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Prepared by CWPA Planning & Architecture

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## ENVIRONMENTAL IMPACT ASSESSMENT REPORT

Proposed development includes the *"Construction of four aviation-related cargo handling units, with ancillary office space (GFA c. 34, 623.6 sqm) located on the townland of Huntstown"*.

Applicant: D.A. Terminal 3 Ltd.

CWPA Planning & Architecture, Penthouse Offices, Third Floor, Broadmeadow Hall, Applewood, Swords, Co. Dublin, K67 Y5F2.

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## Quality Assurance – Mandate Statute

This document has been prepared and scrutinised in accordance with CWPA Planning & Architecture Quality Assurance team provisions.

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## Application Information:

<b>Applicant:</b>	D.A. Terminal 3 Ltd
<b>Planning Authority:</b>	Fingal County Council.
<b>Subject Site:</b>	Lands located within the townland of Huntstown, Swords, Co. Dublin. The subject site fronts onto the R108 to the east.
<b>Development:</b>	Construction of four aviation-related cargo handling units, with ancillary office space.
<b>Prepared By:</b>	CWPA Planning & Architecture.

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# 1.0 Introduction

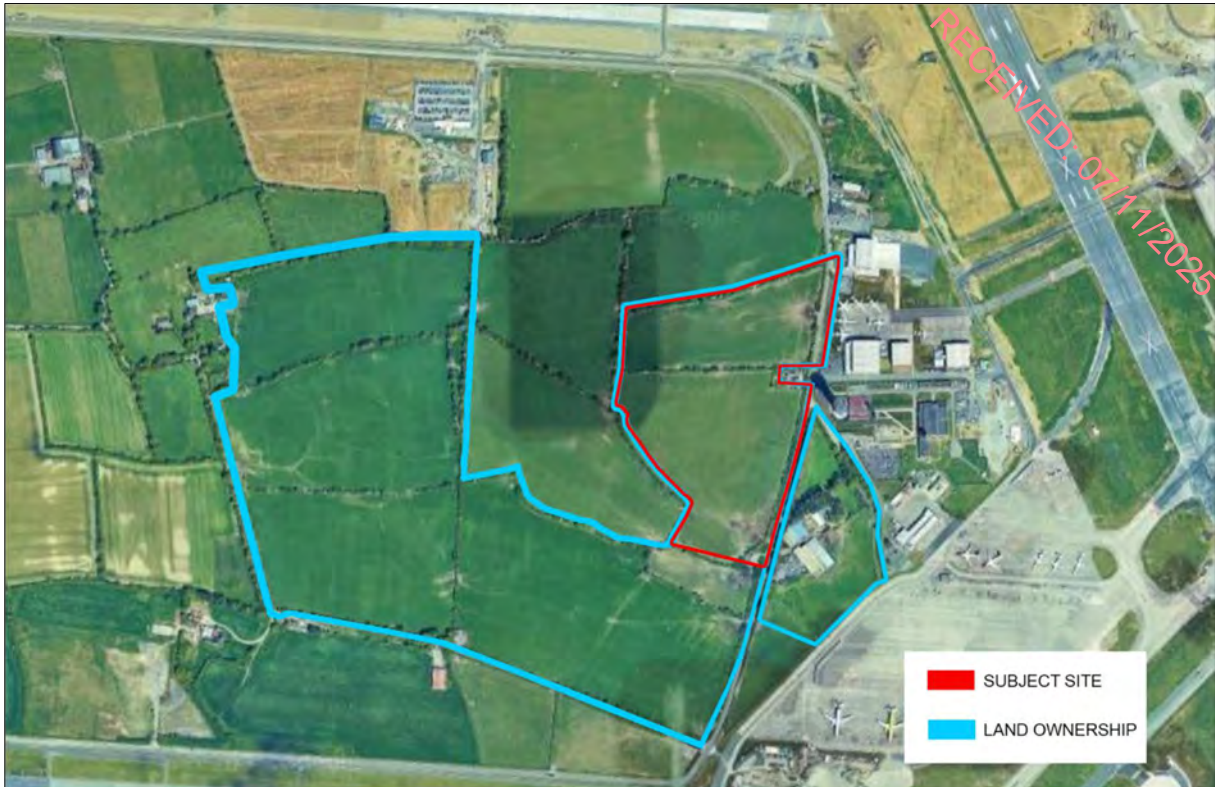
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We, CWPA Planning & Architecture, Penthouse Offices, Third Floor, Broadmeadow Hall, Applewood, Swords, Co. Dublin, K67 Y5F2, have been retained by our clients, D.A. Terminal 3 Ltd., to prepare an Environmental Impact Assessment, Design Rationale and Planning Statement in support of a proposed aviation-related logistics and cargo handling development on the Western Campus at Dublin Airport (Refer to Figure 1.1: Site Location Map).

The proposed development, which is the subject of this application, is a first phase within an overall longer term development proposal for D.A. Terminal 3 Limited's full land holding at this location (as shown in Fig. 1.1), which comprises approximately 50 hectares. The DA Terminal 3 Limited lands have been included in a wider 'masterplan/concept plan' area of c.106.46 ha (as shown in Fig. 1.2).

This document comprises an Environmental Impact Assessment Report (EIAR) relating to the proposed development described in full hereunder.

This Chapter has been prepared by Rachel Kenny, BE, MRUP, FIPI. Rachel Kenny is a senior planning consultant with CWPA, Planning & Architecture consultancy, and has 30 years' experience as a planner in public and private sector organisations, including Fingal, Meath and Louth County Council and An Bord Pleanála (as Director of Planning). She holds a degree in Civil Engineering (be (Civil) (Hons) and Masters in Regional and Urban Planning (MRUP), both from University College Dublin. She is a fellow and corporate member of the Irish Planning Institute. She has experience in both forward planning and development management, and specialises in, inter alia, Strategic Infrastructure Development, and large scale EIAR projects.



**Fig 1.1:** Site Location

**Source:** CWPA



**Fig 1.2:** Concept Plan September 2025

**Source:** CWPA

## 1.1 Development Description

D.A. Terminal 3 Limited, intend to apply to Fingal County Council, for Planning Permission for the following developments on lands located within the townland of Huntstown, Swords, Co. Dublin. The subject site fronts onto the R108 to the east.

1. Construction of four aviation-related cargo handling units with ancillary office space:

- i. Unit 1: c.10,869.7 m<sup>2</sup> (including 940.9 m<sup>2</sup> office space)
- ii. Unit 2: c.9,151.3 m<sup>2</sup> (including 751.3 m<sup>2</sup> office space)
- iii. Unit 3: c.6,024.9 m<sup>2</sup> (including 497.7 m<sup>2</sup> office space)
- iv. Unit 4: c.8,577.7 m<sup>2</sup> (including 751.3 m<sup>2</sup> office space)

The proposed units will have an overall combined total gross floor area (GFA) of c. 34, 623.6 sq.m (alongside ancillary ESB substations, 4 no. security huts with a combined GFA of 30 sqm and pumphouses). The warehouses are c. 12m in height, with the office element being c. 3.3 m in height and located within a landscaped campus on a site of c. 10.7 Ha.

2. Provision of 390 car parking spaces, including 39 EV charging points, 19 accessible spaces, and 39 motorcycle bays.
3. Provision of 230 secure bicycle parking spaces, of which 100 are short stay spaces and 130 are sheltered long stay spaces.
4. Provision of approx. 77 truck parking spaces and 5 van spaces.
5. Hard and soft landscaping, new boundary treatments, including a c. 2m high System Wire Fence to site boundary.
6. Construction of new site entrance onto the R108.
7. Wastewater treatment plant and infiltration area for 250 PE.
8. All necessary site development and engineering and ancillary site works, including provision of ESB substations and switchrooms, sprinkler tanks and pumphouses, bin store and recycle store, lighting, signage, underground services, photovoltaic panel zones at roof level and sustainable drainage systems (SuDS).

## 1.2 Strategic Vision Overall Landholding

CWPA have also been engaged by the landowners to prepare a master plan/concept plan for a western airport campus, complimenting and supporting Dublin Airport. The Western Campus at Dublin Airport represents a critical opportunity to enhance the airport's operational resilience and efficiency through a sustainable, planning and infrastructure-led approach. While concept plans have been drawn up, these plans are and will continue to be iterative.

The concept plans provide an indicative layout for the wider area and are intended to demonstrate that that the first phases of development are compatible with the long-term vision for the lands, including the development of a third terminal, extensions to the existing and proposed aprons and taxiways shown in Figure 1.2.

Early concept plans provided for development solely to the west of the proposed (T3) Terminal building and west of the DAA proposed aprons and taxiways. The indicative plans relating to these areas, originally labelled Areas A, B and C, as well as proposed Terminal 3 site (as per the Oxford Economics Study) remain as before. However, as it is considered imperative that viable alternative locations to accommodate the relocated logistics facilities (following their proposed demolition by the DAA) are brought forward, the current site, east of the proposed T3 building and contiguous with existing and proposed aprons, is being advanced. These lands are not constrained by alleged landownership issues and as such can be developed sooner than Area A. While the applicant remains of the opinion that Area A represents an appropriate and suitable early phase for logistics development, to allow for the expeditious release of logistics lands in the short terms, the application site is now proposed for immediate development subject to planning permission. As per their published plans/strategies, these lands are not required by the DAA for apron, taxiway or other use.

The proposed development, subject of this application, as well as that relating to the overall landholding has been developed having regard to the DAA's vision for their lands in the longer term. The proposed logistics development, the overall concept master plan and the proposals for the Western Access Road serving the western airport campus have been subject to pre-planning discussions with the planning authority, Airport Noise Competent Authority (ANCA), Department of Transport and DAA.

While the overall requirements and importance of a third terminal, western airport campus and new Western Access Road are acknowledged, it is considered that any application for this wider development should be prepared in the context of the wider national aviation policy, and the applicant is working with the Department, DAA and FCC. The proposed development addresses the immediate and urgent cargo

handling needs while establishing the foundation for further strategic development in line with national policy objectives and long-term growth plans and is a sustainable form of interim development.

The plans for the overall lands are a longer-term project, and it would not be appropriate to develop these further at this point, pending further engagement with key stakeholders.

There is currently a deficit in cargo handling and aviation related logistics. This will be further exacerbated, if permission is granted for the development proposed under F23A/0781 submitted by DAA, which as part of their Infrastructure Project Element No.2, sees the demolition of 29,101.2sqm of cargo handling and logistics infrastructure. (Further detailed in Section 1.4.2. Planning Reference F23A/0781).

### 1.3 Statutory Planning Framework

The Irish planning framework is provided on a tiered basis, with policy at a national, regional and local level forming a hierarchy of consistent and complimentary policies. The Planning Statement outlines the wider national and regional planning policy context for these lands, but for convenience, the local context which is provided for in the Fingal Development Plan 2023-2029 Dublin Airport Local Area Plan 2020-2026 (as of March 2025, this LAP has been extended for a further 5 years), the key strategic considerations of which are outlined hereunder, in terms of key strategy considerations.

National and Regional Planning Policy
National Planning Framework: Project Ireland 2040.
Regional Spatial Economic Strategy (Eastern & Midlands Regional Assembly, 2019 - 2031).
National Biodiversity Action Plan 2023-2030
Guidelines for Planning Authorities on the Planning System and Flood Management Risk (2009)
Design Manual for Urban Roads and Streets (DMURS) 2013
Transport Strategy for Greater Dublin Area (2022-2042)

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## Local Planning Policy

Fingal Development Plan (FDP) 2023-2029

Dublin Airport Local Area Plan (DA LAP) 2020-2026 (extended to March 2030)

### 1.3.1 Fingal Development Plan 2023-2029

The 2023 - 2029 Fingal Development Plan was adopted on the 22nd of February 2023 and subsequently the Plan came into effect on the 5<sup>th</sup> of April 2023. The Western Campus, located west of the existing North and South runways, offers a greenfield opportunity optimally suited for aviation-related development. This area, identified as Location 3 in the Oxford Economics Study, was previously earmarked as ideal for future terminal and cargo expansion due to its lack of physical constraints and its strategic location relative to the overall DAA airport lands. (The application site is situated on the Western Campus on lands zoned 'DA' under the Fingal Development Plan 2023–2029, the proposal is central to a long-term vision for enhancing the operational capacity of Dublin Airport.)

Fingal has identified the lands subject to this application as 'DA' zoned and there suitable for aviation related development. Permitted uses and development on these lands include:

- **Air Transport Infrastructure:** Aircraft areas, aprons, runways, taxiways, terminals, cargo handling, maintenance hangars, and related facilities.
- **Airport Operations:** Air traffic control, meteorology services, and other essential airport functions.
- **Ancillary Uses:** Uses that support airport operations, such as security, safety, and certain retail.

The proposed development has been designed to align with the key objectives of the Fingal Development Plan (FDP) 2023–2029, particularly those relating to aviation, transport, environmental protection, and sustainable design. Relevant policies and objectives include:

**Objective DAO4** – *Ensure aviation infrastructure develops to its full sustainable potential, taking into account environmental and community impacts.*

**Objective DAO5** – *Facilitate the ongoing augmentation and improvement of terminal facilities at Dublin Airport.*

**Policy DAP2** – Require all infrastructure provision to be consistent with the Dublin Airport LAP 2020 or any subsequent version.

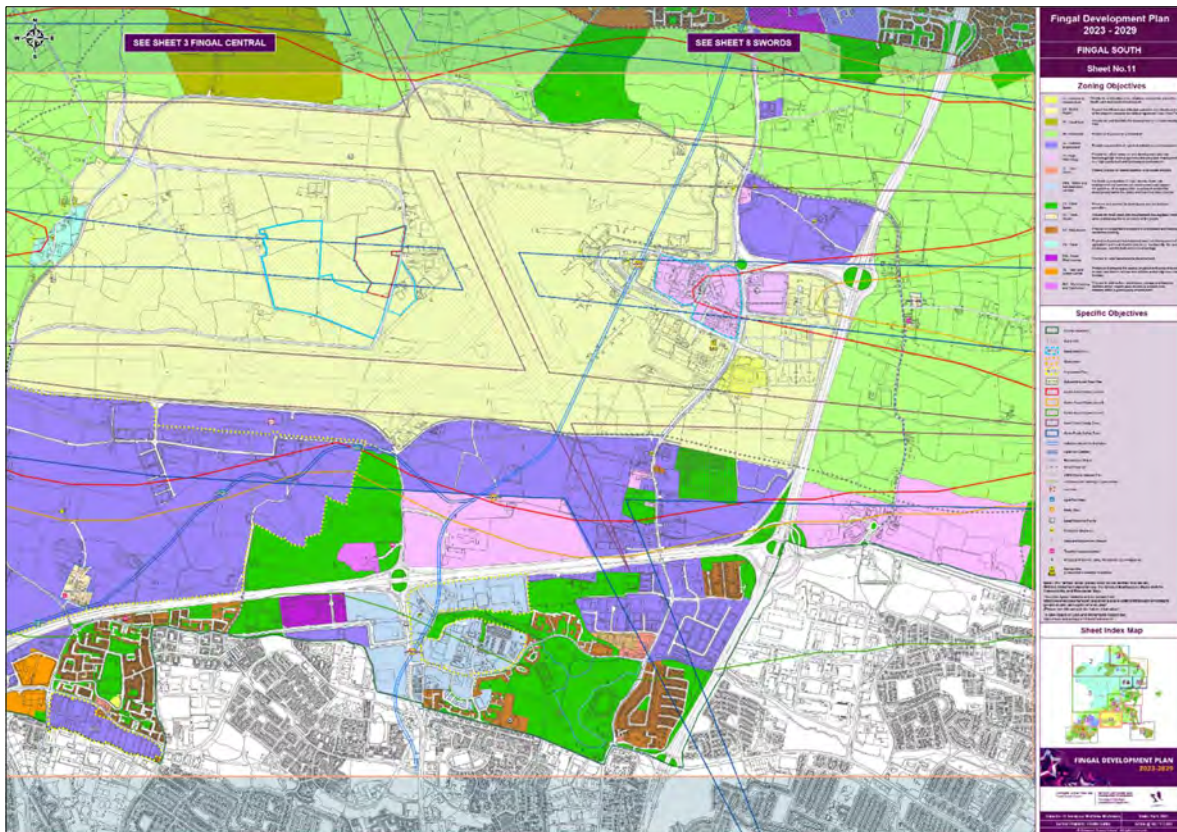
**Objective DAO7–DAO9** – Safeguard integrated public transport networks and protect surface access capacity to the Airport.

**Policy IUP41 & Objectives IUO58–IUO60** – Support air quality monitoring and management in line with the Dublin Regional Air Quality Management Plan.

**Policy DAP5 & DAP6** – Mitigate aviation noise impacts and protect the health of residents affected by aircraft noise, particularly at night.

**Policy DAP10 & Objective DAO26** – Ensure that all development within Dublin Airport LAP lands achieves high standards of design and sustainability, reflecting the airport's role as an international gateway.

Through its siting, design, and integration with existing and planned infrastructure, the proposed development demonstrates full compliance with these policy requirements. Its focus on decarbonisation, sustainable drainage, noise management, and high-quality built form further reinforces its alignment with Fingal County Council's long-term vision for Dublin Airport and its surrounding lands.



**Figure 1.3:** Dublin Airport Zoning (not to scale)

**Source:** Fingal Development Plan Map

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## Zoning Objective 'DA' Dublin Airport

### Objective

Ensure the efficient and effective operation and development of the Airport in accordance with an approved Local Area Plan.

### Vision

Facilitate air transport infrastructure and airport related activities/uses only (i.e. those uses that need to be located at or near the Airport.) All development within the Airport area should be of a high standard reflecting the status of an international airport and its role as a gateway to the country and region. Minor extensions or alterations to existing properties located within the Airport area which are not essential to the operational efficiency and amenity of the Airport may be permitted, where it can be demonstrated that these works will not result in material intensification of land use.

Air Transport Infrastructure includes: aircraft areas, air traffic control/tower, ancillary health, safety and security uses, aprons, cargo handling, maintenance hangars, meteorology, retail – airside/duty free, runways, taxiways, terminals and piers.

Permitted in Principle		
Aerodrome/Airfield	Air Navigation Installations	Air Transport Infrastructure
Car Hire Holding Area	Cargo Yards	Carpark – non-ancillary
Childcare Facilities	Food, Drink and Flower Preparation/Processing	Fuel Depot/Fuel Storage
General Aviation	Hotel	Logistics
Office Ancillary to Permitted Use	Office <= 100 sqm	Office > 100 sqm and < 1,000 sqm
Office >= 1,000 sqm	Open Space	Petrol Station
Place of Worship	Public House	Public Transport Station
Restaurant/Café	Retail – Local < 150 sqm nfa	Retail – Comparison > 500 sqm nfa
Taxi Office	Telecommunications Structures	Training Centre
Utility Installations	Warehousing	

Not Permitted		
Abattoir	Agribusiness	Agricultural Buildings
Agricultural Farm Supplies	Agricultural Machinery Sales and/or Maintenance	Agri-Tourism
Aparthotel	Bed and Breakfast	Boarding Kennels
Builders Provider/Yard	Burial Grounds	Carvan Park – Holiday
Caravan Park – Residential	Casual Trading	Civic Waste Facility
Concrete/Asphalt	Dancehall/Nightclub	Education
Data Centre	Enterprise Centre	Farm Shop
Garden Centre	Golf Course	Guest House
High Technology Manufacturing	Holiday Home/Apartments	Home-Based Economic Activity
Hospital	Hostel	Industry – Extractive/Quarrying
Industry – General	Industry – Light	Industry – High Impact
Park and Ride Facilities	Remote Work Hub	Residential
Residential Care Home/Retirement Home	Residential Institution	Retail – Supermarket ≤ 2,500 sqm nfa
Retail – Superstore > 2,500 sqm nfa	Retail – Hypermarket > 5,000 sqm nfa	Retail – Factory Outlet Centre
Retail Warehouse	Retail – Warehouse Club	Retirment Village
Sheltered Accommodation	Traveller Community Accommodation	Vehicle Sales Outlet – Small Vehicles
Vehicle Sales Outlet – Large Vehicles	Waste Disposal and Recovery Facility (Excluding High Impact)	Waste Disposal and Recovery Facility (High Impact)
Wholesale		

The proposed development for 4 no. Aviation Related Cargo Handling Units and Ancillary Office totalling c. 34, 623.6 sqm comprises a use that is permitted in principle under the DA zoning objective.

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### 1.3.2 Dublin Airport – Strategic Importance

Dublin Airport is the most important strategic location for international connectivity in the Country for both passengers and freight.

#### **Objective CSO43 – Swords – Dublin Airport Support**

*Swords-Dublin Airport as a key location for airport related economic development and employment provision linked to the protection and enhancement of access to Dublin Airport lands including the delivery of MetroLink.*

#### **Policy CMP27 – Dublin Airport, Transportation, Surface Access and Freight**

*Support the continued protection of the core transport function of Dublin Airport including measures to enhance surface access, public transport connections and strategic freight movements.*

The Fingal Development Plan recognises that there will be a greater level of delivery and servicing activity due to economic activity and with the continued shift to online shopping. The RSES supports the need to develop a Regional Freight Strategy to accelerate the decarbonisation of the freight sector and reinforce the important role that the strategic rail and road (including TEN-T) network play in efficiently moving freight.

Fingal County Council supports the development of this strategy in recognition of the need to decarbonise freight and the interregional nature of freight movements, especially as a result of increased activity to and from Dublin Airport and Dublin Port as well as increased development throughout Fingal and the mid-east region. It is also a key objective of the NPF and RSES to improve access to Dublin Airport and Dublin Port. The Government's All Island Strategic Rail Review proposes an investigation into the feasibility of increasing rail freight on the rail network. Fingal County Council recognises and supports the potential that exists for the efficient use of the rail network to transport freight.

Fingal is a major employer across all sectors, supported by a strong supply of zoned land. Fingal has an established industrial base, with recognised clustering of various businesses. Clustering has been a key policy concept over the years in Fingal and has resulted in a number of successful clusters throughout the County, namely; the ICT sector in Blanchardstown, the pharmaceutical sector in both the Swords area and in Blanchardstown/ Mulhuddart area, the Aviation sector in proximity to Dublin Airport and the Agri-Food sector in rural locations principally to the north of the County.

### 1.3.3 Dublin Airport Local Area Plan 2020-2026

The Dublin Airport Local Area Plan (LAP) was adopted in 2020, and intended to have a life of 6 years, however, the life of the Plan has been subsequently extended by a further five years as per the public notice of 10<sup>th</sup> March 2025 published by the Council under section 19 of the Planning & Development Act, 2000 as amended.

The LAP is perhaps most relevant and in support of the proposed development is the Dublin Airport Local Area Plan 2020 with the objective of further sustainable development of Dublin Airport as a national strategic asset, while also addressing the needs of surrounding communities and the environment. The infrastructure required to address capacity constraints over the plan period at Dublin Airport. The provision of the identified infrastructure will support sustainable growth and facilitate the development of the Airport as a secondary hub in line with government policy as set out as a strategic objective in the National Aviation Policy (NAP). The NAP is supplemented by the report commissioned by the Department of Transport, Tourism and Sport, published by Oxford Economics providing a Review of Future Capacity Needs at Ireland's State Airports (2018) (DTTAS Review).

As of 2025, Dublin Airport is the 13th largest airport in terms of passengers in Europe. Expanding freight and cargo handling infrastructure at Dublin Airport is a key objective in the Dublin Airport Local Area Plan 2020. The LAP references the Oxford Economics Report 2018. The report identifies the subject site and beyond as being suitable for long-term terminal and cargo expansion. It references the strategic need for a Western Access Route, which is aligned with this proposal, and recommends phased development to align with infrastructure delivery and airside access integration.

**OBJECTIVE CG01** *Facilitate air cargo operations through the provision of improved apron facilities.*

**OBJECTIVE CG02** *Facilitate the relocation and expansion of new cargo facilities and potential consolidation of air cargo operations, subject to site specific flood risk assessment and transport assessment.*

**OBJECTIVE EA12** *To maintain and protect accessibility of freight to and from Dublin Airport as a priority in particular with respect to accessibility from the M1, M50 and the TEN-T network for freight movements. Any planning applications for new or expansion of freight and cargo operations within the DA zoned lands shall be accompanied by a traffic and transport impact assessment, specific proposals for the application of mobility*

*management measures and the demonstration of consistency with the overall Dublin Airport Mobility Management Plan.*

Business parks and industrial areas across Fingal, including Dublin Airport-zoned lands, are expected to deliver well-designed, high-quality environments that respect and enhance the County's distinctive character. This approach aligns with Policy EEP1 and Policy EEP8, which support the economic development and strategic importance of Dublin Airport as a key employment hub. Objectives EEO12 and EEO14 further emphasise the need for strong design quality, permeability, and safe pedestrian/cyclist access, ensuring that aviation-related employment areas remain efficient, functional, and economically sustainable in the long term.

**Policy EEP1** – *Supports the economic development of Fingal in line with the National Planning Framework and the RSES, including the development of strategic employment areas such as Dublin Airport.*

**Policy EEP8** – *“Support economic growth within the County through strengthening and promoting the strategic importance of major urban centres of Swords, Blanchardstown and Balbriggan and of key employment locations such as Dublin Airport and Dublin 15.”*

**Objective EEO12** – *“Support existing successful clusters in Fingal, such as aviation...”*

This supports the development of high-quality environments for **aviation-related industry**, ensuring that the design sustains and enhances this cluster.

**Objective EEO14** – *(by analogy) While specifically referencing GE lands, its intent — “Encourage high quality sustainable design, permeability and pedestrian and/or cyclist friendly environments...” — is equally relevant to aviation employment sites that are to be well-designed, connected, and sustainable.*

The Planning Statement, submitted separately and in addition to the EIAR, sets out the detailed planning rationale, policy context, and strategic intent underpinning Phase 1, i.e. a purpose-built cargo and logistics hub, this proposed development subject of this application has been designed to address existing operational limitations at the airport's Eastern Campus, as well as providing for decentralisation of key logistical functions, and enabling more efficient use of apron space and operational resources. This introduction is intended to support and introduce the Environmental Impact Assessment Report (EIAR).

