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# **Natura Impact Statement**

Proposed Offline Service  
Station, Gort, Co. Galway



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1.

# INTRODUCTION

1.1

## Background

MKO has been appointed by Riverside Foods Ltd. to provide the information necessary to allow the competent authority to conduct an Article 6(3) Appropriate Assessment for the construction of a Service Station in Gort, Co. Galway.

Screening for Appropriate Assessment is required under Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive). Where it cannot be excluded that a project or plan, either alone or in combination with other projects or plans, would have a significant effect on a European Site then same shall be subject to an appropriate assessment of its implications for the site in view of the site's conservation objectives. The current project is not directly connected with, or necessary for, the management of any European Site. Consequently, the project has been subject to the Appropriate Assessment Screening process, as provided in Section 4 of this report.

This Natura Impact Statement (NIS) has been prepared in accordance with the European Commission's 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, 2021) and Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (EC, 2018) as well as the Department of the Environment's Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (DoEHLG, 2010) and the Appropriate Assessment Screening for Development Management. Office of the Planning Regulator, Dublin 7, Ireland OPR (2021).

1.2

## Statement of Authority

A baseline ecological survey was undertaken on the 15<sup>th</sup> of May 2025 in line with NRA (2009) guidelines (Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes) by Deepali Mooloo (B.Sc., M.Sc.) and Fiona Killeen (B.Sc.) of MKO. A nighttime bat walkover survey was conducted on the 15<sup>th</sup> of May 2025 and on the 27<sup>th</sup> of May 2025.

This NIS was prepared by Stephanie Corkery (B.Sc., M.Sc.) and reviewed by Pádraig Desmond. Pádraig has 4 years' professional experience in ecological consultancy. He has extensive experience undertaking ecological surveys in a range of habitats and has worked on Appropriate Assessment and Ecological Impact Assessments for a wide range of projects.

1.3

## Methodology

1.3.1

### Appropriate Assessment Process

**Screening** - The purpose of the screening stage is to determine, on the basis of a preliminary assessment and objective criteria, whether a plan or project, either alone or in combination with other plans or projects, is likely to have significant effects on a European site in view of the site's conservation objectives.

There is no necessity to establish such an effect; it is merely necessary for the Competent Authority to determine that there may be such an effect. The need to apply the precautionary principle in making any key decisions in relation to the tests of Appropriate Assessment has been confirmed by the case law of the Court of Justice of the European Union (CJEU). Plans or projects that have no appreciable effect on a European site may be excluded. The threshold at this first stage is a very low one and operates as

a trigger in order to determine whether Appropriate Assessment of a project is required. Therefore, where significant effects are likely, uncertain or unknown at screening stage, an AA of the project will be required.

**Appropriate Assessment** - This stage of the process is a focused and detailed examination, analysis and evaluation by the Competent Authority of the implications of the plan or project, either alone or in combination with other plans and projects, on the integrity of a European site in view of that site's conservation objectives. Case law has established that such an Appropriate Assessment, to be lawfully conducted must:

- (i) identify, in the light of the best scientific knowledge in the field, all aspects of the proposed project which may, by itself or in-combination with other plans or projects, affect the conservation objectives of the European site;
- (ii) contain complete, precise and definitive findings and conclusions and may not have lacunae or gaps; and
- (iii) may only include a determination that the proposed project will not adversely affect the integrity of any relevant European site where the competent authority decides (on the basis of complete, precise and definitive findings and conclusions) that no reasonable scientific doubt remains as to the absence of potential adverse effects. If adverse impacts can be satisfactorily avoided or successfully mitigated at this stage, so that no reasonable doubt remains as to the absence of the identified potential effects, then the process is complete. If the assessment is negative, i.e. adverse effects on the integrity of a site cannot be excluded, then the process must proceed to stage three (assessment of alternative) and, if necessary, stage four (IROPI).

## 1.4 Ecological Survey Methodologies

### 1.4.1 Ecological Multidisciplinary Walkover Survey

Assessing the impacts of any project and associated activities requires an understanding of the ecological baseline conditions prior to and at the time of the project proceeding. Ecological baseline conditions are those existing in the absence of proposed activities (CIEEM 2018).

A multidisciplinary walkover survey was conducted on the 15<sup>th</sup> of May 2025 by Deepali Mooloo and Fiona Killeen of MKO in line with NRA (2009) guidelines (Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes). Habitats were identified in accordance with the Heritage Council's 'Guide to Habitats in Ireland' (Fossitt, 2000). Plant nomenclature for vascular plants follows 'New Flora of the British Isles' (Stace, 2010), while mosses and liverworts nomenclature follows 'Mosses and Liverworts of Britain and Ireland - a field guide' (British Bryological Society, 2010). During the surveys, the site was searched for species listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations (S.I. 477 of 2011).

### 1.4.2 Bat Surveys including lesser horseshoe bat

#### 1.4.2.1 Bat habitat appraisal

A walkover survey of the Study Area was carried out during daylight hours on the 15<sup>th</sup> of May and on the 27<sup>th</sup> of May 2025. The landscape features on the site were visually assessed for potential use as bat roosting habitats and commuting/foraging habitats using a protocol set out in Bat Conservation Trusts (BCT) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4<sup>th</sup> edn.) (Collins, 2023). The aim of the survey was to identify suitable bat habitats within the site.

Table 5-1 of the 2023 BCT Guidelines identifies a grading protocol for assessing structures, as well as commuting/foraging habitat for bats, which is summarised in Table 1-1. The protocol is divided into five Suitability Categories: *High*, *Moderate*, *Low*, *Negligible* and *None*. Table 5-1 of the 2023 BCT Guidelines identifies a grading protocol to assess trees, which is divided into three Suitability Categories: NONE (No suitability), FAR (Further Assessment Required), and PRF (Potential Roosting Feature present). This initial tree grading protocol can inform a preliminary roost assessment (PRA) to determine the available tree-roosting resource within the Proposed Development site, depending on whether a PRF could accommodate a small number of bats (PRF-I) or a larger roost, including maternity roosts (PRF-M). More information on PRAs is provided in Table 1-1 below.

Table 1-1 BCT protocol for bat habitat appraisals (Collins, 2023)

| Assessment | Rationale                                                                                                                                                                                                                                                                                                                                    |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| High       | Structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions, and surrounding habitat. Continuous, high-quality, well-connected habitats, connected to known roosts. |
| Moderate   | A structure used by bats due to their size, shelter, protection, conditions and surrounding habitat, but are unlikely to support a roost of high conservation status, and suitable, connected habitats.                                                                                                                                      |
| Low        | Structures with one or more potential roost sites that could be used by an individual bat opportunistically, and suitable but isolated habitats that could be used by a small number of bats.                                                                                                                                                |
| Negligible | No obvious features present, but a level of uncertainty remains.                                                                                                                                                                                                                                                                             |
| None       | No habitat features likely to be used by roosting, foraging or commuting bats.                                                                                                                                                                                                                                                               |

#### 1.4.2.2 Preliminary Roost Assessment

A search for roosts was undertaken within the boundary of the Proposed Development site by two ecologists to identify any potential roost features (PRFs). The aim of the survey was to determine the presence of roosting bats, potential access points, roosting locations and the need for further survey work or mitigation.

There are no structures within the Proposed Development site. The Proposed Development site is delineated by linear features such as stone walls and hedgerows. Roosting suitability was assessed in clusters and at feature level, and areas were marked in accordance to BCT Guidance (Collins, 2023) during the initial walkover surveys to inform need for further surveys and assessment.

#### 1.4.2.3 Bat Activity Surveys

##### Manual surveys

Manual activity surveys comprised night-time bat walkovers (NBW), which were carried out on the 15<sup>th</sup> of May and on the 27<sup>th</sup> of May 2025. For each of the surveys, surveyors were equipped with active full spectrum bat detectors, Batlogger M (Elekon AG, Lucerne, Switzerland). Where possible, species identification was made in the field and any other relevant information was also noted, e.g., numbers, behaviour, features used, etc. All bat echolocation was recorded for subsequent analysis to confirm

species identifications. The aim of this survey was to observe bat species, including the Annex II species lesser horseshoe bat, using the site and visually assess bat behaviour and important features used by bats within the site. The survey effort is summarised in Table 1-2 and presented in **Error! Reference source not found..**

Table 1-2 Bat Activity survey effort

| Date       | Surveyors                      | Type | Sunrise/<br>Sunset | Weather                                                      |
|------------|--------------------------------|------|--------------------|--------------------------------------------------------------|
| 15/05/2025 | Deepali Mooloo & Fiona Killeen | NBW  | 21:26              | 12-14° C, Dry, Calm-Gentle Breez, visible moon, 10-15% Cloud |
| 27/05/2025 | Deepali Mooloo & Fiona Killeen | NBW  | 21:44              | 13-15° C, Dry, Light Breeze, visible moon, 10% cloud         |

The NBW was walked by two surveyors, recording bats in real time. It was completed within 2 hours after sunset. The route was prepared with reference to the proposed layout, desktop and walkover survey results, as well as any health and safety considerations and access limitations. As such, it generally followed existing tracks and bordered field crops. Five-minute point counts were performed along the route to sample bat activity in different habitats and in the middle of the site. The walked route is presented in Figure 3-1.

As no potential roost features were identified during the daytime surveys, there was no necessity to carry out emergence surveys.

### Static Detector Surveys

Two full spectrum SM4 bat detectors (Wildlife Acoustics, Maynard, MA, USA), were deployed during static surveys to record bat activity for twelve days. The detectors were deployed on 15<sup>th</sup> of May 2025 and were collected on the 27<sup>th</sup> of May 2025. The two locations of static detectors were selected to represent favourable bat habitats, particularly to species such as lesser horseshoe bats, which strictly rely on linear feature to navigate the landscape.

The use of static surveys is an established and valuable survey method, whose value needs to be interpreted in the context of the whole suite of surveys undertaken at the site. The comprehensive assessment of the site undertaken also involved a bat habitat appraisal, preliminary roost assessments and manual activity surveys. While not able to accurately provide numbers of bats using the site, the static surveys provide useful long-term baseline data.

Settings used were those recommended by the manufacturer for bats, with minor adjustments in gain settings and band pass filters to reduce background noise when recording. Detectors were set to record from 30 minutes before sunset until 30 minutes after sunrise. The SongMeter automatically adjusts sunset and sunrise times using the Solar Calculation Method when provided with GPS coordinates.

Table 1-3 Static Detector Location

| Detector ID | IG Reference  | Habitat                           | Deployment                   | Collection                   |
|-------------|---------------|-----------------------------------|------------------------------|------------------------------|
| D01         | M 45066 02911 | Hedgerow (WL1)                    | 15 <sup>th</sup> of May 2025 | 27 <sup>th</sup> of May 2025 |
| D02         | M 44979 03042 | Mature Ash tree, stone wall (BL1) | 15 <sup>th</sup> of May 2025 | 27 <sup>th</sup> of May 2025 |

#### 1.4.2.4 Bat Call Analysis

All recordings were later analysed using bat call analysis software Kaleidoscope Pro v.5.0.8 (Wildlife Acoustics, MA, USA). The aim of this was to identify, to a species or genus level, what bats were present at the Proposed Development site. Bat species were identified using established call parameters, to create site-specific custom classifiers. All identified calls were also manually verified.

Echolocation signal characteristics (including signal shape, peak frequency of maximum energy, signal slope, pulse duration, start frequency, end frequency, pulse bandwidth, inter-pulse interval and power spectra) were compared to published signal characteristics for local bat species (Russ, 1999). *Myotis* species (potentially Daubenton's bat (*M. daubentonii*), whiskered bat (*M. mystacinus*), Natterer's bat (*M. nattereri*)) were considered as a single group, due to the difficulty in distinguishing them based on echolocation parameters alone (Russ, 1999). The echolocation of soprano pipistrelle (*P. pygmaeus*) and common pipistrelle (*P. pipistrellus*) are distinguished by having distinct (peak frequency of maximum energy in search flight) peak frequencies of ~55 kHz and ~46 kHz respectively (Jones & van Parijs, 1993). Some overlapping is possible between these species: where no certainty could be achieved, calls were identified to genus level.

Individual bats of the same species cannot be distinguished by their echolocation alone. Thus, 'bat passes' was used as a measure of activity (Collins, 2023). A bat pass was defined as a recording of an individual species/species group's echolocation containing at least two echolocation pulses and of maximum 15s duration. All bat passes recorded in the course of this study follow these criteria, allowing comparison. Due to the volume of bat activity data recorded, where multiple bat passes were recorded within the same registration, rarer or harder to record species were identified. Underreporting of common species is possible using this method and is accounted for within the assessment.

Echolocation calls by brown long-eared bats (*Plecotus auritus*) are intrinsically quiet and hard to record by static equipment. All data collected, including Noise files and Auto ID files are checked to ensure all calls for this species have been captured. However, a level of underrepresentation is expected for this species and is accounted for in the assessment of activity levels.

Echolocation by lesser horseshoe bats (*Rhinolophus hipposideros*) is directional and can be missed by detectors, particularly manual detectors. MKO employs omni-directional microphones to limit under-recording for the species.

#### 1.4.2.5 Bat Survey limitations

A comprehensive suite of bat surveys was undertaken at the Proposed Development site. Good survey coverage of the site has been achieved, with 2 no. static detectors deployed and two manual surveys being carried out to survey the habitats present at the site. The scope of surveys was considered commensurate with the scale of the proposed development and allowed to obtain a baseline of bat activity during the optimal survey season on which to base the assessment.

- MKO employs data storage redundancy methods to ensure no data is lost from the field to final analysis - no data was lost.
- SD card corruption or fill-up can prevent data from being collected during deployments – no issues with data on-site data storage were encountered.
- Bat detector's microphones are checked before every season to ensure they have good sensitivity for data collection, and detectors' software updates are installed as soon as they become available - no issues related to equipment were encountered during the surveys.
- Incidents during deployments, such as tampering or livestock interference, can prevent data from being collected effectively - no incidents were reported during the surveys.

Activity assessment limitations can relate to data analysis procedures and a lack of standardised and Ireland-based assessment methods:

- MKO's data analysis methods include manually checking of 100% of bat passes identified by Auto ID Software, as well as noise and no ID files. Where multiple species, or multiple individuals of the same species, are identified within the same call, only one is reported, prioritising hard to detect species. This is due to the large volumes of data collected. While this method is likely to introduce a bias, it is not believed to affect the overall conclusions of the assessment, as only commonly recorded species might be underreported.
- No activity threshold currently exists for Irish bat species to objectively assess bat activity within a certain habitat, and no standardised assessment method has been proposed across the country. MKO experience surveying habitats similar to those present within the site aided with the assessment.
- To offset limitations in recording the quiet and directional lesser horseshoe calls, MKO employs omni-directional microphones and selected areas considered to be likely bat habitats during the bat habitat appraisals undertaken, in line with best practice guidance (Collins 2023).

No significant limitations in the scope, scale or context of the assessment have been identified.

### 1.4.3 Desk Study

The desk study undertaken for this assessment included a thorough review of the available ecological data associated with the screened-in European Sites within the Likely Zone of Influence of the Proposed Development. Sources of data included the following:

- Review of NPWS Conservation Objectives supporting documents, site synopsis, standard data forms and supporting documents for European Designated Sites,
- Review of online web-mappers: National Parks and Wildlife Service (NPWS), Environmental Protection Agency (EPA),
- Review of the publicly available National Biodiversity Data Centre (NBDC) web-mapper,
- Review of NPWS Article 17 metadata and GIS database.

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## 2. DESCRIPTION OF PROPOSED DEVELOPMENT

### 2.1 Site Location

The Proposed Development site is located north of Gort, Co. Galway off the Galway Road (R458) (Grid Ref: M 45014 02996). This site is currently a green field site within a built-up area, measuring approx. 1.25 ha.

The location of the proposed development site is provided as Figure 2-1.

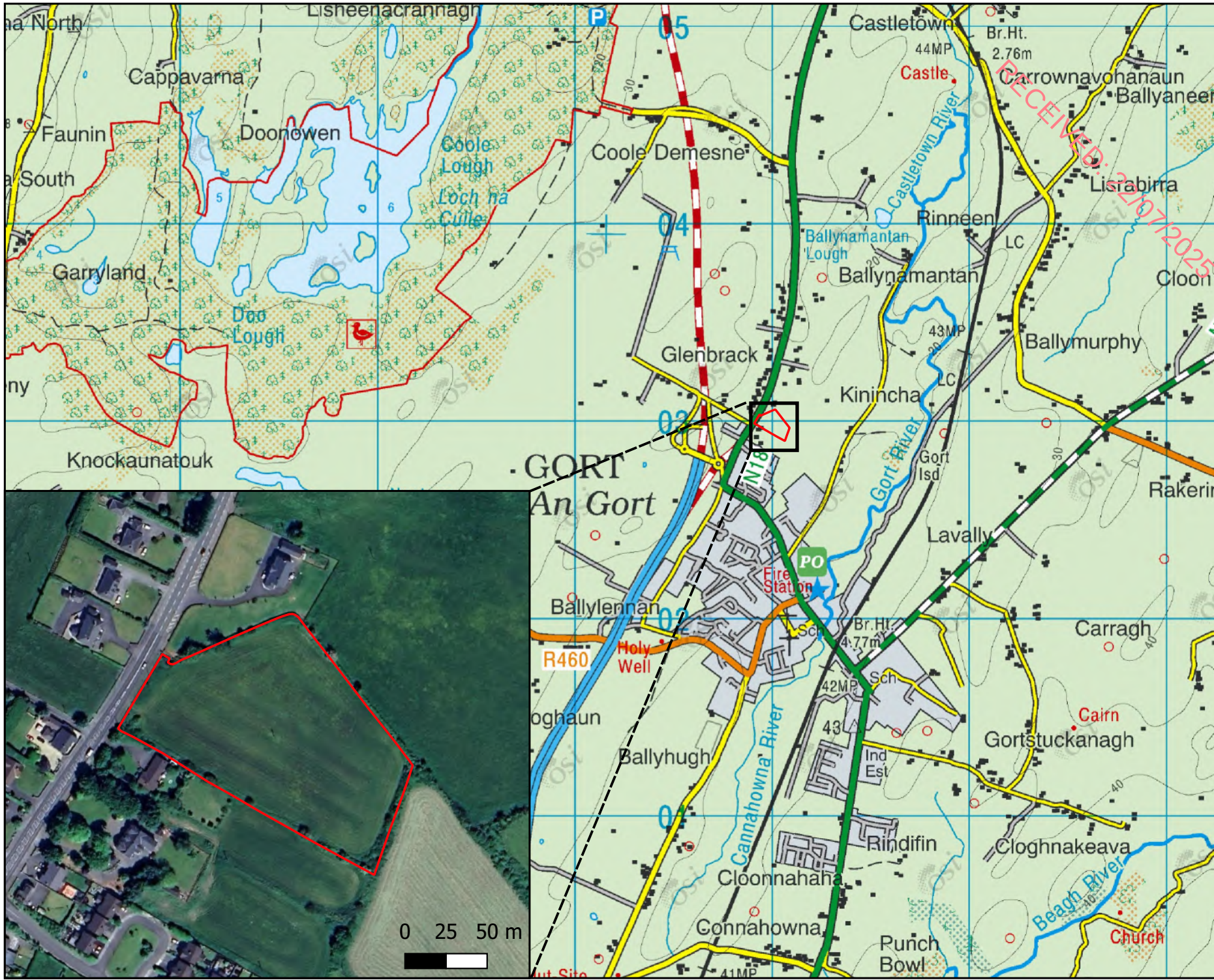
### 2.2 Characteristics of the Proposed Development

#### 2.2.1 Development Description

We, Riverside Foods Ltd., intend to apply for planning permission for an Off-Line Service Area (M18 Motorway), Galway Road (R458), Gort, County Galway. The Proposed Development comprises the following:

- Upgrade of existing site access off Galway Road (R458);
- 1 no. single story Service Area building (726 sq. m gross floor area) containing 1 no. retail area 95.49 sq. m net floor space (including ancillary off-licence), back-of-house staff / office / WC rooms, storage areas, plant room, pump room, toilet and baby changing facilities;
- Food and beverage areas comprising self-service areas, the sale of hot and cold food (3 no. food type offerings) for consumption on and off the premises, with associated internal communal seating, freezer / storage areas and food preparation areas;
- Drive-thru food facility (hatch and lane) to side and rear of Service Area building;
- Outdoor seating and picnic areas to include an externally located 24/7 Washing / Drying Facility;
- 6 no. double-pump islands with forecourt canopy over to include 4 no. underground fuel storage tanks, 1 no. HGV pump island to include 2 no. underground HGV fuel storage tanks;
- 70 no. car parking spaces (including 4 no. disabled accessible spaces, 14 no. electric vehicle charging spaces (EV)), 7 no. HGV spaces, 3 no. coach spaces, 54 no. bicycle spaces, 5 no. motorcycle spaces and air/water services area with a further 2 no. parking bays;
- Ancillary wall mounted and totem pole signage comprising 12 no. (both illuminated and non-illuminated);
- 1 no. car wash and valet building (65.2 sq. m);
- Foul water pump chamber, storage tank with control kiosk and upgrade of foul sewer rising main for connection to existing mains sewer and associated works;
- Nature-Based and Sustainable Urban Drainage System (SuDS) to include soakaways and rain gardens;
- All ancillary site development works to include pedestrian footpaths, external bin stores, solid fuel storage, ESB sub-station, lighting, landscaping and associated boundary treatments'.

The proposed site layout is provided in Figure 2-2.



Map Legend

 Proposed Development Site



Drawing Title

Site Location

Project Title

Gort Plaza

Drawn By

FK

Checked By

PD

Project No.

241010

Drawing No.

