as a proportion of SPA populations

Species (and peak count during field survey)	Approximate proportion of SPA population		
	South Dublin Bay and River Tolka Estuary SPA	North Bull Island SPA	The Murrough SPA
Black-headed gull (4)	0.18%	0.13%	Unknown*
Herring gull (26)	-	-	5.1%
Curlew (25)	-	2.7%	-

* No population size given for the SPA.

For the following reasons, it is unlikely that disturbance during the construction phase would result in any significant adverse effects on any of the SPAs for which SCI species were recorded:

- black-headed gull occur in extremely low numbers relative to the total SPA populations;
- although approximately 5.6% of the Murrough SPA herring gull population and 2.7% of the North Bull Island SPA curlew population were theoretically recorded, it is unlikely that all these birds belong to or utilise a single SPA. It is more likely that these birds utilise several of the SPAs and non-SPA habitat within the Dublin Bay and wider coastal area, such that the proportions of the SPA populations utilising land with disturbance distance of the Proposed Development site are almost certainly much smaller than these percentages;
- there is abundant alternative habitat for roosting and foraging by SCI species, including those recorded by field survey, within Dublin Bay and the wider coastal area both north and south of Shanganagh Castle.

Therefore, any displacement of birds during the construction phase as a result of disturbance would be compensated for by the availability of suitable habitat elsewhere.

Although both merlin and peregrine, which are SCI species of the Wicklow Mountains SPA, may occur in coastal areas during the non-breeding season, they both hunt over large areas. Therefore, any disturbance to or displacement of birds belonging to the SPA would be of very limited consequence.

It is therefore concluded that there are **no Likely Significant Effects on any SPA from disturbance of SCI species during the construction phase of the Proposed Development.**

4.2 Disturbance of SCI bird species during the operational phase

The potential for increased recreational pressure to result in significant effects on all SPAs within 15 km of the Proposed Development during its operational phase is identified in Table 2.

However, the following three SPAs can be excluded from such potential adverse effects for the reasons given:

- Dalkey Islands SPA – this European designated site is an island, which can only be accessed by boat. It is therefore extremely unlikely that the increased housing provided by the Proposed Development would significantly increase visitor numbers such that recreational pressure on this SPA was increased;
- Wicklow Mountains SPA – this is a very large site, covering an area of approximately 329 km^2. Visitors to this site are therefore likely to be spread out over a large area and not restricted to a small or particular location at which there could be an increase in recreational pressure. Furthermore, peregrine and, in particular merlin, both nest in remote and difficult to access locations (Hardey *et al*, 2013) which are unlikely to be subject to significant increases in visitor numbers. Urban nesting peregrines are generally considered to be tolerant to higher levels of human activity (Ruddock and Whitfield, 2007); and,
- The Murrough SPA – the study by Weitowitz *et al* (2019) quoted in this Report suggests that new housing development can increase visitor numbers to designated sites up to a range of 15 km. However, that study identified that 75% of all visitors to such sites live within 12.6 km. The Murrough SPA is located approximately 14.1 km from the Proposed Development and any increase in visitor numbers is therefore expected to be low and insufficient to cause significantly increased recreational pressure.

The remaining SPAs under consideration are South Dublin Bay and River Tolka Estuary SPA and the North Bull Island SPA. As described in Sections 2.4 and 2,5, both these SPAs are already subject to high visitor numbers and recreational pressure.

The Natura Impact Report on the Dún Laoghaire-Rathdown County Development Plan 2016 – 2022 (RPS, 2016) identified that the coastal area of the county is a popular leisure destination and that development may place increasing pressure on ecological features. It highlights disturbance to birds as a potential adverse effect which could arise through development.

However, it should be highlighted again that both South Dublin Bay and River Tolka Estuary SPA and the North Bull Island SPA are already subject to a large number of visitors and they are consequently managed in such a way as to mitigate the potential effects of recreational pressure. As discussed in Section 2, this includes limiting access to certain areas, preventing dog walking off the leash and controlling various watersports. Such management, enforced through bye-laws, will continue during the operational phase of the Proposed Development and will therefore serve to limit the effects of visitor-induced disturbance of SCI bird species such that significant effects are not likely on these two SPAs.

It is therefore concluded that there are **no Likely Significant Effects on any SPA from disturbance of SCI species during the operational phase of the Proposed Development.**

4.3 Other principal plans or projects that may act ‘in combination’

Cumulative effects can result from individually insignificant but collectively significant actions taking place over a period of time or concentrated in a location (CIEEM, 2018).