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## 1.4 Planning History

There is limited planning history pertaining to the subject lands, however, a planning history search for the subject site has been undertaken and the relevant planning history is set out in this section. We summarise below a number of relevant planning applications relating to adjoining and nearby lands, which relate to the subject site.

The subject lands, located to the west of Dublin Airport, are currently an underutilised greenfield site that has historically remained undeveloped. The lands have no record of any built construction or operational development to date.

A review of the planning records indicates that two applications for developments of a similar scale were submitted during the 1990s – one of which was granted providing a clear precedence for support for a light aircraft facility use in the area.

### 1.4.1 Subject Site Planning History

The subject lands have a well-documented planning history demonstrating a long-established recognition of their suitability for aviation-related and airport-supporting development.

PLANNING REFERENCE: 92A/1376	
<b>Applicant Name</b>	Iona Airways Limited
<b>Location</b>	Huntstown, Cloghran
<b>Description</b>	<i>Light aircraft assembly and maintenance building with aviation school offices and separate house and septic tanks.</i>
<b>Decision</b>	GRANT PERMISSION.
<b>Date</b>	21 Sep 1994

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PLANNING REFERENCE: F96/0342	
<b>Applicant Name</b>	Huntstown Airpark Limited
<b>Location</b>	lands adjoining Dublin Airport at Huntstown House, Cloghran, Co. Dublin, accessed from, the Naul Road, Cloghran
<b>Description</b>	<i>New airport terminal (Reg. Ref. F96A/0342), Additional Information/Modified plans providing for the following: The omission of the executive jet terminal, maintenance hangers, cargo stores, fire station and 150 no. bedroom hotel; reorientation of the terminal buildings and circulation routes, provision of two multi-storey car parks, airport parking apron and taxi-ways to existing runways.</i>
<b>Decision</b>	REFUSE PERMISSION
<b>Date</b>	22 May 1997

PLANNING REFERENCE: F98A/0813	
<b>Applicant Name</b>	Gerard Gannon
<b>Location</b>	Naul Road, Huntstown, Cloghran, Co. Dublin
<b>Description</b>	<i>amendments to approved light aircraft assembly and maintenance building with aviation school offices and separate house and septic tank (Reg. Ref. 92A/1376) to increase hangar area for helicopter maintenance and service and to increase aviation school office facilities.</i>
<b>Decision</b>	PERMISSION (FCC Decision)  REFUSE ON APPEAL (PL.06F.111390)
<b>Decision Date</b>	14 Jan 2000

The granting of permission for Reg. Ref. 92A/1376 sets an important precedent for aviation-related activity on the subject lands. The proposal, advanced by Iona Airways Limited, clearly established the site's functional and locational suitability for light aviation, training, and associated enterprise uses. The subsequent non-implementation of the development arose from the dissolution of Iona Airways rather than any planning or environmental constraint associated with the site.

Further to this, the 1998 application Reg. Ref. F98A/0813 further demonstrates consistent planning intent for aviation-supportive uses on these lands. Although ultimately refused on appeal, this was at a time when strategic planning policy and the wider infrastructural framework for the Dublin Airport environs were not yet established to the extent they are today.

Since the previous planning applications on these lands were made, there have been significant changes to both the policy framework and the strategic planning context for the area.

At the time of these planning applications, the policy context did not provide a clear basis for such an aviation-focused development, and the application was ultimately refused. However, the subject site now forms part of lands zoned "DA – Dublin Airport "under the Fingal County Development Plan 2023–2029 and the Dublin Airport Local Area Plan (LAP). This zoning explicitly facilitates the development of airport-related infrastructure and employment uses, including logistics, warehousing, and ancillary activities that enhance and complement the core airport function. This represents a substantial and material change in planning policy direction since 1998, providing a robust framework for the type of aviation-related cargo handling use now proposed.

The application lodged under F98A/0813, was refused on Appeal for one reason; namely that *"The proposed development is located on the western side of the public road and is not directly connected to the airport. The proposed development is also located in an area zoned "to protect and provide for the development of agriculture and rural amenity" in the current Development Plan for the area. It is considered that the proposed development would, therefore, contravene materially an objective of the Development Plan and be contrary to the proper planning and development of the area."*

In contrast to the 1990s context, when planning applications were assessed in the absence of a defined strategic aviation framework and instead of the 'rural' zoning applicable at that time, the current zoning and policy environment now explicitly facilitates aviation and employment-based development on these lands. The DA zoning under the Fingal Development Plan represents a clear, evidence-based recognition that these lands are integral to the Airport's operational and economic ecosystem.

The enlargement of Dublin Airport (including a second terminal, new parallel runway, expanded apron, taxiway and remote peers, etc), along with the transformation of the local infrastructure network, the

introduction of strategic policy support for Dublin Airport, and the clear precedence of aviation-related proposals on the site collectively demonstrate that the subject lands are now optimally positioned and policy-supported for appropriate airport-related development.

In summary, the planning history of the subject site establishes a longstanding intent and suitability for aviation use, while the evolution of both the infrastructure and the planning framework now provides the necessary foundation for sustainable development consistent with the DA zoning objectives and the proper planning and sustainable development of the area.

The change in zoning, together with national and regional policy support for the growth of Dublin Airport as a key economic driver for the region, is further detailed in the Planning Statement accompanying this EIAR. The Planning Statement demonstrates how the Proposed Development aligns with current local, regional, and national policy objectives to promote well-planned, sustainable aviation-related employment development within the airport environs.

#### 1.4.2 Planning History in the Environs

In addition to the site-specific context, this statement also references the planning history of similar-scale aviation-related and cargo handling facilities on nearby lands. While those lands are zoned 'GE' rather than 'DA', they provide a useful comparison in terms of the planning approach to developments of this nature in the wider airport environs.

Recent development of a similar nature and scale in the proximity of the subject site includes Horizon Logistics Park and Dublin Airport Logistics Park and Northwest Logistics Park. The applications lodged in relation to these developments are on lands zoned 'GE' with an objective to "provide opportunities for various enterprise and employment uses, including compatible industry, logistics, and warehousing, within a high-quality physical environment."

PLANNING REFERENCE: F97/1115	
<b>Applicant Name</b>	Donal Fox
<b>Location</b>	Lands adjoining Dublin Airport,, Huntstown, Dunbro,, and access from the Naul Rd., Cloghran, Co. Dublin
<b>Description</b>	<i>International Warehousing Units International Courier Offices and storage depot, heliport, 4 no. car rental offices and surface car parking, airline enterprise unit, and 1,800 place surface car park served by sewage treatment plant to be included in future full planning application</i>
<b>Decision</b>	REFUSE PERMISSION

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PLANNING REFERENCE: FW25/055E	
<b>Applicant</b>	HPREF Dublin Office DevCo 1 Limited
<b>Location</b>	Horizon Logistics Park, off the R108, at the townlands of Merryfalls and Silloge, St. Margaret's, Swords, Co. Dublin
<b>Description</b>	<i>The construction of 5 no. light industrial / warehouse (including wholesale use) / logistics units, including entrance / reception areas and ancillary office space, and 1 no. café / retail unit with associated seating. The proposed units will have an overall combined total gross floor area (GFA) of c. 38,156 sq.m (along with ancillary ESB substations and pumphouses with a combined GFA of 582.4 sq.m.), on a site of c. 14.2 Ha.</i>
<b>Decision</b>	Request Additional Information
<b>Application</b>	18 Feb 2025

**PLANNING REFERENCE: FW23A/0278**

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<b>Applicant</b>	HPREF Dublin Office DevCo 1 Limited
<b>Location</b>	Horizon Logistics Park (known as Site G1), off the R108, at the townlands of Silloge and Harristown, St. Margaret's, Swords, Co. Dublin
<b>Description</b>	<p><i>The construction of 1 no. light industrial / warehouse (including wholesale use) / logistics building (Unit G1) with a gross floor area (GFA) of c. 4,203 sq.m (including 656 sq.m of ancillary welfare and office space over two levels). The proposed building will have a main parapet height of c. 14.8 metres.</i></p> <p><i>Provision of 44 no. car parking spaces (including 3 no. disabled parking spaces and 5 no. electrical vehicle parking spaces), 44 no. bicycle parking spaces within bicycle shelter structures, and 5 no. motorcycle spaces;</i></p> <p><i>Provision of an ESB substation (with a GA of c. 35.75 sq.m) to the southeast of the main building. • Provision of a service yard and loading bays to the east of the main building, bound by a 2.4m high fence.</i></p> <p><i>Provision of a recycling and bin store to the south of the service yard.</i></p> <p><i>Provision of access arrangements to the proposed development including an access from the estate road to the west of the site and provision of new cycle and pedestrian path alongside the estate road.</i></p> <p><i>Provision of landscaping and amenity space to the north and east of the site, planting, and boundary treatments.</i></p> <p><i>The proposal includes signage zones, PV panel zones at roof level, building plant, site lighting, security fencing, and all associated site services and development works, including underground foul and storm water drainage network and sustainable urban drainage systems</i></p>
<b>Decision</b>	GRANT PERMISSION
<b>Application</b>	15 Sep 2023

**PLANNING REFERENCE: F22A/0460**

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<b>Applicant</b>	DAA PLC
<b>Location</b>	Townlands of Collinstown, Coultry, and Hunstown Co. Dublin, and in the townland of Pickardstown, Co. Dublin, and in the townland of Portmellick
<b>Description</b>	<p><i>Planning permission for development on 4no. sites located entirely within lands in the ownership of Dublin Airport, including 2no. sites at the Airfield in the townlands of Collinstown, Coultry, and Huntstown, Co. Dublin, 1no. of which incorporates part of Pier 3 and surrounding aircraft stands, aircraft stands to the south of Pier 2, Apron Taxiway 4, Taxiway F-2, Runway 16/34 (the crosswind runway), Taxiway W1 and W2, West Apron; and 1no. of which incorporates an existing airside site compound, south of the West Apron; 1no. area of land to the west of the existing Western Compound, south of the R108, north-west of the Airport, in the townland of Pickardstown, Co. Dublin, also to be known as the Western Compound; and 1no. an area of existing hardstanding to the south-west of the Airport, north of the R108, to be known as the Southern Compound, in the townland of Portmellick, Co. Dublin.</i></p> <p><i>The proposed development will consist of the construction of a subterranean Underpass of Runway 16/34, a critical airfield operational safety project.</i></p>
<b>Decision</b>	GRANT PERMISSION
<b>Application</b>	22 Dec 2022

PLANNING REFERENCE: F23A/0781	
<b>Applicant</b>	DAA PLC
<b>Location</b>	Dublin Airport, Co. Dublin
<b>Description</b>	<p>Increase in passengers numbers per annum</p> <p>a) An increase in the capacity of the airport from the permitted combined capacity of Terminal 1 together with Terminal 2 of 32 million passengers per annum (32mppa) (as referenced by condition no. 3 of ABP Ref. No. PL06F.220670 (F06A/1248) and condition no. 2 under ABP Ref No. PL06F.223469 (F06A/1843)) to 40 million passengers per annum (40mppa).</p> <p>b) The increase to the capacity will include all attendant airport operations at Dublin Airport. The proposed increase in passenger numbers will supersede and replace condition no. 3 of ABP Ref. No. PL06F.220670 (F06A/1248) and condition no. 2 under ABP Ref. No. PL06F.223469 (F06A/1843).</p>
<b>Decision</b>	Request Additional Information
<b>Application</b>	15 Dec 2023

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### Reg Ref. F23A/0781 - Project Element 2: South Apron

- a) Enabling works comprising the demolition of existing buildings (c. 29,101.2m<sup>2</sup> , to include Cargo Terminal 1 (c. 10,446m<sup>2</sup> ), Cargo Terminal 2 (c. 5,445m<sup>2</sup> ), the existing Passenger Boarding Zone (PBZ) (c. 2,209m<sup>2</sup> ), Shamrock House Annex and Link Bridge (c. 2,509m<sup>2</sup> ) and Gate Gourmet (c. 2,473m<sup>2</sup> )) and service diversions.
- b) The construction of a new 3-storey pier (Pier 5) (c. 24,070m<sup>2</sup> ) projecting eastward from the existing Terminal 2 building and incorporating 8NBE stands, six bus lounges, enclosed gate-hold rooms, fixed links, with the capacity for both airbridge and walk in / walk out boarding / disembarkation.
- c) A reconfiguration & expansion of the existing US Customs and Border Protection (CBP) pre-clearance facility, which will consist of: (i) the demolition of: 2no. existing Pier 4 link bridges; 2no. external vertical circulation cores (VCC) and 2no. airbridges; part of the north, east and south elevations of the existing CBP facility (c. 309m<sup>2</sup> ), including external footpaths, ramps and handrails; and part of

- the existing apron pavement. (ii) internal reconfiguration of part of Pier 4 and the existing CBP facility (c. 1,017m<sup>2</sup> ) and the construction of an expanded 2-storey, part 3-storey CBP facility to the east of the existing CBP facility (c. 8,203m<sup>2</sup> ), to include:
- a. pre-clearance passenger processing facilities at Level 10 (ground floor), including 5no. entry Egates, queuing areas, 11no. screening lanes, 22no. booths, transit lounge area, welfare facilities, and ancillary staff facilities.
  - b. lounge, retail/food and beverage area, swing gateroom, welfare facilities, airline lounge, staff facilities, including ancillary offices at Level 15 (first floor).
  - c. construction of 2no. external vertical circulation cores (VCC).
- d) construction of a new skybridge links at Level 15 (first floor) Level 20 (second floor) and Level 30 (third floor) between the proposed Pier 5, and the existing Pier 4 and the existing Terminal 2 building and all associated works.
  - e) security facilities at Level 10 and Level 20, and a lift core extending to Level 30 (third floor (part)), to merge with the remaining parts of the existing facility at Pier 4.
  - f) ancillary external structures to the extended roof, including rooflights, external balustrade and handrail; fixed metal roof walkway; and fall protection anchorage system.
  - g) realignment of the existing airside road; the provision of new airside road; and the provision of pedestrian walkways and zebra crossings.
  - h) the reorganisation of an existing airside operations car parking area to provide 15no. airside operations car parking spaces; the provision of 2no. PRM airside operations parking spaces, 2no. platinum passenger parking spaces, 2no. GIWA (goods vehicles) spaces, and 2no. bus set down areas.
  - i. decommissioning of 2no. existing operational aircraft stands.
  - ii. the partial demolition (c. 3,320m<sup>2</sup> ), refurbishment and upgrade of the existing 2-storey former Flight Catering Building, to become the South Apron Support Centre (SASC) (c. 4,139m<sup>2</sup> ) which, together with its existing external hardstanding area to the north-west of the SASC, is to be used initially as a temporary construction compound (office storage and a pre-screening/ logistics/ staff welfare facilities) for the proposed works to the CBP facility, and then for continued use as an Airport Operational Building for airside support/operations, which will consist of:
    - i. upgrade of the façade of the existing SASC building, to include partial demolition of the later attritions/extensions to the south and west flanks of the building; demolition of the existing pedestrian link bridge to Shamrock House to the east (making good the elevation of Shamrock House to match the existing), and demolition of an existing substation internal to the building.
    - ii. the refurbishment of the remaining SASC structure to provide offices, meeting rooms, staff welfare facilities, storage and plant rooms on the ground and first floors, and refurbished rooftop plant

- enclosure and new rooftop balustrades (c. 4,139m<sup>2</sup> ), as well as an external dining courtyard at ground floor.
- iii. the provision of 10no. visitor car parking spaces, 2no. PRM visitor car parking spaces and 80no. cycle storage racks.
  - iv. revised external pedestrian and vehicular circulation arrangements.
  - v. separate external smoking shelter and separate external bin storage.
    - i) new part 2-storey Gate Post 4 (c. 431m<sup>2</sup> ), with associated roads and civil works.
    - j) A remote Passenger Boarding Zone (PBZ) (c. 2,198m<sup>2</sup> ), with a capacity of 9NBE stands and an extended dual Code E taxi-lane.
    - k) Associated infrastructure works including airfield and general services, surface water attenuation and pollution control, including the reconfiguration of a section of the Cuckoo stream.

## 1.5 Objectives of the EIAR

This Environmental Impact Assessment Report (EIAR) has been prepared in parallel with the preparation and formulation of a Planning Application for the proposed development of 4 Aviation-Related Cargo Handling Units with a combined total gross floor area (GFA) of c. 34,623.6 sqm (alongside ancillary ESB substations, 4 no. security huts with a combined GFA of 29.96sqm and pumphouses), and associated works on a 10.7 ha site within the townland of Huntstown, fronting onto the R108/Old Naul Road to the east.

The majority of this EIAR was prepared by CWPA Planning and Architecture, and additionally ESC Environmental Ltd, Waterman Moylan Engineering Consultants, MWP ecologists, RMDA Landscape Architects, Digital Dimensions, iAcoustics, Eoin Halpin Archaeology, and Mitchell & Associates have also provided significant additional inputs. Full details of the study team and expertise is provided in Section 1.7 of this Chapter and further outlined in the specific Chapters.

## 1.6 Format & Methodology

This Environmental Impact Assessment Report (EIAR) follows what is referred to as a grouped format structure. Using this structure, the EIAR examines each specialist environmental topic in a separate chapter. The EIAR examines the likely impact of a proposed development, and possible 'predicted or known' environmental impacts associated with the proposed development, during construction and operation, and where subject to mitigation, the residual impacts will also be identified.

In parallel with the EIAR, an **Appropriate Assessment (AA) Screening Report** has been prepared by **MWP Ecological Consultants** in line with Article 6(3) of the EU Habitats Directive. The screening concluded that the project would not result in significant effects on any European Site, either alone or in combination with other plans or projects. As such, the requirement to prepare a Natura Impact Statement (NIS) has been screened out. While the AA process is a separate consent mechanism, its findings are cross-referenced where relevant throughout this EIAR to ensure a coordinated assessment. It may be noted that while this is a separate process, the conclusions of same will be considered where relevant in this document.

The structure of this EIAR has been informed by the EPA's guidelines and follows a topic-specific approach. The report is structured as follows:

- **Chapter 2 – Screening and Scoping**  
Provides an overview of the screening and scoping process undertaken during the early stages of the EIAR. This includes the legislative basis for EIA, consultations with prescribed bodies and stakeholders, and the identification of the key environmental topics addressed.
- **Chapter 3 – Consideration of Alternatives**  
Summarises the reasonable alternatives considered by the applicant, including alternative site layouts, design configurations, and development strategies. Further topic-specific alternatives are also discussed within the relevant chapters.
- **Chapter 4 – Project Description**  
Describes the location, site characteristics, and design of the Proposed Development, including construction methods, phasing, and operational details.

The technical chapters (Chapters 5–15) are structured in accordance with EPA best practice and include:

- **Methodology**  
Setting out the assessment framework and relevant legislation, guidelines, and professional standards. Methodology for Assessment, Competencies, References, etc. are provided in each chapter as they relate to the specific topic assessment.
- **Description of the Receiving Environment**  
A baseline of current environmental conditions relevant to each environmental factor.

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- Impact Assessment**  
 Evaluation of likely significant direct, indirect, cumulative, short-term, medium-term, long-term, permanent or temporary effects, and positive or negative effects.
- Mitigation and Monitoring Measures**  
 Proposed strategies to avoid, reduce, or offset potential adverse impacts, including post-consent monitoring commitments.
- Cumulative Impacts and Interactions**  
 Where relevant, chapters assess potential cumulative effects and interactions with other environmental factors. Interactions and Cumulative impact may be noted in specific chapters, however chapter 16 provides a synopsis of these potential impacts and interactions.

## 1.7 Study Team

CWPA have been engaged as project managers and lead for the preparation of the EIAR, and as such have assumed responsibility for chapters 1 to 5, with further input as outlined in Table 1.2.

**Table 1.1:** Management Team for EIAR

Role	Personnel	Company
<b>Study Manager</b>	Rachel Kenny	CWPA
<b>Study Co-Ordinator</b>	Joe Corr	CWPA
<b>Ecological Assessment Manager (EIAR/AASR)</b>	Rob Beer	MWP
<b>Environmental and Sustainability Manager</b>	Martijn Leenheer	ESC Environmental

<b>Engineering Aspects Study Manager</b>	Ian Worrell	Waterman Moylan
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**Table 1.2:** Specialist Topics –

Chapter 2 Screening & Scoping sets out the basis for the selection of these topics.

Chapter No.	Topic	Personnel	Company
4.	Project Description	Hannah Egan	CWPA
5.	Population and Human Health	Mark Whelan	CWPA
6.	Biodiversity	Jennifer Snook Rob Beer	MWP
7.	Land, Soils and Geology	Martijn Leenheer Peter McCormick	ESC Environmental
8.	Hydrology and Hydrogeology	Martijn Leenheer Peter McCormick	ESC Environmental
9.	Air Quality and Climate	Peter McCormick	ESC Environmental
10.	Noise and Vibration	Glen Plunkett Eoghan Tyrell	iAcoustics
11.	Landscape and Visual Impact	Ronan MacDiarmada	RMDA Landscape Architects
12.	Material Assets	Ian Worrell Hannah Egan	Waterman Moylan CWPA
13.	Traffic and Transportation	Ian Worrell Noel Mahon	Waterman Moylan

14.	Archaeology	Eoin Halpin Hannah Egan Roisin Corr	AHC Ireland CWPA CWPA
15.	Accident and Disaster	Martijn Leenheer Hannah Egan	ESC Environmental CWPA
16.	Interactions and Cumulative Effects	Rachel Kenny Joe Corr	CWPA

## 1.8 Impact Predictions

Rating of potential environmental impacts in the specialist chapters generally follows the Glossary of Impacts contained in the EPA Guidelines as shown in Table 1.3 below. This takes account of the quality, significance, duration, and type of impact characteristic identified.

**Table 1.3:** Impact predictions

Impact Characteristic	Term	Description
Quality	Positive	A change which improves the quality of the environment
	Neutral	A change which does not affect the quality of the environment
	Negative	A change which reduces the quality of the environment
Significance	Imperceptible	An impact capable of measurement but without noticeable consequences
	Slight	An impact which causes noticeable changes in the character of the environment without affecting its sensitivities
	Moderate	An impact that alters the character of the environment in a manner consistent with existing and emerging trends
	Significant	An impact, which by its character, magnitude, duration or intensity alters a sensitive aspect of the environment

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	Profound	An impact which obliterates sensitive characteristics
<b>Duration</b>	Short-term	Impact lasting one to seven years
	Medium-term	Impact lasting seven to fifteen years
	Long-term	Impact lasting fifteen to sixty years
	Permanent	Impact lasting over sixty years
	Temporary	Impact lasting for one year or less
	<b>Type</b>	Cumulative
'Do Nothing'		The environment as it would be in the future should no development of any kind be carried out
Indeterminable		When the full consequences of a change in the environment cannot be described
Irreversible		When the character, distinctiveness, diversity, or reproductive capacity of an environment is permanently lost
Residual		Degree of environmental change that will occur after the proposed mitigation measures have taken effect
Synergistic		Where the resultant impact is of greater significance than the sum of its constituents
'Worst Case'		The impacts arising from a development where the mitigation measures may substantially fail

## 1.9 Difficulties Encountered

The EIA Regulations require that difficulties such as technical deficiencies, lack of information or knowledge encountered in compiling any specified information for the EIAR be described. In general, there were no significant difficulties encountered in the production of this EIAR. Any issues encountered during assessment of individual factors are noted within the specialist chapters.

## 1.10 Level of detail in project description

The project description details provided in Chapter 4 and in the specialist Chapters 5 to 16 are generally the outermost ('not to exceed') characteristics of the proposed development, which is maximum dimensions and emissions that could arise from the range of technologies and processes that could be employed. These are the characteristics that have potential to cause the greatest environmental effects. This facilitates an evaluation of 'worst case' environmental effects which is in keeping with the Guidelines and with best practice. Actual effects will not exceed the predicted effects.

## 1.11 Quotations

By their nature, EIARs contain statements about the proposed development, some of which are positive, and some less than positive. Selective quotation or quotations out of context can give a misleading impression of the findings of the study. Therefore, the study team urges that quotations should, where reasonably possible, be taken from the conclusions of specialists' chapters.

## 1.12 EIA Report Quality Control

CWPA is committed to consistently monitoring the quality of EIA Report documents prepared both in draft form and before they are finalised, published and submitted to the appropriate competent authority taking into account latest best-practice procedure, legislation and policy.

While every effort has been made to ensure that the content of this EIA Report document is error free and consistent there may be instances in this document where typographical errors and/or minor inconsistencies do occur. These typographical errors and/or minor inconsistencies are unlikely to have any material impact on the overall findings and assessment contained in this EIA Report.

## 1.13 References

- Guidelines on the information to be contained in Environmental Impact Statements, EPA 2022
- European Communities (Environmental Impact Assessment) Regulations, 1989, as amended
- European Union Planning and Development (Environmental Impact Assessment) Regulations 2018 (SI 296/18)
- Communities European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (SI 296/18)
- Planning and Development Act 2000 (as amended);
- Planning and Development Regulations 2019 (as amended);
- Directive 2011/92/EU;
- Directive 2014/52/EU;
- Transposition of 2014 EIA Directive (2014/52/EU) in the Land Use Planning and EPA Licensing Systems - Key Issues Consultation Paper (2017; DoHPCLG);
- Preparation of guidance documents for the implementation of EIA directive (Directive 2011/92/EU as amended by 2014/52/EU) -Annex I to the Final Report (COWi, Milieu; April 2017);
- European Union (Planning & Development) (Environmental Impact Assessment) Regulations 2018;
- Guidelines on the information to be contained in environmental impact assessment reports, EPA, 2017 (Draft)
- Environmental Impact Assessment - Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (2018; DoHPLG).
- Guidance for Consent Authorities regarding Sub-threshold Development (2003; DoEHLG)

## 2.0 Screening & Scoping

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### 2.1 Legislation and Guidance

EIAs are carried out in response to the requirements of the European Directive on the assessment of the effects of certain public and private projects on the environment, particularly as codified in Directive 2011/92/EU and amended by Directive 2014/52/EU.