Figure 2-1

Scale

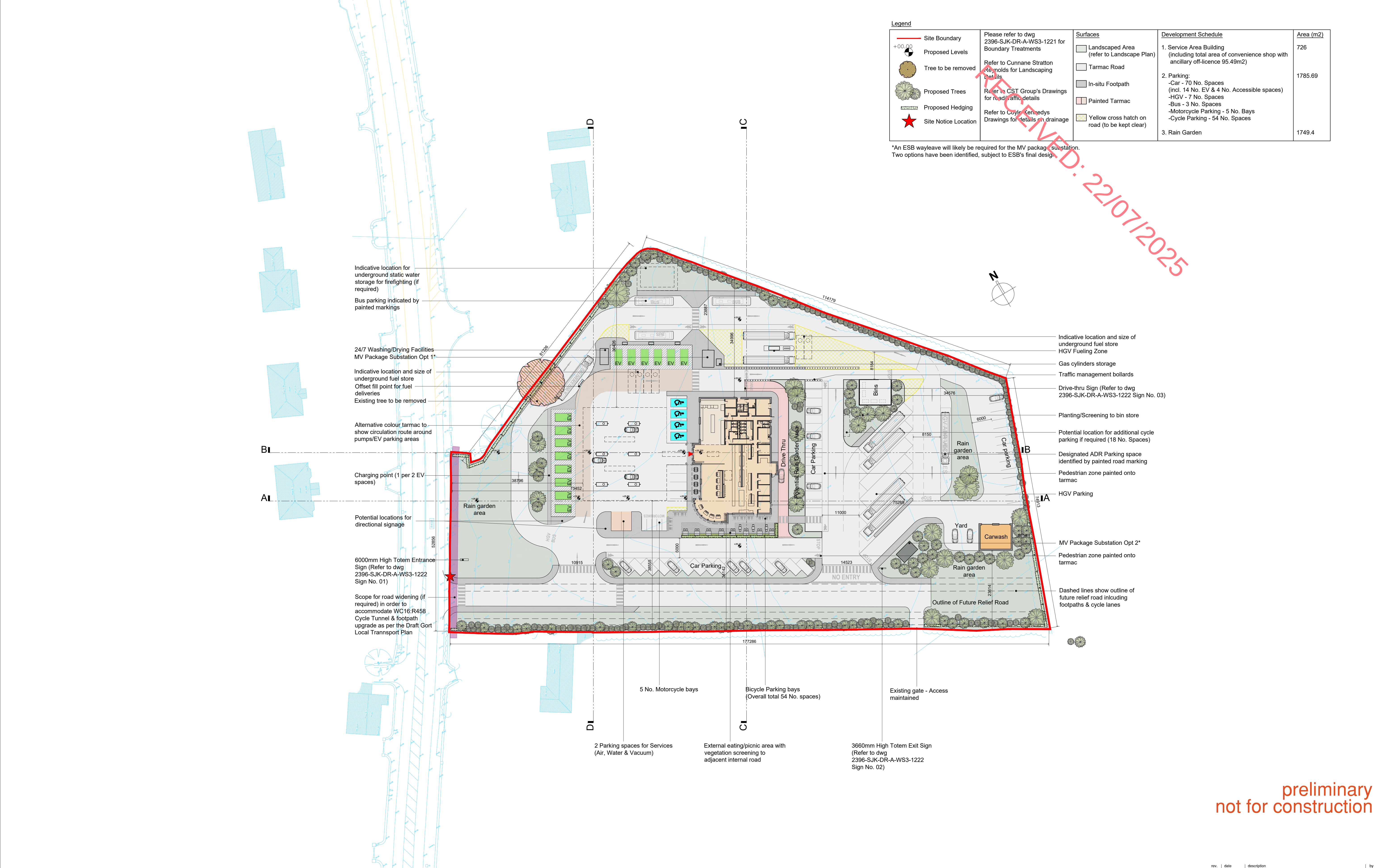
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Date

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| Legend               |                                                                    | Surfaces                                      | Development Schedule                                                                                   | Area (m2) |
|----------------------|--------------------------------------------------------------------|-----------------------------------------------|--------------------------------------------------------------------------------------------------------|-----------|
| Site Boundary        | Please refer to dwg 2396-SJK-DR-A-WS3-1221 for Boundary Treatments | Landsaped Area (refer to Landscape Plan)      | 1. Service Area Building (including total area of convenience shop with ancillary off-licence 95.49m2) | 726       |
| Proposed Levels      | Refer to Cunne Stratton Reynolds for Landscaping Details           | Tarmac Road                                   | 2. Parking:                                                                                            | 1785.69   |
| Tree to be removed   | Refer to CST Group's Drawings for road/traffic details             | In-situ Footpath                              | -Car - 70 No. Spaces (incl. 14 No. EV & 4 No. Accessible spaces)                                       |           |
| Proposed Trees       | Refer to Coyle Kennedy's Drawings for details on drainage          | Painted Tarmac                                | -HGV - 7 No. Spaces                                                                                    |           |
| Proposed Hedging     |                                                                    | Yellow cross hatch on road (to be kept clear) | -Bus - 3 No. Spaces                                                                                    |           |
| Site Notice Location |                                                                    |                                               | -Motorcycle Parking - 5 No. Bays                                                                       |           |
|                      |                                                                    |                                               | -Cycle Parking - 54 No. Spaces                                                                         |           |
|                      |                                                                    |                                               | 3. Rain Garden                                                                                         | 1749.4    |

\*An ESB wayleave will likely be required for the MV package substation. Two options have been identified, subject to ESB's final design.

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### 2.2.1 Fuel Storage

For fuel storage, there are 2 no. underground tank farms proposed for the Proposed Development, one for HGV refuelling and a second for car refuelling. Final capacity detail for each fuel tank farm is subject to operator requirements.

The tanks will be reinforced with concrete slabs above and beneath the tanks to protect them from external damage. They will be constructed of steel with a double skin to reduce the potential for leakage. The tanks will be manufactured in accordance with BS EN12285-1 and fitted with a leak alarm system. The tanks will be placed and strapped to the reinforced concrete base. All tanks are encased with pea gravel.

## 2.3 Site Services

A Drainage and Watermain Design Report has been prepared by Coyle Kennedy Consulting Engineers as part of this planning application. This details the proposed site drainage design including surface water runoff and foul water drainage for the Proposed Development. The site drainage plan is summarised below and the proposed site drainage drawings are included as Figure 2-3. For ease of reference, the Drainage and Watermain Design Report is included as **Appendix 1**.

### 2.3.1 Surface water

The surface water drainage strategy for the site, covering approximately 1.5 hectares, integrates Sustainable Drainage Systems (SuDS), including a hybrid soakaway and attenuation zone. The soakaways have been designed and sized in line with BRE Digest 365, informed by the results of trial holes and percolation testing conducted during the geotechnical site investigation.

Surface water runoff and attenuation calculations for the Proposed Development are based on regional rainfall data, with a 20% increase applied to account for the potential impacts of climate change. This allowance has been incorporated into the design in accordance with current best practice.

A hybrid approach incorporating both traditional infrastructure and SuDS features is proposed to manage runoff rates and enhance infiltration. The proposed development site has been divided into several surface water sub-catchments, each with its own soakaway and localised water treatment. The surface water treatment will include the following measures, which are fully detailed in the accompanying Surface Water, Wastewater & Watermain Layout Report prepared by Coyle Kennedy Consulting Engineers:

- > Silt Trap Gullies
- > Oil & Grit Interceptors
- > Sediment Removal
- > Hydrocarbon Separation
- > Filtration
- > Adsorption
- > Biodegradation
- > Microbial Breakdown
- > Infiltration
- > Groundwater Recharge

In addition to the above, SuDS have been incorporated into the design of the development and include:

- Rain gardens
- Soakaways

SuDS are fully detailed in the accompanying Surface Water, Wastewater & Watermain Layout Report.

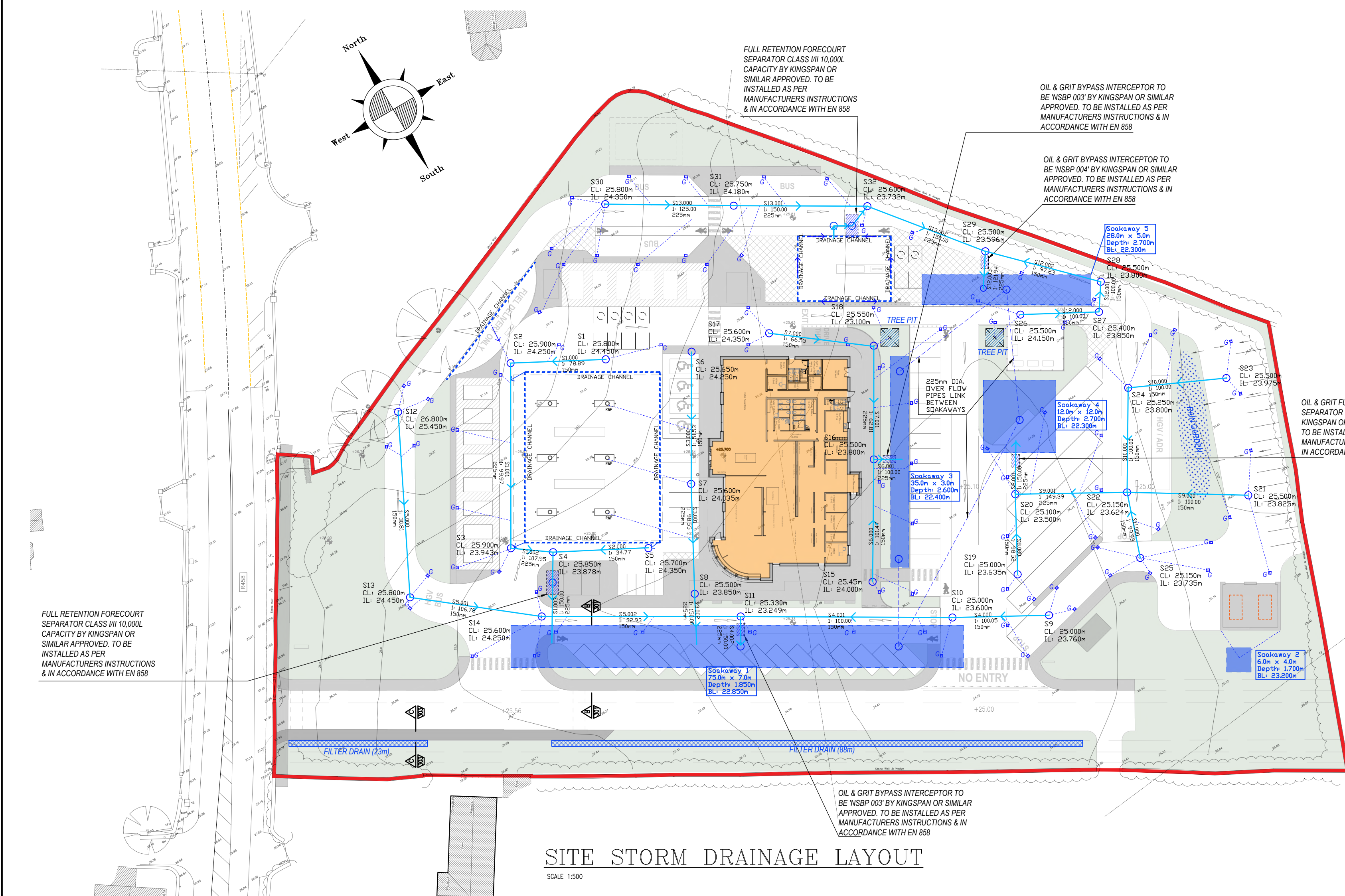
With the incorporation of the above design, there will be no increased loading of surface water into any watercourses, and all pollutants will be removed prior to discharge. In addition, the following minimum criteria will be met for the Proposed Development:

- No surcharging of the pipe network shall occur during storm events with a return period of 1 in 5 years (20% AEP).
- No flooding anywhere on site, except where specifically designed and approved for exceedance events (e.g. detention basins or swales), shall occur during the 1 in 30-year (3.33% AEP) rainfall event.
- No internal property flooding shall occur during storms with a return period of 1 in 100 years (1% AEP).

### 2.3.2 Foul water

A dedicated foul sewer network is proposed to collect wastewater from the development and direct it via gravity to an on-site pumping chamber, which includes 24-hour emergency storage capacity. The pumping station will be equipped with twin pumps arranged in a duty/standby configuration to ensure operational reliability. A weatherproof control kiosk/building (or similar) will be provided adjacent to the chamber to house the electrical controls, telemetry systems, and alarm notifications for pump failure or high-level conditions. The pumping station compound will be securely fenced and accessible for maintenance vehicles.

From the pumping chamber, wastewater is to be pumped to a public manhole located to the South of the site. The location and connection into the Uisce Éireann foul sewer network will be agreed in consultation with Uisce Éireann and carried out in accordance with their requirements.



**SERVICES LEGEND:**

- PROPOSED FOUL SEWER
- PROPOSED ROAD MANHOLE
- PROPOSED ROAD GULLY
- PROPOSED STORM SEWER
- PROPOSED STORM MANHOLE
- PROPOSED SURFACE WATER SOKAWAY/ATTENUATION
- OIL/GRIT INTERCEPTOR
- RAIN GARDEN - PLANTING TO SPECIALIST LANDSCAPING DETAILS
- TREE PITS - TO SPECIALIST LANDSCAPING DETAILS

1. ALL MAIN DRAINAGE PIPES TO BE MIN. 150mm DIA. UPVC TO IS EN 1401 & AGREEMENT CERTIFIED LINED.

2. ALL LOCAL STORM PIPES AROUND BUILDING TO BE MIN. 100mm DIA. LAD AT MIN. 1:100 FALLS.

3. ALL LOCAL FOUL PIPES AROUND BUILDING TO BE MIN. 100mm DIA. LAD AT MIN. 1:100 FALLS.

4. ALL INTERNAL CONNECTIONS TO LOCAL EXTERNAL DRAINAGE TO BE 1:40 FALLS.

5. ALL INSPECTION CHAMBERS TO BE IN COMPLIANCE WITH STANDARD DETAIL STD-WW-13.

6. ALL INTERNAL DRAINAGE IN BUILDING TO ARCHITECTS DETAILS.

7. ALL SLOTTED DRAINAGE CHANNELS AROUND BUILDINGS TO ARCHITECTS/LANDSCAPE ARCHITECTS DETAILS.

8. ALL SOKAWAYS DESIGNED TO BESS. SOKAWAYS TO BE FILLED WITH CLEAN BROKEN STONE, ALL SURROUNDED IN A GEOTEXTILE. SOKAWAY DESIGN SUBJECT TO FURTHER ASSESSMENT AT CONSTRUCTION STAGE.

**EXCAVATION AND FILL NOTES :**

1. THE RESPONSIBLE AUTHORITIES SHOULD BE CONSULTED REGARDING THE GROUND TO BE EXCAVATED WITH REGARD TO THE POSITION AND TYPE OF UNDERGROUND SERVICES THAT ARE LIKELY TO BE ENCOUNTERED DURING EXCAVATION AND ANY POSSIBLE OVERSIGNS REQUIRED.

2. THE BEARING STRATA TO BE APPROVED AND AGREED BY THE CONSULTING ENGINEER.

3. TEMPORARY FILL OVER BEARING STRATA TO BE PROVIDED TO PROTECT THE AGREED BEARING STRATA AND REMOVED FROM SITE BEFORE BEGINNING PERMANENT CONSTRUCTION.

4. EXCAVATE TO THE DIMENSIONS, LEVELS, LINES AND PROFILES SHOWN ON THE RELEVANT DRAWINGS. LEVEL AND GRADE TO FALLS AND REMAIN ALL LOOSE MATERIAL - OBTAIN APPROVAL BEFORE ANY CONCRETING OR FILL WORK IS CARRIED OUT. IF ROCK OR OTHER NATURAL STRATA IS ENCOUNTERED NOTIFY THE ARCHITECT AND ENGINEER AND OBTAIN INSTRUCTIONS BEFORE EXCAVATION. BACK FILL UNAUTHORISED OR EXCESS EXCAVATIONS WITH APPROVED FILLING AT NO EXPENSE TO THE CLIENT.

5. WHEN ARCHAEOLOGICAL OBJECTS ARE DISCOVERED DURING EXCAVATION, STOP WORK IN THE IMMEDIATE VICINITY OF THE FIND AND INFORM THE ARCHITECT AND ENGINEER AT ONCE. THE OWNER OF MINERALS, SINKS, CAVES, OR ARCHAEOLOGICAL OBJECTS AND THE LIEVE DISCOVERED IN THE COURSE OF THE EXCAVATIONS SHALL BE DEEMED TO BE THE PROPERTY OF THE CLIENT.

6. EXCAVATIONS IN PROXIMITY ADJACENT TO EXISTING BUILDINGS, PATHWAYS OR THE LIKE SHALL BE CARRIED OUT IN SUCH A MANNER THAT SUCH EXISTING BUILDINGS, PATHWAYS OR THE LIKE ARE NOT ENDANGERED.

7. KEEP EXCAVATIONS FREE FROM WATER, AND KEEP WATER FROM EXCAVATIONS CLEAR OF OTHER CONSTRUCTION WORK. THE WATER LEVEL MAY BE SEASONAL AND/OR TIDAL. WHERE TEMPORARY SUMPS ARE REQUIRED CONSTRUCTION OF EXCAVATIONS FOR PERMANENT WORK AND FILL THEM WITH SUITABLE FILLING WHEN NO LONGER REQUIRED.

8. DISPOSAL AREA FOR EXCAVATED MATERIAL TO BE AGREED WITH CLIENT AND OTHER RELEVANT AUTHORITIES.

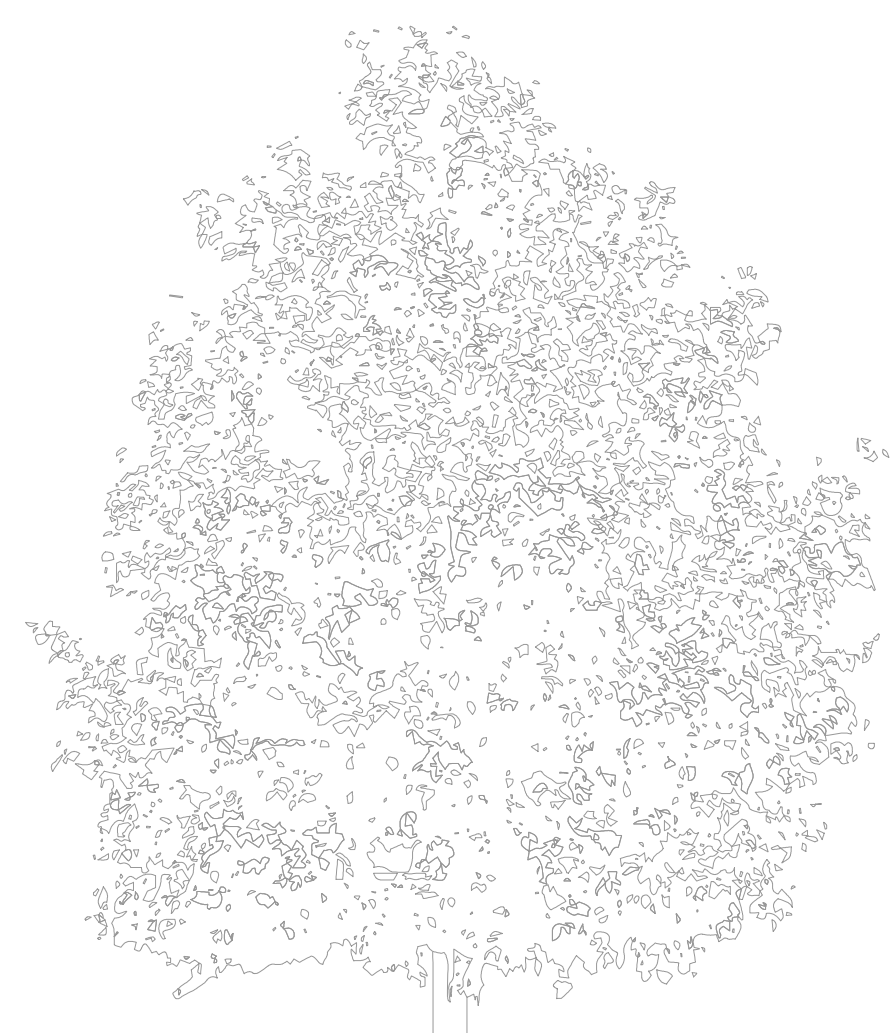
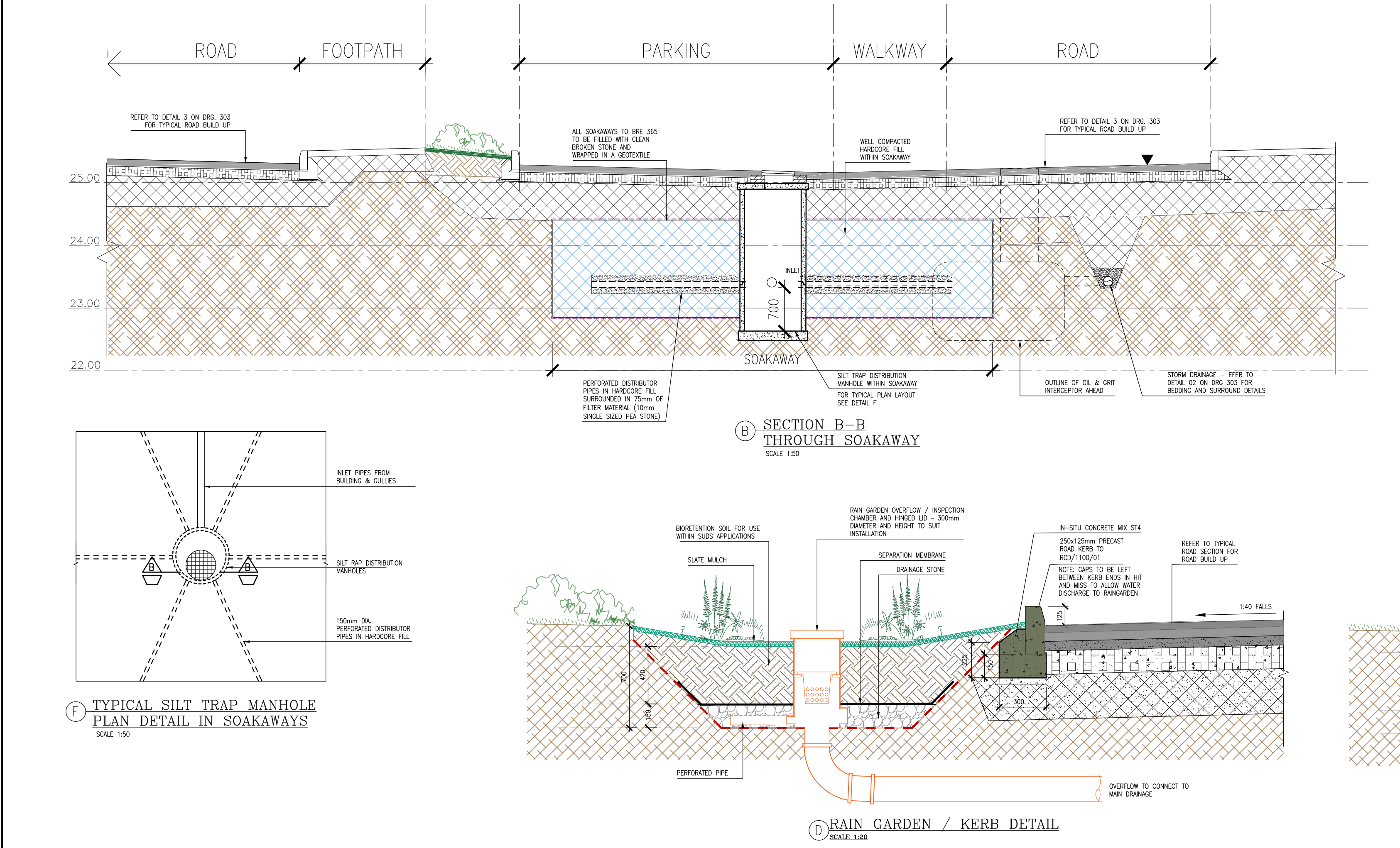
9. UNLESS OTHERWISE AGREED, EXCAVATED MATERIAL WITHIN 1.0m OF BUILDINGS SHOULD BE 'ORANULAR' FILL S.P. 21 2014 ANNEX C. COMPACTED IN 200mm LAYERS USING 10 NUMBER PASSES OF A 3000kg PER METER WITH VIBRATING ROLLER. SEE COMPACTOR SPECIFICATION TABLE.