The location of the Proposed Development at Shangangh Castle is identified in the Dún Laoghaire-Rathdown County Development Plan 2016 – 2022 as a zone for new residential communities. This plan has already been subject to Appropriate Assessment (see RPS, 2016). In addition, the Proposed Development is a key component of the Woodbrook – Shanganagh Local Area Plan 2017 – 2023. The vision of the Local Area Plan (LAP) is to

create a new residential community with the capacity to provide 1,600 – 2,300 housing units. It also seeks to include new pedestrian and cycle connections and to provide a new DART station at Woodbrook. The LAP has been subject to Appropriate Assessment screening (as reported in CAAS Ltd., 2017). It was concluded by that assessment that there were no Likely Significant Effects from the LAP, either alone or in-combination with other plans or the projects which comprise the Woodbrook – Shanganagh LAP (of which the Proposed Development is a part).

The primary project which could in theory act in combination with the Proposed Development to result in adverse effects is the proposed Woodbrook housing scheme, to the south. The Woodbrook scheme includes 685 new residential units, in addition to the provision of two new holes for the Woodbrook Golf Club, a 164-space car park adjacent to the future Woodbrook DART station and all associated landscaping and site development works. Sustainable Drainage Systems (SuDS) and wastewater infrastructure are also to be provided. However, the Appropriate Assessment screening exercise carried out for that project (reported in BSM (2019)) similarly determined that there were no Likely Significant Effects on any European designated sites from its construction or operation. It also concluded that, on this basis, there was no potential for in-combination effects to occur with other projects or plans. Additionally, the Woodbrook housing scheme is a component of the Woodbrook – Shanganagh LAP, the Appropriate Assessment screening of which, as discussed above, concluded no Likely Significant Effects either alone or in-combination.

There are other areas of land zoned for new residential development in the Dún Laoghaire-Rathdown County Development Plan 2016 – 2022 at Old Connaught, to the south-west of the Proposed Development, and further inland.

In all cases, it is considered that the only potential impact that could reasonably be expected to act in-combination with further housing developments to cause Likely Significant Effects is the increase in residents which could increase recreational pressure on European designated sites. However, for the reasons given in this Report (see Section 4.2), it is not expected that any such effects would arise from the Proposed Development. This is due to the existing implementation of visitor management at two sites which are already subject to high levels of recreational pressure, namely South Dublin Bay and River Tolka Estuary SPA and North Bull Island SPA, and the isolation, size / remoteness or distance of the other SPAs.

It is therefore concluded that there is **no potential for in-combination effects to arise with other projects or plans.**

5. Conclusion

Likely Significant Effects on Special Areas of Conservation were screened out of assessment as there are no impact pathways and therefore no possible impacts on Qualifying Interests, including habitats and species.

There are five SPAs within 15 km of the Proposed Development at Shanganagh Castle. A small number of birds belonging to three SCI species of these SPAs were identified within the distance at which disturbance could be caused during the construction phase. However, in addition to the small recorded numbers of SCI bird species, the recorded birds are unlikely to belong to or utilise only one SPA and there is abundant suitable habitat elsewhere in the nearby area. Therefore, no Likely Significant Effects are predicted as a result of construction-related disturbance.

The Proposed Development could result in an increase in visitor numbers to SPAs within 15 km, with consequent potential for increased disturbance of SCI species. This is improbable for those SPAs under consideration that are isolated, very large / remote or distant, and is only realistic for South Dublin Bay and River Tolka Estuary SPA and the North Bull Island SPA. However, both of these SPAs already receive high visitor numbers, and visitors are consequently managed to minimise disturbance to SCI species. This management is considered sufficient to mitigate the potential effects of increased visitors from the Proposed Development.

This AA screening therefore concludes that there are no Likely Significant Effects on any European site as a result of the Proposed Development, and therefore that there is no requirement to proceed to the next step of Appropriate Assessment and , subject to other requirements, the Proposed Development can be authorised.

6. References

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7. Figures

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SHANGANAGH CASTLE DEVELOPMENT

Client:

ABK ARCHITECTS

LEGEND

Proposed Development Site

AECOM Internal Project No:

60588099

Drawing Title:

LOCATION OF PROPOSED DEVELOPMENT

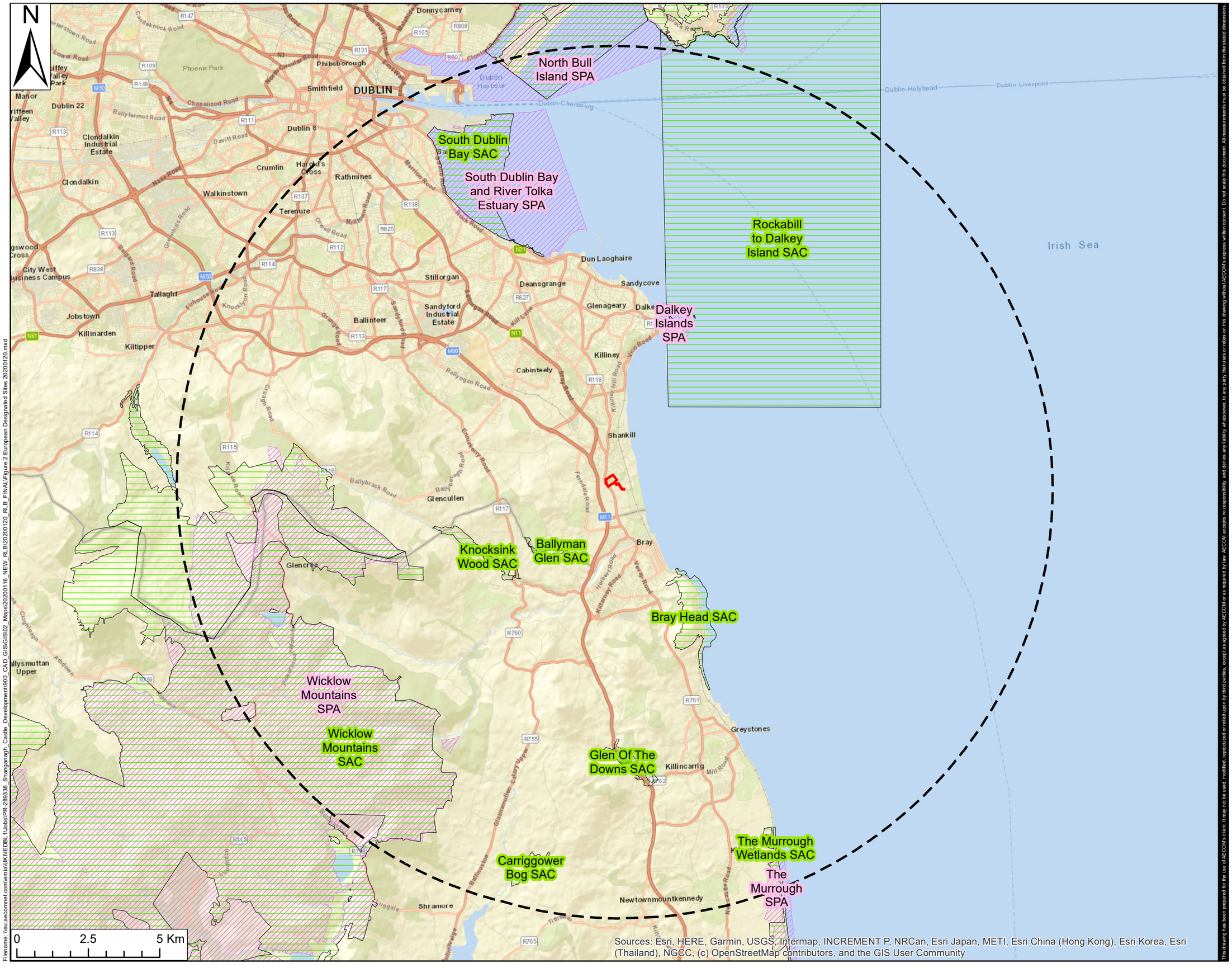
Scale at A3: 1:10,000

Drawing No:

FIGURE 1

Drawn:	Chk'd:	App'd:	Date:
DG	RF	TM	20/01/20

Filename: \\eu.aecomnet.com\emia\UKINEDBL1\Jobs\PR_289336_Shanganagh_Castle_Development\900_CAD_GIS\GIS\02_Maps\20200116_NEW_RLB\20200120_RLB_FINAL\Figure.1 Location of Proposed Development 20200120.mxd



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Filename: \\eu.aecomnet.com\emia\UKINEDBL1\Jobs\PR-289336_Shanganagh_Castle_Development\900_CAD_GIS\GIS\02_Maps\20200116_NEW_RLB\20200120_RLB_FINAL\Figure.2 European Designated Sites 20200120.mxd

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Project Title:

SHANGANAGH CASTLE DEVELOPMENT

Client:

ABK ARCHITECTS

LEGEND

- Proposed Development Site
- Study Area (15km)
- Special Areas of Conservation (SACs)
- Special Protection Areas (SPAs)

AECOM Internal Project No:

60588099

Drawing Title:

EUROPEAN DESIGNATED SITES

Scale at A3: 1:120,000

Drawing No:

FIGURE 2

Drawn:	Chk'd:	App'd:	Date:
DG	RF	TM	20/01/20