The enabling statutory instruments (S.I.s) which transpose the Directive into law in Ireland are the European Communities (Environmental Impact Assessment) Regulations, 1989, as updated by the Planning and Development Acts 2000 to 2006 (the EIA Regulations), with the key legislation being the Planning and Development Regulations 2001 (S.I. 600/2001), as amended. These regulations prescribe the classes of projects subject to Environmental Impact Assessment (EIA). Amendments introduced by Directive 2014/52/EU were transposed into Irish planning law by the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (SI 296/18). These set out the statutory format and content for an EIAR.

### 2.2 Screening

Under the Planning and Development Regulations, 2001 (SI 600 of 2001), Environmental Impact Assessment Report (EIAR) is to accompany a planning application where a proposed development meets the criteria outlined under Schedule 5, Development for the purposes of Part 10; in this regard we would note that the subject development potentially falls within the class/criteria under Part 2 (10) *Infrastructure projects* (a) Industrial estate development projects, where the area would exceed 15 hectares, or (b) (iv) Urban development which would involve an area greater than 2 hectares in the case of a business district, 10 hectares in the case of other parts of a built-up area and 20 hectares elsewhere.

In respect of the current proposal, i.e. the future use of the lands/site for logistics/cargo handling on a c.10.7ha site, it could be classed as an industrial park notwithstanding that no industrial processes will take place on the lands. Alternatively, the development may be considered to be an urban development on a

c.10.7ha site, and either located in a potentially 'built up area' being contiguous to Dublin Airport, which is zoned for development and is in effect 'built up' or 'elsewhere'. Although there is some ambiguity as to how best to categorise this development and its location (built up or elsewhere), it is undoubtedly an 'infrastructure project', and even if one were to consider that it is a subthreshold development based on the application site boundary, it is our considered opinion that it is sufficiently close to the threshold that the requirement for an EIAR could not be excluded on the basis of a preliminary screening.

We have assumed, that the development while it is of a class for which an EIA may be required, it is below the threshold relating to the applicable class of development, i.e. if class (10) *Infrastructure projects* (a) Industrial estate development projects, the application area would not exceed 15 hectares, or if class (10) *Infrastructure projects* (b) (iv) Urban development which would involve an area greater than 20 hectares elsewhere (i.e. not being a business district or a built up area).

However, the application site is part of a larger landbank, which will comprise further logistics and cargo handling activities, and airport related development, including a third airport terminal. A concept plan for the full landbank has been developed and discussed in principle with the planning authority. Having regard to the scale of infrastructure/urban development possible on this landbank, and which undoubtedly exceed the threshold for a mandatory EIA, we consider a subthreshold Environmental Impact Assessment Report (EIAR) would be required to support the development, i.e. works on the site, in order to demonstrate that no significant adverse impact arises, and to address any potential concerns or issues regarding project splitting to avoid carrying out an EIAR.

This EIAR has been prepared in accordance with the above and has had due regard to other relevant regulations and guidance including Guidelines on information to be contained in Environmental Impact Statements, EPA, 2022, Advice Notes on Current Practice in preparation of Environmental Impact Statements, EPA, 2003 and relevant European Commission guidance documents, as relevant.

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## 2.3 Scoping

### 2.3.1 Basis of scoping for this EIAR

Scoping is the process of identifying potential concerns that need to be examined in an EIAR. The determination of potential concerns to be addressed in this case was based on:

- the requirements of the EIA Regulations;
- the requirements of the EIA Directive;
- the Environmental Protection Agency's Guidelines on the information to be contained in Environmental Impact Statements (EPA, 2022) and Advice Notes on Current Practice (in the preparation of EISs) (EPA, 2003);
- the EIA team's experience of preparing and submitting previous EIARs;
- Consultation with the Planning Authority, ANCA and Department of Transportation.

### Key Considerations

The topics examined in this EIAR are categorised under the environmental factors prescribed under the EIA Directive, and include -

- Population and Human Health;
- Biodiversity;
- Land and Soils;
- Hydrology and Hydrogeology;
- Air Quality and Climate;
- Traffic & Transportation;
- Material Assets;
- Archaeology and Cultural Heritage;
- Landscape and Visual.

The potential likely significant effects caused by the vulnerability of the proposed development to risks of major accidents and/or disasters is also be examined.

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### 2.3.2 Related Projects

The proposed project consists of the construction of 'aviation' related logistics and cargo handling units. Specifically –

The application site falls within a larger 'T3 Western Campus concept plan' landbank comprising c.106ha, all of which is zoned DA, for airport related development. A concept plan has been developed for the full landbank, and proposals for a new road into the airport from the west are also being advanced. While definitive plans have yet to be agreed, the general nature and scale of this development have been planned for, and as such the subject development can be considered in the context of the wider landbank. We, however, are satisfied that the subject development can proceed in advance of the development of the wider area.

Please refer to concept plan Figure 2.1 appended, whereby the proposed site boundary is highlighted in a red line.



Figure 2.1: Concept Plan (September 2025)

Source: CWPA

The DAA have submitted a number of planning applications in recent years, including that lodged in December 2023 (F23A/0781). This application comprised 11 no. infrastructure projects, and of particular relevance to the subject application is the DAA proposal to extend the apron(s) at the airport up to and abutting the applicant's lands. Additionally, as part of the overall works, to accommodate the 11no. infrastructure projects the DAA is seeking permission to demolish the existing airside cargo handling buildings and infrastructure at the airport. Again, while the subject development can be considered in the context of the DAA's proposals, we are satisfied that the subject development can proceed in advance of the development of the wider area, and in advance of the DAA application being permitted or proceeding.

### 2.3.3 Relationship between the EIAR and Assessments under other EU Directives.

This EIAR takes account of available results from other relevant assessments while avoiding duplication of those assessments, particularly the following:

#### 2.3.3.1 The Habitats and Birds Directives (92/43/EEC and 79/409/EEC)

The proposal's potential to affect the integrity of the Natura 2000 network, as required under these Directives, has been assessed and an Appropriate Assessment (AA) screening has been formulated. On the basis of the screening exercise, carried out by Rob Beer, a Senior Ecologist and Jennifer Snook, an Ecologist at Malachy Walsh and Partners (MWP), has resulted in an Appropriate Assessment and Natura Impact Site (NIS) being screened out.

The Appropriate Assessment Screening, carried out by MWP, is included as a separately bound document within the planning application document set. It is referred to in the Chapter 6 Biodiversity of this EIAR, as applicable.

#### 2.3.3.2 The Waste Framework Directive (2009/98/EC)

Chapter 12, Material Assets, considers aspects which fall under this Directive, as appropriate.

#### 2.3.3.3 The Water Framework Directive (2000/60/EC)

Chapter 8, Hydrology & Hydrogeology, considers aspects which fall under this Directive, as appropriate.

## 2.4 References.

- European Communities (Environmental Impact Assessment) Regulations, 1989.
- European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (SI 296/18).
- Advice Notes on Current Practice in preparation of Environmental Impact Statements, EPA, 2003.
- OPR Practice Note PN02 Environmental Impact Assessment Screening.

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## 3.0 Alternatives

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### 3.1 Introduction

This Chapter of the EIAR focuses on alternatives that were considered during the preparation of this EIAR and planning application. The potential effects and merits of each realistic option for the proposed development are considered for the subject site, which is located within the townland of Huntstown.

#### 3.1.1 Competency Statement

This chapter has been prepared by Rachel Kenny, BE Civil, MRUP, FIPI Planning Consultant, CWPA Planning & Architecture. Rachel Kenny is a Senior Planning Consultant with CWPA, Planning & Architecture consultancy, and has 30 years' experience as a planner in public and private sector organisations, including Fingal, Meath and Louth County Council and An Bord Pleanála (as Director of Planning). She holds a degree in Civil Engineering (BE (Civil) (Hons) and Masters in Regional and Urban Planning (MRUP), both from University College Dublin. She is a Fellow and Corporate Member of the Irish Planning Institute. She has experience in both forward planning and development management, and specialises in, inter alia, Strategic Infrastructure Development, and large scale EIAR projects.

This Chapter has been reviewed by Joseph Corr and architectural design options input by Francis Whelan and Shyamalima Buragohain have informed this Alternatives chapter.

Joseph Corr is Director of Planning with CWPA Planning & Architecture. He holds a MSc in Spatial Planning which was obtained from Technological University Dublin. Joe also holds a Diploma in Legal Studies from the Honourable King's Inns. Joe was formerly an Elected Member of Fingal County Council from 2004 to 2009 and was Mayor of Fingal 2006-2007. Joe is also a former President of the Irish Planning Institute (2018 – 2019). Throughout his career, Joe has worked on large scale strategic infrastructural projects including the Poolbeg GSE, Huntstown CCGT Power Station, Kilshane Energy Power Station and Dublin Port Tunnel.

Francis Whelan is a member of the Royal Institute of Architects Ireland and is Director of Architecture with CWPA. Fran was a founding member of Whelan Corcoran Smith Architects and was Managing Director of WCA Architects since its formation in 2011. Fran has wide experience in residential, commercial, educational and healthcare design and in recent years he has focused on the specialist design of nursing homes, care

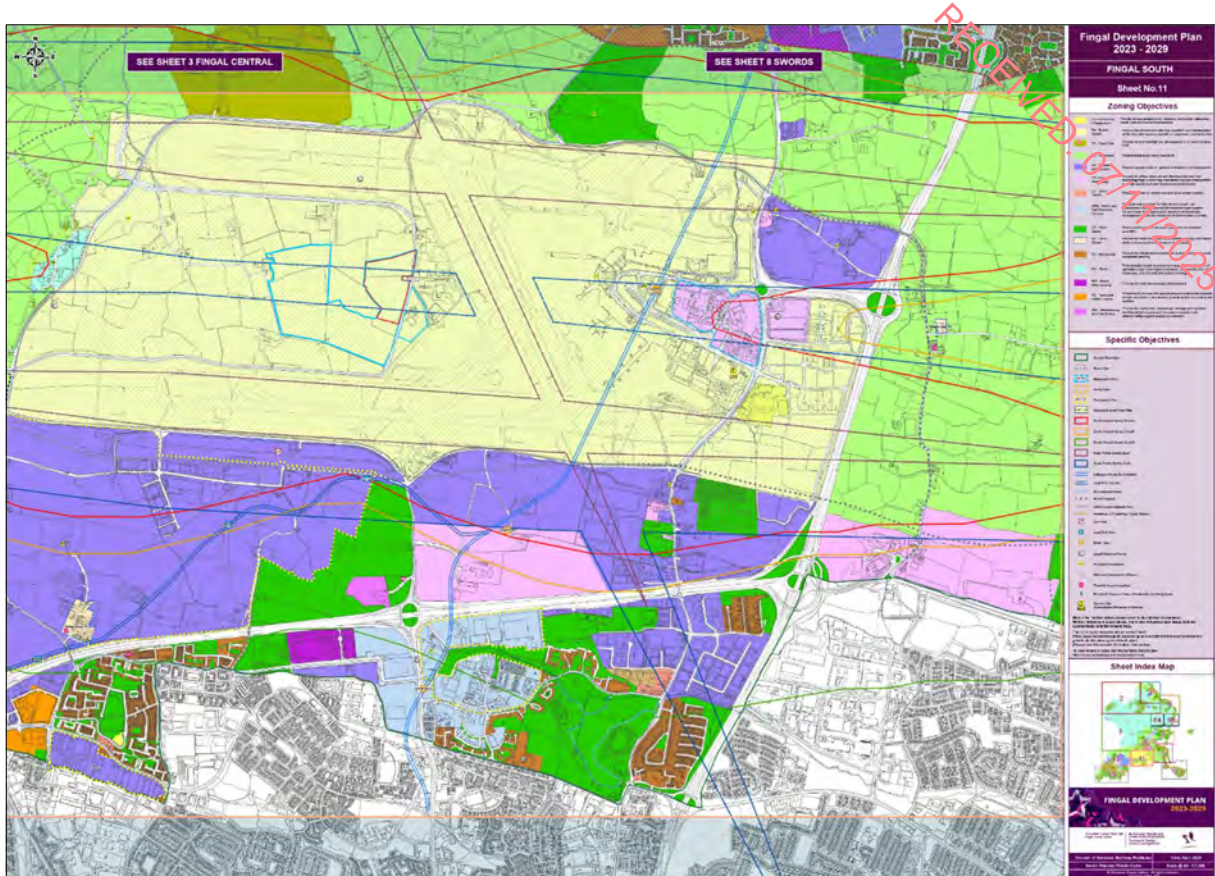
for the elderly and dementia care. Fran was President of Fingal Chamber of Commerce in 2007 and 2008. In 2009 Fran won the coveted Chambers Ireland Award for corporate responsibility for the work of his Architectural practice, WCA, in South Africa and Niger, providing design services for antiretroviral clinics, hospitals and operating theatres.

Shyamalima Buragohain joined CWPA Planning and Architecture as an Architect and Urban Designer in 2021 after completing her post-graduation from University College of Dublin with first-class honours in MSc Urban Design and Planning and is a full member of the RIAI. She completed her Bachelor's Degree in Architecture from India in 2018 and since has worked across various projects in India and Sri Lanka. Her expertise lies in Architecture and Urban Design with a goal to implement sustainable urban environments that enhance the quality of life, wellbeing, and resiliency in cities around the world. Along with certifications in Sustainable Urban Development and Sustainable Energy, she has also published a paper in IIT Bombay Volume: Proceedings of International Conference on Humanizing Work & Work Environment (HWWE) 2015 & Community Nutrition & Health: A Social Responsibility. Since joining the company, she has been involved in a diverse portfolio of projects ranging from master planning, residential, commercial, hotel & leisure and healthcare.

### 3.1.2 Consistency with Statutory Planning

D.A. Terminal 3 Limited's lands which comprises the application site are zoned '*DA – Dublin Airport*', and as such the proposed development use, logistics and warehousing (related to airport/aviation) is '*Permitted in Principle*' on DA zoned lands. Therefore, at a strategic level these lands, being '*DA*' zoned lands and being within the ownership of the applicant, are considered to be the most suitable lands for the development proposed in terms of consistency with the Land Use Zoning, compatibility with airport activities and deliverability.

Lands and sites outside of this landbank have been excluded, being not deliverable by the applicant and noting the more favourable zoning on the subject lands.



**Figure 3.1:** Dublin Airport (DA) Zoning (and site) **Source:** Fingal Development Plan 2023-2029

### 3.1.3 Proposed Development

CWPA were engaged by D.A. Terminal 3 Ltd. for the purposes of developing an overall strategy for their lands and those of their neighbours, adjacent to Dublin Airport, providing for a Third Terminal. As part of the analysis of the development opportunity associated with these lands, the applicants requested that consideration be given to a first phase of development comprising aviation related logistics/cargo handling.

Various development options were considered as part of the analysis and a synopsis of these is provided in Section 3.5. The nature and scale of the logistics/cargo handling operations have since been refined as part of the assessment and analysis and the proposed development which comprises ‘aviation’ related logistics and cargo handling is now specifically described as:

D.A. Terminal 3 Ltd., intend to apply to Fingal County Council, for Planning Permission for the following developments on lands located within the townland of Huntstown, Swords, Co. Dublin. The subject site fronts onto the R108 to the east.

1. Construction of four aviation-related cargo handling units with ancillary office space:

- i. Unit 1: c.10,869.7 m<sup>2</sup> (including 940.9 m<sup>2</sup> office space)
- ii. Unit 2: c.9,151.3 m<sup>2</sup> (including 751.3 m<sup>2</sup> office space)
- iii. Unit 3: c.6,024.9 m<sup>2</sup> (including 497.7 m<sup>2</sup> office space)
- iv. Unit 4: c.8,577.7 m<sup>2</sup> (including 751.3 m<sup>2</sup> office space)

The proposed units will have an overall combined total gross floor area (GFA) of c. 34, 623.6m<sup>2</sup> (alongside ancillary ESB substations, 4 no. security huts with a combined GFA of 30 sqm and pumphouses). The warehouses are c. 12m in height, with the office element being c. 3.3 m in height and located within a landscaped campus on a site of c. 10.7 Ha

2. Provision of 390 car parking spaces, including 39 EV charging points, 19 accessible spaces, and motorcycle bays.
3. Provision of 230 secure bicycle parking spaces, of which 100 are short stay spaces and 130 are sheltered long stay spaces.
4. Provision of approx. 77 truck parking spaces and 5 van spaces.
5. Hard and soft landscaping, new boundary treatments, including a c. 2m high System Wire Fence to site boundary.
6. Construction of new site entrance onto the R108.
7. Wastewater treatment plant and infiltration area for 250 PE.
8. All necessary site development and engineering and ancillary site works, including provision of ESB substations and switchrooms, sprinkler tanks and pumphouses, bin store and recycle store, lighting, signage, underground services, photovoltaic panel zones at roof level and sustainable drainage systems (SuDS).

## 3.2 Consideration of Alternatives - Methodology

Prior to looking at the potential impacts of any development on the environment, the 2018 Regulations require an EIAR to include a description of the reasonable alternatives studied by the person or persons who prepared the EIAR, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the proposed development on the environment.

The subject site, and applicant lands, are immediately contiguous with DAA lands at Dublin Airport, and specifically located close to the existing runways and existing and proposed aprons and taxi areas serving the runways.

### 3.2.1 Guidelines

The EPA Guidelines give considerable coverage to alternatives, partly because the consultation about the effectiveness of EIA practice found that “the acceptability and credibility of EIA findings can be significantly affected by the extent to which this issue is addressed.” An EIAR will deal with the issue of alternatives under two key headings.

The consideration of alternative routes, sites, alignments, layouts, processes, designs or strategies is the single most effective means of avoiding environmental impacts. The acceptability and credibility of EIA findings can be significantly affected by the extent to which this issue is addressed.

However, it is important, from the outset, to acknowledge the existence of difficulties and limitations when considering alternatives. These include:

- *Non-Environmental Factors.*
- *Site Specific Issues.*

### **Non - Environmental Factors**

EIA is confined to the environmental effects which influence the consideration of alternatives. It is important to acknowledge that other non-environmental factors may have equal or overriding importance to the developer, e.g., project economics, land availability, engineering feasibility, planning considerations.

Non-Environmental issues in terms of zoning and land availability have been outlined in section 3.1.2, above, and have been further elaborated on in the Planning Statement accompanying the EIAR.

### **Site Specific Issues**

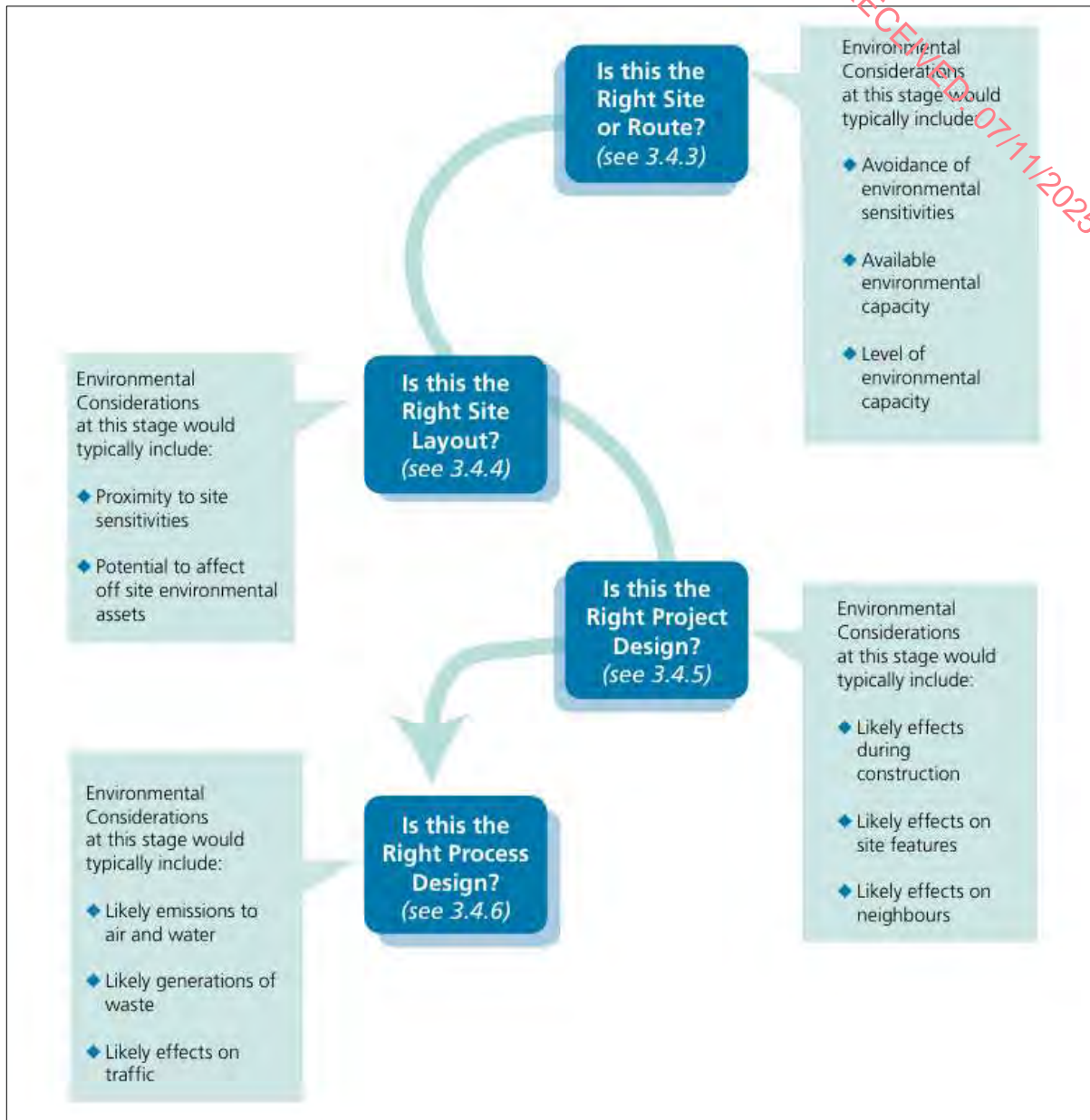
The consideration of alternatives also needs to be set within the parameters of the availability of land (it may be the only suitable land available to the developer) or the need for the project to accommodate demands or opportunities which are site specific. Such considerations should be on the basis of alternatives within a site e.g., design, layout.

For the purposes of the Regulations, alternatives may be described at three levels:

1. *Alternative Locations.*
2. *Alternative Designs.*
3. *Alternative Processes.*

Extracts from EPA guidelines regarding Alternatives to be considered and factors that may assist in selecting the most appropriate location, site, design and processes. (refer Figure 3.2 Consideration of Alternatives in an EIAR).

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**Figure 3.2** Consideration of Alternatives

**Source:** Guidelines on the information to be contained in Environmental Impact Assessment Reports

### 3.2.3 Consultation

In developing and advancing the design strategy, the applicants have engaged with key stakeholders as part of their statutory and non-statutory pre-planning consultation process. As outlined in the EPA guidance on the preparation of EIARs, the benefits of early consultation include:

- *Early identification and therefore more focused consideration of significant effects, a more focused EIAR, and a more focused scoping process.*
- *Reduction in consultees' time and/or input required later in the process.*
- *Early indication of the need for detailed survey work, especially relating to data that is required over several seasons.*
- *Early indication of the information required to assess the application in a manner that is proportionate and appropriate in defining the likely significant effects on the environment.*
- *It allows for early understanding of the potential concerns of the consultees and encourages greater understanding of the project and the preparation of the EIAR by the consultees and decision maker.*
- *It allows for the identification of opportunities to incorporate mitigation measures into the design of the proposal.*

Most consultation carried out for the preparation of the EIAR takes place with the Competent Authority, other authorities, specialist agencies and those parties that are most likely to be directly affected. In this instance, the applicant has also engaged with potential occupants and market leaders in the area of 'aviation related' logistics and cargo handling to ensure that the design reflects market/end user requirements, thereby ensuring that where there is a potential environmental impact, such as the loss of agricultural lands, that there is a justification for this, i.e. positive impact re. population, with employment, rates, and much needed commercial infrastructure maximising the opportunities brought about by existing airport development/activities.

## 3.3 The Design Hypothesis

### 3.3.1 Overall Vision for the DA Terminal 3 Limited lands

The 10.7ha site forms part of a larger landholding of c. 50 ha within the ownership of the applicant, and included in a wider area of some 106.46 ha corresponding to the 'concept' planned lands, all of which are zoned DA. The applicant engaged CWPA to develop concept strategic plans and design frameworks for the 106.46ha landbank to ensure that any smaller interim proposals sat comfortably within the overall strategic vision for the lands. The concept plan provides for aviation related logistics, commercial, office development at a number of locations within the wider landbank. However, the majority of the lands identified for future logistics are outside of the control of the applicant, and therefore cannot be advanced by the applicant. The development of the application site does not prejudice the future development of other lands ear-marked for aviation logistics.

The applicant engaged with the Planning Authority with regard to their strategic vision for these lands and presented concept proposals which outlined the nature and scale of development proposed for the lands. The overall plan for the lands includes a new Terminal building (Terminal 3), as envisaged in the Oxford Economics (DTTAS Review of Future Capacity Needs) Report 2018 as well as various support and ancillary development associated with this, including aprons, piers, car parking, hotel, office, and logistics. It has also been acknowledged that a Western Access Road, consistent with that envisaged in the Dublin Airport Local Area Plan since 2006, would also be developed in tandem with this proposed development for the wider lands. The Applicants have been advancing this proposed road, with agreements from landowners and lands purchased relating to the road alignment well under way. We are satisfied that this road is not required to serve the subject lands and proposed development therein.