10. FILL MATERIAL MUST BE PROVIDED OVER THE ENTIRE EXTENT OF THE ROADS AND EXTEND AT LEAST 300mm BEYOND KERB LINE. IT MUST THEN TAPEL DOWN TO BEARING STRATA.

| Compaction Specification                                                |                                                                    |                  |                                                        |
|-------------------------------------------------------------------------|--------------------------------------------------------------------|------------------|--------------------------------------------------------|
| Type of Compaction Plant                                                | Category                                                           | Number of Passes | Layers not exceeding the following compacted thickness |
| Smooth-wheeled Roller (or vibratory roller operating without vibration) | Mass per metre width of roll: Over 2000 Kg to 5400 Kg              | 16               | 150mm                                                  |
|                                                                         | Over 5400 Kg                                                       | 18               | 150mm                                                  |
| Pneumatic-tyred Roller                                                  | Mass per metre width of vibrating roll: Over 4000 Kg up to 6000 Kg | 12               | 150mm                                                  |
|                                                                         | Over 6000 Kg up to 8000 Kg                                         | 12               | 150mm                                                  |
|                                                                         | Over 8000 Kg up to 12000 Kg                                        | 10               | 150mm                                                  |
| Vibratory Roller                                                        | Mass per metre width of vibrating roll: Over 700 Kg up to 1300 Kg  | 16               | 150mm                                                  |
|                                                                         | Over 1300 Kg up to 1800 Kg                                         | 6                | 150mm                                                  |
|                                                                         | Over 1800 Kg up to 2300 Kg                                         | 4                | 150mm                                                  |
|                                                                         | Over 2300 Kg up to 2900 Kg                                         | 3                | 150mm                                                  |
|                                                                         | Over 2900 Kg up to 3600 Kg                                         | 3                | 150mm                                                  |
| Vibrating-plate Compactor                                               | Mass: Over 50 Kg up to 65 Kg                                       | 4                | 150mm                                                  |
|                                                                         | Over 65 Kg up to 75 Kg                                             | 3                | 150mm                                                  |
| Vibro-tamper                                                            | Mass: Over 50 Kg up to 65 Kg                                       | 4                | 150mm                                                  |
|                                                                         | Over 65 Kg up to 75 Kg                                             | 3                | 150mm                                                  |
| Power Rammer                                                            | Mass: 100 Kg - 500 Kg                                              | 5                | 150mm                                                  |
|                                                                         | Over 500 Kg                                                        | 5                | 150mm                                                  |

- NOTES**
- GENERAL NOTES :**
- ALL COYLE KENNEDY DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTS DRAWINGS AND ALL OTHER RELEVANT DRAWINGS.
  - ALL SETTING OUT, INSULATION, DPC, TANKING / WATERPROOFING, SCORED AND RASON PROTECTION DETAILS BY ARCHITECT & SPECIALIST.
  - DETAILED SPECIFICATIONS (IF NOT ISSUED) ARE AVAILABLE AT ENGINEERS OFFICE FOR INSPECTION BY CONTRACTORS, BY APPOINTMENT.
  - REFER TO ARCHITECT FOR DAMP PROOF, TANKING AND GAS PROOFING MEMBRANE REQUIREMENTS. REQUIREMENTS OF SUBSTRUCTURE GAS/WATER PROOFING MEMBRANES TO BE BY A REPUTABLE, COMPETENT SPECIALIST WITH ADEQUATE PL.
  - THE CONTRACTOR SHALL BE DEEMED TO HAVE ALLOWED FOR WITHIN HIS TENDER, EMPLOYING A CHARTERED STRUCTURAL ENGINEER WITH ADEQUATE PROFESSIONAL INDEMNITY INSURANCE TO ASSESS, DESIGN AND DETAIL SUCH TEMPORARY WORKS AS ARE NECESSARY TO OFFER SUPPORT TO EXISTING AND/OR CONSTRUCTED ELEMENTS DURING THE CONSTRUCTION PERIOD. THIS APPLIES TO ELEMENTS WITHIN THE SITE AND NEIGHBOURING THE SITE.
  - THE CONTRACTOR IS DEEMED TO HAVE VISITED THE SITE AND CONSULTED WITH RELEVANT AUTHORITIES AND BE SATISFIED IN RELATION TO THE SITE'S SURROUNDINGS, EXISTING SERVICES, LEVELS, BOUNDARIES, GROUND CHARACTERISTICS AND ANY OTHER SITE CONSTRAINTS, INCLUDING DIRECTION OF SERVICES AS NECESSARY.
  - ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT BUILDING REGULATIONS.
  - WHERE LEANMX IS SPECIFIED ALL LEANMX TO BE GRADE C16/20 (GEN 3), UNLESS NOTED OTHERWISE.
  - ALL LEVELS ARE IN METRES ABOVE ORNANCE DATUM (U.N.O.) INDICATING STRUCTURAL LEVEL (SSL).
  - DO NOT SCALE FROM DRAWINGS. USE FIGURED DIMENSIONS ONLY. ANY DISCREPANCIES TO BE REPORTED TO THE STRUCTURAL ENGINEER PRIOR TO COMMENCEMENT OF WORKS.
  - ALL WORKS SHALL BE CARRIED OUT IN A SAFE MANNER AND IN ACCORDANCE WITH THE HEALTH AND SAFETY REGULATIONS, METHOD STATEMENTS (WHERE REQUIRED) SHALL BE SUBMITTED TO THE ENGINEER OR OTHER APPOINTED PERSON(S).
  - THE CONTRACTOR SHALL COMPLY WITH ALL STATUTORY AUTHORITY REQUIREMENTS INCLUDING PLANNING CONDITIONS, FIRE SAFETY CERTIFICATE CONDITIONS, LOCAL AUTHORITY DRAINAGE REQUIREMENTS, ETC.
  - PROJECT DRAWINGS AND SPECIFICATIONS REFERENCE TO BUILDING REGULATIONS, BRITISH, IRISH OR OTHER NATIONAL STANDARDS OR CODES OF PRACTICE DO NOT GIVE THE YEAR OF ISSUE OR DATES OF AMENDMENTS. THE LATEST RELEVANT PUBLISHED VERSION INCLUDING ANY RELEVANT AMENDMENTS AND ADD END AT THE DATE OF INITIATION TO TENDER SHALL APPLY. WHERE A STANDARD OR CODE OF PRACTICE HAS BEEN SUPERSEDED, THE LATEST EDITION OF THE SUPERSEDING PUBLICATION SHALL APPLY.
  - ANY DISCREPANCIES DISCOVERED BETWEEN DESIGN TEAM DRAWINGS TO BE REPORTED IMMEDIATELY AND CLARIFICATION SOUGHT AND DISCREPANCY CORRECTED PRIOR TO CONSTRUCTION COMMENCING.

- DRAINAGE NOTES :**
- CONTRACTOR TO MAKE ALL NECESSARY ENQUIRIES REGARDING LOCATION OF EXISTING SEWERS, ELECTRICAL AND OTHER SERVICES ON SITE.
  - FOR DRAINAGE WORK LOCAL TO BUILDINGS, REFER TO ARCHITECT'S DRAWINGS.
  - ALL DRAINAGE WORK TO BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT SPECIFICATION, PART H - BUILDING REGULATIONS AND DEPT. OF ENVIRONMENT DOCUMENT 'RECOMMENDATIONS FOR SITE DEVELOPMENT WORKS FOR HOUSING AREAS', & WRC 'SEWERS FOR ADOPTION' 6th EDITION A DESIGN & CONSTRUCTION GUIDE FOR DEVELOPERS AND USER. EIREANN WASTEWATER CODE OF PRACTICE.
  - BEDDING MATERIAL TO BE 10mm SINGLE SIZED AGGREGATE COMPLYING WITH THE REQUIREMENTS OF SPECIFICATIONS FOR CONCRETE. FOR RIGID PIPES THE GRANULAR MATERIAL SHOULD CONFORM TO BS EN 12620 ANNEX B TABLE B AND SHOULD BE SINGLE SIZE MATERIAL OR GRADED MATERIAL FROM 5mm to 10mm FOR 150mm PIPES, 4mm to 10mm FOR 100mm PIPES, 25mm for 150mm - 600mm DIAMETER AND 40mm FOR PIPES MORE THAN 600mm DIAMETER.
  - THE PREPARED UNDEROFT OF THE TRENCH SHOULD CONSIST OF BEDDING MATERIAL FOR THE FULL WIDTH OF THE TRENCH AND LAD TO THE CORRECT GRADIENT.
  - THE MINIMUM THICKNESS OF BEDDING MATERIAL UNDER THE BARREL OF THE PIPE SHOULD BE 100mm.
  - IMPORTED BEDDING MATERIAL AND BACKFILL USING 'AS DUG MATERIAL' MUST BE APPROVED BY ENGINEER.
  - ALL PVC-U PIPES AND FITTINGS USED FOR DRAIN AND SEWER MUST COMPLY WITH IS 424 " UNPLASTICISED POLYVINYL CHLORIDE (PVC-U) PIPES AND FITTINGS FOR BURIED DRAINAGE AND SEWAGE SYSTEMS "
- REFER TO DRAWINGS 300 FOR RISING MAIN CONNECTION AND TO 302 FOR FOUL SEWER LAYOUT. REFER TO DRG. 303 & 304 FOR TYPICAL DETAILS. REFER TO DRGS, 305 & 306 FOR DRAINAGE NETWORK SECTIONS.**
- DRAWINGS TO BE READ IN CONJUNCTION WITH CK REFER 25-029-250519-01RP AND ITS APPENDICES**



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**PROJECT**  
PROPOSED OFF LINE SERVICE AREA AT GORT

**CLIENT**  
RIVERSIDE FOODS

**TITLE**  
SITE STORM DRAINAGE LAYOUT

**PROJECT No.** 25-029 **STATUS - SKETCH No.** P-301

**DATE** MAY 2025 **DRAWING REV.** A

**SCALE** 1:500, 100 @ A1 **BY** AC **CHECKED** BC

## 2.4 Hydrology and Flood risk assessment

### 2.4.1 Hydrology

A Flood Risk Assessment (FRA) has been prepared by Hydro Environmental Ltd. and is included in this planning pack. The following information has been taken from the FRA, as it is relevant to the impact assessment of this report.

*There are no surface drainage features on or within the immediate vicinity of the site with site drainage currently relying on infiltration into the sub soil and potential overland and interflow heading southwest from the site.*

*The underlying bedrock at the site is the Tubber Limestone formation which is a Dinantian pure bedded limestone. This is a pale grey clean limestone that is a crinoidal and cherty limestone and dolomite and which is prone to karstification. The bedrock aquifer is classified as a Regionally important karst conduit flow bedrock aquifer (Rkc) that is highly productive in local zones. The overburden is a limestone till that is classified as having moderate permeability. The overlying top-soil is a deep well drained mineral soil. The groundwater vulnerability is medium for the site suggesting overburden thickness above the limestone bedrock of 5 to 10m.*

*The groundwater body for this area is the Caherglassaun Turlough SAC GWB. No karst features are identified on the site or within surrounding lands. The groundwater table on the site and surrounding lands is likely to be a depth located in the upper weathered zone of the bedrock which is possibly in excess of 5m below ground level.*

### 2.4.2 Flood risk Assessment

*Based on the Flood Risk Management Planning Guidelines (2009) the site is located in low flood risk, Flood Zone C and is suitable for all category of development including commercial and industrial development as per the flood risk management planning guidelines.*

*The proposed Services Area commercial development with the proposed storm water management is protected from local pluvial flooding and will not adversely impact flood risk elsewhere and is considered to be in compliance with the flood risk management planning guidelines (2009) and in compliance with the drainage and flood risk requirements set out in the Galway County Development plan (2022 to 2028).*

For ease of reference, the FRA prepared by Hydro Environmental Ltd. is included as **Appendix 2**.

## 2.5 Landscape plan

A landscape plan document has been prepared by Cunnane Stratton Reynolds and is included in this planning pack. The landscape drawing is attached to this report as **Appendix 3**. The plan provides for the following:

- Parkland tree planting providing cover and screening to adjoining properties, underplanted with Irish wildflower planting mix to provide important pollinators for local wildlife.
- Native hedgerow with mixed tree planting creating a natural native hedgerow boundary
- Native wildflower planting with low frequency mowing regime.
- Sustainable Drainage Systems (SuDs) Rain Garden with rain garden ornamental planting mixes and mixed tree planting.
- Robust ornamental planting softening the edges of proposed parking bays, and with small Street tree planting

Given that the Proposed Development site currently comprises marginal agricultural grassland and broken hedgerows on the boundaries, the proposed landscape, should it be implemented, will result in an increase in biodiversity value.

## 2.6

# Operational Lighting Plan

An operational lighting plan has been prepared by EDC-Mechanical & Electrical Consulting Engineers as part of this planning application. The proposed operational lighting drawings are provided as **Appendix 4** of this report.

The lighting provides for three types of luminaries to be used within the Proposed Development site, each of which have lamp flux of 2700K, which is line with bat lighting guidance. Given the nature of the development, there is requirement for both Type A and Type B luminaries to be on 10m columns, whereas Type C are recessed lighting in the forecourt canopy. The lighting Plan has been designed to minimise lux levels on the boundary of the site as much as possible, with ranges of less than 1 lux to 10 lux anticipated on the boundary of the site.

The Lighting Plan has, where feasible given the nature of the Proposed Development, included the following bat friendly mitigations:

- Lighting has been designed to position luminaries pointing away from the existing boundaries of the site. Whilst lux levels proposed vary on the boundary, these have been minimised on the eastern and southern boundaries of the site where existing hedgerows are present. In the southeastern corner of the site, where lesser horseshoe were recorded on D02, the Lighting Plan provides for Lux levels of less than 1.0.
- All luminaries proposed have a warm light LED of 2700K.
- No luminary has a tilt of greater than 5 degrees.

3.

## CHARACTERISTICS OF THE RECEIVING ENVIRONMENT

3.1

### Hydrological Desk Study

The baseline hydrology of the site and surrounding area has been reviewed on the EPA web-mapper (<https://gis.epa.ie/EPAMaps/>) which was consulted on the 02/07/2025

Regionally the Proposed Development site is located within the Galway Bay South East (Catchment ID: 29) surface water catchment. This is located within the Shannon River Basin District.

Within this catchment, the study area is primarily located within the Kilchreest sub-catchment (Kilchreest\_SC\_010) and partially within the Cannahowna sub-catchment (Cannahowna\_SC\_010). The study area is located within the Kilchreest (KILCHREEST\_010) and Cannahowna (CANNAHOWNA\_010) sub-basins.

With regards to local hydrology, no mapped watercourses traverse the site of the Proposed Development. The closest mapped watercourse to the site is the Cannahowna Order 4 watercourse [EPA Code: 29C01] located approximately 650m east of the Proposed Development site. The Cannahowna watercourses has downstream connectivity to Coole-Garryland Complex SAC, Coole-Garryland SPA, Caherglassaun Turlough SAC, Galway Bay Complex SAC, and Inner Galway Bay SPA.

The Biotic Index of Water Quality (BIWQ) was developed in Ireland by the Environmental Protection Agency (EPA). Q-values are assigned using a combination of habitat characteristics and structure of the macro-invertebrate community within the waterbody. Individual macro-invertebrate families are classified according to their sensitivity to organic pollution and the Q-value is assessed based primarily on their relative abundance within a sample.

River Basin Management Plans (RBMPs) have been published for all River Basin Districts in Ireland in accordance with the requirements of the Water Framework Directive. The online EPA Envision map viewer provides access to water quality information at individual waterbody status for all the River Basin Districts in Ireland. The EPA Envision map viewer was consulted on the 2nd of January regarding the water quality status of the Cannahowna river. The River Waterbody WFD Status 2016-2021 for the Cannahowna watercourse is 'Good' and the River Waterbodies Risk for this watercourse is under review. The closest Q value was taken from the Cannahowna 650m from the site, which has been assigned with a 'Moderate' Q value status of 3-4.

The site of the Proposed Development is located within the GWDTE-Caherglassaun Turlough (SAC000238) groundwater catchment. this groundwater body has been identified as 'poor' (as per the Water Framework Directive risk score) and is 'at risk'.

3.2

### Results of Baseline Ecological Survey

3.2.1

#### Multidisopcianry walkover survey

The Proposed Development site is located within a greenfield site currently used for low intensity agricultural practices. It is located on the edge of an urban area and is delineated by linear features such as stone walls, hedgerows and roads. Table 3-1 lists all the habitats recorded within the site during the surveys undertaken.

Table 3-1 Habitats recorded within and adjacent to the Proposed Development site.

| Habitat                         | Code |
|---------------------------------|------|
| Dry meadows and grassy verges   | GS2  |
| Hedgerows                       | WL1  |
| Earth banks                     | BL2  |
| Treelines                       | WL2  |
| Stone walls and other Stonework | BL1  |
| Improved agricultural grassland | GA1  |

The grassland within the Proposed Development site was categorised as **Dry meadows and grassy verges (GS2)** and was dominated by grasses such as Yorkshire fog (*Holcus lanatus*), Meadow grass (*Poa annua*), Perennial ryegrass (*Lolium perenne*), as well as Rough meadow-grass (*Poa trivialis*), Sweet Vernal-grass (*Anthoxanthum odoratum*), false oat-grass (*Arrhenatherum elatius*), and red fescue (*Festuca rubra* agg.). This habitat which dominates the site is presented in Plate 3-1 and Plate 3-2. Broad leaved species were also recorded frequently and included smooth Hawk's-beard (*Crepis capillaris*), common field-speedwell (*Veronica persica*), red clover (*Trifolium pratense*), ribwort plantain (*Plantago lanceolata*), daisy (*Bellis perennis*), dandelion (*Taraxacum* spp.), creeping buttercup (*Ranunculus repens*), common birds foot trefoil (*Lotus corniculatus*), common mouse-ear (*Cerastium fontanum*), common vetch (*Vicia sativa* ssp. *Segetalis*), changing Forget-me-not (*Myosotis discolor*), silverweed (*Potentilla anserina*), meadow buttercup (*Ranunculus acris*), cut-leaved Crane's-bill (*Geranium dissectum*), cuckooflower (*Cardamine pratensis*), yarrow (*Achillea millefolium*), primrose (*Primula vulgaris*), perforate St John's-wort (*Hypericum perforatum*), broad-leaved Dock (*Rumex obtusifolius*) and ragwort (*Jacobaea vulgaris*).

The Proposed Development site was mainly delineated by **Hedgerows (WL1)**, as shown in Plate 3-3 and Plate 3-4. The hedgerows consisted of common bramble (*Rubus fruticosus* agg.), Yorkshire fog, nettle (*Urtica dioica*), gorse (*Ulex europaeus*), cleaver (*Gallium* sp.), hogweed (*Heracleum sphondylium*), ivy (*Hedera hibernica*), field bindweed (*Convolvulus arvensis*), creeping thistle (*Cirsium arvense*), cocksfoot (*Dactylis glomerata*) and fern species at ground level and tree species including hawthorn (*Crataegus monogyna*), blackthorn (*Prunus spinosa*), with occasional ash (*Fraxinus excelsior*), and elder (*Sambucus nigra*).

The northern portion of the Proposed Development site was delineated by **Stone walls and other stonework (BL1) and Hedgerow (WL1)** Plate 3-5. The Proposed Development Site was also bordered by **Improved agricultural grasslands (GA1)** to the north and south.

No habitats listed under Annex I of the EU Habitats Directive were recorded within or adjacent to the Proposed Development site and no significant supporting habitat for species listed under Annex II of the EU Habitats Directive or Annex I of the EU Birds Directive was identified during the walkover survey.

No species listed under the Third Schedule of the European Communities Regulations 2011 (S.I. 477 of 2011) and the First Schedule of the European Union (Invasive Alien Species) Regulations 2024 (S.I. No 374 of 2024) were recorded within the Proposed Development site.