While concept plans have been developed for the lands, these plans are continually evolving. The exact details of some elements, for example, the location of T3, as well as the scale and timeframe for its delivery, have yet to be determined. Finalisation of the Department's updated aviation policy should feed into this. Plans for the 'Terminal 3' site are a longer-term project. It would not be appropriate to further develop up plans for these lands at this point, pending agreement at government level that a third terminal is required and that the subject lands are the most appropriate lands for such a development. Equally, the scale of passenger throughput, whether that is 40million passengers per annum or 70 million passengers per annum, is also a matter for the Department of Transport, Airport Noise Competent Authority, et al. We have, however, in so far as is practicable ensured that our concept plans reflect those being considered by the DAA, which also show a third terminal and/or satellite piers on the DA Terminal 3 lands. In addition,

the western access road will be a national asset and is required to facilitate any increase in passenger numbers at the airport as outlined in the Dublin Airport Local Area Plan and elaborated on in the Planning Statement accompanying this application. The proposal for this road is subject to preliminary preplanning discussions with the Planning Authority; Department of Transport and the applicant will be required to engage with Transport Infrastructure Ireland.

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**Figure 3.3:** Concept Plan (September 2025)

**Source:** CWPA

### 3.4 'Do nothing scenario'

One alternative typically considered is to 'do nothing'. In this instance, given that the lands are zoned, 'do nothing' if it was to be read as 'carry out no development' would be nonsensical in that it would be contrary to the Vision of the Council as it relates to this area. Therefore, do nothing would not seem to be in accordance with the proper planning and sustainable development.

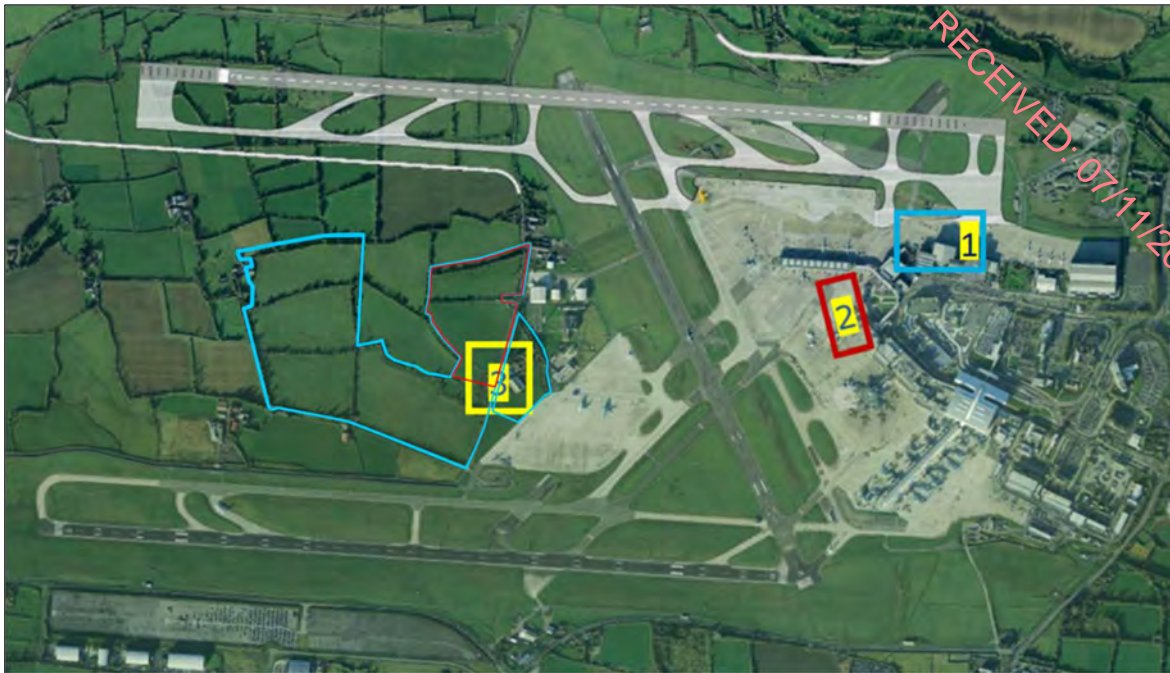
In considering the 'do nothing' scenario, we also considered the 'do nothing yet', i.e. consider whether and what the potential impacts were on the environment if the development were carried out now/as soon as would be practicable. This scenario was considered to be an appropriate scenario to consider, as it allows the applicant to address concerns raised by the Planning Authority, that the subject development may be premature pending the delivery of the Western Access Airport Road, and also premature pending the

Government's decision regarding the location of a Third Terminal (T3). The Planning Authority, at pre-planning stage, also expressed concerns that the subject development may be premature pending the application and assessment of the entire landbank (being the c.106 ha Western Airport Campus).

Having considered these three points we are satisfied that the subject development is not premature, and that indicative proposals for the overall lands demonstrate the suitability of the subject site to accommodate this development, and that it does not prejudice the overall development of these lands and delivery of Terminal 3. Aviation consultants have been engaged, and their considerations and conclusions support the location of each of the 'aviation' related activities in the Concept Plan for the land, and specifically for 'logistics' within the application site lands. Additionally, the Traffic & Transport reports demonstrate that the existing roads can accommodate the proposed development, and that the optimal location for the Strategic Western Access Road is not compromised by this development (See Chapter 13). Finally, in circumstances where there is already a shortfall in high quality, logistics buildings, and that the DAA is proposing to demolish existing cargo handling facilities on their site exacerbating this deficit, the demand for such aviation related infrastructure is critical and needed now. It should be noted that no relocation site has been identified or determined for the cargo handling facilities proposed for demolition, at this time.

### 3.5 Alternative Locations

The subject site comprises c.10.7ha within a c.106ha 'masterplan/concept plan' landbank, all of which are zoned DA – Airport Related Development. The overall land holding, within the ownership of the applicant, comprises a potential site for a third terminal to serve Dublin Airport, as outlined in the Oxford Economics, *"Review of future capacity needs at Ireland's state airports - Final Report for the Department of Transport, Tourism and Sport"* (August 2018).



**Figure 3.4:** Possible Terminal 3 Locations against DA Terminal 3 lands and application site.

**Source:** Oxford Economics (DTTAS Review of Future Capacity Needs) Report 2018

Additionally, regard was had to the Fingal Development Plan 2023-2029, and Dublin Airport Local Area Plan 2020-2026 (extended in March 2025 for a further 5 years). These two documents outline various adopted Council policies for this area, and in particular include the objective for a third terminal, and a new western access road, to alleviate congestion on the R132 and airport roundabout.

In considering the application, the design hypothesis was influenced by the lodgement of the DAA application for 11 no. infrastructural projects, including new apron development contiguous with the applicant's lands and the demolition of existing airside cargo handling and logistics facilities.

It was within these parameters that an overall concept plan for the lands was developed, ensuring that future development was consistent with that envisaged in the statutory plans, and also complimented the DAA's proposed plans for the future development of Dublin Airport. To this end, the applicant and their design team, considered that given the interplay between the DAA and D.A. Terminal 3 lands, that D.A. Terminal 3 lands immediately contiguous with and separating the existing and proposed aprons should be reserved for expansion of the existing/proposed aprons and taxiways allowing for a better planned layout, which was not dictated by landownership.

As the location of the runways and the aprons have already been determined and relate to existing and proposed DAA development, there are limited alternatives appropriate in respect of the expansion of aprons and runways, and we are satisfied that the current proposal reflects this. Thereafter, development that requires or would benefit from airside access is located adjacent to the exiting runways and existing and proposed aprons. This development would include the Terminal, its piers and airport cargo handling facilities. Sequentially outwards from the airside development, and airside/landside interface development (e.g. Terminal Buildings) aviation related commercial development would be proposed in accordance with that 'normally permitted' on DA zoned lands.

We have considered the phasing of development for these lands in tandem with the optimal location for each component, and therefore this has influenced the decision to phase the development allowing the current application to proceed noting that it does not prejudice or impinge on the overall plans for the wider lands on the Western Campus, whether that is as per the applicants indicative proposals (concept plan) or the iterations being considered by the DAA for the applicant's lands. Please refer to figures hereunder showing the DAA's indicative strategy proposals for a third terminal/satellite piers and passenger building on the western campus overlaid on the applicant's concept plan. All show the subject site and application to be outside of the potential development zone for a third terminal/passenger building and piers.



**Figure 3.5:** Indicative concept layout for DA Terminal 3 lands with DAA Strategy Option for a third terminal (passenger building and piers). **Source:** CWPA

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**Figure 3.6:** Indicative concept layout for DA Terminal 3 lands with DAA Strategy Option for a third terminal (passenger building and piers).

**Source:** CWPA

### 3.5.1 Alternative Sites

This section of the 'Alternatives' chapter, in accordance with the EIA Directive 2014/52/EU as transposed into Irish law, outlines the assessment of reasonable alternative locations for the proposed cargo handling facility (4no. cargo handling units) within the D.A. Terminal 3 Limited lands of Dublin Airport. Emphasis is placed on future proofing development within a reasonable and logical framework for these lands alongside DAA lands, surface access and aviation-related constraints and opportunities, which are critical in determining the technical feasibility, safety, and efficiency of each alternative site within the airport boundary.

## Aviation Considerations in Site Selection – Dublin Airport Context

The following aviation-specific criteria were used to assess potential alternative terminal locations within the Dublin Airport campus.

### Proximity to Runway and Taxiway Infrastructure

- **Runway Connectivity:** *Dublin Airport's current parallel runway system (Runways 10R/28L and 10L/28R) and associated taxiways define the critical airside geometry. Lands that were assessed to be optimal for apron and taxiway extensions to compliment the existing and proposed DAA aprons and taxiways, as well as reserving sites/optimal locations for a new terminal were identified and omitted to ensure that these lands were reserved to enable efficient access to both runways to minimise taxi times and congestion in due course.*
- **Operational Flow:** *The site of the proposed logistics units must not interfere with existing aircraft movement corridors or create bottlenecks around high-traffic taxiways (e.g., TWY A, B, and W), which are essential for efficient runway access. Any development proposed must ensure that it does not interfere with the efficiency and safety of the runways and taxiways.*

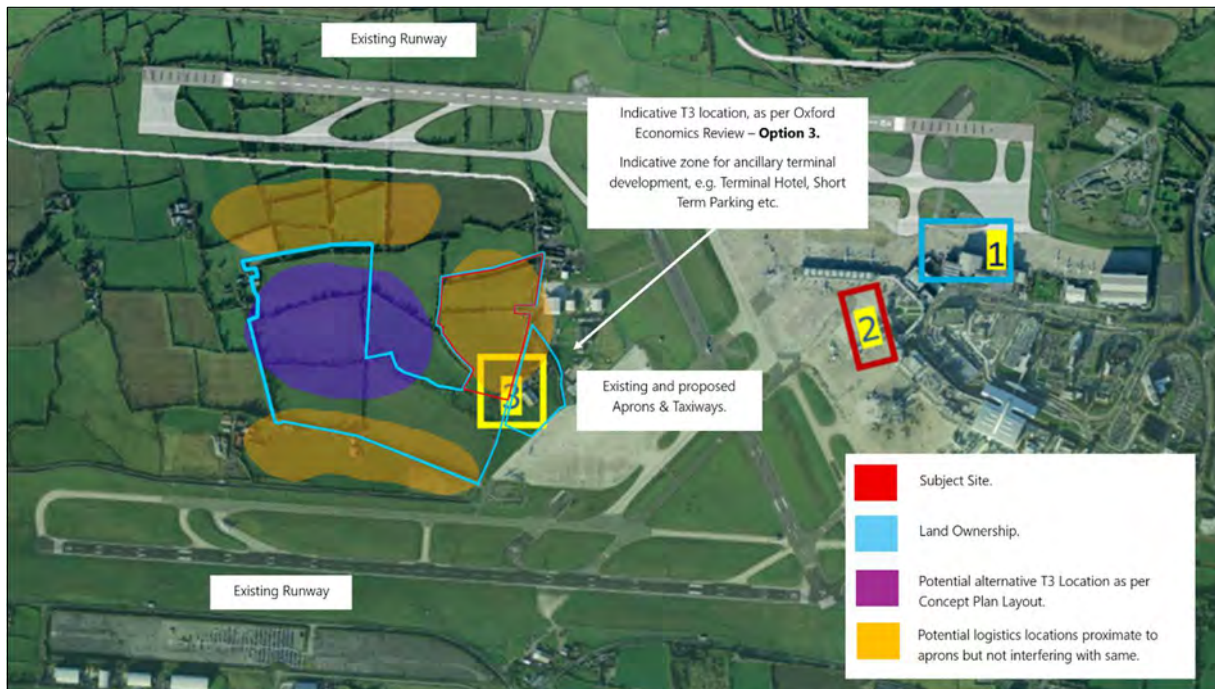
**Application Response:** The lands within the central area of the site were considered to be optimal for a third term having regard to the Oxford Economics Review carried out for the Department of Transport, Tourism and Sports in 2018. Therefore, this area was excluded for consideration as an alternative for logistics. Noting that terminal buildings require considerable ancillary infrastructure/development an additional area was identified for this purpose (ultimately shown in the applicant's concept plans for the airport).

Having regard to the DAA current application for apron and taxiway extensions, the area immediately contiguous with the existing and proposed aprons was initially excluded as being a suitable location for logistics as it was considered that this area may provide for the possible future expansion of the aprons into DA Terminal 3 lands. However, reflecting the DAA's proposals for development of a terminal and piers within this area, as noted in Figure 3.5 above, which shows the indicative concept layout for DA Terminal 3 lands with DAA Strategy Option for a third terminal (passenger building and piers).

The applicant initially identified two pockets of land as possible logistics locations, as the lands were served by existing road network, and additionally could, subject to DAA agreement, be amended (in the future) to be redeveloped to facilitate airside access, being adjacent to the existing and proposed aprons. However,

a third location was also identified as a possible location for logistics uses, being closer to the existing airport complex and situated between the existing terminals and the proposed third terminal on the applicant's lands. The lands also benefit from future airside access, as well as existing landside surface access.

Having consulted with the DAA, we have been advised that they do not consider there to be any need or advantage to airside access for logistics at this time. While we would not necessarily agree, as the DAA are responsible for airside operations at Dublin Airport, we have factored their views in to the 'alternatives' considered. Therefore, while the application site (similar to that previously considered and noted in initial concept plans as Area A) could be developed to avail of airside access, it can in the interim be developed as landside access logistics that is dependent on proximity and use of Dublin Airport (Refer to figure 3.7 below).



**Figure 3.7:** Site Selection with indicative T3 Location

**Source:** Oxford Economic Report 2018

### **Obstacle Limitation Surfaces (OLS) and IAA Safeguarding**

- **Compliance with OLS:** All proposed locations were evaluated against the Irish Aviation Authority (IAA) safeguarding maps to ensure compliance with ICAO Annex 14 standards. Sites near the runway thresholds or within take-off climb surfaces were ruled out due to potential infringement risks.

- **Temporary Obstructions:** Crane usage and construction heights must also be reviewed by the IAA for temporary penetrations of the Inner Horizontal Surface (IHS) or Transitional Surfaces.

**Application Response:** The application site is not within or interfering with the take-off or landing zones, and the height of the proposed buildings at up to 12m is such that it will not cause any impingement or obstruction.

### Impact on Air Traffic Management (ATM) and Flight Procedures

- **SIDs and STARs Compatibility:** The proposed location must avoid the need for reconfiguration of Standard Instrument Departures (SIDs) and Standard Arrival Routes (STARs) in use at Dublin Airport, including those under the control of the Irish Aviation Authority (Shannon ACC and Dublin TWR).
- **Instrument Flight Procedures (IFPs):** Sites to the north of the primary runway (28L) are less favourable due to potential complexity in flight path design and navigational aid relocation.

**Application Response:** The application site is not within or interfering with the Air Traffic Management (ATM) and Flight Procedures.

### Emergency and Fire Service Access

- **Proximity to Fire Station and Airfield Roads:** Dublin Airport's Fire & Rescue Service is currently located airside on the west apron.
- **Incident Management:** Siting must allow for secure and efficient evacuation routes to the landside and emergency assembly points without compromising airside integrity.

**Application Response:** The application site is not within or interfering with the Emergency and Fire Service Access serving the airport and its operations. Additionally, fire safety and access for emergency response vehicles to the application site have been factored into the detailed design of the application.

### Integration with Airport Security Zones

- **Airside-Landside Interface:** Clear delineation of secure zones in line with Dublin Airport's compliance with EU Regulation (EC) No 300/2008 and associated DAA Airport Security Programme must be preserved and respected by any future development at the airport.
- **Access Control & Screening:** Sufficient space and circulation must be available to support future integration of security screening technology and cargo handling systems. This is an important design consideration in particular if the subject development were to avail of airside access.

**Application Response:** The application site will not avail of airside access, and as such this has not been included in the detailed design considerations. However, if airside access were to be permitted by DAA, we are satisfied that the site could be developed/redeveloped to comply with the DAA requirements to ensure Airport Safety & Security Screening measures can be met.

### Alignment with Dublin Airport Masterplan

- **Strategic Fit:** The Dublin Airport Central Campus Masterplan outlines growth zones for both airside and landside development. Terminal development must be consistent with these spatial strategies and support future connectivity to MetroLink and surface access improvements.
- **Future Apron Expansion:** Sites that constrain long-term expansion of apron, cargo, or ground handling facilities have been discounted as inconsistent with strategic objectives.

**Application Response:** The application site has been developed to sit within the statutory planning and concept planning frameworks that are known. This is outlined in detailed in the Planning Statement submitted with the application.

### Meteorological and Noise Considerations

- **Prevailing Winds and Fog:** Meteorological data from Met Éireann and DAA indicate that the southern and eastern sections of the campus experience less fog persistence and wind shear than northern locations, favouring those sites from a flight safety standpoint.

- **Noise Contours:** *Site options within the 60 dB Lden contour are less desirable for development due to heightened environmental sensitivity and regulatory obligations under the Environmental Noise Directive (END).*

**Application Response:** The application site and subject development is considered to be located such that these considerations do not rule out alternatives, but are factored into the detailed design considerations. This is considered in detail in the Chapter on Noise and Vibrations in this EIAR.

### **Apron Access and Stand Availability**

- **Contact Stand Optimisation:** *The preferred terminal site should allow direct contact stands for both Schengen and Non-Schengen flights in line with EU Border Control Requirements. Were the DAA to consider the provision of a cargo terminal site, a similar proposition would apply.*
- **Ground Handling Access:** *Efficient access for DAA and third-party ground handling operators must be ensured, avoiding conflict with existing cargo, maintenance or long-stay car park zones.*

**Application Response:** The application site has been selected such that airside access is possible. However, at this time, the logistics units will not avail of airside access, and as such this has not been included in the detailed design considerations. If airside access were to be permitted by DAA, we are satisfied that the site could be developed/redeveloped to comply with the DAA requirements to ensure airport safety & security screening, apron and taxiway efficiency measures can be met.

### **Site Comparison**

In our initial concept plans, the design team considered the advantages and disadvantages of two possible locations (noted as Area A and Area B), for proposed logistics. Both sites were considered to be suitable for logistics. The applicant had initially advanced Area A, being the smaller of the sites and thought reasonable as a first phase. However, following lodgement of a planning application relating to Area A, queries arose (resulting in the invalidation of this application). It would now appear that the issues pertaining to these lands will take some time to resolve, and the optimal arrangements for the development of the lands and preferred surface access may not be deliverable by the applicant without third party agreement. The applicant, in consultation with the design team, have therefore revisited the 'concept plan' to identify lands within the applicant's ownership that can be delivered within the short term

Following this in-depth review, have identified a new area within the overall D.A. Terminal 3 Limited lands, closer to the existing airport / apron development. In considering the DAAs various Strategy Options, and

having regard to consultation with them to date, it is our clear understanding that the applicant's lands are not required for additional apron, aircraft parking or taxing activities. The new application site therefore improves land-use efficiency, and maximising the development potential of DA zoned land. From a sequential test perspective, the application site is also preferable. The selection of the subject lands also allows for the continued preservation of Area A and B, which could be made available following resolution of site access and landownership potential issues.

With respect to the selection of the application site we have satisfied ourselves that the surface access can be achieved within the applicant's lands, and that access study equally supports this location, with minimal local road improvements necessary and no requirement for the Strategic Western Access Road.



**Figure 3.8:** Site Selection within indicative concept plan layout

**Source:** CWPA Ltd.

## 3.6 Alternative Designs

### 3.6.1 Design Hypothesis & Strategy

The design strategy has undergone a robust development process informed by functional requirements, site constraints, environmental sensitivities, and architectural quality. A key part of this process was the evaluation of an early design alternative comprising two large-scale buildings, as opposed to the four-unit solution presented in the final proposal.

The two-unit scheme featured a linear layout responding directly to the site's elongated form. Each unit was designed to operate as a standalone facility with its own dedicated service yard, HGV access, staff entrance, and parking provision. This ensured operational segregation and self-sufficiency for future occupants, which was particularly suited to large single-user tenants. Internally, deep warehouse floorplates maximised contiguous storage space and offered efficiency for high-volume logistics users.



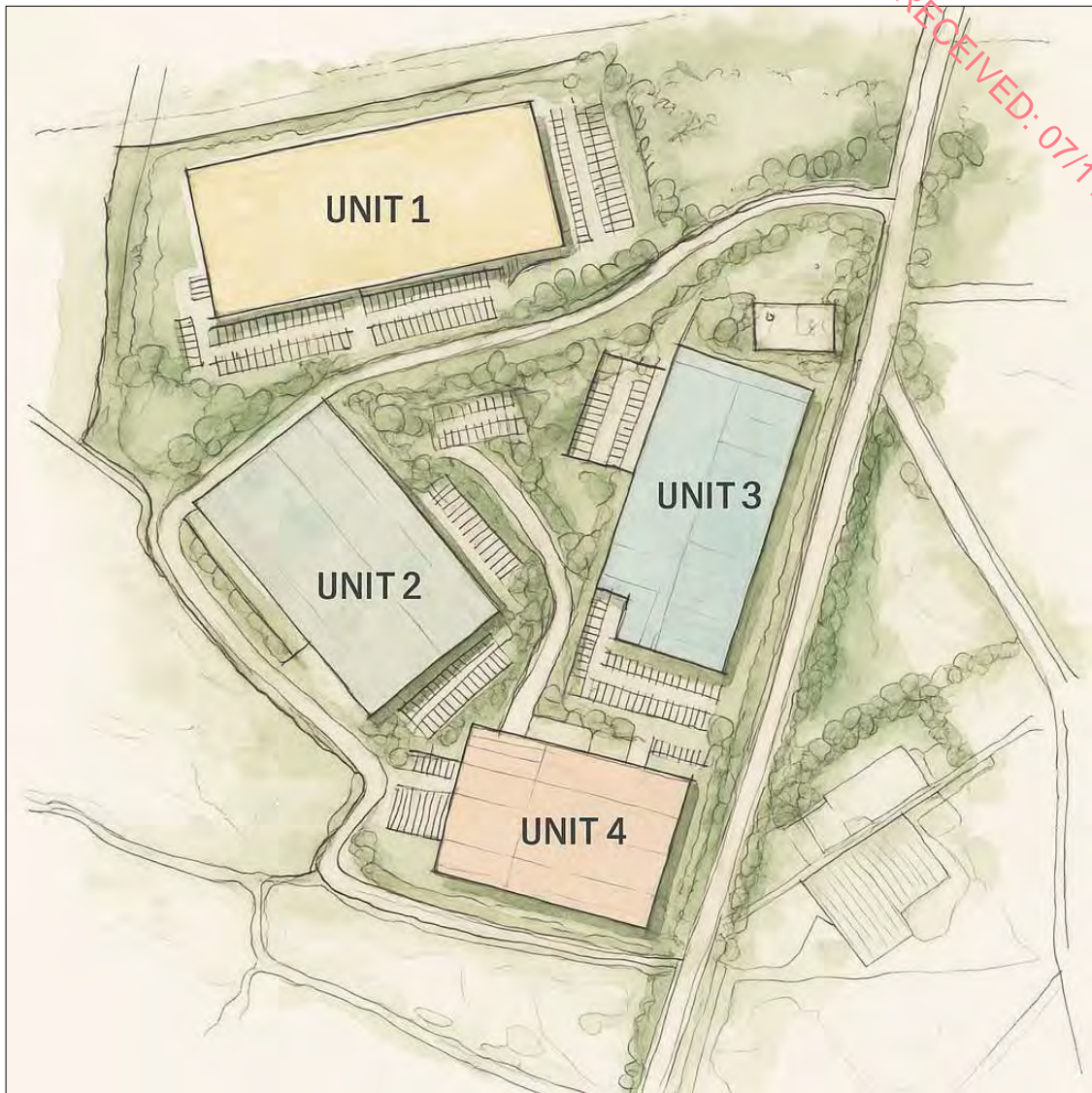
**Figure 3.8:** Draft Site Plan - Version 1

**Source:** CWPA

### 3.6.1.2 Identified Limitations and Evolution of Architectural Design

However, a number of limitations emerged in this approach. The increased depth of each building impacted natural daylight penetration, restricted future flexibility for internal subdivision, and raised concerns around long-term adaptability. From an urban design and architectural character perspective, the scale of each building resulted in long, unarticulated façades with limited rhythm or permeability. This posed challenges for integrating the development into the surrounding landscape and reduced the opportunity for meaningful public-facing architectural expression or variation in massing. Moreover, the two-unit solution limited options for phased construction or modular leasing, reducing resilience to changes in future demand or user profile.

In response to these findings, the design team developed the four-unit alternative, which is the basis for this planning application. While maintaining the principles of operational independence, the current proposal divides the massing into four distinct buildings, each with its own access, dedicated yard, staff entrance, and car parking zones. The articulation of the building forms, along with strategically located landscaping and pedestrian-friendly interface zones, creates a more human-scaled environment. The reduced footprint of each unit allows for greater façade modulation, improved solar access, and more efficient passive design strategies. From a leasing perspective, the arrangement increases market flexibility by supporting multiple tenant scenarios and allowing for phased occupancy without disruption to site-wide operations.



**Figure 3.9:** Architectural Sketch Layout

**Source:** CWPA

Importantly, the shift to a four-unit scheme has allowed for greater articulation and spatial organisation across the site, introducing a more legible hierarchy of buildings, open space, and movement routes. The scaled-down massing and repetition of form create a coherent streetscape rhythm, while allowing each unit to retain its own operational identity. This structure enhances both the legibility and navigability of the site for users, contributing to a more intuitive and functional environment. The refined layout also supports a layered architectural expression, where materiality, colour, and form can be employed to subtly distinguish buildings while maintaining a unified design language that reflects the strategic and international character of the airport campus.

### 3.6.1.2 Consideration of Alternative Façade Colours

The selected primary façade colour — a range of tonal blues — has been chosen to achieve a calm, contemporary architectural expression appropriate to the building's use and context. This palette offers a clean and professional aesthetic that complements the building's modular form and materials, while also contributing to visual interest and identity.

Earlier colour options such as yellow and green were explored during the design development stage. While both offered strong thematic associations (visibility and sustainability, respectively), they were ultimately considered less appropriate for large-scale application. Yellow was found to be overly assertive and visually dominant, particularly when applied across extensive elevations. Green, although contextually softer, tended to merge visually with surrounding landscaping and lacked contrast.

Blue was selected as a more balanced and enduring alternative — offering subtle variation under natural daylight conditions, strong legibility from a distance, and compatibility with the proposed metal cladding system. It also supports a refined and professional visual identity in keeping with the intended use of the building, and pairs effectively with the neutral base tones used across other façade elements. The result is a palette that is contemporary, visually coherent, and appropriate for long-term use in a commercial-industrial setting.

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**Figure 3.10:** Façade Colours Considered and Selected

**Source:** CWPA

In conclusion, the four-unit layout offers a superior architectural, operational, and environmental solution, delivering a flexible, high-quality logistics facility that is aligned with both current demand and future adaptability. The approach reflects a considered evolution of the brief and context, balancing technical performance with architectural expression and long-term viability.

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Figure 3.11: Proposed Site Layout

Source: CWPA

### 3.7 Alternative Processes

The subject development comprises four logistics buildings. These buildings are to access the airport by way of landside access, although in the future, subject to DAA agreement could be accessible (with minor/modest amendments to the proposed scheme) to provide airside accessible cargo handling facilities.

Alternative processes considered included whether the units would provide for Pharma/cold storage, however, at this time, the immediate need is understood to be for non-temperature-controlled logistics space. The units have not been designed to provide for temperature-controlled environments/cold storage, which would place a greater demand on energy. This option has been ruled out at this time.

No processing will take place within the units, in that they merely provide for storage, sorting and transfer of cargo that is intended to travel via existing aircraft/flights to their intended destination, as well as acceptance of incoming cargo from existing flights.

No additional flight movements are required to serve the subject development.

### 3.8 Preferred Option

Having considered the various options regarding the design and layout, it was determined that the most appropriate development for these lands was to advance a relatively small scale first phase, comprising logistics/cargo handling to serve Dublin Airport. This proposal opens up the lands for development, and provides much needed cargo handling facilities, noting that the DAA's current planning application seeks to demolish and remove much of the existing cargo handling facilities that are currently located on their lands. The subject site also has the potential to provide airside access if this was so required, but in the interim can be served by existing landside access routes, subject to the proposed modest upgrades.

Noting the ambitions plans for these lands, and that they comprise a longer-term vision and implementation programme, it is not unreasonable to allow development in the interim subject to this development not adversely impacting or prejudicing the long-term vision. To this end, and as outlined in the various chapters to this EIAR and in the Planning Statement that accompanies this application, the subject development does not prejudice the delivery of Terminal 3 and expansion of the airport and does not prejudice the delivery of the Western Access Road. Facilitating the subject development provides

confidence in the developability of these lands and enables the applicants to continue to advance the Council's objective to deliver terminal 3 and the western access road.

### 3.9 References

- European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (SI 296/18)
- Guidelines on the information to be contained in Environmental Impact Statements, EPA, 2022.
- EU Habitats Directive (92/43/EEC), as amended
- EU Birds Directive (2009/147/EC, as amended)

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## 4.0 Project Description

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### 4.1 Introduction

This chapter of the EIAR provides a detailed description of the Proposed Development together with details of the existing environment. In accordance with Article 5(1)(a) of the EIA Directive, the description of the project should comprise: *'Information on the site, design, size and other relevant features of the project'*.

The EIAR must contain information in relation to the environmental impact of both the Proposed Development and all other "reasonable" alternatives studied. An indication of the main reasons for the option chosen must be given, taking into account the effects of the Proposed Development on the environment.

This chapter describes the nature, scale, and context of the proposed development. It provides information on the

- Site location
- Layout
- Design
- Size
- Physical characteristics
- Material use
- Anticipated emissions during construction and operation.

At a strategic macrolevel, it outlines the likely construction programme and proposed mitigation measures to address potential environmental impacts, both on- and off-site. The chapter also situates the project within its wider catchment and local context, providing a clear rationale for its development. The receiving environment, construction process, predicted development impacts and mitigation measures are described in detail in the individual themed chapters.

#### 4.1.1 Statement of Competency

This chapter has been prepared by Joe Corr, Director of Planning with CWPA. Joe is the founder and former Managing Director of Corr & Associates Spatial Planning and now serves as Director of Planning with CWPA Planning & Architecture. He holds a Master's Degree in Spatial Planning from Technological University Dublin and is a former President of the Irish Planning Institute (2018–2020). Joe's experience includes delivery of large-scale, strategic infrastructure projects such as the Poolbeg Generating Station Extension, Huntstown Power Station, and the Dublin Port Tunnel.

This chapter has been reviewed by Rachel Kenny BE, MRUP, FIPI.

Rachel Kenny is a senior planning consultant with CWPA, Planning & Architecture consultancy, and has 30 years' experience as a planner in public and private sector organisations, including Fingal, Meath and Louth County Council and An Bord Pleanála (as Director of Planning). She holds a degree in Civil Engineering (be (Civil) (Hons) and Masters in Regional and Urban Planning (MRUP), both from University College Dublin. She is a fellow and corporate member of the Irish Planning Institute. She has experience in both forward planning and development management, and specialises in, inter alia, Strategic Infrastructure Development, and large scale EIAR projects.

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#### 4.1.2 Statutory Development Description

The proposed development, subject of this EIAR is as follows –

Permission is sought for –

1. Construction of four aviation-related cargo handling units with ancillary office space:
  - i. Unit 1: c.10,869.7 m<sup>2</sup> (including 940.9 m<sup>2</sup> office space)
  - ii. Unit 2: c.9,151.3 m<sup>2</sup> (including 751.3 m<sup>2</sup> office space)
  - iii. Unit 3: c.6,024.9 m<sup>2</sup> (including 497.7 m<sup>2</sup> office space)
  - iv. Unit 4: c.8,577.7 m<sup>2</sup> (including 751.3 m<sup>2</sup> office space)

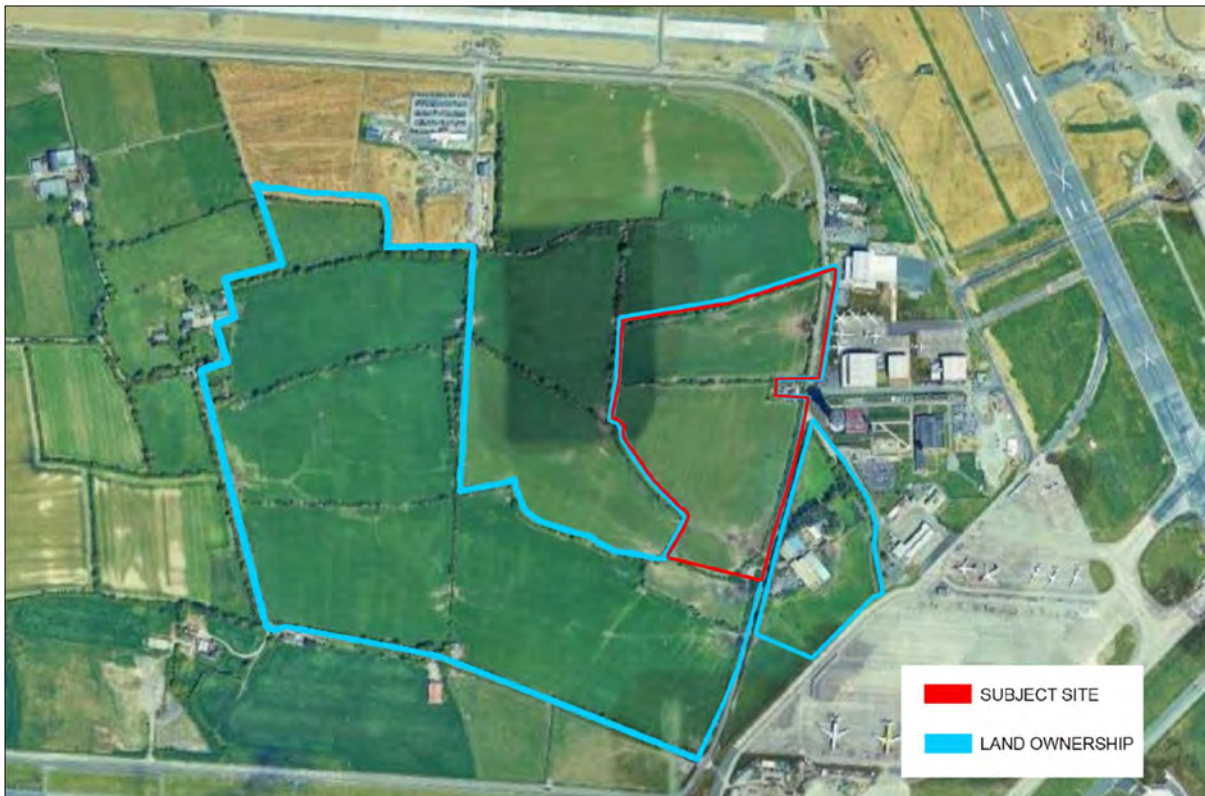
The proposed units will have an overall combined total gross floor area (GFA) of c. 34, 623.6m<sup>2</sup> (alongside ancillary ESB substations, 4 no. security huts with a combined GFA of 30 sqm and pumphouses). The warehouses are c. 12m in height, with the office element being c. 3.3 m in height and located within a landscaped campus on a site of c. 10.7 Ha

2. Provision of 390 car parking spaces, including 39 EV charging points, 19 accessible spaces, and motorcycle bays.
3. Provision of 230 secure bicycle parking spaces, of which 100 are short stay spaces and 130 are sheltered long stay spaces.
4. Provision of approx. 77 truck parking spaces and 5 van spaces.
5. Hard and soft landscaping, new boundary treatments, including a c. 2m high System Wire Fence to site boundary.
6. Construction of new site entrance onto the R108.
7. Wastewater treatment plant and infiltration area for 250 PE.
8. All necessary site development and engineering and ancillary site works, including provision of ESB substations and switchrooms, sprinkler tanks and pumphouses, bin store and recycle store, lighting, signage, underground services, photovoltaic panel zones at roof level and sustainable drainage systems (SuDS).

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## 4.2 Site Location

This planning application relates to lands colloquially referred to as the Western Campus (c.106.46 ha), situated directly west of Dublin Airport, as outlined on the Site Location Map (refer to figure 4.1). The wider landholding under the ownership of D.A. Terminal 3 Ltd extends to c. 50 hectares, with the proposed development site comprising approximately 10.7 hectares of this total. The lands are situated within the townland of Huntstown, bounded by the R108 to the east.



**Figure 4.1:** Site Outline

**Source:** Google Earth

The subject site is located approximately 1 km west of Dublin Airport in a transitional zone between existing aviation infrastructure, the rural fringe, and emerging industrial and logistics development. The surrounding context features a diverse mix of land uses, including airport operations, light industrial premises, logistics facilities, energy infrastructure, and open agricultural lands. To the east, the site adjoins the Dublin Airport complex, including terminal buildings, aprons, and associated airfield operations. To the south and west, the site adjoins lands increasingly identified for strategic employment and logistics development, capitalising on proximity to the national road network and Dublin Airport.

The site benefits from excellent connectivity, situated close to the M50, M1, and N2 corridors, and integrated with existing internal airport logistics routes. This accessibility supports efficient goods movement and underpins the suitability of the location for aviation-linked industrial uses.

Although the site remains undeveloped, its scale and location are consistent with other major logistics-focused developments in the wider Huntstown and Collinstown areas. Aerial imagery and historical mapping confirm the lands have long been in agricultural use with no record of built development to date.

Adjacent lands to the west and southwest are zoned 'GE' – General Employment, which supports compatible industrial and logistics activities. While the application site itself is zoned 'DA' – Dublin Airport, the proposed development fully aligns with the zoning objective of facilitating aviation-related employment and logistics uses.

#### 4.2.1 Site Background and History

Historically, the site has been in low-intensity agricultural use within an area dominated by farmland, light industry, and commercial activity, with no residential occupation. Its strategic location near the suburban settlements of Swords, Ballymun, and Santry, and its direct transport connections to Dublin Airport, the M50, and the M1, reinforce its long-identified potential for transport and logistics functions.

Despite changes in ownership over recent decades, the lands have never accommodated permanent structures or operational developments. There are no protected structures or recorded monuments within the application site footprint. Its long-established greenfield status supports the feasibility of its redevelopment for aviation-related logistics.

### 4.3 Rationale for the Proposed Development

The proposed development forms part of a strategic infrastructural initiative to expand air freight and logistics capacity within Ireland, positioning Dublin Airport as a key international logistics hub in line with national and regional transport strategies.

The location of the subject site leverages its proximity to major transport corridors, including the M2, M50, and Dublin Airport, to address the growing demands of international air traffic. By decentralising cargo handling operations away from the congested Eastern Campus, the development will improve operational resilience and capacity for both freight and passenger services.

The proposal aligns with the Dublin Airport Local Area Plan (LAP) 2020–2026 (extended to 2030), which identifies the Western Campus as a suitable long-term expansion area for logistics and cargo functions and recognises the need for a Western Access Route. The LAP specifically supports the relocation of air cargo operations to facilitate the continued development of terminal capacity in the Eastern Campus.

The Fingal Development Plan 2023–2029 reinforces this strategic vision through its 'DA' zoning objective, which seeks:

*"To ensure the efficient and effective development of the airport in a safe and sustainable manner, supporting its role as a national and international gateway and driver of economic growth."*

Independent reports such as the Oxford Economics (DTTAS Review of Future Capacity Needs) Report 2018, commissioned by the Department of Transport, confirm the Western Campus as the optimal unconstrained location for terminal and cargo expansion. The location reduces potential conflicts with passenger traffic, enhances logistics efficiency, and supports the integration of multimodal transport infrastructure, safeguarding capacity for future aviation growth.

Environmental considerations such as biodiversity protection, sustainable drainage, and low-carbon design principles have been integrated from the outset. The development's scale and layout have been designed to maintain flexibility for future phases and to protect the option for a potential third terminal, as referenced in relevant policy documents.

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## 4.4 Description of Proposed Development

### 4.4.1 Layout Strategy

The overall layout of the proposed development is informed by the site's natural geometry, creating a softer edge condition that transitions appropriately between the operational airport lands and the adjoining agricultural hinterland. A zoned masterplan has been adopted, with the four cargo handling units (Units 1–4) arranged in an organic and curved layout that responds sensitively to the existing topography and agricultural context of the surrounding landscape.

Internal vehicle circulation has been consolidated into an efficient loop configuration, minimising turning radii and hardstanding footprint while maximising manoeuvrability for heavy goods vehicles (HGVs) and service vehicles. Pedestrian and cycle routes are integrated into the layout, ensuring safe access for all site users.

The masterplan design supports logical phasing, minimises operational disruption during future expansions, and facilitates seamless integration with the airport's internal road network and external road connections.

### 4.4.2 Built Form and Massing

The proposed built form consists of four modular, purpose-built aviation cargo handling units. Each unit is designed to maximise operational efficiency while maintaining a coherent architectural approach across the site.

All warehouse buildings will have a uniform maximum height of approximately 12 metres, providing adequate internal clearance for modern cargo handling operations. The ancillary office elements will have a maximum height of approximately 3.3 metres and will be located strategically along the building edges to benefit from natural daylight, passive surveillance, and clear sightlines to operational areas.

Office components and welfare facilities have been designed to deliver high-quality working environments, promoting staff wellbeing and safety. The overall massing balances the large-scale industrial requirements with sensitive landscaping and boundary treatments that integrate the development into its surroundings.

The buildings will employ sustainable design measures, including provisions for rooftop photovoltaic panels, energy-efficient building materials, and optimised natural lighting where feasible.

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### 4.4.3 Detailed Unit Descriptions

The four cargo handling units are summarised as follows:

#### Unit 1

- Total GFA: c.10,869.7 m<sup>2</sup> (including c.940.9 m<sup>2</sup> ancillary office space).
- Maximum height: c.12 m (warehouse), c.3.3 m (office).
- 123 car parking spaces (including 12 EV charging bays and 6 accessible).
- 12 motorcycle parking spaces.
- 28 truck parking spaces
- 80 secure bicycle spaces (30 short stay, 50 long stay sheltered).
- Dedicated ESB substation and switchroom, sprinkler tank and pumphouse, bin and recycle store.
- Dedicated service yard with HGV loading/unloading areas and associated loading bays.

#### Unit 2

- Total GFA: c.9,151.3 m<sup>2</sup> (including c. 751.3 m<sup>2</sup> ancillary office space).
- Maximum height: c.12 m (warehouse), c.3.3 m (office).
- 67 car parking spaces (including 7 EV charging bays and 3 accessible).
- 7 motorcycle parking spaces.
- 14 truck parking spaces and 3 van spaces.
- 40 secure bicycle spaces (20 short stay, 20 long stay sheltered).
- Dedicated ESB substation and switchroom, sprinkler tank and pumphouse, bin and recycle store.
- Dedicated service yard with HGV loading/unloading areas and associated loading bays.

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### Unit 3

- Total GFA: c.6,024.9 m<sup>2</sup> (including c.497.7 m<sup>2</sup> ancillary office space).
- Maximum height: c.12 m (warehouse), c.3.3 m (office).
- 103 car parking spaces (including 10 EV charging bays and 5 accessible).
- 10 motorcycle parking spaces.
- 18 truck parking spaces and 2 van spaces.
- 50 secure bicycle spaces (20 short stay, 30 long stay sheltered).
- Dedicated ESB substation and switchroom, sprinkler tank and pumphouse, bin and recycle store.
- Dedicated service yard with HGV loading/unloading areas and associated loading bays.

### Unit 4

- Total GFA: c.8,577.7 m<sup>2</sup> (including c.751.3 m<sup>2</sup> ancillary office space).
- Maximum height: c.12 m (warehouse), c.3.3 m (office).
- 97 car parking spaces (including 10 EV charging bays and 5 accessible).
- 10 motorcycle parking spaces.
- 17 truck parking spaces.
- 60 secure bicycle spaces (30 short stay, 30 long stay sheltered).
- Dedicated ESB substation and switchroom, sprinkler tank and pumphouse, bin and recycle store.
- Dedicated service yard with HGV loading/unloading areas and associated loading bays.



Figure 4.2: Proposed Site Plan

Source: CWPA



**Figure 4.2:** CGI of Proposed Development

**Source:** CWPA

All units will include integrated ESB substations, sprinkler tanks, pumphouses, bin and recycle stores, and rooftop photovoltaic zones to support sustainability objectives. Office and amenity areas are strategically located to enhance natural daylighting, passive surveillance, and staff comfort.

The uniform approach to built form ensures that each unit operates independently while contributing to the site's overall functional and visual coherence.

## 4.5 Construction Process

The construction of the proposed aviation-related cargo handling development at Huntstown will be undertaken in a phased and controlled manner, in full accordance with the Construction and Environmental Management Plan (CEMP) prepared by Waterman Moylan Consulting Engineers (October 2025). The CEMP provides the framework for managing all environmental, traffic, and health and safety aspects throughout the construction phase and will guide the Main Contractor's detailed construction methodology.

The works will commence with enabling and site preparation activities, including:

- Site clearance, topsoil stripping, and establishment of secure perimeter fencing.
- Construction of the new site entrance onto the R108 and associated road realignment works.
- Installation of essential utilities, foul and surface water drainage, and sustainable drainage (SuDS) infrastructure such as swales, detention basins, and tree-pit attenuation areas.
- Formation of the construction compound, offices, welfare facilities, and bunded storage areas.

Subsequent phases will include the construction of the four cargo handling units and their associated service yards, internal access roads, parking areas, cycle lanes, pedestrian paths, and landscaping. Each phase will be sequenced to ensure controlled progression of works while maintaining environmental protection and minimising disruption to surrounding road networks and airport operations. A loop circulation system will be maintained for construction access, providing segregation between construction and operational areas within the wider Dublin Airport environment.

#### 4.5.1 Construction Materials and Waste Management

Construction materials will be responsibly sourced and stored in compliance with the Waste Management Act 1996 and associated regulations. Materials will include concrete, steel, asphalt, and prefabricated components for the main units, as well as ancillary structures such as ESB substations, security huts, drainage systems, and road pavements.

All fuel, oil, and chemical storage areas will be bunded to 110% capacity, located at least 50 metres from any watercourse, and provided with spill kits and containment equipment. Refuelling activities will occur only in designated bunded areas under the supervision of trained personnel. The use of mobile fuel bowzers and impermeable bases will prevent potential soil and groundwater contamination.

A Construction Waste Management Plan (WMP), implemented under the supervision of an appointed Construction Waste Manager, will ensure waste minimisation, segregation at source, and lawful reuse or disposal. Reusable soils and aggregates will be retained on site where practicable for landscaping and backfilling, and all waste transfers will be fully documented.

Further detail on materials handling and waste control procedures is available in the Construction and Environmental Management Plan (CEMP). The figures for construction materials will be determined prior to commencement and will be refined as detailed design progresses.

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#### 4.5.2 Construction Workforce

The precise construction workforce numbers for the Proposed Development are not known at this stage, as they will be determined by the appointed Main Contractor and will depend on the final construction programme, sequencing, and work methodologies adopted. It is anticipated that workforce levels will fluctuate throughout the construction period to reflect specific phases of work, but detailed projections will be confirmed prior to commencement.

The Main Contractor will have overall responsibility for the implementation of the project Construction Environmental Management Plan (CEMP) during the construction phase. An appropriately trained and competent representative from the Main Contractor's team will be assigned authority to instruct and oversee all site personnel to ensure compliance with the CEMP requirements.

These measures outlined in the CEMP will ensure that environmental risks during construction are properly managed in line with relevant statutory obligations and industry standards.

#### 4.5.3 Construction Access and Compounds

Access to the site will be provided via the new entrance from the R108, as illustrated in the CEMP. This access will accommodate all deliveries and construction traffic while minimising interaction with local traffic and airport operations. During the road upgrade works, temporary restrictions and localised diversions along the R108 will be implemented in coordination with Fingal County Council.

The construction compound, located to the east of the site, will provide offices, welfare facilities, material laydown areas, and secure storage. Dedicated cycle parking and staff facilities (including showers and lockers) will be provided to support sustainable travel modes during the construction phase. 2m-high security fencing will be installed around the compound perimeter. Wheel washing facilities will be in operation to prevent mud and debris from reaching the public road network.

A Construction Stage Mobility Plan will be prepared prior to commencement, addressing parking, traffic management, and delivery scheduling.

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#### 4.5.4 Environmental Management During Construction

The CEMP will be the principal document guiding environmental risk management during construction. Specific measures include:

- Dust Control: Use of water sprays, wheel-wash facilities, and covering of stockpiles.
- Noise and Vibration: Scheduling of noisy activities during appropriate hours, use of silencers and acoustic barriers where necessary.
- Surface Water Protection: Implementation of silt fences, sediment traps, and oil interceptors.
- Traffic Management: Use of designated haul routes, traffic marshals, and phased delivery scheduling.

Compliance with the CEMP will be monitored by the appointed contractor and the project's Environmental Manager to ensure best practice and statutory compliance.

#### 4.5.5 Operating Hours

The proposed cargo handling and logistics facility is designed to operate 24 hours a day, 7 days a week, 364 days per year, providing continuous air cargo and freight operations in line with international airport standards.

Operational noise and light emissions will be managed through carefully integrated design measures, in line with the site's detailed external lighting strategy prepared by Waterman Moylan. All external lighting will use energy-efficient, LED luminaires with full horizontal cut-off to ensure downward light distribution, minimising glare, light spill, and upward light pollution. Lighting levels will be designed to comply with relevant BS EN 12464-2 and CIBSE standards, while ensuring safe illumination of access roads, service yards, loading bays, and pedestrian routes.

Automatic controls, such as timeclock and photocell sensors, will further reduce unnecessary nighttime illumination, and the scheme will be designed to meet best practice guidance for obtrusive light and light trespass to neighbouring properties and habitats.

Staff and service vehicle access will be facilitated via the direct connection to the R108 and the wider airport logistics network. Internal shuttle links to the primary airport terminals will ensure seamless integration with existing airport operations.

#### 4.5.6 Cumulative Effects

Cumulative effects are considered in this EIAR in line with Section 3.7.3 of the EPA Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (2022). It is acknowledged that a while a single activity may itself result in a minor effect, it may, when combined with other impacts, minor or significant, result in a cumulative impact that is collectively significant. Similarly, a single activity which may on its own have a significant effect, may be reduced to an insignificant effect when combined with other effects.