Plate 3-1 Footprint of the Proposed Development within a dry meadow



Plate 3-2 Additional example of grassy meadow recorded within the Proposed Development site



Plate 3-3 Bramble and blackthorn hedgerow recorded within on the boundary of the Proposed Development site.



Plate 3-4 Low hedgerow with mature hawthorn within the boundary of the Proposed Development site.



Plate 3-5 Example of stone wall delineating the Proposed Development site.

## 3.2.2 Bat Surveys – Lesser horseshoe bat

### 3.2.2.1 Bat habitat appraisal

The Proposed Development site comprises agricultural fields delineated by hedgerows and stone walls. Regarding potential roosting habitat for lesser horseshoe bat, no structures are present within the site and therefore, no significant supporting roosting habitat for lesser horseshoe bat exists within the site.

With regard to foraging and commuting bats at the site, areas of treeline, hedgerow, stone wall and grasslands were considered to be of *Moderate* suitability for bats, i.e. continuous habitat connected to the wider landscape that could be used by bats for flight-paths (Collins, 2023).

As the proposed development site is delineated by linear features such as hedgerow and stonewalls, and as the site is within the 2.5 km foraging range of a SAC roost (Kiltartan House SAC), the Proposed Development site potentially provides commuting and foraging habitat for QI populations of lesser horseshoe bat.

### 3.2.2.2 Manual Activity Surveys

Walkover surveys were aimed at assessing the use of linear features and other habitats by bats. Bat activity was dominated by common pipistrelles, with most of this taking place along hedgerows. Soprano pipistrelles were also recorded to a lesser extent, predominantly along hedgerows and the lone Ash tree.

No lesser horseshoe bats were detected during the manual activity surveys undertaken. The walked route is presented in Figure 3-1.

### 3.2.2.3 Static detector Surveys

Two SM4 static detectors were deployed on the site for a period of 2 weeks at 2 different locations (D01 to D02). D01 was next to the mature Ash tree, north-west of the Proposed Development site; D02 was placed in a hedgerow area to the south-east of the Proposed Development site. The location of the static detectors is shown in Figure 3-1.

In total 11,139 bat passes were recorded. Analysis of the detector recordings positively identified six bats to species level with *Myotis* genus also present. Common pipistrelle made up the vast majority of the activity recorded within the site (n=6,519), followed by Leisler's bats (*Nyctalus leisleri*) (n=2,372) and Soprano pipistrelles (n=2,200). *Myotis* spp. (n=43) were less frequently recorded, followed by brown long-eared bats (n=4). **Only one instance of lesser horseshoe bat was recorded at the site.** The Site is located within the current known range for this species. Plate 5-6 shows total bat species composition recorded at the site, included lesser horseshoe bat.

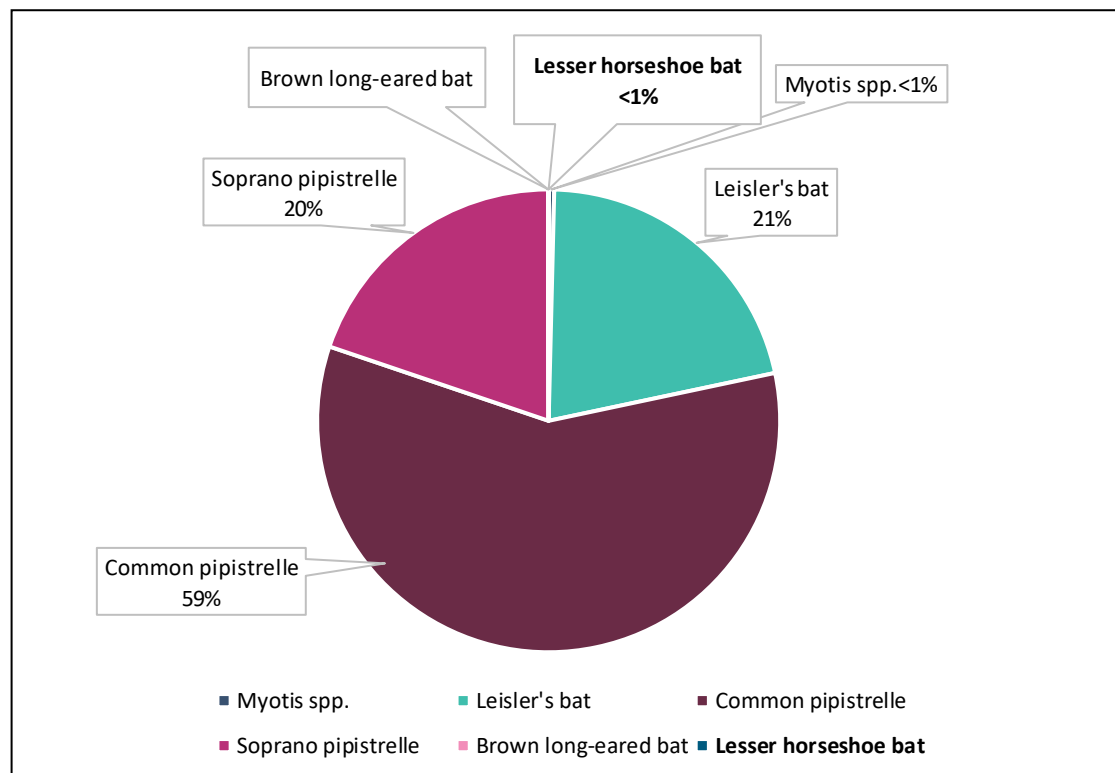


Plate 3-6 Total bat species composition.

Plate 3-7 shows total bat passes per detector, which are summarised in Table 3-5.

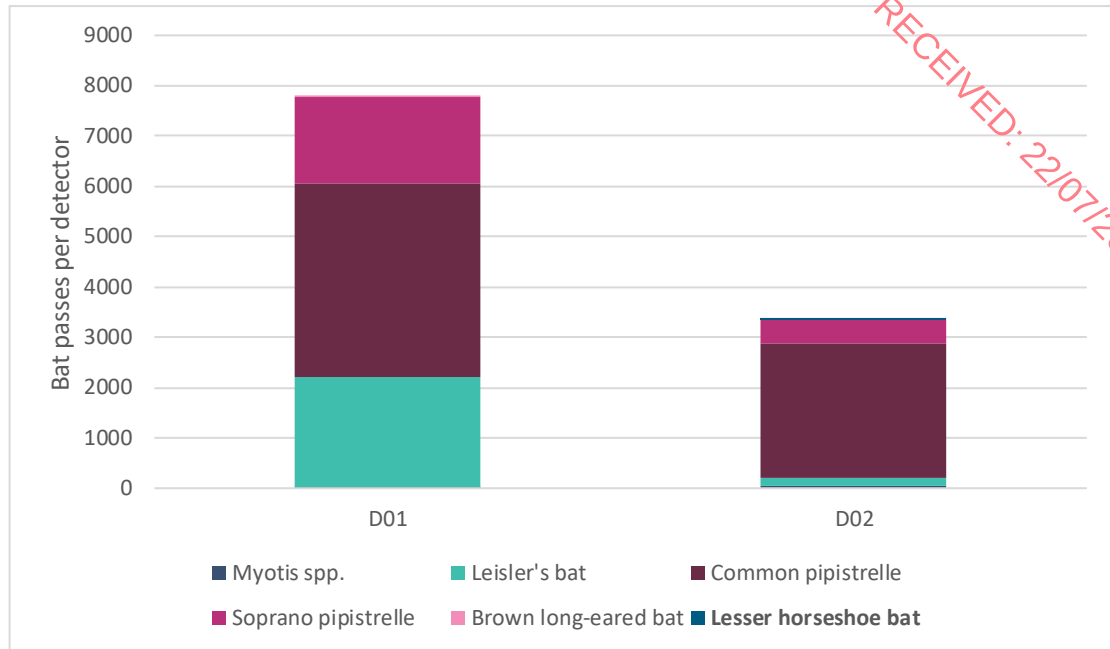


Plate 3-7 Total bat passes per detector

Table 3-2 Static detector results, total bat passes.

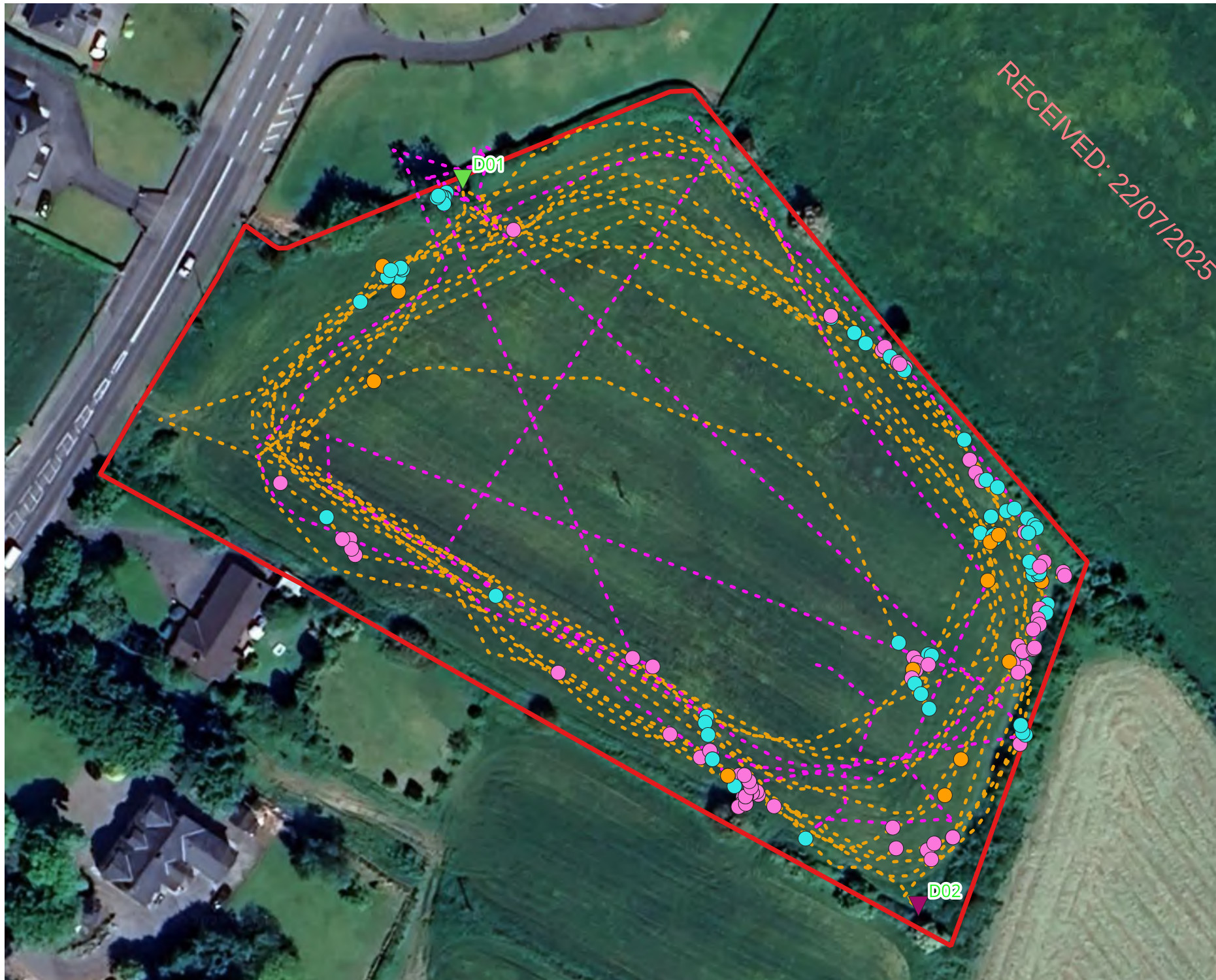
| Detector | Common Pipistrelle | Soprano Pipistrelle | Leisler's Bat | Brown Long-eared Bat | <i>Myotis</i> spp. | Lesser Horseshoe Bat |
|----------|--------------------|---------------------|---------------|----------------------|--------------------|----------------------|
| D01      | 3860               | 1707                | 2199          | 2                    | 8                  | 0                    |
| D02      | 2659               | 493                 | 173           | 2                    | 35                 | 1                    |

Species composition was higher at D01. Common pipistrelles were recorded more frequently at location D01 than D02. *Myotis* spp. were more frequent at D02 than D01. Instances of brown long-eared bats (n=2) was similar to both D01 and D02. **No lesser horseshoe bat was recorded at D01. One instance (n=1) of lesser horseshoe passes were recorded at location D02, along the hedgerow lining the eastern boundary of the site, during the same night that the static was deployed (15<sup>th</sup> May) and well after sunset, as presented in**

Table 3-3.

Table 3-3 Lesser horseshoe bat (*Rhinolophus hipposideros*) passes recorded by static detectors

| Detector Location | Recording Date | Recording Time |
|-------------------|----------------|----------------|
| D02               | 15/05/2025     | 23:51:30       |



### Map Legend

- Proposed Development site
- Detector location- D01
- Detector location- D02
- Leisler's bat
- Common pipistrelle
- Soprano pipistrelle
- Transect-15.05.25
- Transect-27.05.25

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Drawing Title

**Survey Effort**

Project Title

Proposed Service Station, Gort, Co. Galway

|             |         |             |            |
|-------------|---------|-------------|------------|
| Drawn By    | DM      | Checked By  | PD         |
| Project No. | 241010  | Drawing No. | Figure 3-1 |
| Scale       | 1:1,500 | Date        | 24.06.2025 |

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4.

## STAGE 1 SCREENING – IDENTIFICATION OF RELEVANT EUROPEAN SITES

4.1

### Hydrological Desk Study

The baseline hydrology of the site and surrounding area has been reviewed on the EPA web-mapper (<https://gis.epa.ie/EPAMaps/>) which was consulted on the 02/01/2025

Regionally the Proposed Development site is located within the Galway Bay South East (Catchment ID: 29) surface water catchment. This is located within the Shannon River Basin District.

Within this catchment, the study area is primarily located within the Kilchreest sub-catchment (Kilchreest\_SC\_010) and partially within the Cannahowna sub-catchment (Cannahowna\_SC\_010). The study area is located within the Kilchreest (KILCHREEST\_010) and Cannahowna (CANNAHOWNA\_010) sub-basins.

With regards to local hydrology, no mapped watercourses traverse the site of the Proposed Development. The closest mapped watercourse to the site is the Cannahowna Order 4 watercourse [EPA Code: 29C01] located approximately 650m east of the Proposed Development site. The Cannahowna watercourse has downstream connectivity to Coole-Garryland Complex SAC, Coole-Garryland SPA, Caherglassaun Turlough SAC, Galway Bay Complex SAC, and Inner Galway Bay SPA.

The Biotic Index of Water Quality (BIWQ) was developed in Ireland by the Environmental Protection Agency (EPA). Q-values are assigned using a combination of habitat characteristics and structure of the macro-invertebrate community within the waterbody. Individual macro-invertebrate families are classified according to their sensitivity to organic pollution and the Q-value is assessed based primarily on their relative abundance within a sample.

River Basin Management Plans (RBMPs) have been published for all River Basin Districts in Ireland in accordance with the requirements of the Water Framework Directive. The online EPA Envision map viewer provides access to water quality information at individual waterbody status for all the River Basin Districts in Ireland. The EPA Envision map viewer was consulted on the 2<sup>nd</sup> of January regarding the water quality status of the Cannahowna river. The River Waterbody WFD Status 2016-2021 for the Cannahowna watercourse is 'Good' and the River Waterbodies Risk for this watercourse is under review. The closest Q value was taken from the Cannahowna 650m from the site, which has been assigned with a 'Moderate' Q value status of 3-4.

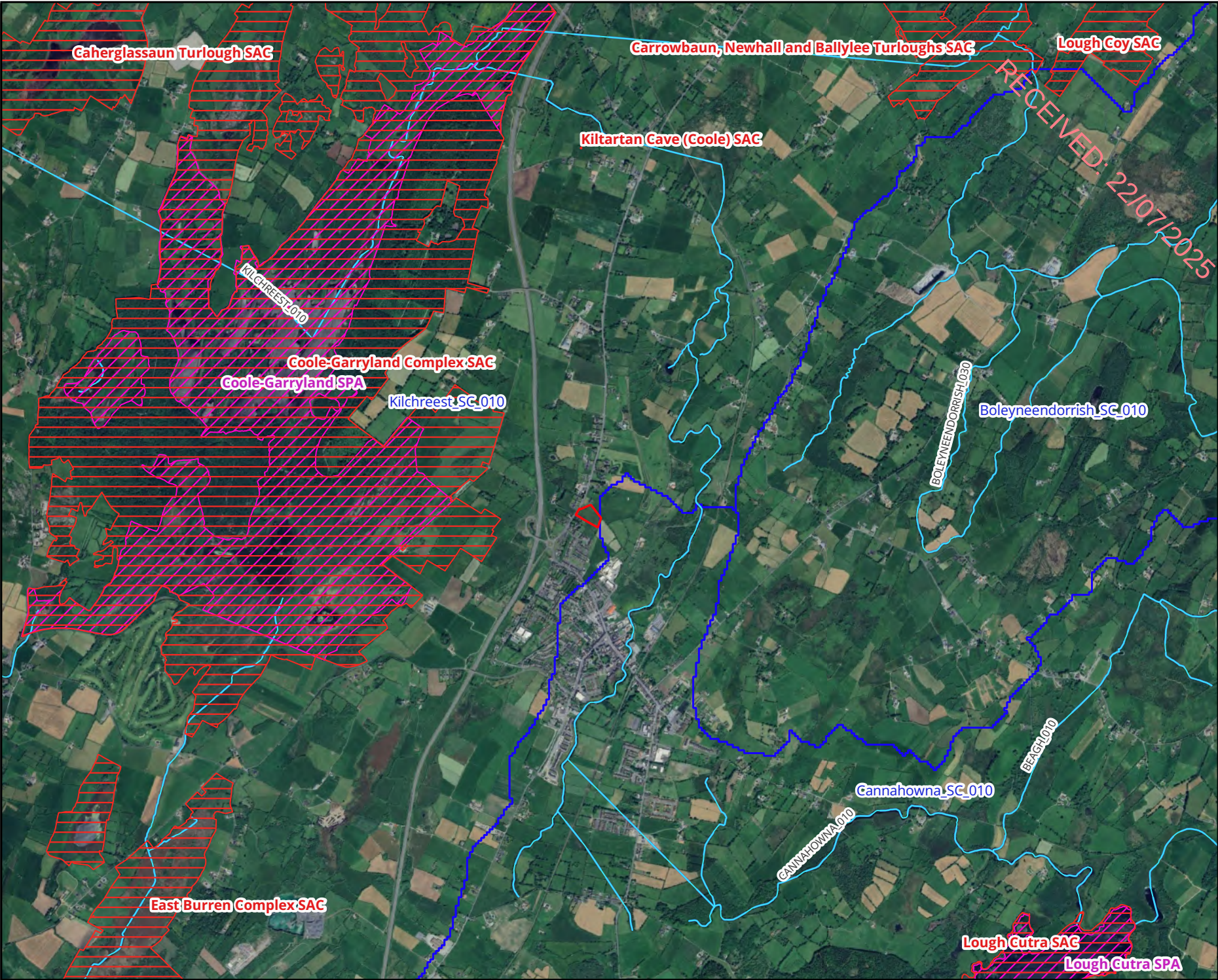
The site of the Proposed Development is located within the GWDTE-Caherglassaun Turlough (SAC000238) groundwater catchment. this groundwater body has been identified as 'poor' (as per the Water Framework Directive risk score) and is 'at risk'.

## 4.2

## Identification of the European Sites within the Likely Zone of Influence

The following methodology was used to establish any European Sites upon which there is a potential for a likely significant effect to occur either individually or in combination with other plans and projects as a result of the Proposed Development:

- Initially the most up to date GIS spatial datasets for European designated sites and water catchments were downloaded from the NPWS website ([www.npws.ie](http://www.npws.ie)) and the EPA website ([www.epa.ie](http://www.epa.ie)).
- All European Sites that could potentially be affected were identified using a source-pathway - receptor model. To provide context for the assessment, European Sites surrounding the Proposed Development are shown on Figure 4-1. Information on these sites according to the site-specific conservation objectives is provided in Table 4-1. Sites that were further away from the Proposed Development were also considered but given their distance from the site and the absence of any watercourses within the site, no additional sites have been considered within the Likely Zone of Interest.
- The catchment mapping was used to establish or discount potential hydrological connectivity between the site of the proposed development and any European Sites. The hydrological catchments are also shown in Figure 4-1.
- In relation to Special Protection Areas, in the absence of any specific European or Irish guidance in relation to such sites, the Scottish Natural Heritage (SNH) Guidance, 'Assessing Connectivity with Special Protection Areas (SPA)' (2016) was consulted. This document provides guidance in relation to the identification of connectivity between proposed development and Special Protection Areas. The guidance takes into consideration the distances species may travel beyond the boundary of their SPAs and provides information on dispersal and foraging ranges of bird species which are frequently encountered when considering plans and projects.
- Table 4-1 provides details of all relevant European Sites as identified in the preceding steps and assesses the potential for likely significant effects on each.
- The assessment considers any likely direct or indirect impacts of the Proposed Development, both alone and in combination with other plans and projects, on European Sites by virtue of criteria including the following: size and scale, land-take, distance from the European Site or key features of the site, resource requirements, emissions, excavation requirements, transportation requirements and duration of construction, operation and decommissioning were considered in this assessment.
- The site synopses and conservation objectives of these sites, as per the NPWS website ([www.npws.ie](http://www.npws.ie)), were consulted and reviewed at the time of preparing this report.
- Where potential pathways for Likely Significant Effect are identified, the site is included within the Likely Zone of Influence and further assessment is required within the NIS.
- The potential for the Proposed Development to result in cumulative impacts on any European Sites in combination with other plans and projects was considered in the assessment that is presented in Table 4-1. Plans and projects considered include those that are listed in Section 8.