*"The addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects. While a single activity may itself result in a minor impact, it may, when combined with other impacts (minor or insignificant), result in a cumulative impact that is collectively significant. For example, effects on traffic due to an individual industrial project may be acceptable; however, it may be necessary to assess the cumulative effects taking account of traffic generated by other permitted or planned projects. It can also be prudent to have regard to the likely future environmental loadings arising from the development of zoned lands in the immediate environs of the proposed project."*

The first step in determining cumulative impacts for this EIAR involved the identification of a list of developments which may have the potential to overlap with the Proposed Development. A desk study involving searches of Fingal County Council, An Bord Pleanála and the Department of Housing, Local Government and Heritage EIA Portal Map were conducted. This involved a desk-study of planning applications, development plan documents, relevant development frameworks and any other publicly available sources to identify other developments which may have the potential to interact with the Proposed Development.

A 'zone of influence' was established for the purposes of the cumulative assessment. The 'zone of influence' for the purposes of this assessment were developments within 1km of the Proposed Development site. Where this criterion differs, it is stated in the relevant technical chapters of this EIAR. The criteria used to establish the zone of influence was based on professional judgement with consideration of the setting of the Proposed Development site along with the following guidelines.

- Guidelines on the Information to be contained in Environmental Impact Assessment Reports (EPA, 2022)

- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (Government of Ireland, 2018)
- Projects, which in combination with the Proposed Development that potentially could have a cumulative impact are those the subject of (DAA Project Element No.2) where these have a cumulative effect or where any other project is identified, the effect is consistent with each chapter.

## 4.6 Mitigation Measures

Environmental considerations have been integrated into the development's design and operational approach from the outset. Emissions associated with construction and operation will be managed in line with relevant national and EU regulations, including the Aircraft Noise (Dublin Airport) Regulation Act 2019 and Regulation (EU) No. 598/2014.

Key mitigation measures include:

### 4.6.1 Air Quality

The site's location away from residential areas reduces direct exposure to noise and air emissions. Electric vehicle infrastructure, rooftop solar PV, and high efficiency building services will contribute to lower carbon output. Mitigation measures are further detailed in Chapter 9 Air Quality and Climate.

### 4.6.2 Noise Management

Operational noise will be minimised through careful site layout, noise-insulating building materials, and designated service areas. Ongoing noise monitoring will be undertaken in accordance with the Aircraft Noise Competent Authority (ANCA)'s guidelines. Mitigation measures are further outlined in Chapter 10 Noise and Vibration.

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### 4.6.3 Sustainable Drainage

Surface water will be managed through SuDS features, including permeable paving, swales, and detention basins, to ensure high-quality runoff management and groundwater protection. Mitigation measures are further outlined in Chapter 12 Material Assets and Chapter 8 Hydrology and Hydrogeology.

All measures will be regularly reviewed to ensure that the facility meets all relevant environmental standards and policy requirements.

## 4.7 Infrastructure and Utilities

The proposed development will be fully serviced by enhanced infrastructure and utilities, supporting both operational requirements and sustainability objectives.

Key provisions include:

### 4.7.1 Stormwater Management

Sustainable Urban Drainage Systems (SuDS) will be integrated throughout the site. Permeable paving, swales, detention basins, and tree pit attenuation areas will manage surface water runoff, promote infiltration, and protect water quality.

### 4.7.2 Water Supply and Wastewater

Potable water will be supplied via new connections to the existing network. A dedicated wastewater treatment plant and infiltration area for up to 250 population equivalent (PE) will manage foul water from the development.

### 4.7.3 Energy Supply

ESB substations and switchrooms will be provided for each unit, future-proofed for capacity expansion. The development will include rooftop photovoltaic (PV) zones to generate renewable energy on-site, contributing to reduced carbon emissions.

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#### 4.7.4 Electric Vehicle Infrastructure

Provision of multiple EV charging points will facilitate the transition to low-emission vehicles for both staff and operational fleet use.

#### 4.7.5 Telecommunications

Advanced broadband and fibre optic connections will be installed, ensuring that logistics operations are fully supported by modern digital infrastructure.

#### 4.7.6 Future-Proofing

Utility corridors will be safeguarded to accommodate emerging technologies, such as hydrogen-ready pipelines and smart energy systems, in line with Dublin Airport's long-term decarbonisation strategy.

### 4.8 Integration with Strategic Transport and Aviation Frameworks

The development is designed to complement wider airport expansion and national mobility plans. Its location and configuration align with the Dublin Airport Local Area Plan (LAP) 2020–2026 (extended to 2030), which recognises the Western Campus as a key growth area for air freight and logistics.

The project will strengthen links with major transport corridors, including the M2/N2, M50, and the broader national road network. The construction of a new entrance onto the R108 to facilitate safe access, enhance local connectivity and support future integration with the proposed Western Access Route.

By decentralising cargo operations from the constrained Eastern Campus, the proposed facility will reduce conflicts with passenger traffic, support operational resilience, and protect capacity for potential future terminal expansion.

The development also aligns with the National Investment Framework for Transport in Ireland (NIFTI), which prioritises the use of existing transport assets and the integration of sustainable transport modes. Provisions for secure bicycle parking, pedestrian routes, and EV charging infrastructure will encourage multi-modal access for staff and visitors.

Long-term integration with regional public transport schemes, including the planned MetroLink, will ensure the site remains accessible and adaptable as mobility patterns evolve.

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## 4.9 Other Plans

Further National, Regional and Local legislation including:

National and Regional Planning Policy
National Planning Framework: Project Ireland 2040.
Regional Spatial Economic Strategy (Eastern & Midlands Regional Assembly, 2019 - 2031).
National Biodiversity Action Plan 2023-2030
Guidelines for Planning Authorities on the Planning System and Flood Management Risk (2009)
Design Manual for Urban Roads and Streets (DMURS) 2013
Transport Strategy for Greater Dublin Area (2022-2042)

Local Planning Policy
Fingal Development Plan (FDP) 2023-2029
Dublin Airport Local Area Plan (DA LAP) 2020-2026 ( extended to 2030)

Relevant policies and objectives from these Plans are extracted and referenced in the Planning Statement accompanying this EIAR.

## 4.10 Fingal Development Plan 2023–2029

The proposed development has been designed to align with the key objectives of the Fingal Development Plan (FDP) 2023–2029, particularly those relating to aviation, transport, environmental protection, and sustainable design.

Relevant policies and objectives include:

**Objective DAO4** – *Ensure aviation infrastructure develops to its full sustainable potential, taking into account environmental and community impacts.*

**Objective DAO5** – *Facilitate the ongoing augmentation and improvement of terminal facilities at Dublin Airport.*

**Policy DAP2** – *Require all infrastructure provision to be consistent with the Dublin Airport LAP 2020 or any subsequent version.*

**Objective DAO7–DAO9** – *Safeguard integrated public transport networks and protect surface access capacity to the Airport.*

**Policy IUP41 & Objectives IUO58–IUO60** – *Support air quality monitoring and management in line with the Dublin Regional Air Quality Management Plan.*

**Policy DAP5 & DAP6** – *Mitigate aviation noise impacts and protect the health of residents affected by aircraft noise, particularly at night.*

**Policy DAP10 & Objective DAO26** – *Ensure that all development within Dublin Airport LAP lands achieves high standards of design and sustainability, reflecting the airport's role as an international gateway.*

Through its siting, design, and integration with existing and planned infrastructure, the proposed development demonstrates full compliance with these policy requirements. Its focus on decarbonisation, sustainable drainage, noise management, and high-quality built form further reinforces its alignment with Fingal County Council's long-term vision for Dublin Airport and its surrounding lands.

## 4.11 Conclusion

The proposed aviation-related cargo handling facility located within the of Huntstown represents a strategically significant addition to Dublin Airport's infrastructure. It will increase Ireland's air freight capacity, reduce congestion on the Eastern Campus, and strengthen the Airport's position as a key national and international logistics hub.

Through its carefully considered location, phased construction programme, sustainable design approach, and robust alignment with national and local policy frameworks, the project will deliver long-term economic and operational benefits while safeguarding capacity for future airport expansion.

The development has been planned to respect environmental constraints, integrate with existing transport assets, and enhance the airport's resilience to future growth demands, ensuring it contributes positively to the sustainable development of both Dublin Airport and the wider Fingal region.

The proposed development consists of four new aviation-related cargo handling units and supporting facilities on a greenfield site of approximately 10.7 hectares, located within the townlands of Huntstown. The project aims to increase Ireland's air freight capacity, reduce pressure on the more congested Eastern Campus, and support the long-term growth of Dublin Airport as a key national and international logistics hub.

The new development will include:

- Four cargo handling units, each with integrated office and welfare spaces, providing a total gross floor area of c. 34, 623.6 sqm.
- Provision of 390 car parking spaces, including 39 EV charging points, 19 accessible spaces, and motorcycle bays.
- Provision of 230 secure bicycle parking spaces, of which 100 are short stay spaces and 130 are sheltered long stay spaces.
- Provision of approx. 77 truck parking spaces and 5 van spaces.
- Hard and soft landscaping, new boundary treatments, including a c. 2m high System Wire Fence to site boundary.
- Construction of new site entrance onto the R108.
- Wastewater treatment plant and infiltration area for 250 PE.
- All necessary site development and engineering and ancillary site works, including provision of ESB substations and switchrooms, sprinkler tanks and pumphouses, bin store and recycle store, lighting,

signage, underground services, photovoltaic panel zones at roof level and sustainable drainage systems (SuDS).

Construction will take place in two phases over an estimated period of approximately 18 months, starting with site clearance and enabling works. A Construction and Environmental Management Plan (CEMP) will be in place to control dust, noise, traffic, and waste during the build.

The cargo handling facility will operate 24 hours a day, 7 days a week, reflecting the nature of modern air freight logistics. Its design supports future expansion, integrates with the airport's existing transport network, and is fully consistent with the Fingal Development Plan, the Dublin Airport Local Area Plan, and national transport policy.

Environmental design measures include responsible sourcing of materials, robust stormwater management, noise and air quality controls, and sustainable energy solutions. The project is intended as permanent infrastructure but will comply with all relevant legislation if decommissioning is required in the future.

In summary, the project will deliver a high-quality, strategically located air cargo facility that supports the continued development of Dublin Airport while protecting the local environment and surrounding community.

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## 5.0 Population and Human Health

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### 5.1 Introduction

This chapter assesses the potential effects of the proposed aviation related cargo handling facility on the human environment in the general area of the subject site, which is located within the townland of Huntstown, Swords, Co. Dublin. This assessment was carried out by Mark Whelan, MRUP, MIPI on behalf of CWPA Planning & Architecture.

This section on population and human health is broad ranging and covers the existence, wellbeing, and activities of people through the format of considering people as '*groups*' or '*populations*'. The assessment of impacts on human beings therefore involves the identification of relevant key populations that may be affected by the proposal and quantifiable documentary research. Key populations have been identified as persons residing and engaging in activities near the site, persons with a stake in the general economy of the local and regional area, and persons enjoying the recreational and cultural amenities of the area.

Health, as defined by the World Health Organization (WHO), is "*a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity*". This section of the EIAR assesses the impact of the proposed development on population and human health in the vicinity of the site. Insofar as is practicable, this assessment has also considered impacts on the future workers and visitors to the subject lands.

#### 5.1.1 Competency Statement

This chapter has been prepared by Mark Whelan, Planning Consultant, CWPA Planning & Architecture. Mark holds an Undergraduate degree in Geography, Planning and Environmental Policy and a Master's degree in Regional and Urban Planning both of which were obtained from University College Dublin. Mark has been practicing as a Planning Consultant since 2016 and has been working with CWPA Planning & Architecture since its foundation in 2020. Mark has experience preparing Environmental Impact Assessment (EIA) Screening Reports, Introduction, Population and Human Health chapters of the EIARs.

This Chapter has been reviewed by Rachel Kenny, BE, MRUP, FIPI. Rachel Kenny is a senior planning consultant with CWPA, Planning & Architecture consultancy, and has 30 years' experience as a planner in public and private sector organisations, including Fingal, Meath and Louth County Council and An Bord Pleanála (as Director of Planning). She holds a degree in Civil Engineering (BE (Civil) (Hons)) and Masters in Regional and Urban Planning (MRUP), both from University College Dublin. She is a fellow and corporate member of the Irish Planning Institute. She has experience in both forward planning and development management, and specialises in, inter alia, Strategic Infrastructure Development, and large scale EIA projects.

## 5.2 Methodology

The methodology employed for this chapter consisted of a desktop study which involved the gathering and analysis of data in relation to population, age structure, economic activity, employment, health status and existing community and social infrastructure within the vicinity of the subject site (i.e. the Study Area).

The conclusions of various additional technical chapters in this EIA have also been reviewed, where relevant, insofar as the potential likely effects on population and human health are concerned. These include chapters relating to Air Quality, Noise and Vibration, Hydrology, Traffic and Transport and Accidents and Disaster Risks. The assessment was undertaken in accordance with the '*Guidelines on the information to be contained in Environmental Impact Assessment Reports, EPA (2022)*'.

The scope of this evaluation is based on the most up to date, available data from the Central Statistics Office, relevant legislation, guidance documents and a review of EIAs similar to that of the proposed development. A site visit was also undertaken to appraise the location to assist in characterising the environment in relation to human beings.

The potential effects on local population and human health as a result of the proposal are assessed in this chapter with respect to the following:

- Population demographics;
- Socio economic impacts;
- Water quality;
- Air quality;
- Noise and vibration;
- Traffic and transport; and
- Community Infrastructure & Social Facilities.

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### 5.2.1 Information Sources

The following primary information sources have been used to inform the nature and content of this chapter.

- Census population and employment data published by the Central Statistics Office (CSO);
- Fingal Development Plan 2023 -2029;
- Dublin Airport Local Area Plan 2020; and
- Ordinance Survey Ireland (OSI) mapping and aerial photography.

### 5.2.2 Additional Sources

In November 2021, the Institute of Public Health in Ireland (IPH) issued the fourth edition of "*Health Impact Assessment (HIA) Guidance*" (2021) for Ireland and Northern Ireland, incorporating the most recent developments and best practice in the field. The updated HIA Guidance is endorsed by the International Association for Impact Assessment and by the European Public Health Association.

This document also details the negative health impacts associated with unemployment. Unemployment affects both physical and mental health and is an important determinant of health inequalities in adults of working age. Unemployed people have a higher risk of lower levels of psychological wellbeing ranging from symptoms of depression and anxiety to self-harm and suicide. Unemployment can also impact other health determinants for example housing and nutrition. Based on this information, employment generated as a result of the proposal has been assessed throughout this chapter.

The European Commission (EC) has published the "*Guidance on the Preparation Of The Environmental Impact Assessment Report*" (EC, 2017). This document notes that '*human health is a very broad factor*' that is '*highly project dependent*'. It states that: '*The notion of human health should be considered in the context of the other factors in Article 3(1) of the EIA Directive and thus environmentally related health issues (such as health effects caused by the release of toxic substances to the environment, health risks arising from major hazards associated with the Project, effects caused by changes in disease vectors caused by the Project, changes in living conditions, effects on vulnerable groups, exposure to traffic noise or air pollutants) are obvious aspects to study.*' (European Commission 2017).

In line with the Environmental Protection Agency (EPA) Guidelines on the information to be contained in Environmental Impact Assessment Reports (2022) (the EPA Guidelines (EPA, 2022)), the terms used when quantifying the quality of effects have been detailed in Chapter 1.

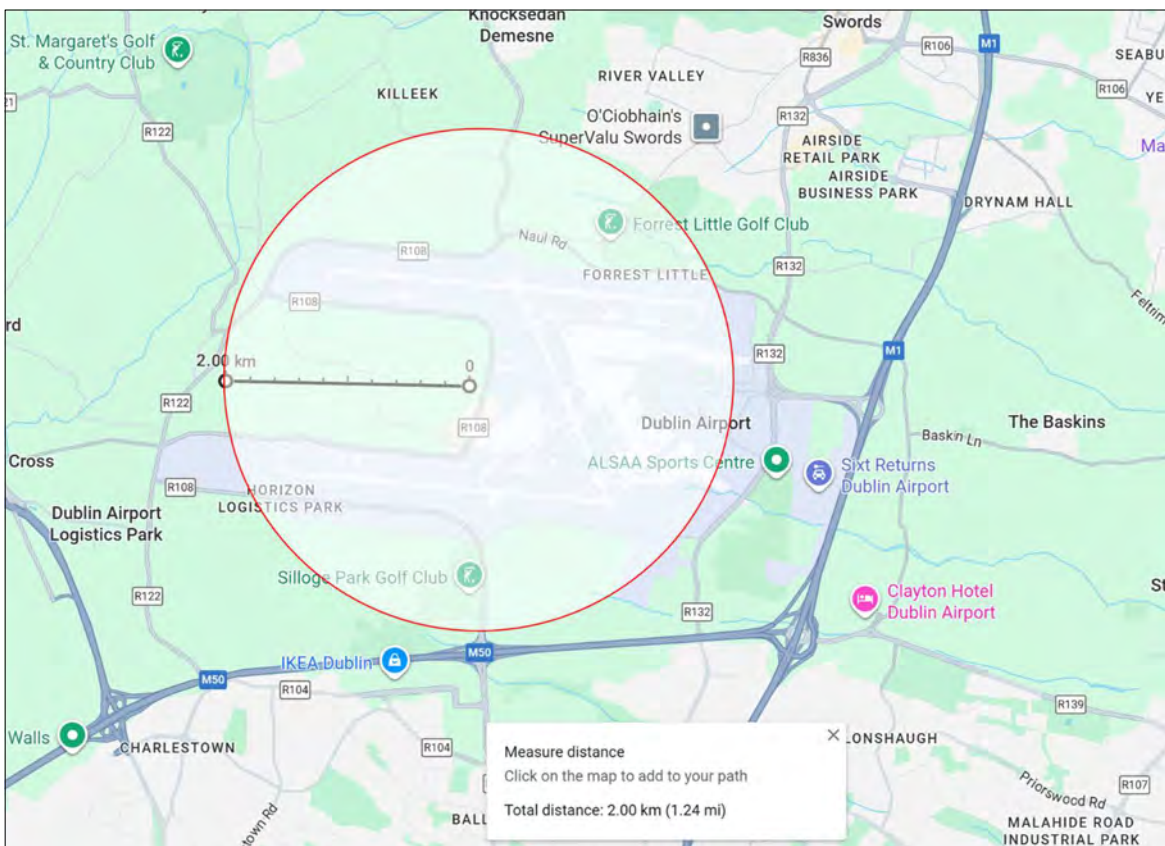
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### 5.2.3 Study Area

There is no specific national guidance for defining the appropriate Study Area when assessing the potential effects of proposals on population and human health. The Health Impact Assessment (HIA) Guidance for Ireland and Northern Ireland (2021) describes a number of different geographic scales for measuring health varying from neighbouring community to International.

Expert judgement has been applied in determining the appropriate Study Area. A Study Area covering a radius of approximately 2 km of land surrounding the site has been selected. This size of Study Area captures the main communities within a distance most likely to be affected by the proposal for example this distance captures people who live and work within easy access of the proposal and also encompasses the air quality and noise Study Area s. The Study Area has been identified by including all the Electoral Areas that are identified as being partially of fully within the 2 Km radius of the development proposal.

The 'Study Area' selected for the assessment of the impact on the demographic profile and human health therefore includes the Electoral Divisions of Dublin Airport, Dubber, Swords Forrest and Kilsallaghan.



**Figure 5.1:** 2 Km Radius surrounding the proposed development for the purposes of establishing Electoral Divisions (i.e. Study Area).

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**Figure 5.2:** Electoral Divisions selected as part of the 'Study Area'.

## 5.3 Receiving Environment

### 5.3.1 Population and Demographics

The most recent population figures published by the Central Statistics Office (CSO) demonstrates the population of the state experienced rapid growth in the period between 1996 and 2022. The latest Census results (i.e. 2022) show that Ireland's population stood at 5,149,139 in April 2022, an increase of 8% since April 2016.

The Greater Dublin Area (GDA) showed a population growth of 8.45 % between 2016 and 2022. According to Census 2022, the total population of Dublin is 1,458,177 which represents an 8.2 % increase from the value of 1,347,359 in 2016 (Table 5.1).

**Table 5.1** 2011, 2016 and 2022 Populations of the Study Area , Fingal and State and associated percentage changes (CSO Ireland).

Location	Population	Population	Population	% Change	% Change	% Change
	2011	2016	2022	2011-2016	2016-2022	2011 - 2022
<b>Airport ED</b>	4,032	5,018	6,139	+24.45	+22.34	+52.26
<b>Dubber ED</b>	6,359	7,372	8,812	+15.93	+19.53	+38.58
<b>Swords Forrest ED</b>	13,894	15,153	15,926	+9.06 %	+5.10	+14.63
<b>Kilsallaghan ED</b>	2,205	2,263	2,427	+02.63	+07.25	+10.07
<b>Study Area</b>	26, 490	29, 806	33, 304	+ 12.52%	+ 11.73	+25.72
<b>Fingal County</b>	273,991	296,020	330,358	+08.04	+11.60	+20.57
<b>Dublin City</b>	527,612	554,554	592,818	+05.10	+06.90	+12.36
<b>Dun Laoghaire - Rathdown</b>	206,261	218,018	233,933	+05.70	+07.30	+13.41
<b>South Dublin</b>	265,205	278,767	301,068	+05.11	+08.00	+13.53
<b>Dublin</b>	1,273,069	1,347,359	1,458,177	+05.83	+08.22	+14.54
<b>Kildare</b>	210,312	222,504	247,869	+05.79	+11.40	+17.86
<b>Wicklow</b>	136,640	142,425	155,813	+04.23	+09.40	+14.03
<b>Meath</b>	184,135	195,044	206,552	+05.92	+13.20	+12.17
<b>GDA</b>	1, 804, 156	1, 907, 332	2, 068, 441	+5.72 %	+8.45%	+14.65
<b>State</b>	4,588,252	4,761,865	5,149,139	+03.78	+08.00	+12.22

On a regional level, aside from Fingal, the Dublin Local Authorities experienced a steady rate of growth when compared with the other counties in the Greater Dublin Area. This mirrors an identifiable and inevitable trend that emerged during the last two intercensal periods (2011-2016, 2016-2022) where the population in some of Dublin's traditional residential areas declined, whereas areas in the hinterland of Dublin including Fingal experienced exponential growth.

Table 5.1 (above) also shows the population growth within the District Electoral Divisions (DEDs) within the catchment area. The majority of DEDs within the area have experienced significant growth over the past decade. The subject lands are situated within the Dubber ED, an area that has seen major growth over the

past decade with an increase of 19.53% recorded in the period between 2016 and 2022. Table 5.1 indicates that population within the vicinity of the Airport is relatively low due to safety restrictions or residential development and indeed the nature and extent of the airport area.

While the population within the Study Area has increased since the 2016 Census due to significant residential developments at Ballymun, Poppintree, Meakstown, Santry Demesne, Fosterstown, Airside and Knocksedan Demesne, the proposed development itself has no residential component and is therefore not likely to result in a notable increase in the permanent population of the area.

#### 5.3.1.1 Age Range Comparison between Study Area , Fingal and State

Table 5.2 below shows the breakdown of the population of the Study Area based on age range against the Fingal and State averages. This table is further broken down into percentages of the population within these age ranges.

The population of the Study Area is comparable to the demographic age profile of the Fingal County and Ireland. No age category in the Study Area deviates from the average figures in Fingal or Ireland by more or less than 4.5 %.

- The number of people aged 0-4 years are broadly similar across the catchment area, Fingal and the State with a deviation of less than 1%.
- The number of children and young adults aged 0-24 years in the Study Area is in line with the figures for Fingal and the State.
- People aged 35-44 (20.05%) in the Study Area is slightly higher than the value for Fingal (17.43%) and notably higher than the value for Ireland (15.43%).
- People aged 45-54 (13.85%) and 55-64 (8.48%) in the Study Area are in line with those for Fingal and the State and vary by a maximum of +/-2.5%.

The Study Area has a lower percentage of people aged 65 - 74 years and over (5.14 %) when compared with Fingal (6.6 %) and Ireland (8.57%).

**Table 5. 2** Population Age Range of people residing in the Study Area, Fingal and State (CSO, 2022).

Age Range	Study Area		Fingal		Ireland	
	No. of People.	% of People.	No. of People	% of People.	No. of People	% of People.
<b>0-4 years</b>	2,184	6.56	21,017	6.36	295,415	5.74
<b>5-24 years</b>	8,860	26.58	95,004	28.75	1,361,643	26.44
<b>25-34 years</b>	5,537	16.61	40,171	12.15	628,031	12.20
<b>35-44 years</b>	6,683	20.05	57,603	17.43	794,393	15.43
<b>45-54 years</b>	4,616	13.85	48,660	14.72	713,507	13.86
<b>55-64 years</b>	2,826	8.48	31,507	9.53	579,835	11.26
<b>65-74 years</b>	1,714	5.14	21,828	6.60	441,028	8.57
<b>75 years and over</b>	910	2.73	14,716	4.45	335,287	6.51
<b>Total</b>	<b>33,330</b>		<b>330, 506.</b>		<b>5, 149, 139.</b>	

### 5.3.2 Employment & Economic Activity

An assessment of employment and economic activity as it pertains to the study area, Fingal and the State is summarised in Table 5.3, 5.4 and 5.5. Table 5.3 below which demonstrates the number and percentage of people above the legal working age that are available to work (i.e. labour force) during the 2022 Census for the Study Area, Fingal and Ireland.

The percentage of people at work in the Study Area (66.78%) is higher than the average for Fingal (60.46%) and notably higher than the average for the State (56.09%). This is in line with the Study Area having a high percentage of people of working age (i.e. aged 16-64 years).

The percentage of people who are retired in the Study Area (9%) is also less than that in Fingal (12.56%) and even less again than the State (15.90%). This is line with the Study Area also having a lower than state average of people aged 75 years and over.