Map Legend

- Proposed Development Site
- Special Protection Area (SPA)
- Special Area of Conservation (SAC)
- WFD Hydrological Subcatchments
- WFD Watercourses

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Drawing Title  
European Designated Sites within the Likely Zone of Influence

Project Title  
Gort Plaza

|                       |                           |
|-----------------------|---------------------------|
| Drawn By<br>FK        | Checked By<br>PD          |
| Project No.<br>241010 | Drawing No.<br>Figure 4-1 |
| Scale<br>1:35,000     | Date<br>25/06/2025        |

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Table 4-1 European Sites within the Likely Zone of Influence

| European Sites and distance from Proposed Development                                                                                         | Qualifying Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, <a href="http://www.npws.ie">www.npws.ie</a> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Conservation Objectives                                                                                                                                                                  | Identification of Source-Pathway-Receptor chain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Potential for Likely Significant Effects (LSEs) |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| Special Areas of Conservation (SAC)                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                 |
| <p>Coole-Garryland Complex SAC (000252)</p> <p><b>Approx. Distance:</b> 530m</p> <p><b>Hydrological Distance:</b> no direct connectivity.</p> | <ul style="list-style-type: none"> <li>➤ [1303] Lesser Horseshoe Bat (<i>Rhinolophus hipposideros</i>)</li> <li>➤ [3150] Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation</li> <li>➤ [3180] Turloughs</li> <li>➤ [3270] Rivers with muddy banks with <i>Chenopodium rubri</i> p.p. and <i>Bidenton</i> p.p. vegetation</li> <li>➤ [5130] <i>Juniperus communis</i> formations on heaths or calcareous grasslands</li> <li>➤ [6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites)</li> <li>➤ [8240] Limestone pavements</li> <li>➤ [91J0] <i>Taxus baccata</i> woods of the British Isles*</li> </ul> | <p>Detailed conservation objectives for this site, (Version 2, July 2024), were reviewed as part of the assessment and are available at <a href="http://www.npws.ie">www.npws.ie</a></p> | <p>The Proposed Development site is located entirely outside of this Designated Site and therefore, no potential for direct effect exists.</p> <p>The potential for significant indirect effects on this SAC was also considered. Whilst no watercourses were recorded within or adjacent to the Proposed Development site, the site is located within the same groundwater catchment as this SAC, the (GWDTE-Caherglassaun Turlough (SAC000238). As per the EPA map viewer, the Proposed Development site is located within an area of high vulnerability for groundwater. As this SAC is designated for groundwater dependant QIs, given the proximity of the site to the Proposed Development, and taking precautionary approach, a potential pathway for likely significant effects resulting from the percolation of pollutants to groundwater during both construction and operation was identified.</p> <p>Given the proximity of the Proposed Development site to this SAC, which is also designated for lesser horseshoe bat, taking a precautionary approach, there is potential for habitat loss and/or disturbance to this QI as a result of the Proposed Development.</p> <p><b>A source pathway receptor chain was identified and in the absence of mitigation, there is potential for the Proposed Development to result in Likely Significant Effects on this European Site. Therefore, the European Site is located within the Likely Zone of Influence and is considered further in this assessment.</b></p> | <p><b>Yes</b></p>                               |

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| European Sites and distance from Proposed Development                                                                                          | Qualifying Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie)                                             | Conservation Objectives                                                                                                                 | Identification of Source-Pathway-Receptor chain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Potential for Likely Significant Effects (LSEs) |
|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| <p>Caherglassaun Turlough SAC (000238)</p> <p><b>Approx. Distance:</b> 4.2 km</p> <p><b>Hydrological Distance:</b> no direct connectivity.</p> | <p>➤ [1303] Lesser Horseshoe Bat (<i>Rhinolophus hipposideros</i>)</p> <p>➤ [3180] Turloughs</p> <p>➤ [3270] Rivers with muddy banks with <i>Chenopodium rubri</i> p.p. and <i>Bidenton</i> p.p. vegetation</p> | Detailed conservation objectives for this site, (Version 1, October 2018), were reviewed as part of the assessment and are available at | <p>The Proposed Development site is located entirely outside of this Designated Site and therefore, no potential for direct effect exists.</p> <p>The potential for significant indirect effects on this SAC was also considered. Whilst no watercourses were recorded within or adjacent to the Proposed Development site, the site is located within the same groundwater catchment as this SAC, the GWDTE-Caherglassaun Turlough. As per the EPA map viewer, the Proposed Development site is located within an area of high vulnerability for groundwater. As this SAC is designated for groundwater dependant QIs, given the proximity of the site to the Proposed Development and taking precautionary approach, a potential pathway for likely significant effects resulting from the percolation of pollutants to groundwater during both construction and operation was identified.</p> <p>This SAC is designated for populations of lesser horseshoe bat. The Proposed Development is located approximately 4.2 km from the SAC, which is outside the foraging range (2.5 km) of this bat species (NPWS, 2013) and therefore, there is no potential for significant effect on populations of this species associated with this SAC.</p> <p><b>A source pathway receptor chain was identified and in the absence of mitigation, there is potential for the Proposed Development to result in Likely Significant Effects on this European Site. Therefore, the European Site is located within the Likely Zone of Influence and is considered further in this assessment.</b></p> | <b>Yes</b>                                      |
| <p>Kiltartan Cave (Coole) SAC (000286)</p>                                                                                                     | <p>➤ [1303] Lesser Horseshoe Bat (<i>Rhinolophus hipposideros</i>)</p>                                                                                                                                          | Detailed conservation objectives for this                                                                                               | <p>The Proposed Development site is located entirely outside of this Designated Site and therefore, no potential for direct effect exists.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Yes</b>                                      |

| European Sites and distance from Proposed Development                                                | Qualifying Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, <a href="http://www.npws.ie">www.npws.ie</a> )                                                          | Conservation Objectives                                                                                                                                                                     | Identification of Source-Pathway-Receptor chain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Potential for Likely Significant Effects (LSEs) |
|------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| <p><b>Approx. Distance:</b> 2.52 km</p> <p><b>Hydrological Distance:</b> no direct connectivity.</p> | <p>➤ [8310] Caves not open to the public</p>                                                                                                                                                                                                                   | <p>site, (Version 1, October 2018), were reviewed as part of the assessment and are available at <a href="http://www.npws.ie">www.npws.ie</a></p>                                           | <p>The potential for significant indirect effects on this SAC were also considered. No QI habitat for which this SAC has been designated was recorded within or adjacent to the Proposed Development site and therefore, there is no potential for <i>ex-situ</i> effects on this European Site.</p> <p>This SAC is designated for populations of lesser horseshoe bat (Roost ID 219). The Proposed Development is located marginally over the outer extent of this QI's foraging range (2.5 km) (NPWS, 2013).</p> <p>Therefore, taking a highly precautionary approach, potential exists for significant effect on Lesser Horseshoe Bat associated with this SAC as a result of habitat loss and/or disturbance during the construction and operational phases of the Proposed Development.</p> <p><b>A source pathway receptor chain was identified and in the absence of mitigation, there is potential for the Proposed Development to result in Likely Significant Effects on this European Site. Therefore, the European Site is located within the Likely Zone of Influence and is considered further in this assessment.</b></p> |                                                 |
| <p>East Burren Complex SAC (001926)</p> <p><b>Approx. Distance:</b> 3 km</p>                         | <p>➤ [3140] Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.</p> <p>➤ [3180] Turloughs</p> <p>➤ [3260] Water courses of plain to montane levels with the <i>Ranunculus fluitans</i> and <i>Callitriche-Batrachion</i> vegetation</p> | <p>Detailed conservation objectives for this site, (Version 1, January 2022), were reviewed as part of the assessment and are available at <a href="http://www.npws.ie">www.npws.ie</a></p> | <p>The Proposed Development site is located entirely outside of this Designated Site and therefore, no potential for direct effect exists.</p> <p>The potential for significant indirect effects on this SAC were also considered. No watercourses were recorded within the Proposed Development site. The closest mapped watercourse to the site is the Cannahowna watercourse [EPA Code: 29C01], which lies approximately 650m east of the Proposed Development site where it flows in a north-westerly direction and does not flow into this SAC.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No                                              |

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| European Sites and distance from Proposed Development           | Qualifying Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, <a href="http://www.npws.ie">www.npws.ie</a> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Conservation Objectives | Identification of Source-Pathway-Receptor chain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Potential for Likely Significant Effects (LSEs) |
|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| <b>Hydrological</b><br><b>Distance:</b> no direct connectivity. | <ul style="list-style-type: none"> <li>➤ [4060] Alpine and Boreal heaths</li> <li>➤ [5130] <i>Juniperus communis</i> formations on heaths or calcareous grasslands</li> <li>➤ [6130] Calaminarian grasslands of the <i>Violetalia calaminariae</i></li> <li>➤ [6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites)</li> <li>➤ [6510] Lowland hay meadows (<i>Alopecurus pratensis</i>, <i>Sanguisorba officinalis</i>)</li> <li>➤ [7210] Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>*</li> <li>➤ [7220] Petrifying springs with tufa formation (<i>Cratoneurion</i>)*</li> <li>➤ [7230] Alkaline fens</li> <li>➤ [8240] Limestone pavements</li> <li>➤ [8310] Caves not open to the public</li> <li>➤ [91E0] Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, <i>Salicion albae</i>)*</li> </ul> |                         | <p>Whilst the SAC and the Proposed Development site are located within the same groundwater catchment, the GWDTE-Caherglassaun Turlough, given the distance between the sites and the scale of the development, no potential for likely significant effect on the groundwater dependant QIs are anticipated.</p> <p>This SAC is designated for populations of lesser horseshoe bat. The Proposed Development is located approximately 3 km from the SAC, which is outside the foraging range (2.5 km) of this bat species (NPWS, 2013).</p> <p>There is no potential for significant effect on any aquatic QI of this SAC and Lesser Horseshoe Bat as a result of a deterioration in water quality and disturbance respectively.</p> <p><b>No source-pathway-receptor chain for likely significant effect exists and therefore, this SAC is not within the Likely Zone of Influence and no further assessment is required.</b></p> |                                                 |

| European Sites and distance from Proposed Development                                                                                                              | Qualifying Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, <a href="http://www.npws.ie">www.npws.ie</a> ) | Conservation Objectives                                                                                                                                                                     | Identification of Source-Pathway-Receptor chain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Potential for Likely Significant Effects (LSEs) |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| <p>Carrowbaun, Newhall and Ballylee Turloughs SAC (002293)</p> <p><b>Approx. Distance:</b> 4.5 km</p> <p><b>Hydrological Distance:</b> no direct connectivity.</p> | <p>➤ [3180] Turloughs</p>                                                                                                                                                                             | <p>Detailed conservation objectives for this site, (Version 1, January 2021), were reviewed as part of the assessment and are available at <a href="http://www.npws.ie">www.npws.ie</a></p> | <p>The Proposed Development site is located entirely outside of this Designated Site and therefore, no potential for direct effect exists.</p> <p>The potential for significant indirect effects on this SAC were also considered. No watercourses were recorded within the Proposed Development site. The closest mapped watercourse to the site is the Cannahowna watercourse [EPA Code: 29C01], which lies approximately 650m east of the Proposed Development site where it flows in a north-westerly direction and does not flow into this SAC.</p> <p>Whilst the SAC and the Proposed Development site are located within the same groundwater catchment, the GWDTE-Caherglassaun Turlough, given the distance between the sites and the scale of the development, no potential for likely significant effect on the groundwater dependant QIs are anticipated.</p> <p><b>No source-pathway-receptor chain for likely significant effect exists and therefore, this SAC is not within the Likely Zone of Influence and no further assessment is required.</b></p> | <p><b>No</b></p>                                |
| <p>Lough Cutra SAC (000299)</p> <p><b>Approx. Distance:</b> 3.9 km</p>                                                                                             | <p>➤ [1303] Lesser Horseshoe Bat (<i>Rhinolophus hipposideros</i>)</p>                                                                                                                                | <p>Detailed conservation objectives for this site, (Version 1, July 2018), were reviewed as part of the assessment and</p>                                                                  | <p>The Proposed Development site is located entirely outside of this Designated Site and therefore, no potential for direct effect exists.</p> <p>This SAC is designated for populations of lesser horseshoe bat. The Proposed Development is located approximately 3.9 km from this QI's known extent within the SAC, which is outside the foraging range (2.5km) of for this bat species (NPWS, 2013).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <p><b>No</b></p>                                |

| European Sites and distance from Proposed Development                                                                                       | Qualifying Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, <a href="http://www.npws.ie">www.npws.ie</a> )                                                                                                                                                                                                                                                                                                                                                                                                                           | Conservation Objectives                                                                                                                                                                   | Identification of Source-Pathway-Receptor chain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Potential for Likely Significant Effects (LSEs) |
|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| <b>Hydrological Distance:</b> no direct connectivity.                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | are available at <a href="http://www.npws.ie">www.npws.ie</a>                                                                                                                             | <p>Therefore, there is no potential for significant effect on Lesser Horseshoe Bat associated with this SAC as a result of disturbance or habitat loss.</p> <p><b>No source-pathway-receptor chain for likely significant effect exists and therefore, this SAC is not within the Likely Zone of Influence and no further assessment is required.</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                 |
| <p>Galway Bay Complex SAC (000268)</p> <p><b>Approx. Distance:</b> 10.1 km</p> <p><b>Hydrological Distance:</b> no direct connectivity.</p> | <ul style="list-style-type: none"> <li>➤ Mudflats and sandflats not covered by seawater at low tide [1140]</li> <li>➤ Coastal lagoons* [1150]</li> <li>➤ Large shallow inlets and bays [1160]</li> <li>➤ Reefs [1170]</li> <li>➤ Perennial vegetation of stony banks [1220]</li> <li>➤ Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]</li> <li>➤ Salicornia and other annuals colonising mud and sand [1310]</li> <li>➤ Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330]</li> <li>➤ Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410]</li> <li>➤ Turloughs* [3180]</li> </ul> | <p>Detailed conservation objectives for this site, (Version 1, April 2013), were reviewed as part of the assessment and are available at <a href="http://www.npws.ie">www.npws.ie</a></p> | <p>The Proposed Development site is located entirely outside of this Designated Site and therefore, no potential for direct effect exists.</p> <p>The potential for significant indirect effects on this SAC was also considered. No watercourses were recorded within the Proposed Development site and therefore, no direct hydrological connectivity exists to this SAC. The closest mapped watercourse to the site is the Cannahowna watercourse [EPA Code: 29C01], which lies approximately 650m east of the Proposed Development site. Furthermore, the Proposed Development site and this SAC are located in separate ground water catchments.</p> <p>Given the absence of direct hydrological connectivity, the distance from the Proposed Development site to the SAC, and the scale of the development, no potential for significant indirect effects are anticipated.</p> <p><b>No source-pathway-receptor chain for likely significant effect exists and therefore, this SAC is not within the Likely Zone of Influence and no further assessment is required.</b></p> | <b>No</b>                                       |

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| European Sites and distance from Proposed Development                                                                          | Qualifying Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, <a href="http://www.npws.ie">www.npws.ie</a> )                                                                                                                                                                                                                                                                                                                                              | Conservation Objectives                                                                                                                                                             | Identification of Source-Pathway-Receptor chain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Potential for Likely Significant Effects (LSEs) |
|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
|                                                                                                                                | <ul style="list-style-type: none"> <li>➤ <i>Juniperus communis</i> formations on heaths or calcareous grasslands [5130]</li> <li>➤ Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) [6210]</li> <li>➤ Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> [7210]</li> <li>➤ Alkaline fens [7230]</li> <li>➤ Limestone pavements [8240]</li> <li>➤ Otter (<i>Lutra lutra</i>) [1355]</li> <li>➤ Harbour Seal (<i>Phoca vitulina</i>) [1365]</li> </ul> |                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                 |
| <b>Special Protected Areas (SPA)</b>                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                 |
| Coole-Garryland SPA (004107)<br><br><b>Approx. Distance:</b> 875m<br><br><b>Hydrological Distance:</b> no direct connectivity. | <ul style="list-style-type: none"> <li>➤ [A038] Whooper swan (<i>Cygnus cygnus</i>)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                     | General conservation objectives for this site, (Version 1, October 2022), were reviewed as part of the assessment and are available at <a href="http://www.npws.ie">www.npws.ie</a> | <p>The Proposed Development site is located entirely outside of this Designated Site and therefore, no potential for direct effect exists.</p> <p>The potential for significant indirect effects on this SPA was also considered. Whilst the Proposed Development site is located within the core foraging range of Whooper Swan (&lt; 5km) (SNH, 2016), the single SCI of the SPA, no significant supporting habitat for this SCI was recorded within the Proposed development site and therefore, there is no potential for <i>ex-situ</i> significant effects as a result of disturbance or habitat loss.</p> | <b>No</b>                                       |

| European Sites and distance from Proposed Development                                                                               | Qualifying Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, <a href="http://www.npws.ie">www.npws.ie</a> ) | Conservation Objectives                                                                                                                                                                   | Identification of Source-Pathway-Receptor chain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Potential for Likely Significant Effects (LSEs) |
|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
|                                                                                                                                     |                                                                                                                                                                                                       |                                                                                                                                                                                           | <p>Additionally, there is no hydrological connectivity between the Proposed Development site and the SPA and therefore, there is no potential for indirect effects on aquatic feeding habitat for the single SCI of the SPA.</p> <p><b>No source-pathway-receptor chain for likely significant effect exists and therefore, this SPA is not within the Likely Zone of Influence and no further assessment is required.</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                 |
| <p>Lough Cutra SPA (004056)</p> <p><b>Approx. Distance:</b> 4.1 km</p> <p><b>Hydrological Distance:</b> no direct connectivity.</p> | <p>➤ [A017] Cormorant (<i>Phalacrocorax carbo</i>)</p>                                                                                                                                                | <p>Detailed conservation objectives for this site, (Version 1, March 2025), were reviewed as part of the assessment and are available at <a href="http://www.npws.ie">www.npws.ie</a></p> | <p>The Proposed Development site is located entirely outside of this Designated Site and therefore, no potential for direct effect exists.</p> <p>The potential for significant indirect effects on this SPA was also considered. No significant supporting habitat for the single SCI of the SPA was recorded within the Proposed development site and therefore, there is no potential for <i>ex-situ</i> significant effects as a result of disturbance or habitat loss.</p> <p>Additionally, there is no hydrological connectivity between the Proposed Development site and the SPA and therefore, there is no potential for indirect effects on aquatic feeding habitat for the single SCI of the SPA.</p> <p><b>No source-pathway-receptor chain for likely significant effect exists and therefore, this SPA is not within the Likely Zone of Influence and no further assessment is required.</b></p> | <b>No</b>                                       |
| <p>Slieve Aughty Mountains SPA (004168)</p>                                                                                         | <p>➤ [A084] Hen Harrier (<i>Circus cyaneus</i>)</p>                                                                                                                                                   | <p>Detailed conservation objectives for this</p>                                                                                                                                          | <p>The Proposed Development site is located entirely outside of this Designated Site and therefore, no potential for direct effect exists.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>No</b>                                       |

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| European Sites and distance from Proposed Development                                                                              | Qualifying Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, <a href="http://www.npws.ie">www.npws.ie</a> )                                                                                                                                                                                                                                                                                                                                 | Conservation Objectives                                                                                                                                                          | Identification of Source-Pathway-Receptor chain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Potential for Likely Significant Effects (LSEs) |
|------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| <b>Approx. Distance:</b> 4.5 km<br><br><b>Hydrological Distance:</b> no direct connectivity.                                       | ➤ [A098] Merlin ( <i>Falco columbarius</i> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | site, (Version 1, December 2022), were reviewed as part of the assessment and are available at <a href="http://www.npws.ie">www.npws.ie</a>                                      | <p>The potential for significant indirect effects on this SPA was also considered. No significant supporting habitat for the SCIs of the SPA was recorded within the Proposed development site and therefore, there is no potential for <i>ex-situ</i> significant effects as a result of disturbance or habitat loss.</p> <p><b>No source-pathway-receptor chain for likely significant effect exists and therefore, this SPA is not within the Likely Zone of Influence and no further assessment is required.</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                 |
| Inner Galway Bay SPA (004031)<br><br><b>Approx. Distance:</b> 10.1 km<br><br><b>Hydrological Distance:</b> no direct connectivity. | ➤ Great Northern Diver ( <i>Gavia immer</i> ) [A003]<br>➤ Cormorant ( <i>Phalacrocorax carbo</i> ) [A017]<br>➤ Grey Heron ( <i>Ardea cinerea</i> ) [A028]<br>➤ Brent Goose ( <i>Branta bernicla hrota</i> ) [A046]<br>➤ Wigeon ( <i>Anas Penelope</i> ) [A050]<br>➤ Teal ( <i>Anas crecca</i> ) [A052]<br>➤ Shoveler ( <i>Anas clypeata</i> ) [A056]<br>➤ Red-breasted Merganser ( <i>Mergus serrator</i> ) [A069]<br>➤ Ringed Plover ( <i>Charadrius hiaticula</i> ) [A137]<br>➤ Golden Plover ( <i>Pluvialis apricaria</i> ) [A140] | Detailed conservation objectives for this site, (Version 1, May 2013), were reviewed as part of the assessment and are available at <a href="http://www.npws.ie">www.npws.ie</a> | <p>The Proposed Development site is located entirely outside of this Designated Site and therefore, no potential for direct effect exists.</p> <p>The potential for significant indirect effects on this SPA was also considered. No watercourses were recorded within the Proposed Development site and therefore, no direct hydrological connectivity exists to this SPA. The closest mapped watercourse to the site is the Cannahowna watercourse [EPA Code: 29C01], which lies approximately 650m east of the Proposed Development site. Furthermore, the Proposed Development site and this SPA are located in separate ground water catchments.</p> <p>Given the absence of direct hydrological connectivity, the distance from the Proposed Development site to the SPA, and the scale of the development, no potential for significant indirect effects are anticipated.</p> <p><b>No source-pathway-receptor chain for likely significant effect exists and therefore, this SPA is not within the Likely Zone of Influence and no further assessment is required.</b></p> | No                                              |

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| European Sites and distance from Proposed Development | Qualifying Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, <a href="http://www.npws.ie">www.npws.ie</a> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Conservation Objectives | Identification of Source-Pathway-Receptor chain | Potential for Likely Significant Effects (LSEs) |
|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-------------------------------------------------|-------------------------------------------------|
|                                                       | <ul style="list-style-type: none"> <li>&gt; Lapwing (<i>Vanellus vanellus</i>) [A142]</li> <li>&gt; Dunlin (<i>Calidris alpina alpina</i>) [A149]</li> <li>&gt; Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157]</li> <li>&gt; Curlew (<i>Numenius arquata</i>) [A160]</li> <li>&gt; Redshank (<i>Tringa tetanus</i>) [A162]</li> <li>&gt; Turnstone (<i>Arenaria interpres</i>) [A169]</li> <li>&gt; Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179]</li> <li>&gt; Common Gull (<i>Larus canus</i>) [A182]</li> <li>&gt; Sandwich Tern (<i>Sterna sandvicensis</i>) [A191]</li> <li>&gt; Common Tern (<i>Sterna hirundo</i>) [A193]</li> <li>&gt; Wetlands [A999]</li> </ul> |                         |                                                 |                                                 |

4.2.1

## Stage 1 Appropriate Assessment Concluding Statement

It cannot be excluded beyond reasonable scientific doubt, in view of best scientific knowledge, on the basis of objective information and in light of the conservation objectives of the relevant European Sites, that the Proposed Development, individually or in combination with other plans and projects, has the potential to have a likely significant effect on the following European Sites:

- Coole-Garryland Complex SAC (000252)
- Caherglassaun Turlough SAC (000238)
- Kiltartan Cave (Coole) SAC (000286)

The following sections consider each European Site individually to:

- Determine which individual qualifying features have the potential to be adversely affected by the Proposed Development.
- Provide information with regard to the Conservation Objectives and site-specific pressures and threats for those qualifying features that have the potential to be adversely affected.