**Table 5.3** Principal Economic Status of people residing in the Study Area, Fingal and State (CSO, 2022).

Principle Economic Status	Study Area		Fingal		Ireland	
	No. of People	% of People	No. of People	% of People	No. of People	% of People
<b>At work</b>	17,518	66.78	155,063	60.46	2,320,297	56.09
<b>Looking for first regular job</b>	234	0.89	2,299	0.90	34,526	0.83
<b>Short term unemployed</b>	534	2.04	4,794	1.87	70,217	1.70
<b>Long term unemployed</b>	641	2.44	5,957	2.32	106,059	2.56
<b>Student</b>	2,545	9.70	29,497	11.50	459,275	11.10
<b>Looking after home/family</b>	1,327	5.06	16,344	6.37	272,318	6.58
<b>Retired</b>	2,362	9.00	32,219	12.56	657,790	15.90
<b>Unable to work due to permanent sick-ness or disability</b>	880	3.35	8,835	3.45	189,308	4.58
<b>Other</b>	192	0.73	1,450	0.57	27,062	0.65
<b>Total</b>	<b>26,233</b>	<b>100</b>	<b>256,458</b>	<b>100</b>	<b>4,136,852</b>	<b>100</b>

Table 5.4 shows the industries the people in the Study Area work in when compared with the figures for Fingal and Ireland. The top three industries which account for 64.85% of the Study Area in total are:

- Commerce and Trade (25.04%).
- Transport and Communications (15.49 %).
- Professional Services (24.32%).

The proposed aviation related cargo-handling facility will provide for development which falls appropriately within the scope of two of all of these categories, in particular 'Commerce and Trade' and 'Transport and Communications'.

**Table 5.4** Industries people are working in who reside in the Study Area, Fingal and State (CSO, 2022).

Industry	Study Area		Fingal		Ireland	
	No. of People	% of People	No. of People	% of People	No. of People	% of People
Agriculture, Forestry and Fishing	90	0.51	1,092	0.70	82,228	3.54
Building and Construction	730	4.17	2,299	0.90	34,526	0.83
Manufacturing Industries	1,155	6.60	11,189	7.22	273,102	11.77
Commerce and Trade	4,387	25.04	42,599	27.47	552,642	23.82
Transport and Communications	2,714	15.49	22,248	14.35	212,383	9.15
Public Administration	858	4.90	9,370	6.04	131,639	5.67
Professional Services	4,261	24.32	37,049	23.89	568,105	24.48
Other	3,323	18.97	23,258	15.00	365,716	15.76
<b>Total</b>	<b>17,518</b>		<b>155,063</b>		<b>2,320,297</b>	

Table 5.5 demonstrates the types of occupations of people working in the Study Area when compared with the figures for Fingal and Ireland.

The top three occupations which account for 40.36% of the Study Area in total are:

- Professional Occupation (18.19 %).
- Associate Professional and Technical Occupations (11.98 %).
- Administrative and Secretarial Occupations (10.19%).

**Table 5.5** Occupations of people residing in the Study Area , Fingal and the State (CSO, 2022).

Occupation	Study Area		Fingal		Ireland	
	No. of People	% of People	No. of People	% of People	No. of People	% of People
Managers, Directors and Senior Officials	1373	7.34	15,273	9.21	192,679	7.72
Professional Occupations	3401	18.19	34,431	20.76	507,044	20.31

<b>Associate Professional and Technical Occupations</b>	2240	11.98	22,377	13.50	292,273	11.71
<b>Administrative and Secretarial Occupations</b>	1905	10.19	17,621	10.63	229,737	9.20
<b>Skilled Trades Occupations</b>	1398	7.47	14,179	8.55	313,921	12.57
<b>Caring, Leisure and Other Service Occupations</b>	1346	7.21	11,763	7.09	183,584	7.35
<b>Sales and Customer Service Occupations</b>	1255	6.71	10,812	6.52	154,238	6.18
<b>Process, Plant and Machine Operatives</b>	1172	6.26	9,920	5.98	172,521	6.91
<b>Elementary Occupations</b>	1650	8.82	13,363	8.06	203,532	8.15
<b>Not stated</b>	2953	15.79	16,075	9.69	247,044	9.90
<b>Total</b>	<b>18, 693</b>		<b>165, 814</b>		<b>2, 496573</b>	

### 5.3.3 Travel & Commuting

An assessment of commuter times and duration are summarised in Table 5.6, 5.7 and 5.8 below. The time period that most people leave for work, school or college is 08:01 - 08:30 (19.54%) followed by 07:31 - 08:00 (17.01%) (Table 5.6). This is also consistent with the Fingal jurisdiction and State times.

**Table 5. 6** Commuting Travel Times for people residing in the Study Area , Fingal and State (CSO, 2022).

Duration of Travel Times	Study Area		Fingal		Ireland	
	No. of People	% of People	No. of People	% of People	No. of People	% of People
<b>Before 06:30</b>	1986	8.58	16,807	7.78	212, 439	6.67
<b>06:30 - 07:00</b>	2507	10.84	24,311	11.25	312, 861	9.81
<b>07:01 - 07:30</b>	2364	10.22	22,134	10.25	299, 508	9.40
<b>07:31 - 08:00</b>	3933	17.01	39,746	18.40	564, 895	17.72
<b>08:01 - 08:30</b>	4519	19.54	49,055	22.71	716, 882	22.49
<b>08:31 - 09:00</b>	1827	7.89	23,945	11.08	479, 703	15.05
<b>09:01 - 09:30</b>	320	1.38	3,620	1.68	89, 676	2.81

<b>After 09:30</b>	1411	6.11	12,818	5.93	184,515	5.7
<b>Not stated</b>	4258	18.41	23,588	10.92	326,542	10.25
<b>Total</b>	23128		216,024		3,187,021	

The majority of people travel 45 minutes or less to work, school or college (65.66%) indicating that most people live and go to work, school or college within 45-minute drive time radius (Table 4-8).

**Table 5.7** Average commute time to work, school or college for people residing in the Study Area, Fingal and the State (CSO, 2022).

Journey Time	Study Area		Fingal		Ireland	
	No. of People	% of People	No. of People	% of People	No. of People	% of People
<b>Under 15 mins</b>	4,120	17.81	51,155	23.68	936,520	29.39
<b>1/4 hour - under 1/2 hour</b>	6,670	28.84	54,854	25.39	894,844	28.08
<b>1/2 hour - under 3/4 hour</b>	4,398	19.01	42,010	19.45	550,229	17.27
<b>3/4 hour - under 1 hour</b>	1,568	6.78	17,605	8.15	186,834	5.86
<b>1 hour - under 1 1/2 hours</b>	1,648	7.13	19,900	9.21	195,397	6.13
<b>1 1/2 hours and over</b>	494	2.13	6,115	2.83	80,867	2.54
<b>Not stated</b>	4,227	18.28	24,385	11.29	342,270	10.74
<b>Total</b>	23,125		216,024		3,186,961	

As demonstrated in Table 5.8 below, 44.57% of people in the Study Area rely on private car usage. A further 18.09% of people commute by bus, minibus or coach. It is noted that this Study Area is not serviced by train, DART or LUAS such that this means of travel is noticeably lower than both Fingal and the State.

**Table 5.8** Means of Travel for people residing in the Study Area, Fingal and State.

Means of Travel	Study Area		Fingal		Ireland	
	No. of People	% of People	No. of People	% of People	No. of People	% of People
<b>On Foot</b>	2,745	10.65	36,997	15.02	456,291	12.63
<b>Bicycle</b>	659	2.57	7,686	3.12	97,212	2.69
<b>Bus, minibus or Coach</b>	4,662	18.09	27,641	11.22	323,923	8.96
<b>Train, DART or LUAS</b>	140	0.54	15,191	6.17	85,316	2.36

<b>Motorcycle or scooter</b>	115	0.45	929	0.38	9,150	0.25
<b>Car Driver</b>	7,726	29.98	76,482	31.05	1,254,419	34.72
<b>Car passenger</b>	3,760	14.59	36,182	14.69	691,044	19.12
<b>Van</b>	562	2.18	6,057	2.46	148,823	4.12
<b>Other (incl. lorry)</b>	43	0.17	501	0.20	14,092	0.39
<b>Work mainly at or from home</b>	1,650	6.40	19,613	7.96	266,726	7.38
<b>Not stated</b>	3,705	14.38	19,066	7.74	266,412	7.37
<b>Total</b>	25,767		246,345		3,613,408	

### 5.3.4 Human Health

Health, as defined by the World Health Organization (WHO), is "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity".

Health is crucial for individual well-being and societal progress. It is considered a public good and a valuable asset for development, impacting economic prosperity and overall quality of life. Improving the health and wellbeing of a nation is a key priority for governments worldwide, as it underpins economic productivity and social progress. Healthy Ireland Framework 2013-2025 is a collective response to the challenges facing Ireland's future health and wellbeing.

The Healthy Ireland Framework 2013-2025 defines health as 'everyone achieving his or her potential to enjoy complete physical, mental and social wellbeing. Healthy people contribute to the health and quality of the society in which they live, work and play'. This framework also states that health is much more than an absence of disease or disability, and that individual health, and the health of a country affects the quality of everyone's lived experience.

Statistics for general health in the Study Area, Fingal and Ireland are presented in Table 5.9. This shows that 78.09% of people have self-identified themselves as having "very good" or "good" health.

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**Table 5.9** General Health as identified by people residing in the Study Area , Fingal and the State (CSO, 2022).

General Health	Study Area		Fingal		Ireland	
	No. of People	% of People	No. of People	% of People	No. of People	% of People
Very Good	16,786	50.23	182,955	55.36	2,740,994	53.23
Good	9,312	27.86	95,307	28.84	1,527,027	29.66
Fair	1,954	5.85	23,659	7.16	444,895	8.64
Bad	366	1.10	3,857	1.17	72,556	1.41
Very Bad	68	0.20	832	0.25	16,843	0.33
Not Stated	4,929	14.75	23,896	7.23	346,824	6.74
<b>Total</b>	<b>33,415</b>		<b>330,506</b>		<b>5,149,139</b>	

### 5.3.5 Social Health

The World Health Organization (WHO) states that social and economic conditions significantly impact health across an individual's lifespan. Good health is promoted by addressing factors like educational attainment, job security, and housing quality. These factors, among others, can positively or negatively influence an individual's overall well-being. Some of these factors are genetic or biological and are relatively fixed. However, 'Social determinants of health' arise from the social and economic conditions in which people live. They are not so fixed such as type of housing and environments, access to health or education services, incomes generated, and the type of work people do, can all influence a person's health, and the lifestyle decisions people make.

A range of factors have been identified as social determinants of health. These can include the wider socio-economic context, inequality, poverty, social exclusion, socioeconomic position, income, public policies, access to health services, access to education, employment opportunities, housing, transport, the built environment, health behaviours or lifestyles, social and community support networks and stress. People who are less well off or who belong to socially excluded groups tend to fare badly in relation to these social determinants. Being at work on the other hand provides not only an income, but also access to social networks, a sense of identity and opportunities for development or progression.

According to the baseline assessment, 66.78% of the population within the Study Area are at work. This reflects the high number of people of a working profile living within the area which is expected due to the percent of people of a working age living in the area.

As detailed in Table 5.9, the majority of people in the Study Area (77.86%) have self-identified as having 'very good health' or 'good health'. The high employment levels, coupled with these health statuses in both Swords and Fingal, indicates that positive social health conditions exist. Moreover, 65.66 % of people within the Study Area are commuting less than 45 minutes to work, school or college indicating a variety of employment and educational services are within reasonable distance. Reduced commute times are also positively associated with reduced stress levels.

### 5.3.6 Community Infrastructure and Social Facilities

The Fingal County Development Plan 2023-2029 defines the term '*community infrastructure*' as including infrastructure and facilities such as education facilities, facilities associated with social service provision, public health facilities, childcare facilities including private nurseries, community facilities, libraries and arts centres, religious buildings, and cemeteries.

The subject site is located c. 4 Km south of Swords, a '*Key Town*' as designated in the RSES for the Eastern and Midland region and one of the fastest growing metropolitan towns in the County. The 2022 Census results indicated the population of Swords to be 47, 120 while the Core Strategy of the FDP 2023 – 2029 indicates the population is projected to increase significantly to 60, 265 by 2029. This is due to a substantial quantum of land being zoned for future residential development, much of which will be compact, high density development.

Having regard to the aforementioned, a wide variety educational services, churches, library services and health care services, are accessible c. 4 Km from the subject site. These areas are also well provided for in terms of active community recreation facilities, including playing fields, parks and sports facilities. These areas are also well provided for in terms of passive recreation facilities including public houses, restaurants, cinemas etc.

The nearest primary school is St. Margaret's National School which is situated within c. 1.83 Km north of the subject site. The nature of the existing facility is such that there will be no impact upon educational facilities in the vicinity of the subject site.

There are a number of recreational and sporting facilities located approximately 2.2 km north of the subject site including St. Margaret's GAA club, with the St. Margaret's Golf & Country Club and grounds of Rivermeade Football Club located in Kilbrook further north of it. A number of recreational and sporting

facilities are also located approximately 1.3 km south/southeast of the site beyond the airport runway that include grounds of the Royal College of Surgeons, and the GAA facilities of Ballymun Kickhams and Silloge Park Golf Club.

### 5.3.7 Summary of Baseline Environment

The baseline environment can be summarised as followed:

- The subject site is situated within the Dubber ED, an area that has seen major population growth over the past decade of 19.53% between 2011 and 2022.
- The population of the Dubber ED and the Study Area more broadly has increased significantly due to significant residential developments at Ballymun, Poppintree, Meakstown, Santry Demesne, Fosterstown, Airside and Knocksedan Demesne during this period. However, the proposed development itself has no residential component and will therefore not result in a noticeable increase in the permanent population of the area.
- The population within the vicinity of the Airport is relatively low due to safety restrictions on residential development and indeed the nature and extent of the airport area.
- People aged 35-44 in the Study Area (20.05%) is slightly higher than the value for Fingal (17.43%) and notably higher than the value for State (15.43%).
- There are less people aged 65 - 74 years and over in the Study Area (5.14 %) when compared with Fingal (6.6 %) and Ireland (8.57%).
- There are more people at work in the Study Area (66.78%) when compared with Fingal (60.46%) and notably more people when compared with the State (56.09%). This is in line with the Study Area having higher numbers of people of working age (16-64 years).
- Less people are retired in the Study Area (9%) when compared to Fingal (12.56%) and the State (15.90%). This is line with the Study Area having a lower than county and state average aged 75 years and over.
- The majority of people in the Study Area travel 45 minutes or less to work, school or college (65.66%) which is an indication of positive living conditions.

- 44.57% of people in the Study Area rely on private car usage. A further 18.09% of people commute by bus, minibus or coach. This in part reflects that the study area and the closest large town (Swords) is not currently served by DART or Rail services.
- 78.09% of people in the Study Area have self-identified as having "very good health" or "good health" health.
- The study area and Fingal are identified as being well serviced with a broad range of community infrastructure and social facilities in part by virtue of the proximate location of the site to Swords as a key metropolitan town in the county.
- The high employment levels, short commuting distances, variety of community infrastructure and social facilities which exist and the self-identification of health status in both Swords and Fingal, indicates that positive social health conditions exist.

### 5.3.8 Summary of Receptors and Sensitivity

A number of sensitive receptors were identified as part of the baseline assessment.

**Table 5. 10** Sensitive Receptors identified as part of baseline assessment.

Receptor	Description	Sensitivity
<b>Population Demographics</b>	<i>The baseline population demographics show the Study Area has a balanced population with age categories broadly reflecting those of the county and state.</i>	Low.
<b>Socio Economic Impacts</b>	<i>The number of people at work in the Study Area is higher than the state average and the number of retired people is lower than the state average indicating a high number of people in the workforce. The number of people who are short term and long term unemployed are in line with those for the county and state.</i>	Medium.
<b>Water Quality (Impact on Local Population)</b>	<i>Safe, clean drinking water is essential for population and human health.</i>	Medium.

<b>Air Quality (Impact on Local Population)</b>	<i>Nuisance dust emissions from construction and operational activities, including traffic has the potential to negatively impact air quality and consequently human health.</i>	Medium.
<b>Noise and Vibration (Impact on Local Population)</b>	<i>Noise exposure can cause a variety of human health effects including annoyance, sleep disturbance, raised stress levels, work impacts for commercial receptors or individuals who work from home.</i>	Medium.
<b>Traffic and Transport</b>	<i>Operational vehicle movements to and from the site can affect the capacity of the local road network to support these additional journeys.</i>	Low.
<b>Community Infrastructure &amp; Social Facilities.</b>	<i>Amenities including tourism sites and community infrastructure contribute to a sense of community and the social health of the surrounding population.</i>	Medium.

## 5.4 Development Description

1. Construction of four aviation-related cargo handling units with ancillary office space:

- Unit 1: c.10,869.7 m<sup>2</sup> (including 940.9 m<sup>2</sup> office space)
- Unit 2: c.9,151.3 m<sup>2</sup> (including 751.3 m<sup>2</sup> office space)
- Unit 3: c.6,024.9 m<sup>2</sup> (including 497.7 m<sup>2</sup> office space)
- Unit 4: c.8,577.7 m<sup>2</sup> (including 751.3 m<sup>2</sup> office space)

The proposed units will have an overall combined total gross floor area (GFA) of c. 34, 623.6 sq.m (alongside ancillary ESB substations, 4 no. security huts with a combined GFA of 30 sqm and pumphouses). The warehouses are c. 12m in height, with the office element being c. 3.3 m in height and located within a landscaped campus on a site of c. 10.7 Ha.

2. Provision of 390 car parking spaces, including 39 EV charging points, 19 accessible spaces, and 39 motorcycle bays.
3. Provision of 230 secure bicycle parking spaces, of which 100 are short stay spaces and 130 are sheltered long stay spaces.
4. Provision of approx. 77 truck parking spaces and 5 van spaces.
5. Hard and soft landscaping, new boundary treatments, including a c. 2m high System Wire Fence to site boundary.
6. Construction of new site entrance onto the R108.
7. Wastewater treatment plant and infiltration area for 250 PE.
8. All necessary site development and engineering and ancillary site works, including provision of ESB substations and switchrooms, sprinkler tanks and pumphouses, bin store and recycle store, lighting, signage, underground services, photovoltaic panel zones at roof level and sustainable drainage systems (SuDS).

## 5.5 Predicted Impacts

### 5.5.1 Population and Demographics

#### 5.5.1.1 Construction Phase

Based on projects of a similar scale and nature it is estimated that the construction phase of the proposed aviation – related cargo handling facility will generate a requirement for approximately 160 full time employees (40 workers per unit working 40 hours per week). Such employees may either already reside in the local area or may travel to the subject site from surrounding towns. In recognition of this, and given the majority of people in the Study Area travel 45 minutes or less to work, school or college, the effect on population demographics has been assessed having regard to the broader Fingal population. The sensitivity of the receptor has been identified as **low**. The magnitude of the impact is **low**.

Based on the mobile nature of employees and the baseline population assessment, the likely effect on population demographics during the construction phase will be **direct, short to medium – term, positive and imperceptible.**

#### 5.5.1.2 Operational Phase

It is estimated that the operational phase will generate a total of approximately 350 new jobs (200 new warehousing jobs and 150 new office jobs). Such employees may either already reside in the local area or may travel to the subject site from surrounding towns. In recognition of this, and given the majority of people in the Study Area travel 45 minutes or less to work, school or college, the effect on population demographics has been assessed with regard to the broader Fingal population. The sensitivity of the receptor has been identified as **low**. The magnitude of the impact is **low**.

Based on the mobile nature of employees and the baseline population assessment, the likely effect on population demographics during the operating of the proposed aviation-related cargo handling facility will be **direct, long – term to permanent, positive and imperceptible.**

### 5.5.2 Socio - Economic Impacts

#### 5.5.2.1 Construction Phase

New employment will be created during the construction phase of the proposed development. As noted previously, based on projects of a similar scale and nature, the construction phase is estimated to generate approximately 160 full time employees (40 workers per unit working 40 hours per week).

Such employees may either already reside in the local area or may travel to the subject site from surrounding towns. In recognition of this and given the majority of people in the Study Area travel 45 minutes or less to work, school or college, the socio-economic effect has been assessed for both the Study Area and Fingal. The sensitivity of the receptor in the Study Area has been identified as **medium**. The magnitude of the impact is **low**. The sensitivity of the receptor at a county level has been identified as **low**. The magnitude of the impact is **low**.

Having regard to nature of the proposed development and the baseline assessment of economic activity, the likely effect on the economy at a local level during the construction phase will be both **direct and indirect, short to medium – term, positive and imperceptible.** At a county scale, the likely effect on the

economy during the construction phase will be both **direct and indirect, short to medium - term, positive and imperceptible.**

#### 5.5.2.2 Operational Phase

As previously noted, the operating of the proposed development is estimated to create approximately 350 new jobs (200 new warehousing jobs and 150 new office jobs). Such employees may either already reside in the local area or may travel to the subject site from surrounding towns. In recognition of this and given the majority of people in the Study Area travel 45 minutes or less to work, school or college, the socio-economic effect has been assessed for both the Study Area and Fingal.

In addition, the subject site is partially located within the Outer Public Safety Zone for Dublin Airport where employment densities of up to 110 persons/ half hectare are applicable. As such, the development proposal adheres to employment density requirements as set out within the ERM report.

The sensitivity of the receptor in the Study Area has been identified as **medium**. The magnitude of the impact is **low**. The sensitivity of the receptor at a county level has been identified as **low**. The magnitude of the impact is **low**.

The likely effect on the economy at a local scale during the operational phase will be both **direct and indirect, long – term to permanent, positive and imperceptible**. At a county scale, the likely effect on the economy during the operational phase will be both **direct and indirect, long – term to permanent, positive and imperceptible**.

### 5.5.3 Water Quality

#### 5.5.3.1 Construction Phase

Safe, clean drinking water is essential for human health. Pollution incidents have the potential to affect water quality, which in turn could pose a risk to human health in the surrounding area. Chapter 8 of this EIAR provides a detailed assessment of the predicted impacts on hydrology and hydrogeology associated with the construction and operating of the proposed aviation - related cargo handling facility. To this end, the following is noted in Chapter 8:

"During the construction phase of the development, the main potential impacts on hydrology and hydrogeology are:

- Surface water run-off containing silt, sediments and/or other pollutants into nearby waterbodies.
- Uncontrolled release of pollutants to groundwater.

Best Available Techniques will be applied during construction to minimize any environmental risks.

The site is removed from major surface water features and is connected to the Santry River via drainage ditches in the vicinity."

Chapter 8 further notes that the following mitigation measures will be implemented during construction to ensure the safeguarding of water quality and thus human health in the surrounding area;

- All potentially polluting substances will be stored on impermeable surfaces with controlled drainage or at least 10m away from storm water sewers, grids, channels, watercourses and ditches.
- All fuel, chemicals and oils will be stored within bunded areas.
- All tank discharge pipes, valves and trigger guns will be contained securely within the bund when not in use.
- Bowsers will be stored within secure areas when not in use to protect against theft or vandalism.
- Leaking or empty drums will be removed and stored in a suitably bunded area separating from other drums prior to disposal by an appropriate licensed waste disposal contractor.
- All hazardous substances on site will be controlled in accordance with COSHH Regulations (2004).
- Refuelling of plant and machinery will take place on concrete hard standing with controlled drainage.
- Wheel washing will be undertaken in a designated area if required.
- Washing out of plant will take place in areas away from storm water sewers, grids, channels and watercourses.
- Spill kits will be held on site with a variety of absorbent materials to be used in the event of a spill of fuel, oil or chemicals.

With the implementation of the above mitigation measures, the impact on water quality during construction and thus human health in the surrounding area is predicted to be **long-term, imperceptible** and **neutral**.

### 5.5.3.2 Operational Phase

At the operating stage of the development the following predicted impact on water quality is noted in Chapter 8;

*"Due to the existing systems in place to ensure good quality of surface water being discharged from the site, it is considered that with mitigation measures, the potential impact during the operational phase is **long-term, imperceptible and neutral.**"*

The predicted human health impact in terms of water quality is therefore also predicted to be **long-term, imperceptible and neutral.**

## 5.5.4 Air Quality

### 5.5.4.1 Construction Phase

Nuisance dust emissions from construction and operational activities have the potential to negatively impact air quality and consequently human health. Chapter 7 of this EIAR addresses the predicted impacts on air quality during the construction and operating of the proposed aviation-related cargo handling facility. Regarding the construction phase the following is noted in Chapter 7:

*"The construction of the aviation related cargo handling facility is expected to have temporary impacts on air quality. These impacts are due to construction stages such as soil clearance and other groundworks, moving and processing of materials and the use and operation of construction machinery and vehicles. The potential quantity of dust emissions will depend on the type of construction activity being carried out such as excavations, mixing concrete, sawing wood and construction traffic travelling across exposed ground. The generation of fugitive dusts could also vary due to weather affecting the area such as levels of rainfall, wind speed and wind direction and these conditions may affect air quality in the area. These emissions will be the same as ones mentioned previously in this report such as nitrogen oxides and particulate matter. The overall impact on air quality should be minimal if Best Available Techniques, mitigation measures, and practices are used in the construction phase. This site will be surrounded by hedgerows and tree lines which can be a natural barrier for the escape of dust off site."*

The predicted impact on air quality during the construction phase is ultimately determined in Chapter 7 to be **temporary, negative, and slight**. Similarly, the predicted impact on human health is also predicted to be **temporary, negative, and of slight significance**.