5.

## STAGE 2- NATURA IMPACT STATEMENT (NIS)

This Natura Impact Statement (NIS) provides an analysis of the potential adverse effects on the integrity of the EU designated sites for which a potential pathway for significant effect was identified at the Appropriate Assessment Screening stage. Potential adverse effects are assessed in view of best scientific knowledge, based on objective information in relation to the Proposed Development including the proposed avoidance, reduction and preventive measures that are described in Section 6 below. The following sections provide a review of the potential impact pathways for the screened-in EU Designated Sites, identified in the Appropriate Assessment Screening assessment in Section 4 above.

5.1

### Identification of relevant Qualifying Features and Desk Study

5.1.1

#### Coole-Garryland Complex SAC (000252)

The potential for impacts on this SAC were identified in Table 4-1 in Section 4 above. The identified pathways for effect include the following:

- There is potential for indirect impacts via deterioration of groundwater arising from the runoff or percolation of pollutants into groundwaters as a result of the Proposed Development.
- This SAC is located approximately 530m from the site of the Proposed Development, therefore the potential for habitat loss and/or disturbance to lesser horseshoe bat exists.

The Conservation Objectives document and Natura 2000 Data Form for this designated site were reviewed during this assessment.

Table 5-1 below lists the qualifying features of this European Site and determines, in the light of their Conservation Objectives, whether there is any complete source-pathway-receptor chain, by which adverse effects may occur.

Table 5-1 Assessment of Qualifying features potentially affected in Coole-Garryland Complex SAC.

| Qualifying feature                                                                       | Conservation Objective (NPWS, Version 1, July 2024)                                                                                                                  | Rationale                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Potential for Adverse Effects Yes/No |
|------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| [3150] Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation    | To maintain the favourable conservation condition of Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation in Coole-Garryland Complex SAC   | <p>According to the SSCOs for this SAC, the presence and extent of this habitat within the SAC is currently unknown. Therefore, following the precautionary principle, a potential pathway for significant effect on this QI was identified via the deterioration of groundwater quality within the SAC arising from the runoff of pollutants into groundwater systems during the construction and operational phases of the Proposed Development.</p> <p><b>A complete source-pathway-receptor chain for adverse effects on this habitat was identified and it is assessed further in this NIS.</b></p>                                                                                                                                                                                                     | Yes                                  |
| [3180] Turloughs                                                                         | To restore the favourable conservation condition of Turloughs* in Coole-Garryland Complex SAC                                                                        | <p>According to Map 4 in the SSCOs for this SAC, the extent of this habitat is mapped in detail throughout the extent of this SAC. Coole-Garryland Complex SAC is a well-studied complex of Irish turloughs.</p> <p>The site of the Proposed development lies in the same groundwater catchment (GWDTE-Caherglassaun Turlough (SAC000238)) as this SAC. Therefore, a potential pathway for significant effect on this QI habitat was identified via the deterioration of groundwater quality within the SAC arising from the runoff of pollutants into groundwater systems during the construction and operational phases of the Proposed Development.</p> <p><b>A complete source-pathway-receptor chain for adverse effects on this habitat was identified and it is assessed further in this NIS.</b></p> | Yes                                  |
| [3270] Rivers with muddy banks with Chenopodion rubri p.p. and Bidention p.p. vegetation | To restore the favourable conservation condition of Rivers with muddy banks with Chenopodion rubri p.p. and Bidention p.p. vegetation in Coole-Garryland Complex SAC | <p>This habitat is a constituent vegetation community within the turlough habitat in Coole-Garryland Complex SAC. Coole-Garryland Complex SAC is a well-studied complex of Irish turloughs.</p> <p>Therefore, a potential pathway for significant effect on this QI habitat was identified via the deterioration of groundwater quality within the SAC arising from the runoff or percolation of pollutants into groundwater systems during the construction and operational phases of the Proposed Development.</p>                                                                                                                                                                                                                                                                                         | Yes                                  |

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| Qualifying feature                                                                                                               | Conservation Objective (NPWS, Version 1, July 2024)                                                                                                                                                          | Rationale                                                                                                                                                                                                                                                                                                                                                                                        | Potential for Adverse Effects Yes/No |
|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
|                                                                                                                                  |                                                                                                                                                                                                              | <b>A complete source-pathway-receptor chain for adverse effects on this habitat was identified and it is assessed further in this NIS.</b>                                                                                                                                                                                                                                                       |                                      |
| [5130] <i>Juniperus communis</i> formations on heaths or calcareous grasslands                                                   | To restore the favourable conservation condition of <i>Juniperus communis</i> formations on heaths or calcareous grasslands in Coole-Garryland Complex SAC                                                   | These QI habitats are entirely terrestrial and will not be impacted via any deterioration of water quality as a result of the Proposed Development. Given the terrestrial nature of these QI habitats, no complete source- pathway- receptor chain for adverse effect on these habitats as a result of the Proposed Development was identified.<br><br><b>No further assessment is required.</b> | No                                   |
| [6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) | To restore the favourable conservation condition of Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) in Coole-Garryland Complex SAC |                                                                                                                                                                                                                                                                                                                                                                                                  | No                                   |
| [8240] Limestone pavements*                                                                                                      | To restore the favourable conservation condition of Limestone pavements* in Coole-Garryland Complex SAC                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                  | No                                   |
| [91J0] <i>Taxus baccata</i> woods of the British Isles                                                                           | To restore the favourable conservation condition of <i>Taxus baccata</i> woods of the British Isles* in Coole-Garryland Complex SAC                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                  | No                                   |
| [1303] Lesser Horseshoe Bat ( <i>Rhinolophus hipposideros</i> )                                                                  | To maintain the Favourable conservation condition of the Lesser Horseshoe Bat in CooleGarryland Complex SAC                                                                                                  | According to Map 8 of the SSCOs for this SAC, the site of the Proposed Development lies outside the 2.5km potential foraging range for Lesser Horseshoe bat. The Proposed Development is located approximately 3.7 km from SAC roost, and approximately 1.15 km outside the potential foraging range of this species within the SAC. The development is also                                     | No                                   |

| Qualifying feature | Conservation Objective (NPWS, Version 1, July 2024) | Rationale                                                                                                                                                                                                                                                                                                                                                                                                                   | Potential for Adverse Effects Yes/No |
|--------------------|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
|                    |                                                     | <p>separated from the SAC by the M8 motorway and is located approximately 2.8km south of the bat-friendly overpass constructed for the motorway. Due to the distance to the designated roost, this existing barrier created by the M8 and the limited lesser horseshoe bat activity recorded on site, no potential for adverse effects has been identified on this QI.</p> <p><b>No further assessment is required.</b></p> |                                      |

### 5.1.1.1 Site Specific Pressures and Threats

As per the Natura 2000 Data Form, the site-specific threats, pressures, and activities with potential to impact on the European Site were reviewed and considered in relation to the Proposed Development. These are provided in Table 5-2.

Table 5-2 Site-specific threats, pressures and activities with potential to effect Coole-Garryland Complex SAC.

| Negative Impacts |                       |                                                                              |                |
|------------------|-----------------------|------------------------------------------------------------------------------|----------------|
| Rank             | Threats and Pressures |                                                                              | Inside/Outside |
| High             | A08                   | Fertilisation                                                                | Inside         |
| High             | J02.01                | Landfill, land reclamation and drying out, general                           | Inside         |
| High             | J02.05                | Modification of hydrographic functioning, general                            | Both           |
| Low              | A10.01                | Removal of hedges and copses or scrub                                        | Inside         |
| Low              | C01.01                | Sand and gravel extraction                                                   | Inside         |
| Low              | C03.03                | Wind energy production                                                       | Both           |
| Low              | E03.03                | Disposal of inert materials                                                  | Both           |
| Low              | H01.08                | Diffuse pollution to surface waters due to household sewage and waste waters | Both           |
| Low              | H02.06                | Diffuse groundwater pollution due to agricultural and forestry activities    | Both           |
| Low              | J01.01                | Burning down                                                                 | Inside         |
| Low              | J02.04.01             | Flooding                                                                     | Both           |
| Medium           | A04.01.01             | Intensive cattle grazing                                                     | Inside         |
| Medium           | A04.01.02             | Intensive sheep grazing                                                      | Inside         |
| Medium           | D01.02                | Roads, motorways                                                             | Outside        |
| Medium           | E03.01                | Disposal of household/recreational facility waste                            | Both           |
| Medium           | I01                   | Invasive non-native species                                                  | Inside         |
| Medium           | J02.01.03             | Infilling of ditches, dykes, ponds, pools, marshes or pits                   | Both           |

### 5.1.1.2 Relevant Special Conservational Interests

[3150] Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition* - type vegetation

As per the detailed Site-Specific Conservation Objectives (SSCO) document (NPWS, 2024), Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition* - type vegetation is known to occur within the SAC. According to the Natura 2000 Form, 56.02 ha of this habitat are present within the SAC.

According to the Article 17 Report (NPWS 2019), the overall Conservation Status for this QI habitat is 'Inadequate' with a stable trend.

The targets and attributes for this QI, as per the SSCOs of the SAC, are provided in Table 5-3

Table 5-3 Targets and attributes associated with nominated site-specific conservation objectives for Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition* - type vegetation in Coole-Garryland Complex SAC

| Attribute                                       | Target                                                                                                                                        |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Habitat area                                    | Area stable or increasing, subject to natural processes                                                                                       |
| Habitat distribution                            | No decline, subject to natural processes                                                                                                      |
| Typical species                                 | Typical species present, in good condition, and demonstrating typical abundances and distribution                                             |
| Vegetation composition: characteristic zonation | All characteristic zones should be present, correctly distributed and in good condition                                                       |
| Vegetation distribution: maximum depth          | Maintain maximum depth of vegetation, subject to natural processes                                                                            |
| Hydrological regime: water level fluctuations   | Maintain appropriate hydrological regime necessary to support the habitat                                                                     |
| Lake substratum quality                         | Maintain appropriate substratum type, extent and chemistry to support the vegetation                                                          |
| Transparency                                    | Maintain appropriate Secchi transparency. There should be no decline in Secchi depth/transparency                                             |
| Nutrients                                       | Maintain/restore the concentration of nutrients in the water column to sufficiently low levels to support the habitat and its typical species |
| Phytoplankton biomass                           | Maintain/restore appropriate water quality to support the habitat, including high chlorophyll <i>a</i> status                                 |
| Attached algal biomass                          | Maintain/restore trace/absent attached algal biomass (<5% cover)                                                                              |
| Acidification status                            | Maintain appropriate water and sediment pH, alkalinity and cation concentrations to support the habitat, subject to natural processes         |
| Water colour                                    | Maintain/restore appropriate water colour to support the habitat                                                                              |
| Dissolved organic carbon (DOC)                  | Maintain/restore appropriate organic carbon levels to support the habitat                                                                     |
| Turbidity                                       | Maintain appropriate turbidity to support the habitat                                                                                         |

|                                      |                                                                                                                                |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Fringing habitat: area and condition | Maintain the area and condition of fringing habitats necessary to support the natural structure and functioning of the habitat |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|

### [3180] Turloughs

As per the detailed Site-Specific Conservation Objectives (SSCO) document (NPWS, 2024), Turloughs known to occur within the SAC. According to the Natura 2000 Form, 425.76 ha of this habitat are present within the SAC.

According to the Article 17 Report (NPWS 2019), the overall Conservation Status for this QI habitat is 'Inadequate' with a stable trend.

The targets and attributes for this QI, as per the SSCO of the SAC, are provided in Table 5-4.

Table 5-4 Targets and attributes associated with nominated site-specific conservation objectives for Turloughs in Coole-Garryland Complex SAC.

| Attribute                                                          | Target                                                                                                                     |
|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Habitat area                                                       | Area of c.365.1ha stable or increasing, subject to natural processes                                                       |
| Habitat distribution                                               | No decline, subject to natural processes                                                                                   |
| Hydrological regime                                                | Maintain appropriate natural hydrological regime necessary to support the natural structure and functioning of the habitat |
| Soil type                                                          | Maintain variety, area and extent of soil types necessary to support turlough vegetation and other biota                   |
| Soil nutrient status: nitrogen and phosphorus                      | Maintain nutrient status appropriate to soil types and vegetation communities                                              |
| Physical structure: bare ground                                    | Maintain sufficient wet bare ground, as appropriate                                                                        |
| Chemical processes: calcium carbonate deposition and concentration | Maintain appropriate calcium carbonate deposition rate and concentration in soil                                           |
| Active peat formation                                              | Maintain active peat formation                                                                                             |
| Water quality                                                      | Restore appropriate water quality to support the natural structure and functioning of the habitat                          |
| Vegetation composition: area of vegetation communities             | Maintain area of sensitive and high conservation value vegetation communities/units                                        |
| Vegetation composition: vegetation zonation                        | Maintain vegetation zonation/mosaic characteristic of the turlough                                                         |
| Vegetation structure: sward height                                 | Maintain sward heights appropriate to the vegetation unit, and a variety of sward heights across the turlough              |
| Typical species                                                    | Maintain typical species within the turlough                                                                               |

|                                         |                                                                                                                    |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Fringing habitats: area                 | Maintain marginal fringing habitats that support turlough vegetation, invertebrate, mammal and/or bird populations |
| Vegetation structure: turlough woodland | Maintain appropriate turlough woodland diversity and structure                                                     |

### [3270] Rivers with muddy banks with *Chenopodium rubri* p.p. and *Bidenton* p.p. vegetation

As per the detailed Site-Specific Conservation Objectives (SSCO) document (NPWS, 2024), Rivers with muddy banks with *Chenopodium rubri* p.p. and *Bidenton* p.p. vegetation is known to occur within the SAC. According to the Natura 2000 Form, 22.41 ha of this habitat are present within the SAC.

According to the Article 17 Report (NPWS 2019), the overall Conservation Status for this QI habitat is 'Favourable' with a stable trend.

The targets and attributes for this QI, as per the SSCOs of the SAC, are provided in Table 5-5.

*Table 5-5 Targets and attributes associated with nominated site-specific conservation objectives for Rivers with muddy banks with *Chenopodium rubri* p.p. and *Bidenton* p.p. vegetation in Coole-Garryland Complex SAC.*

| Attribute                                                          | Target                                                                                                                         |
|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Habitat area                                                       | Area stable, subject to natural fluctuations                                                                                   |
| Habitat distribution                                               | No decline, subject to natural processes                                                                                       |
| Hydrological regime                                                | Maintain appropriate natural hydrological regime necessary to support the natural structure and functioning of the habitat     |
| Soil type                                                          | Maintain area and extent of soil types necessary to support the habitat                                                        |
| Soil nutrient status: nitrogen and phosphorus                      | Maintain nutrient status appropriate to soil types and vegetation communities/units                                            |
| Physical structure: bare ground                                    | Maintain sufficient wet bare ground, as appropriate                                                                            |
| Chemical processes: calcium carbonate deposition and concentration | Maintain appropriate calcium carbonate deposition rate and concentration in soil                                               |
| Water quality                                                      | Restore appropriate water quality to support the natural structure and functioning of the habitat                              |
| Vegetation composition: area of vegetation communities             | Maintain area of sensitive and high conservation value vegetation communities/units                                            |
| Vegetation composition: vegetation zonation                        | Maintain vegetation zonation/mosaic characteristic of the site                                                                 |
| Typical species                                                    | Maintain typical species                                                                                                       |
| Fringing habitats: area and condition                              | Maintain the area and condition of fringing habitats necessary to support the natural structure and functioning of the habitat |

5.1.2

## Caherglassaun Turlough SAC (000238)

The potential for impacts on this SAC were identified in Table 4-1 in Section 4 above. The identified pathways for effect include the following:

- There is potential for indirect impacts via deterioration of groundwater arising from the runoff or percolation of pollutants into groundwaters as a result of the Proposed Development.

The Conservation Objectives document and Natura 2000 Data Form for this designated site were reviewed during this assessment.

Table 5-6 below lists the qualifying features of this European Site and determines, in the light of their Conservation Objectives, whether there is any complete source-pathway-receptor chain, by which adverse effects may occur.

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Table 5-6 Assessment of Qualifying features potentially affected in Caherglassaun Turlough SAC.

| Qualifying feature                                                                                    | Conservation Objective (NPWS, Version 1, October 2018)                                                                                                                            | Rationale                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Potential for Adverse Effects Yes/No |
|-------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| [3180] Turloughs                                                                                      | To restore the favourable conservation condition of Turloughs* in Caherglassaun Turlough SAC                                                                                      | <p>According to Map 2 in the SSCOs for this SAC, the extent of this habitat is mapped in detail throughout the extent of this SAC. Caherglassaun turlough is one of the better studied of Irish turloughs.</p> <p>The site of the Proposed development lies in the same groundwater catchment (GWDTE-Caherglassaun Turlough (SAC000238)) as this SAC. Therefore, a potential pathway for significant effect on this QI habitat was identified via the deterioration of water quality within the SAC arising from the runoff of pollutants into groundwater systems during the construction and operational phases of the Proposed Development.</p> <p><b>A complete source-pathway-receptor chain for adverse effects on this habitat was identified and it is assessed further in this NIS.</b></p> | Yes                                  |
| [3270] Rivers with muddy banks with <i>Chenopodium rubri</i> p.p. and <i>Bidenton</i> p.p. vegetation | To restore the favourable conservation condition of Rivers with muddy banks with <i>Chenopodium rubri</i> p.p. and <i>Bidenton</i> p.p. vegetation in Coole-Garryland Complex SAC | <p>The area of habitat 3270 in Caherglassaun Turlough SAC can vary significantly inter-annually with flooding regime.</p> <p>As the site of the Proposed development and this SAC are located in the same surface water and groundwater catchments, a potential pathway for significant effect on this QI habitat was identified via the deterioration of water quality within the SAC arising from the runoff of pollutants into surface water and groundwater systems during the construction and operational phases of the Proposed Development.</p> <p><b>A complete source-pathway-receptor chain for adverse effects on this habitat was identified and it is assessed further in this NIS.</b></p>                                                                                            | Yes                                  |
| [1303] Lesser Horseshoe Bat ( <i>Rhinolophus hipposideros</i> )                                       | To maintain the favourable conservation condition of Lesser Horseshoe Bat in Caherglassaun Turlough SAC                                                                           | <p>According to Map 3 of the SSCOs for this SAC, the site of the Proposed Development lies outside the 2.5km potential foraging range for Lesser Horseshoe bat. The Proposed Development is located approximately 5.5 km from SAC roost, and approximately 2.5 km outside the potential foraging range of this species within the SAC. Therefore, no potential for adverse effects has been identified on this QI.</p>                                                                                                                                                                                                                                                                                                                                                                               | No                                   |

| Qualifying feature | Conservation Objective (NPWS, Version 1, October 2018) | Rationale                          | Potential for Adverse Effects Yes/No |
|--------------------|--------------------------------------------------------|------------------------------------|--------------------------------------|
|                    |                                                        | No further assessment is required. |                                      |

### 5.1.2.1 Site Specific Pressures and Threats

As per the Natura 2000 Data Form, the site-specific threats, pressures, and activities with potential to impact on the European Site were reviewed and considered in relation to the Proposed Development. These are provided in Table 5-7.

Table 5-7 Site specific pressures and threats with potential to effect Caherglassaun Turlough SAC.

| Negative Impacts |                       |                                                                              |                |
|------------------|-----------------------|------------------------------------------------------------------------------|----------------|
| Rank             | Threats and Pressures |                                                                              | Inside/Outside |
| High             | A04.01.01             | Intensive cattle grazing                                                     | Inside         |
| High             | A05.02                | Stock feeding                                                                | Inside         |
| High             | A08                   | Fertilisation                                                                | Both           |
| High             | A10.01                | Removal of hedges and copses or scrub                                        | Inside         |
| High             | J02.04.01             | Flooding                                                                     | Both           |
| Low              | H01.08                | Diffuse pollution to surface waters due to household sewage and waste waters | Outside        |
| Medium           | E03.01                | Disposal of household/recreational facility waste                            | Inside         |
| Medium           | H02.06                | Diffuse groundwater pollution due to agricultural and forestry activities    | Both           |

### 5.1.2.2 Relevant Special Conservational Interests

#### [3180] Turloughs

As per the detailed Site-Specific Conservation Objectives (SSCO) document (NPWS, 2018), Turloughs known to occur within the SAC. According to the Natura 2000 Form, 152.4 ha of this habitat are present within the SAC.

According to the Article 17 Report (NPWS 2019), the overall Conservation Status for this QI habitat is 'Inadequate' with a stable trend.

The targets and attributes for this QI, as per the SSCO of the SAC, are provided in Table 5-8.

Table 5-8 Targets and attributes associated with nominated site-specific conservation objectives for Turloughs in Caherglassaun Turlough SAC.

| Attribute            | Target                                                               |
|----------------------|----------------------------------------------------------------------|
| Habitat area         | Area stable at c.63.3ha or increasing, subject to natural processes. |
| Habitat distribution | No decline, subject to natural processes                             |

|                                                                    |                                                                                                                            |
|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Hydrological regime                                                | Maintain appropriate natural hydrological regime necessary to support the natural structure and functioning of the habitat |
| Soil type                                                          | Maintain variety, area and extent of soil types necessary to support turlough vegetation and other biota                   |
| Soil nutrient status: nitrogen and phosphorus                      | Maintain/restore nutrient status appropriate to soil types and vegetation communities                                      |
| Physical structure: bare ground                                    | Maintain sufficient wet bare ground, as appropriate                                                                        |
| Chemical processes: calcium carbonate deposition and concentration | Maintain appropriate calcium carbonate deposition rate and concentration in soil                                           |
| Water quality                                                      | Restore appropriate water quality to support the natural structure and functioning of the habitat                          |
| Active peat formation                                              | Maintain active peat formation, where appropriate                                                                          |
| Vegetation composition: area of vegetation communities             | Maintain/restore area of sensitive and high conservation value vegetation communities/units                                |
| Vegetation composition: vegetation zonation                        | Maintain/restore vegetation zonation/mosaic characteristic of the site                                                     |
| Vegetation structure: sward height                                 | Maintain/restore sward heights appropriate to the vegetation unit, and a variety of sward heights across the turlough      |
| Typical species                                                    | Maintain typical species within and across the turlough                                                                    |
| Fringing habitats: area                                            | Maintain marginal fringing habitats that support turlough vegetation, invertebrate, mammal and/or bird populations         |
| Vegetation structure: turlough woodland                            | Maintain appropriate turlough woodland diversity and structure                                                             |

### [3270] Rivers with muddy banks with *Chenopodium rubri* p.p. and *Bidention* p.p. vegetation

As per the detailed Site-Specific Conservation Objectives (SSCO) document (NPWS, 2018), Rivers with muddy banks with *Chenopodium rubri* p.p. and *Bidention* p.p. vegetation is known to occur within the SAC. According to the Natura 2000 Form, 2.4 ha of this habitat are present within the SAC.

According to the Article 17 Report (NPWS 2019), the overall Conservation Status for this QI habitat is 'Favourable' with a stable trend.

Taking a precautionary approach there is potential for this habitat to occur within the same groundwater catchment as the Proposed Development resulting in potential for ex-situ disturbance of this habitat via a deterioration in groundwater quality.

The targets and attributes for this QI, as per the SSCOs of the SAC, are provided in Table 5-9.

Table 5-9 Targets and attributes associated with nominated site-specific conservation objectives for Rivers with muddy banks with *Chenopodium rubri* p.p. and *Bidenton* p.p. vegetation in Caherglassaun Turlough SAC.

| Attribute                                                          | Target                                                                                                                                           |
|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Habitat area                                                       | Area stable, subject to natural fluctuations                                                                                                     |
| Habitat distribution                                               | No decline, subject to natural processes                                                                                                         |
| Hydrological regime                                                | Maintain appropriate natural hydrological regime necessary to support the natural structure and functioning of the habitat                       |
| Soil type                                                          | Maintain area and extent of soil types necessary to support the habitat                                                                          |
| Soil nutrient status: nitrogen and phosphorus                      | Maintain nutrient status appropriate to soil types and vegetation communities/units                                                              |
| Physical structure: bare ground                                    | Maintain sufficient wet bare ground, as appropriate                                                                                              |
| Chemical processes: calcium carbonate deposition and concentration | Maintain appropriate calcium carbonate deposition rate and concentration in soil                                                                 |
| Water quality                                                      | Maintain/restore appropriate water quality to support the natural structure and functioning of the habitat                                       |
| Vegetation composition: area of vegetation communities             | Maintain area of sensitive and high conservation value vegetation communities/units                                                              |
| Vegetation composition: vegetation zonation                        | Maintain vegetation zonation/mosaic characteristic of the site                                                                                   |
| Typical species: plants                                            | Maintain typical species                                                                                                                         |
| Fringing habitats: area and condition                              | Maintain the area and condition of fringing habitats necessary to support the natural structure and functions and typical species of the habitat |

### 5.1.3 **Kiltartan Cave (Coole) SAC (000286)**

The potential for impacts on this SAC were identified in Table 4-1 in Section 4 above. The identified pathways for effect include the following:

- Taking a highly precautionary approach, there is potential for indirect impacts via habitat loss and/or disturbance as this SAC is located 2.52km of the foraging range for Lesser Horseshoe Bat.

The Conservation Objectives document and Natura 2000 Data Form for this designated site were reviewed during this assessment.

Table 5-10 below lists the qualifying features of this European Site and determines, in the light of their Conservation Objectives, whether there is any complete source-pathway-receptor chain, by which adverse effects may occur.

Table 5-10 Assessment of Qualifying features potentially affected in Kiltartan Cave (Coole) SAC.

| Qualifying feature                                              | Conservation Objective (NPWS, Version 1, October 2018)                                                                                                                                                                                                                           | Rationale                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Potential for Adverse Effects Yes/No |
|-----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| [1303] Lesser Horseshoe Bat ( <i>Rhinolophus hipposideros</i> ) | To maintain the favourable conservation condition of Lesser Horseshoe Bat in Kiltartan Cave (Coole) SAC                                                                                                                                                                          | <p>According to Map 2 of the SSCOs for this SAC, the site of the Proposed Development lies in the outer extent of the 2.5km potential foraging range for lesser horseshoe bat of this SAC. Whilst the Proposed Development site is not mapped as potential foraging grounds for this QI, taking a precautionary approach, potential exists for indirect effects via disturbance.</p> <p><b>A complete source-pathway-receptor chain for adverse effects on this habitat was identified and it is assessed further in this NIS.</b></p> | Yes                                  |
| [8310] Caves not open to the public                             | Caves not open to the public (8310) is integrally linked to lesser horseshoe bat ( <i>Rhinolophus hipposideros</i> ) (1303) as part of the habitat for the species; therefore, a separate conservation objective has not been set for the habitat in Kiltartan Cave (Coole) SAC. | <p>This QI habitat is entirely terrestrial and will not be impacted via any deterioration of water quality as a result of the Proposed Development. Given the terrestrial nature of this QI habitats, no complete source- pathway- receptor chain for adverse effects on this habitat as a result of the Proposed Development was identified.</p> <p><b>No further assessment is required.</b></p>                                                                                                                                     | No                                   |

### 5.1.3.1 Site Specific Pressures and Threats

As per the Natura 2000 Data Form, the site-specific threats, pressures, and activities with potential to impact on the European Site were reviewed and considered in relation to the Proposed Development. These are provided in Table 5-11.

Table 5-11 Site-specific threats, pressures and activities with potential to effect on Kiltartan Cave (Coole) SAC.

| Negative Impacts |                       |                          |                |
|------------------|-----------------------|--------------------------|----------------|
| Rank             | Threats and Pressures |                          | Inside/Outside |
| High             | D01.02                | Roads, motorways         | Both           |
| High             | J02.04.01             | Flooding                 | Both           |
| Medium           | G01.04.03             | Recreational cave visits | Inside         |

### 5.1.3.2 Relevant Special Conservational Interests

#### [1303] Lesser Horseshoe Bat (*Rhinolophus hipposideros*)

As per the SSCOs for this SAC, Kiltartan Cave (Coole) SAC has been selected for lesser horseshoe bat because of the presence of one internationally important winter roost (roost id. 219 in NPWS database). Damage or disturbance to the roost or to the habitat immediately surrounding it will lead to a decline in its condition (Mitchell-Jones et al., 2007).

According to the Article 17 Report (NPWS 2019), the overall Conservation Status for this QI habitat is 'Inadequate' with a declining trend.

The targets and attributes for this QI, as per the SSCOs of the SAC, are provided in Table 5-12.

Table 5-12 Targets and attributes associated with nominated site-specific conservation objectives for Lesser Horseshoe Bat in Kiltartan Cave (Coole) SAC.

| Attribute                            | Target                                                                                                                             |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Population per roost                 | Minimum number of 20 bats for the winter roost (roost id. 219 in NPWS database)                                                    |
| Winter roosts                        | No decline                                                                                                                         |
| Auxiliary roosts                     | No decline                                                                                                                         |
| Extent of potential foraging habitat | No significant decline within 2.5km of qualifying roost                                                                            |
| Linear features                      | No significant loss within 2.5km of qualifying roost                                                                               |
| Light pollution                      | No significant increase in artificial light intensity adjacent to named roost or along commuting routes within 2.5km of the roost. |

6.

## ASSESSMENT OF POTENTIAL EFFECTS & ASSOCIATED MITIGATION

This section of the NIS assesses the potential effects of the Proposed Development on the identified relevant Qualifying Interests/Special Conservation Interests. This assessment is undertaken in the absence of any mitigation and in respect of the conservation objectives of European Site/s. The Conservation Objectives of the European Sites assessed were reviewed on the 18/06/2025. The Conservation Objectives for this site are available at the following location:

- Coole-Garryland Complex SAC (000252):  
[https://www.npws.ie/sites/default/files/protected-sites/conservation\\_objectives/CO000252.pdf](https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000252.pdf)
- Caherglassaun Turlough SAC (000238):  
[https://www.npws.ie/sites/default/files/protected-sites/conservation\\_objectives/CO000238.pdf](https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000238.pdf)
- Kiltartan Cave (Coole) SAC (000286):  
[https://www.npws.ie/sites/default/files/protected-sites/conservation\\_objectives/CO000286.pdf](https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000286.pdf)

6.1

### Potential for Direct Effects on European Sites

There will be no direct effects on the QIs/SCIs of the European sites listed above. The proposed works are located entirely outside of the boundaries of these European Sites. There are no Annex I habitats associated with any of these European Sites within the Proposed Development site. No significant supporting habitat for Annex II protected species associated with any European Sites is present within or adjacent to the site boundary. The nearest mapped watercourse is the Cannahowna River which is located approximately 650m to the east of the site. The site does not support significant suitable habitat for SCI bird species associated with any European Site. No potential for direct effects on any European Site exists.

6.2

### Potential for Indirect Effects on the European Sites

6.2.1

#### Deterioration in Water Quality

Following a highly precautionary approach, a potential pathway for indirect effects on the below listed aquatic QIs/SCIs of the Screened-In European Sites was identified as a result of deterioration of water quality via the runoff or percolation of polluting materials to groundwaters via porous limestone bedrock underlying the site during the construction and operational phases of the Proposed Development.

QIs/SCIs of the relevant European Sites on which a potential pathway for indirect effects as a result of deterioration of water quality has been identified:

#### Coole-Garryland Complex SAC (000252)

- [3150] Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition* - type vegetation
- [3180] Turloughs
- [3270] Rivers with muddy banks with *Chenopodium rubri* p.p. and *Bidenton* p.p. vegetation

#### Caherglassaun Turlough SAC (000238)

- [3180] Turloughs

- [3270] Rivers with muddy banks with *Chenopodium rubri* p.p. and *Bidentation* p.p. vegetation

### 6.2.1.1 Construction Phase

The construction of the Proposed Development will involve excavations and earth moving which create the potential for pollution in various forms, i.e. the generation of suspended solids and the potential for spillage of fuels associated with the refuelling of excavation machinery. There is a risk that pollutants will percolate down into groundwater or runoff into surface water. Taking a precautionary approach and in the absence of mitigation, the works have potential to impact on water quality within the above European Sites, potentially having an adverse effect on the QIs of the relevant European site.

#### Mitigation

The pathways that would allow potentially adverse effects to occur were considered in the design of the Proposed Development. The sections below set out the environmental management framework to be adhered to during the proposed works and incorporate the mitigating principles to ensure there is no significant impacts on Biodiversity. These include comprehensive detail regarding site set up, pollution prevention including environmental monitoring, hydrocarbon management, waste management and wastewater disposal.

#### Environmental Monitoring

- The contractor will assign a member of the site staff as the environmental officer with the responsibility for ensuring the environmental measures prescribed in this document are adhered to. Any environmental incidents or non-compliance issues will immediately be reported to the project team.

#### General site set-up and pre-commencement measures

- Prior to the commencement of earthworks, silt fencing will be erected around the boundary of the Proposed Development site. This will be embedded into the ground adjacent to the perimeter boundary. The silt fences will be left in place throughout construction until all exposed soil has revegetated.
- The appointed contractor will be fully briefed by an ecologist as to the sensitive nature of the site and the required mitigation measures.
- A site compound will be established within the site boundary. The exact location of the site compound will be established by the contractor and will be located a minimum of 50m from any watercourses or waterbodies. The compound will be used for storage of material, machinery, fuel, and workers facilities.
- All construction materials and substances will be stored in the site compound and the compound will be located a minimum of 50m from any watercourse.
- The Proposed Development site will fenced off using heras fencing.

#### Pollution Prevention

- Prior to the commencement of earthworks, silt fencing will be erected around the boundary of the Proposed Development site. This will be embedded into the ground adjacent to the perimeter boundary. The silt fences will be left in place throughout construction until all exposed soil has revegetated.
- Excavated spoil (if any) will be stockpiled and contained entirely within the confines of the site boundaries.
- During earthwork activities, the following mitigations will be adhered to:
  - Material that is not re-used will be transported off site to a designated waste facility.

- Suitable stone material will be imported to the site to be used as backfill.
  - Stockpiling of soil during construction, should it be required, will take place in designated areas within the site boundary away from any watercourses or waterbodies.
  - A silt fence will be erected around any stockpiling of material to prevent any sediment-laden run-off occurring.
- 
- All diesel or petrol pumps required onsite will be operated within bunded units.
  - Exposed surfaces will be re-vegetated as soon as possible following construction.
  - The minimum number of soil/subsoils and bedrock material will be removed from site. Soil may be reused for landscaping elsewhere on the site.
  - Where possible, earthworks will not be carried out during periods of heavy rainfall.
  - As construction advances there may be a requirement to collect and treat surface water within the site. This will be completed using perimeter swales at low points around the construction areas, and if required water will be pumped from the swales into sediment bags prior to overland discharge allowing water to percolate naturally to ground;
  - If ground water is encountered during excavations, waters will be pumped from excavation and discharged through a pipe with a silt bag attached on to an area of overland vegetation within the site boundary.
  - Discharge to ground will be via a silt bag which will filter any remaining sediment from the pumped water;
  - Daily monitoring and inspections of site drainage during construction will be completed by the appointed environmental officer;
  - Good construction practices such as wheel washers and dust suppression on site roads, and regular plant maintenance will ensure minimal risk. The Construction Industry Research and Information Association (CIRIA) provide guidance on the control and management of water pollution from construction sites ('Control of Water Pollution from Construction Sites, guidance for consultants and contractors', CIRIA, 2001), which provides information on these issues. This will ensure that surface water arising during the course of construction activities will contain minimum sediment.

### **Cement Based Products**

- No batching of wet-cement products will occur on site.
- Ready-mixed supply of wet concrete products and where possible, emplacement of pre-cast elements, will take place.
- Where possible, pre-cast elements for concrete works will be used.
- No washing out of any plant used in concrete transport or concreting operations will be allowed on-site.
- Where concrete is delivered on site, only chute cleaning will be permitted, using the smallest volume of water possible.
- No discharge of cement contaminated waters to the construction phase drainage system or directly to any artificial drain or watercourse will be allowed.
- Use weather forecasting to plan dry days for pouring concrete.
- Ensure pour site is free of standing water and plastic covers will be ready in case of sudden rainfall event.

### **Hydrocarbon Management**

- All oils and solvents used during the construction phase will be stored within specially constructed, dedicated, bunded areas within the temporary site compound.

- Refuelling of construction vehicles and the addition of hydraulic oils to vehicles, will take place in a designated area in the temporary site compound, away from drainage ditches or other features that may transmit pollutants to surface waters.
- Spill kits and hydrocarbon adsorbent packs will be stored in the refuelling area and operators will be fully trained in the use of this equipment.

### **Refuelling, Fuel and Hazardous Materials Storage**

- Storage/refuelling will be located in and carried out in a designated area of the proposed site, located a suitable distance from excavation works. Bunded tanks will be used, and these will be inspected for leaks regularly. Spill kits will be available on site and staff will be trained in their use and in spill control. All spills shall be diverted for collection.
- Fuels, lubricants and hydraulic fluids for equipment used on the site will be carefully handled to avoid spillage, properly secured against unauthorised access or vandalism, and provided with spill containment.
- Minimal refuelling or maintenance of construction vehicles or plant will take place on site. Off-site refuelling will occur at a controlled fuelling station.
- On-site refuelling will take place by direct refuelling from the delivery truck or from fuel stored within a bunded fuel tank. Mobile measures such as drip trays and fuel absorbent mats will be used during all refuelling operations.
- Vehicles will never be left unattended during refuelling. Only dedicated trained and competent personnel will carry out refuelling operations and plant refuelling procedures shall be detailed in the contractor's method statements.
- Storage bunds/trays, if required will be constructed of an impermeable membrane (HDPC Plastic) and will have the adequate capacity to contain the volume of the liquids contained therein, if a leak/spillage does occur from one of the storage vessels.
- The storage area will contain a small bund lined with an impermeable membrane in order to prevent any contamination of the surrounding soils and vegetation.
- All site plant will be inspected at the beginning of each day prior to use. Defective plant shall not be used until the defect is satisfactorily fixed. All major repair and maintenance operations will take place off site.
- Potential impacts caused by spillages etc. during the construction phase will be reduced by keeping spill kits and other appropriate equipment on-site.
- Spill kits will be used to deal with any accidental spillage in and outside the refuelling area. Spill control measures as outlined fully in the Risk Assessment accompanying this application will be adhered to.

### **Spill Control Measures**

In the event of minor spills and leaks from road vehicles and the onsite machinery, the following steps provide the procedure to be followed in the event of any significant spill or leak.

- Stop the source of the spill and raise the alarm to alert people working in the vicinity of any potential dangers.
- If applicable, eliminate any sources of ignition in the immediate vicinity of the incident
- Contain the spill using the spill control materials, track mats or other material as required. Do not spread or flush away the spill.
- If possible, cover or bund off any vulnerable areas where appropriate such as drains or watercourses.
- If possible, clean up as much as possible using the spill control materials.
- Contain any used spill control material and dispose of used materials appropriately using a fully licensed waste contractor with the appropriate permits so that further contamination is limited.
- Notify the applicant immediately giving information on the location, type and extent of the spill so that they can take appropriate action and further investigate the incident to ensure it has been contained adequately.

- External consultants will inspect the site and ensure the necessary measures are in place to contain and clean up the spill and prevent further spillage from occurring.
- The applicant will notify the appropriate regulatory body such as Galway County Council if deemed necessary.

### **Sediments and siltation management**

- Site surface drainage and silt control measures will be established prior to commencing earthworks.
- Working practices will be controlled by, for example, minimising land take, avoiding repetitive handling of soils, minimising vehicle movements off-road and limiting the size of stockpiles to reduce the compaction and erosion of material.
- Soils will be reinstated to their original locations where possible.
- A buffer zone of 5 m or more will be established to protect any surface water channels, including drainage ditches, from disturbance from construction work.
- Working near watercourses during intense rainfall events (>5 mm /hour) will be avoided and work will cease entirely near watercourses when it is evident that there is a threat of pollution occurring.
- Where possible, all excavated material will be removed to suitable stockpile areas. The volume of material to be managed is anticipated to be minor due to the nature and extent of works.
- Stockpiling will be limited to areas where the ground is stable and well drained. Stockpiles will be located where the risk of soil erosion and water quality deterioration is minimal and will also have an adequate buffer (>5 m) from aquatic zones.
- Any water discharge from the stockpiles will be monitored. Runoff water will be prevented from flowing into a nearby excavation area or directly into nearby watercourses. Silt fences will be placed as required around stored excavated soils and other materials.

### **Waste Management**

- All waste will be collected in skips and the site will be kept tidy and free of debris at all times.
- Waste oils and hydraulic fluids will be collected in leak-proof containers and removed from the site for disposal or recycling.
- All construction waste materials will be stored within the confines of the site, prior to removal from the site to a permitted waste facility.

### **Wastewater Disposal**

- A self-contained port-a-loo with an integrated waste holding tank will be used at the site compounds, maintained by the providing contractor, and removed from site on completion of the construction works; No foul water will be discharged on-site during the construction.

### **Policy and Legislation**

- National Policy: The Waste Management Acts 1996 to 2005.
- Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition (C&D) Projects.

After implementation of best practice and preventive measures as described above, together with measures already incorporated in the project design, there is no potential for adverse effects on any Designated Site due to deterioration of water quality. The measures ensure that the proposed works do not prevent or obstruct any of the QIs and SCIs from reaching favourable conservation status as per Article 1 of the EU Habitats Directive.

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#### 6.2.1.1.2 **Residual Effect**

No adverse residual effects on any European Sites due to deterioration of water quality during construction are anticipated following the implementation of the measures and best practice described in the preceding sections.

#### 6.2.1.2 **Operational Phase**

The operational phase of the Proposed Development will result in the production of surface water runoff from the proposed building and additional hardstanding areas. The development will also generate foul water on site. If not properly treated, a potential pathway for indirect effects on water quality exists from the operational phase of the Proposed Development.

##### 6.2.1.2.1 **Surface water run-off**

The Proposed Development will result in increased hard surfaces within the Proposed Development site which has the potential to result in impacts on aquatic ecological receptors as a result of deterioration in water quality arising from the run-off or percolation of pollutants, if surface water run-off is not adequately treated, during the operational phase of the Proposed Development.

As described in Section 2.3.1, proposed surface water drainage systems have been incorporated into the design of the Proposed Development have been designed to cater for all surface water runoff from all hard surfaces within the Proposed Development. This includes Sustainable Drainage Systems (SUDs) and permeable pavements throughout the site.

Given the proposed treatment of surface water, significant negative effects on water quality are not anticipated as a result of surface water runoff.

##### 6.2.1.2.2 **Production of Foul Sewage**

The operational phase of the Proposed Development will result in the production of foul sewage. If not adequately treated, there is potential for indirect impacts on surface and ground water quality.

As described in Section 2.3.2, a dedicated foul sewer network is proposed to collect wastewater from the development and direct it via gravity to an on-site pumping chamber, which includes 24-hour emergency storage capacity. The pumping station will be equipped with twin pumps arranged in a duty/standby configuration to ensure operational reliability. A weatherproof control kiosk/building (or similar) will be provided adjacent to the chamber to house the electrical controls, telemetry systems, and alarm notifications for pump failure or high-level conditions. The pumping station compound will be securely fenced and accessible for maintenance vehicles.

From the pumping chamber, wastewater is to be pumped to a public manhole located to the South of the site. The location and connection into the Uisce Éireann foul sewer network will be agreed in consultation with Uisce Éireann and carried out in accordance with their requirements.

Given the proposed management of foul water, significant negative effects on water quality are not anticipated as a result of foul water production.

#### 6.2.1.2.3 **Residual Effect**

No adverse residual effects on any European Sites due to deterioration of water quality during operation are anticipated following the implementation of the measures and best practice described in the preceding sections.

## 6.2.2 Habitat loss

Following a precautionary approach, a potential pathway for indirect effects on the below listed QIs of the Screened-In European Sites was identified as a result of habitat loss during the construction and operational phases of the Proposed Development.

QIs of the relevant European Sites on which a potential pathway for indirect effects as a result of habitat loss has been identified:

### **Kiltartan Cave SAC (000286)**

- [1303] Lesser Horseshoe Bat (*Rhinolophus hipposideros*)

The Proposed Development site is located 2.5 km to the lesser horseshoe bat roost associated with the SAC. During the target bat surveys undertaken of the Proposed Development site, as per Section 3.2.2, no lesser horseshoe bat were recorded during the manual surveys, with just one recorded by the static detectors, suggesting that the site is not of significance to populations of this QI associated with the SAC and is irregularly used.

### 6.2.2.1 Construction phase

The Proposed Development footprint contains no structures and there is no potential roosting habitat for lesser horseshoe within or on the boundary of the site. Therefore, there is no potential for adverse effects on the SAC in this regard.

With regard to foraging and commuting habitat for lesser horseshoe, the Proposed Development site is considered to have *Moderate* suitability for bats overall, primarily due to the presence of stone walls and hedgerows which provide connectivity to the wider landscape. There will be no loss of any linear habitat as a result of the construction phase of the Proposed Development. Therefore, there is no potential for adverse effects on the SAC in this regard.

#### 6.2.2.1.1 Residual Effect

No adverse residual effects on any European Sites due to habitat loss during construction are anticipated.

### 6.2.2.2 Operational Phase

There will be no loss of any habitat associated with the operational phase of the Proposed Development. No assessment required.

## 6.2.3 Disturbance

Following a precautionary approach, a potential pathway for indirect effects on the below listed QIs of the Screened-In European Sites was identified as a result of disturbance during the construction and operational phases of the Proposed Development.

QIs of the relevant European Sites on which a potential pathway for indirect effects as a result of disturbance has been identified:

### Kiltartan Cave SAC (000286)

- [1303] Lesser Horseshoe Bat (*Rhinolophus hipposideros*)

The Proposed Development site is located 2.52 km to the lesser horseshoe bat roost associated with the SAC, which is just marginally outside of the core foraging range of this species (2.5km). During the target bat surveys undertaken of the Proposed Development site, as per Section 3.2.2, no lesser horseshoe bat were recorded during the manual surveys, with just one recorded by the static detectors, suggesting that the site is not of significance to populations of this QI associated with the SAC and is irregularly used.

### 6.2.3.1 Construction phase

Regards disturbance to populations of lesser horseshoe associated with this SAC, construction activities, including the use of machinery and lighting, may pose a risk of disturbance to bat species. Taking a highly precautionary approach, the potential for adverse effects as result of disturbance, particularly from noise and light, has been identified.

#### Mitigation

During construction works the following mitigations will be implemented to avoid any impacts on bats as a result of lighting or noise:

- Any lighting required for night-time works will be switched off when not needed.
- Lighting required for night-time works will be directed onto the works areas and will not be focussed onto habitats on the boundary.
- All plant and equipment for use will comply with Statutory Instrument No 359 of 1996 "European Communities (Construction Plant and Equipment) (Permissible Noise Levels) Regulations 1996".
- Operating machinery will be restricted to the works area.
- All vehicles and mechanical plant will be fitted with effective exhaust silencers and maintained in good working order for the duration of the works.
- Compressors will be of the "sound reduced" models fitted with properly lined and sealed acoustic covers which will be kept closed whenever the machines are in use and all ancillary pneumatic tools shall be fitted with suitable silencers.
- Machines, which are used intermittently, will be shut down during those periods when they are not in use.

### 6.2.3.1.2 Residual Effect

No adverse residual effects on any European Sites due to disturbance during construction are anticipated following the implementation of the measures and best practice described in the preceding sections.

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### 6.2.3.2 Operational Phase

Regards disturbance to populations of lesser horseshoe associated with this SAC, lighting associated with the operational phase of the Proposed Development may illuminate habitats surrounding the site. These habitats have been assessed as having *Moderate* suitability for commuting and foraging bats, including lesser horseshoe bat. Whilst, the site has been found not to be of significance to populations of this QI associated with the SAC, taking a precautionary approach, the below mitigations will be incorporated, where feasible, into the final lighting design of the development.

#### Mitigation

The proposed light fitting/scheme will be designed to help mitigate the effect of the artificial lighting on the local bat populations:

- Warm White LED (3000K or less) light source – less attractive to insects, and a good light source to enable directional luminaires. Lowest possible design illuminance levels considering the nature of the site.
- Lamps will also be specified with 0 Degree tilt (where possible) to ensure limited unwanted light spill, especially onto the boundary of the site. The fittings will be angled no greater than 5 degrees to further reduce light spill.
- Light sources should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats
- Where feasible, all pole mounted lamps in close proximity to the site boundary will be 6m in height.
- A lighting control regime shall be included to reduce illuminance during hours of lower human activity (i.e., 12:00am – 6:00am).
- All proposed Luminaires will be justified. Lighting only to be used where necessary.

As per Section 2.6 of this report, the lighting plan (**Appendix 4**) for the operational phase of the Proposed Development, has been designed with consideration of the following guidelines: Bat Conservation Ireland (Bats and Lighting: Guidance Notes for Planners, Engineers, Architects and Developers, BCI, 2010), Dark Sky Ireland and the Bat Conservation Trust (Guidance Note 08/23 Bats and Artificial Lighting at night (ILP, 2023), to minimise light spillage where feasible, thus reducing any potential disturbance to bats.

### 6.2.3.2.2 Residual Effect

The potential for adverse effects on populations of lesser horseshoe bat associated with the Kiltartan Cave SAC was considered on a highly precautionary basis. Given the Proposed Development is located outside the core foraging range, the findings of the bat surveys, and the proposed mitigations provided above, no adverse residual effects on any European Sites due to light disturbance during operation are anticipated.

7.

## ASSESSMENT OF RESIDUAL ADVERSE EFFECTS

The potential for residual adverse effects on each of the individual relevant Qualifying Features of the Screened In European Site following the implementation of mitigation, is assessed in this section of the report.

Based on the above, in view of best scientific knowledge, on the basis of objective information, there is no potential for adverse effect on the identified QIs and their associated targets and attributes, or on any European Site Potential pathways for effect have been robustly blocked through measures to avoid impacts and the incorporation of best practice/mitigation measures into the project design.

Taking cognisance of measures to avoid impacts and best practice/mitigation measures incorporated into the project design which are considered in the preceding section, the Proposed Development will not have an adverse effect on the integrity of any European Site.

The Proposed Development will not prevent the QIs/SCIs of European Sites from achieving/maintaining favourable conservation status in the future as defined in Article 1 of the EU Habitats Directive. A definition of Favourable Conservation Status is provided below:

*‘Conservation status of a species means the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations within the territory referred to in Article 2; The conservation status will be taken as ‘favourable’ 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, and*
- *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 populations on a long-term basis.’*

Based on the above, it can be concluded in view of best scientific knowledge, on the basis of objective information that the Proposed project will not adversely affect the Qualifying Interests associated with any European Site.

8.

## IN COMBINATION EFFECTS

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

8.1

### Plans

The following plans have been reviewed in Table 8-1 and taken into consideration as part of this assessment:

- Galway County Development Plan 2022-2028
- Northern and Western Regional Assembly – Regional Spatial and Economic Strategy 2020 – 2032
- Ireland's 4<sup>th</sup> National Biodiversity Action Plan 2023-2030
- Lesser Horseshoe Bat Species Action Plan 2022-2026

The review focused on policies and objectives that relate to European sites. None of the objectives reviewed had the potential to result in cumulative adverse effects on any European Site.

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## 8.1.1

**Review of Relevant Plans**

Table 8-1 Review of plans

| Plans                                                                                              | Key Policies/Issues/Objectives Directly Related to European Sites, Biodiversity and Sustainable Development in The Zone of Influence                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Assessment of development compliance with policy                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Galway County Development Plan 2022-2028</b>                                                    | <p><b>Policy Objective NHB 1 – Natural Heritage and Biodiversity of Designated Sites, Habitats and Species</b></p> <ul style="list-style-type: none"> <li>➤ Protect and where possible enhance the natural heritage sites designated under EU Legislation and National Legislation (Habitats Directive, Birds Directive, European Communities (Birds and Natural Habitats) Regulations 2011 and Wildlife Acts) and extend to any additions or alterations to sites that may occur during the lifetime of this plan.</li> <li>➤ Protect and, where possible, enhance the plant and animal species and their habitats that have been identified under European legislation (Habitats and Birds Directive) and protected under national Legislation (European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477 of 2011), Wildlife Acts 1976-2010 and the Flora Protection Order (SI 94 of 1999).</li> <li>➤ Support the protection, conservation and enhancement of natural heritage and biodiversity, including the protection of the integrity of European sites, that form part of the Natura 2000 network, the protection of Natural Heritage Areas, proposed Natural Heritage Areas, Ramsar Sites, Nature Reserves, Wild Fowl Sanctuaries (and other designated sites including any future designations) and the promotion of the development of a green/ecological network.</li> </ul> | <p>The plans were comprehensively reviewed, with particular reference to Policies and Objectives that relate to the Natura 2000 network and other natural heritage interests.</p> <p>The Proposed Development will not result in significant impacts on any European Site and no potential for cumulative impacts when considered in conjunction with the proposed works were identified.</p> |
| <b>Northern and Western Regional Assembly – Regional Spatial and Economic Strategy 2020 – 2032</b> | <p><b>Growth Ambition 2: Environment – Natural Region</b></p> <p><b>RPO 5.4</b> - Encourage the prioritisation of Site-Specific Conservation Objectives (SSCO) for all sites of Conservation Value, designated in</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>The plans were comprehensively reviewed with particular reference to Policies and Objectives that relate to the Natura 2000 network and other natural heritage interests. No potential for cumulative impacts</p>                                                                                                                                                                          |

| Plans                                                                 | Key Policies/Issues/Objectives Directly Related to European Sites, Biodiversity and Sustainable Development in The Zone of Influence                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Assessment of development compliance with policy                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                       | <p>EU Directive (i.e., SACs, SPAs) to integrate with the development objectives of this Strategy.</p> <p><b>RPO 5.5</b> - Ensure efficient and sustainable use of all our natural resources, including inland waterways, peatlands, and forests in a manner which ensures a healthy society a clean environment and there is no net contribution to biodiversity loss arising from development supported in this strategy. Conserve and protect designated areas and natural heritage areas. Conserve and protect European sites and their integrity.</p> <p><b>RPO 5.6</b> - Develop awareness and create a greater appreciation of the benefits of our natural heritage, including on the health, wealth and well-being of the region's ecosystem services.</p> <p><b>RPO 5.7</b> - Ensure that all plans, projects and activities requiring consent arising from the RSES are subject to the relevant environmental assessment requirements including SEA, EIA and AA as appropriate.</p> | <p>when considered in conjunction with the current proposal were identified.</p> <p>There will be no impact on designated site or other natural heritage interests as a result of deterioration of water quality. Best practice preventative measures will be implemented to avoid effects on water quality as outlined in Section 6.3 of this report. There will be no adverse effects on sensitive aquatic receptors listed as QIs/SCIs of European Sites as a result of deterioration in water quality.</p> |
| Ireland's 4 <sup>th</sup> National Biodiversity Action Plan 2023-2030 | <p>➤ <b>Objective 1: Adopt a Whole-of Government, Whole of Society Approach to Biodiversity.</b> Proposed actions include capacity and resource reviews across Government; determining responsibilities for the expanding biodiversity agenda providing support for communities, citizen scientists and business; and mechanisms for the governance and review of this National Biodiversity Action Plan.</p> <p>➤ <b>Objective 2: Meet Urgent Conservation and Restoration Needs.</b> Supporting actions will build on existing conservation measures. Efforts to tackle Invasive Alien Species will be elevated. The protected area network will be expanded to include the Marine</p>                                                                                                                                                                                                                                                                                                     | <p>The Proposed Development will not result in significant effects on habitats and features of ecological importance. The Proposed Development will not impact on connectivity within the wider area and there is no potential for significant effects on water quality. There will be no adverse effects on biodiversity as a result of the Proposed Development.</p>                                                                                                                                         |

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| Plans                                                     | Key Policies/Issues/Objectives Directly Related to European Sites, Biodiversity and Sustainable Development in The Zone of Influence                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Assessment of development compliance with policy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                           | <p>Protected Areas. The ambition of the EU Biodiversity Strategy will be considered as part of an evolving work programme across Government.</p> <ul style="list-style-type: none"> <li>➤ <b>Objective 3: Secure Nature's Contribution to People.</b> Actions highlight the relationship between nature and people in Ireland. These include recognising the tangible and intangible values of biodiversity, promoting nature's importance to our culture and heritage and recognising how biodiversity supports our society and our economy.</li> <li>➤ <b>Objective 4: Enhance the Evidence Base for Action on Biodiversity.</b> This objective focuses on biodiversity research needs, as well as the development and strengthening of long-term monitoring programmes that will underpin and strengthen future decision-making. Action will also focus on collaboration to advance ecosystem accounting that will contribute towards natural capital accounts.</li> <li>➤ <b>Objective 5: Strengthen Ireland's Contribution to International Biodiversity Initiatives.</b> Collaboration with other countries and across the island of Ireland will play a key role in the realisation of this Objective. Ireland will strengthen its contribution to international biodiversity initiatives and international governance processes, such as the United Nations Convention on Biological Diversity.</li> </ul> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Lesser Horseshoe Bat Species Action Plan 2022-2026</b> | <ul style="list-style-type: none"> <li>➤ <b>4.1.2 Roost Recording:</b><br/>4.1b Undertake a review of the roost network across the species' range to identify those areas without adequate roosting opportunities, for example, winter hibernation sites, night roosts and maternity roosts.</li> <li>➤ <b>4.1.4 Roost Monitoring:</b><br/>4.1h Continue monitoring winter and summer roosts annually and keep the national database up to date.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <p>The overall aim of the objectives set out in the Lesser Horseshoe Bat Species Action Plan aim to guide, inform and provide structure for the conservation management of lesser horseshoe bats. Whilst this species has been recorded on site, the potential for cumulative impacts were identified in-combination with the Proposed Development. However, the site was assessed not to be off significance to this species with just one pass recorded. Additionally, the Proposed Development site is not within identified potential foraging ground for any SAC designated population of this species, as per the relevant SSCO's. Given the above, as well as the incorporation of bat friendly lighting mitigations in</p> |

| Plans | Key Policies/Issues/Objectives Directly Related to European Sites, Biodiversity and Sustainable Development in The Zone of Influence                                                                                                                                                                                                                      | Assessment of development compliance with policy                                                |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
|       | <p>4.1j Continue to survey for new roosts, particularly in those areas that border the current known range for the species</p> <p>&gt; <b>4.1.4 Lighting:</b><br/> 4.1e Evaluate current lighting regimes in the vicinity of key lesser horseshoe bat roosts and their foraging areas and implement site-specific mitigation measures where required.</p> | <p>Section 6.2.3, <b>no potential for significant in-combination effects are predicted.</b></p> |

## 8.2

## Other Projects

Assessment material for this in-combination impact assessment was compiled on the relevant developments within the vicinity of the Proposed Development and was verified on the 9<sup>th</sup> of June 2025. The material was gathered through a search of relevant online Planning Registers, reviews of relevant documents, planning application details and planning drawings, and served to identify past and future projects, their activities and their environmental impacts. All relevant projects were considered in relation to the potential for in-combination effects. All relevant data was reviewed (e.g. individual EISs/EIARs, layouts, drawings etc.) for all relevant projects where available. These consisted mainly of small scale domestic and agricultural developments.

The online planning system for Galway City Council as well as the An Bord Pleanála Website (planning searches), was consulted on the 9<sup>th</sup> of June 2025 for the wider area surrounding the site. Relevant finalised projects identified in the wider area of the development from the last 5 years include:

- Permission for to construct 2 no. semi detached dwelling houses and all associated works. Gross floor area of proposed works of each semi detached dwelling: 1392 sqm (Planning Ref: **260159**).
- Permission for & completion of ground & first floor office space, fit-out of same, re-located fire escape doors & minor elevation alterations, signage & for all ancillary services & site works to an existing light industrial unit (No.1) to those previously approved under Pl. Ref. 05/1307 & 00/4187 (Planning Ref: **2360583**).
- Permission for for development consisting of the construction of a new Discount Foodstore Supermarket with ancillary off-licence sales on an extended site. The proposed development comprises: 1. the demolition of existing single storey Discount Foodstore (with ancillary off-licence use) measuring c. 1,795 sqm gross floor space with a net retail sales area of c. 1,286 sqm; 2. the demolition of existing two storey (retail at ground & residential at first floor) building measuring c. 328 sqm; 3. the construction of a single storey (with mezzanine plant deck) mono-pitch Discount Foodstore (with ancillary off-licence use) measuring c. 2,529 sqm gross floor space with a net retail sales area of c. 1,652 sqm; 4. redevelopment/reconfiguration & extension of existing site layout, car parking & hard & soft landscaping, with revised vehicular & pedestrian access junction to Kinincha Road & new pedestrian accesses to Kinincha Road & Crowe Street as part of public realm plaza area; & 5. provision & renewal of boundary treatments, free standing & building mounted signage, covered trolley bay, refrigeration & air conditioning plant & equipment, ESB unit sub-station, public lighting, electric vehicle charging infrastructure, roof mounted solar panels, cycle parking, modification of existing drainage, utility & services infrastructure and connections, & all other associated & ancillary development & works above & below ground level. A Natura Impact Statement will be submitted to the planning authority with the application (Planning Ref: **2360976**).
- Permission for for the application being made under the provisions of the Planning and Development (Amendment) (Large Scale Residential Development) Act 2021. The development will consist of the following: 1. The provision of 234 no. residential units, comprised of the following: a. 144 no. 3-bed houses; b. 31 no. 4-bed houses; c. 11 no. 2-bed duplexes; d. 11 no. 3-bed duplexes; e. 19 no. 1-bed senior living apartments; f. 5 no. 2-bed senior living apartments; g. 3 no. 1-bed apartments; and h. 10 no. 2-bed apartments. 2. The provision of 4,186 sq.m of commercial floor space, comprised of 1 no. café unit (130 sqm), 5 no. retail units (1,029 sqm), co-working office spaces and associated lobby (1,595 sqm), Senior Living Communal amenity spaces (292 sqm), creche (333 sqm) and 1 no. activity centre (807 sqm). 3. The provision of a pedestrian and cyclist access link to the existing Gort Railway Station (RPS no. 443). 4. Upgrade works to the existing junction at lands bounding the R-380, R-458 and the L-85078 to provide for a new signalised junction. 5. The provision of new access road, internal access roads, set-down areas and surface level car parking, accessible parking and associated bicycle parking. 6. The provision of signage, landscaping and boundary

treatments and all other associated site development works and services necessary to facilitate the proposed development. The application contains a statement setting out how the proposal will be consistent with the objectives of the relevant development plan. A Natura Impact Statement (NIS) has been prepared in respect of the proposed development. Gross floor space of proposed works: 25,892.60 sqm & 4,186.00 sqm (Planning Ref: **2460115**).

All other applications identified in the areas surrounding the Proposed Development are small scale in nature and include agricultural buildings and private residential developments.

## 8.2.1 Conclusion of Cumulative Assessment

Following the detailed assessment provided in the preceding sections, it is concluded that the Proposed Development will not result in any residual adverse effects on any of the European Sites, their integrity or their conservation objectives when considered on its own. There is therefore no potential for the Proposed Development to contribute to any cumulative adverse effects on any European Site when considered in-combination with other plans and projects.

In the review of the projects that was undertaken in Section 8.2 above, no connection that could potentially result in additional or cumulative impacts was identified. Neither was any potential for different (new) impacts resulting from the combination of the various projects and plans in association with the Proposed Development.

Taking into consideration the reported residual impacts from other plans and projects in the area and the predicted impacts with the current proposal, no residual cumulative impacts have been identified with regard to any European Site.

9.

## **CONCLUDING STATEMENT**

This NIS has provided an assessment of all potential direct or indirect adverse effects on European Sites. It has also assessed the potential for in-combination effects on European sites with other plans and projects.

Where the potential for any adverse effect on any European Site has been identified, the pathway by which any such effect may occur has been robustly blocked through the use of avoidance, appropriate design and mitigation measures as set out within this report and its appendices. The measures ensure that the construction and operation of the Proposed Development does not adversely affect the integrity of European sites.

Therefore, it can be objectively concluded that the Proposed Development, individually or in combination with other plans or projects, will not adversely affect the integrity of any European Site.

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