#### 5.5.4.2 Operational Phase

At the operating stage of the development Chapter 7 highlights the following in respect of the impact on air quality and consequently human health;

*"Traffic related air emissions have the potential to impact human health if they do not comply with the ambient Air Quality Standards detailed in Table 7.1. However, while the site will have many vehicles present the emissions caused by this will not be of significant amount to impact human health.*

*Dust emissions could have adverse effects on human health but during the operational phase the car park and driveway surfaces will be impermeable which significantly reduces the potential for dust emissions from the site during operation. The main potential for an impact on human health is the potential for increased greenhouse gas emissions from the increased traffic which has been discussed in detail in the previous section. Due to this the amount of expected impact on human health due to the operational phase is considered to be **long term, imperceptible and negative.**"*

### 5.5.5 Noise & Vibration

#### 5.5.5.1 Construction Phase

Noise exposure can cause a variety of human health effects including annoyance, sleep disturbance, raised stress levels, work impacts for commercial receptors or individuals who work from home. Chapter 9 of this EIA provides a detailed assessment of the predicted noise and vibration impacts arising from the construction and operating of the proposed aviation - related cargo handling facility.

The predicted impacts have been assessed at four Noise-Sensitive Locations (NSLs) which represent the nearest noise-sensitive residential receptors. NSL 1 and NSL 3 are both derelict unoccupied properties. In chapter 9 the following predicted noise impacts are noted at each NSL;

*"At all NSL's, the highest noise levels will be generated during groundbreaking and excavation. During the site excavation and foundation construction phase, the resulting effect at **NSL 1** will be **temporary, negative and significant**. It is reiterated that NSL 1 is a derelict unoccupied property. **At NSL 2**, the resulting effect will be **temporary, negative and of slight to moderate significance**. At NSL's 3 & 4, the resulting effect will be **temporary, negative and of slight significance**.*

In respect of the predicted vibration impacts during the constructing of the proposed development the following is noted in Chapter 9;

*"The main potential source of vibration during the construction programme is expected to come from initial groundbreaking activities, carried out using standard excavation equipment. Although BS 5228-*

2 does not provide empirical data for this specific activity, the anticipated vibration levels are expected to be below the thresholds associated with building damage. The resulting impact is expected to be **temporary, neutral and slight.**"

#### 5.5.5.2 Operational Phase

In respect of predicted noise impacts during the operating of the proposed development the following is noted in Chapter 9;

"Noise modelling was carried out in CadnaA®, a software package which integrates the calculation procedure of ISO 9613:2024. The acoustic model provides a single scenario output representative of only the specified configuration of the model and for the specified source levels. Appendix C – Noise Modelling Configuration reports the model's configuration, settings, and applied calculation methods. (...)

The approach we have taken for other speculative commercial/industrial units on nearby permitted developments (FW24A/0373E – Drake House, Dublin Airport Logistics Park & FW23A/0299 - Unit A8, North City Business Park) is to apply conservative noise assumptions for the primary and dominant noise source (i.e. loading bay). There are currently no standardised sound levels for loading bay activities; iAcoustics have undertaken previous field measurements of loading bay noise which we have used to carry out our predictions. (...)

The resulting impact is expected to be **long-term, negative and slight significance** at **NSL's 3 & 4**, and **long-term, negative and moderate significance** at **NSL's 1 & 2**. It's reiterated that **NSL 1 & 3** are derelict properties."

Furthermore, the following noise related impacts due to transportation are noted in Chapter 9;

"The anticipated rise in road traffic during the operational phase is expected to have a largely negligible effect on noise levels. The resulting impact is **long-term, negative and negligible**. The only notable exception is the R108 North Parallel Road, where a moderate increase is anticipated resulting in a **long-term, negative** impact of **moderate significance**. However, the dominant source of noise in the area will remain aviation activity, which is expected to generate noise levels significantly higher than those produced by the relatively low volumes of road traffic."

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## 5.5.6 Traffic & Transport

### 5.5.6.1 Construction Phase

The construction phase has the potential to cause congestion on the local road network causing annoyance to the road users. Chapter 13 of this EIAR provides a detailed assessment of the impact of the proposed aviation – related cargo handling facility on the traffic and transportation infrastructure and network in the surrounding area. Chapter 13 notes the following predicted impact during the construction phase;

*“The primary impact during the construction phase will be the operation of trucks removing unwanted materials and delivering materials for incorporation in the works.*

*These operations will be controlled by the Construction Management Plan and the Construction Traffic Management Plan.*

*The predicted traffic impact on the surrounding roads during the Construction Phase is likely to be **short - term** and **moderate**.”*

As such, the impact on human health during construction due to traffic and transport related considerations to be **short – term, neutral** and of **moderate** significance.

### 5.5.6.2 Operational Phase

In respect of the operating of the proposed development the following is noted in Chapter 13

*“The conclusions of the Traffic and Transport Assessment were that Junctions 1 and 4 would operate within capacity post development in 2030, 2035 and 2045.*

*Junctions 2 and 3 were predicted to operate within capacity post development in 2030 and 2035. For the post development scenario in 2045 lase, Junctions 2 and 3 were predicted to operate above capacity in both the AM and PM peaks.*

*The predicted traffic impact on the surrounding roads and junctions during the Operational Phase is likely to be to be long term moderate.”*

(...)

*The primary mitigation measure during the operational phase will be the implementation of the Mobility Management & Workplace Travel Plan and in particular the mobility management measure set out in the Plan.*

*Should the actual traffic at Junctions 2 and 3 approach the level predicted in this TTA for Future Year 2045, the capacity of both junctions can readily be increased by the introduction of signalisation."*

Having regard to the aforementioned, the predicted impact on human health during the operating of the proposed aviation-related cargo handling facility will be **long term, neutral** and of **moderate** significance.

## 5.5.7 Community Infrastructure & Social Facilities.

### 5.5.7.1 Construction Phase

Construction impacts are expected to be short - term, but some potential adverse local impacts can be expected due to the actual construction of the development. This is likely to be associated with construction traffic and any possible nuisance with such movements, for example an increase in daytime noise levels. The resident community in adjoining dwellings are most likely to have been affected by these short-term temporary impacts. Based on the assessments made in relation to noise and vibration, traffic and transport and air quality, and associated mitigation measures where relevant, there will be no significant effects on facilities referenced in Section 5.3.6 relating to community infrastructure and social facilities.

### 5.5.7.2 Operational Phase

The local amenities referenced in Section 5.3.6 will remain in place during the Operational Phase of the Proposed Development. Furthermore, there is the potential for an increase in the strength and viability of these amenities going forward due to the increased population of the area. Therefore, the effects on community and amenities are deemed to be **long-term, neutral** and of **slight significance**.

## 5.5.8 Human Health

### 5.5.8.1 Construction Phase

The construction of any project of this nature has the potential to give rise to unplanned events or accidents, including fire, which impact on human health if such activities are not managed appropriately. Subject to adherence with best practice measures during the constructing of the proposed development, such impacts are not considered to be likely or significant in this instance.

Chapter 15 of this EIAR, '*Accidents and Disaster Risks*', assesses the vulnerability of the proposed development in terms of natural disasters, on - site and off - site hazards, off - site receptors, water bodies and flood risk, Seveso Sites, seismic activity and fire risk. The location of the site partially within the Outer Public Safety Zone is also fully considered in this Chapter.

Appropriate health, safety, and environmental management measures will be implemented on site in accordance with the conditions of planning approval, applicable legislation, and recognised codes of practice.

Following the application of the mitigation measures outlined in the relevant chapters of this EIAR, this chapter concludes there are no credible risk scenarios are identified, whether from major accidents or natural hazards, that would result in a significant impact to human health during the construction phase of the development.

#### 5.5.8.2 Operational Phase

Similarly, the operating of any project of this nature has potential to give rise to unplanned events or accidents, including fire, which impact on health and safety of human beings if such activities are not managed appropriately. Subject to adherence to best practice operating measures, such impacts are not considered to be likely or significant in this instance.

Appropriate health, safety, and environmental management measures will be implemented on site during the operational phase in accordance with the conditions of planning approval, applicable legislation, and recognised codes of practice.

Following the application of the mitigation measures outlined in the relevant chapters of this EIAR, no credible risk scenarios—whether from major accidents or natural hazards—have been identified that would result in a significant impact to human health during the operating of the proposed development.

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## 5.6 Mitigation and Monitoring

### 5.6.1 Construction Phase

No specific mitigation measures are required during the Construction Phase of the Proposed Development in relation to population and human health, given the lack of direct effects resulting from the proposed development. However, where required, mitigation measures in relation to water quality, air quality, noise and vibration and traffic are identified in their respective chapters in this EIAR.

### 5.6.2 Operational Phase

No specific mitigation measures are required during the operational phase of the proposed development in relation to population and human health, given the lack of direct effects resulting from the Proposed Development. However, where required, mitigation measures in relation to water quality, air quality, noise and vibration and traffic are identified in their respective chapters in this EIAR.

## 5.7 Residual Impacts

Residual Impacts are defined as *'effects that are predicted to remain after all assessments and mitigation measures.'* No negative residual impacts in the context of population and human health are anticipated regarding this proposed development.

It is considered that the proposed development will have a positive residual effect on population and socioeconomic aspects securing future employment and contributing positively to economic activity for residents living in the area.

## 5.8 Cumulative Impacts

Cumulative Impacts can be defined as *'impacts that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the project'*. Effects which are caused by the interaction of effects, or by associated or off-site projects, are classed as indirect effects. Cumulative effects are often indirect, arising from the accumulation of different effects that are individually minor. Such effects are not caused or controlled by the project developer.

## 5.9 References

- Census data published by the Central Statistics Office (CSO 2022) in relation to population, age structure, economic activity, employment, and unemployment within the vicinity of the subject site;
- Fingal Development Plan 2023 -2029;
- Dublin Airport Local Area Plan 2020;
- Ordinance Survey Ireland (OSI) mapping and aerial photography.
- Institute of Public Health (IPH) - Health Impact Assessment Guidance (Fourth Edition, 2021) for Ireland and Northern Ireland.
- European Commission - Guidance on the Preparation Of The Environmental Impact Assessment Report” (EC, 2017).
- WHO. Ottawa Charter for Health Promotion First International Conference on Health Promotion Ottawa, 21 November 1986 - WHO/HPR/HEP/95.1. 1986.
- WHO. Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June, 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of the World Health Organization, no. 2, p. 100) and entered into force on 7 April 1948. 1946.
- Healthy Ireland Framework 2013-2025
- Farrell, C., McAvoy, H., Wilde, J. and Combat Poverty Agency (2008), Tackling Health Inequalities – An All-Ireland Approach to Social Determinants. Dublin: Combat Poverty Agency/Institute of Public Health in Ireland.
- Wilkinson, Richard; Marmot, Michael, eds. (2003). The Social Determinants of Health: The Solid Facts (PDF) (2nd ed.). World Health Organization Europe.
- Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions (European Communities 1999).

## 6.0 Biodiversity

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### 6.1 Introduction

This chapter considers the potential effects on biodiversity arising from the Proposed Development. A full description of the proposed development, development lands and all associated project elements is provided in Chapter 4 of this EIAR. The nature and probability of effects on biodiversity arising from the overall project has been assessed.

The assessment comprises:

- A review of the existing receiving environment.
- Prediction and characterisation of likely impacts
- Evaluation of effects significance
- Consideration of mitigation measures, where appropriate

#### 6.1.2 Competency Statement

This report has been prepared by Rob Beer (BSC, MRSB) Senior Ecologist at MWP. Rob is a Senior Ecologist with seven years full-time experience, since graduating in 2017. Before joining MWP in March 2024, Rob had previously been working in the UK. Rob is experienced in a range of standard and complex ecological surveys in accordance with British standards, including, but not limited to, UK habitat classification surveys and JNCC<sup>1</sup> Phase 1 surveys, Biodiversity Net Gain (BNG) metric and reporting, bat surveys (stages 1 & 2), reptile surveys, badger surveys, & great crested newt (GCN) surveys. Rob has also authored ecological reports within an Irish setting including, but not limited to, Screenings for Appropriate Assessment Reports, Natura Impacts Statements and Ecological Impact Assessments. Rob is a holder of a Natural England bat license level 2, a holder of a Natural England GCN license level 1 and has a FISC<sup>2</sup> level 2 certificate. Rob is also a holder of a National Parks and Wildlife Service (NPWS) bat survey license (License Number: DER-

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<sup>1</sup> Joint Nature Conservation Committee (JNCC) - Public body that advises the Government of the United Kingdom on UK-wide and international nature conservation.

<sup>2</sup> Field Identification Skills Certificate (FISC) from the Botanical Society of Britain and Ireland (BSBI)

BAT-2025-213). Rob also has extensive experience with ecological clerk of works (ECoW) for a range of species across diverse project types, from small household projects to large infrastructure projects such as rail and road schemes. This includes conducting supervisions and overseeing licenced works in relation to bat, badger and GCN.

This report was reviewed by Hazel Dalton (BSc., BBus.). Hazel is a Principal Ecologist with ten years' experience with MWP since graduating with a first-class Honours Degree in *Wildlife Biology* from Munster Technological University (MTU) in 2015. Hazel is experienced in ecological surveying and impact assessment for Appropriate Assessment (AA) and EIAR. She has authored and contributed to numerous screening reports for AA, Natura Impact Statements (NIS) and Ecological Impact Assessment (EclA) reports. Hazel is an experienced field ecologist with a diverse ecological survey profile including habitats and flora, mammals, bats and birds. She has held/holds NPWS Licences for small mammal trapping, tape lure/endoscope bird surveys, Kerry slug (*Geomalacus maculosus*) surveys, disturbance of bats and their roosts and photographing wild animals (badger and otter) at their resting/breeding places.

## 6.2 Methodology

This assessment has been prepared for the proposed development following a comprehensive desk study, supplemented by an ecological walkover survey which was undertaken on the 11<sup>th</sup> of March 2025 to establish an ecological baseline of the proposed development site.

The objectives of the assessment are as follows:

- Establish an ecological baseline of the proposed development site;
- Identify and evaluate the natural environment and relevant ecological features regarding nature conservation importance in compliance with current methodologies outlined under National and International best practice guidelines.
- Determine, assess and evaluate potential direct, indirect and cumulative impacts and effects on biodiversity.
- Anticipate and prescribe mitigation and avoidance measures to reduce or remove potential impacts of the proposed development.

### 6.2.1 Legislation

Important legislation underpinning biodiversity and nature conservation in Ireland comprise the:

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- EU Habitats Directive (92/43/EEC), as amended
- EU Birds Directive (2009/147/EC, as amended)
- EU Water Framework Directive (WFD, 2000/60/EC)
- European Communities (Birds and Natural Habitats) Regulations 2011 to 2015 (S.I. 477/2011), as amended
- Planning and Development Act (2000), as amended
- Planning and Development Regulations 2001 to 2011, as amended
- Wildlife Act 1976 to 2021, as amended; and
- Flora (Protection) Order, 2022

### 6.2.2 Guidelines and Best Practice

The following guidance and relevant documents were used:

- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, 2022)
- 'Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland' published by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018).
- 'Best Practice Guidance for Habitat Survey and Mapping' (Smith et al., 2011).
- 'Bat surveys for Professional Ecologists: Good Practice Guidelines (4th edition)'. Bat Conservation Trust, London. (Collins/BCT, 2023).

Other information sources and reports footnoted in the course of the report.

### 6.2.3 Zone of Influence (ZOI)

The 'zone of influence' (ZOI) for a project is the area over which ecological features may be affected by biophysical changes as a result of the proposed project and associated activities. This is likely to extend beyond the project site, for example where there are ecological or hydrological links beyond the site boundaries. The zone of influence will vary for different ecological features depending on their sensitivity to an environmental change (CIEEM, 2018). With regard to potential impacts on biodiversity, the following criteria were considered when identifying the potential ZOI at the initial stages of the project:

- The nature, size and location of the project.
- Identification of potential effect pathways to key ecological receptors.

- The sensitivities of the relevant key ecological receptors.
- Identification of suitable habitats for high conservation value species.
- Ecological connectivity between the project and the wider landscape.

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## 6.2.4 Desktop Study

The desk studies undertaken for this assessment included reviews of available published data on sites designated for nature conservation, and other ecologically sensitive sites, habitats and species of interest in the vicinity of the Proposed Development site. The available ecological data which were accessed included the following:

- Ordnance Survey Ireland (OSI) Aerial photography and 1:50000 mapping
- National Parks and Wildlife Service (NPWS) on-line datasets and literature
- National Biodiversity Data Centre (NBDC) (on-line mapping)
- BirdWatch Ireland on-line resources
- Bat Conservation Ireland online resources
- Birds of Conservation Concern in Ireland (BoCCI) 2020 to 2026 (Gilbert, Stanbury, & Lewis, 2021)
- Species protected under the Wildlife Acts, species listed in Annex II, Annex IV, and Annex V of the EU Habitats Directive, and species on the Irish Red Lists.
- Teagasc soil area maps (NBDC website)
- Geological Survey Ireland (GSI) area maps
- Environmental Protection Agency (EPA) water quality data and on-line mapping
- Review of requested records from NPWS Rare and Protected Species database
- Dublin City Biodiversity Action Plan 2021-2025<sup>3</sup>
- Fingal Development Plan 2023 – 2029<sup>4</sup>
- Other information sources and reports footnoted or referenced.

## 6.2.5 Data Requests

The proposed development site lies within the Ordnance Survey Ireland National Grid hectad O14. Concise and site-specific information on species records available in this hectad was retrieved from the National Biodiversity Data Centre (NBDC) online database and reviewed.

- On the 1<sup>st</sup> of April 2025 a request was made to NPWS for Sensitive Data Access for hectad O14.
- On the 1<sup>st</sup> of April 2025 a request was made to Bat Conservation Ireland (BCI) for Data Access for hectad O14.

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<sup>4</sup> <https://www.fingal.ie/development-plan>

Additionally, the NBDC online mapper includes a Bat Habitat Suitability Index (BHSI) layer derived from an analysis of the habitat and landscape associations of Irish bats compiled in Lundy *et al.* (2011). The index evaluation ratings range from 0 to 100 with 0 being the least favourable, and 100 the most favourable, for bats. Index evaluations are available for each species and overall rating is also available for all species in combination. Ratings are mapped to 2 km grid square resolution. The NBDC BHSI information pertaining to the proposed development was reviewed.

### Study area

The study area comprised all lands encompassed within the proposed development site boundary comprising 10.73 hectares and encompassing agricultural land.

## 6.2.6 Field Surveys

The desk top study was supplemented by ecological walkover surveys of the proposed works site carried out by MWP ecologists on the 11<sup>th</sup> of March, 19<sup>th</sup> of June, 26<sup>th</sup> of September and 11<sup>th</sup> of October 2024 and the 18<sup>th</sup> of September 2025. The walkover surveys had regard to '*Best Practice Guidance for Habitat Survey and Mapping*' (Smith *et al.*, 2011) and '*A Guide to Habitats in Ireland*' (Fossitt, 2000). Habitats were categorised to Level 3 according to Fossitt (2000) and were evaluated in terms of potential links with EU Annex I habitats.

Habitats were also assessed for their potential suitability for faunal species - evidence of mammal activity such as prints, droppings, burrow-holes, dens/setts, feeding signs, and trails or disturbed vegetation was searched for. The surveys had regard to '*Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes*' (NRA, 2008), '*Animal Tracks and Signs*' (Bang & Dahlstrom, 2006) and '*Surveying for Badgers: Good Practice Guidelines*' (Scottish Badgers, 2018). Any birds observed or heard calling during the walkover surveys were recorded. Any invasive alien plant species (IAPS) observed during the walkover surveys were also recorded.

The ecological features of interest within and connected to the site were recorded and used to help identify the potential Important Ecological Features (IEFs) of the development. The following literature was referred to during field surveys and throughout the ecological assessment process:

- Irish Red Lists: Terrestrial Mammals (Marnell, *et al.*, 2019); Amphibians and Reptiles (King, *et al.*, 2011)
- Birds of Conservation Concern in Ireland 2020 – 2026 (Gilbert *et al.*, 2021)

- Irish Wildlife Manuals (IWM) 116 Checklists of protected and threatened species in Ireland. Version 2.1 Dec 2021 (Nelson, *et al.*, 2019)
- Irish Red Data Book for Vascular Plants (Curtis & McGough, 1988)
- Review of records of plant species protected under the Flora (Protection) Order of 2015 and the Irish Red Data Book (Wyse *et al.*, 2016)

### Important Ecological Features (IEFs)

The cumulation of desk study and ecological walkover surveys determined the Important Ecological Features (IEFs) likely to occur in the zone of influence (ZOI) of the proposed development. IEFs may include protected habitats and species listed under the following legislation, any habitats or habitat features of conservation importance as well as designated nature conservation sites;

- Annexes listed in the EU Habitats Directive (92/43/EEC)
- Qualifying Interest (QI) of Special Protection Areas (SPA)/ Special Areas of Conservation (SAC) within the likely Zone of Influence
- Species Protected under the Wildlife Acts 1976-2021 (as amended)
- Species Protected under the Flora Protection Order (FPO), 2015

### 6.2.7 Assessment Criteria

The following sub sections outlines the criteria upon which evaluations of the importance of ecological features and the assessments of the ecological impact of the project on these features are made, referring to relevant legislation and guidelines.

#### Evaluation

Guidance on Ecological Impact Assessment (CIEEM, 2018) recommends categories of nature conservation value that relate to a geographical framework (International, through to Local). The evaluation set out in this report and the assessment of the effects of the Proposed Development follows methodologies set out in 'Guidelines for Assessment of Ecological Impacts of National Roads Schemes' (NRA, 2009). The guidelines set out the context for the determination of value on a geographic basis with a hierarchy assigned based on the importance of any particular ecological receptor. The guidelines provide a basis for determination of whether any particular site, habitat, or species is of importance on the following scales:

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- International
- National
- County
- Local Importance (higher value) and
- Local Importance (lower value)

The NRA Ecological Impact Guidelines (2009) clearly sets out the criteria by which each geographic level of importance can be assigned. Locally Important (lower value) receptors contain habitats and species that are widespread and of low ecological significance and of any importance only in the local area. Internationally Important features are either designated for conservation as part of the Natura 2000 Network (SAC or SPA) or provide the best examples of habitats or internationally important populations of protected flora and fauna. The value of habitats is assessed based on its condition, size, rarity, conservation and legal status. The value of fauna is assessed on its biodiversity value, legal status and conservation status. Biodiversity value is based on its national distribution, abundance or rarity, and associated trends.

### 6.2.8 Impact Assessment

The ecological significance of the effects of the proposed development are assessed with regard to CIEEM (2018). This guidance document states that, "For the purposes of EclA, a 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general".

Conservation objectives may be specific or broad and can be considered at a wide range of scales ranging from international to local (CIEEM, 2018). An impact on the conservation status of a habitat or species is considered to be significant if it will result in a change in conservation status.

Significant effects encompass impacts on the structure and function of defined sites, habitats or ecosystems and the conservation status of habitats and species (including extent, abundance and distribution). CIEEM (2018) defines the 'conservation status' for habitats and species, as follows:

- Habitats: conservation status is determined by the sum of the influences acting on the habitat that may affect its extent, structure and functions as well as its distribution and its typical species within a given geographical area.
- Species: conservation status is determined by the sum of influences acting on the species concerned that may affect its abundance and distribution within a given geographical area.

Significant effects should be qualified with reference to an appropriate geographic scale (CIEEM, 2018).

EPA (2022) guidance and criteria were also considered in determining significance and for assessing impact. Professional judgement is used. The EPA (2022) criteria for assessing quality of effects and the significance of effects are set out in the following tables.

**Table 6.1:** Quality of the Effects - Guidelines<sup>5</sup>

Quality of Effect	Criteria
Positive	A change which improves the quality of the environment (for example, by increasing species diversity; or improving reproductive capacity of an ecosystem, or by removing nuisances or improving amenities).
Neutral	No effects or effects that are imperceptible within normal bounds of variation or within the margin of forecasting error.
Negative/Adverse	A change which reduces the quality of the environment (e.g., lessening species diversity or diminishing the reproductive capacity of an ecosystem; or damaging health/property or by causing nuisance).

**Table 6.2:** Description of the Significance of Effects Guidelines

Significance of Effects	Definition
Imperceptible	An effect capable of measurement but without significant consequences
Not significant	An effect which causes noticeable changes in the character of the environment but without significant consequences
Slight	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities
Moderate	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends
Significant	An effect which, by its character, magnitude, duration or intensity significantly alters a sensitive aspect of the environment
Very significant	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment
Profound	An effect which obliterates sensitive characteristics

<sup>5</sup> [Guidelines on the information to be contained in Environmental Impact Assessment Reports \(EIAR\)](#)

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**Table 6.311:** Description of the duration of Effects Guidelines

Duration	Criteria
Momentary	Effects lasting from seconds to minutes
Brief	Effects lasting less than a day
Temporary	Effects lasting less than a year
Short- term	Effects lasting 1 to 7 years
Medium Term	Effects lasting 7 to 15 years
Long Term	Effects lasting 15 to 60 years
Permanent	Effects lasting over 60 years
Reversible	Effects that can be undone, for example through remediation or restoration
Frequency	How often the effect will occur (once, rarely, occasionally, frequently, constantly- or hourly, daily, weekly, monthly, annually

### 6.2.9 Statement of Limitations and Difficulties Encountered

No limitations or difficulties were encountered during this assessment. Full access to the site was obtained, and all surveys were completed in accordance with relevant best practice guidance and standards (CIEEM, 2018; EPA, 2022).

## 6.3 Receiving Environment

### 6.3.1 Site location

The proposed development site is located within the townland of Huntstown, in north County Dublin, approximately 9.5 kilometres north of Dublin City centre. The subject site is bound to the east by the R108 and Dublin Airport, and is bounded by to the north, south and west by agricultural land. The adjacent major roads include the M50 2km to the south, the M1 3.24km to the east, and the M2 4.3km to the west.



Figure 6.1: Site location

Source: MWP

### 6.3.2 Relevant Site Characteristics

The subject site is comprised of Improved Agricultural Grassland (GA1), Hedgerows (WL1), Treelines (WL2) and Buildings and Artificial Surfaces (BL3) comprising one small area of hard standing.

The CORINE (2018) landcover data series (available on EPA’s interactive map viewer) indicates that landcover at the proposed development site is classified as as ‘Agricultural Areas, and Pastures’ (Code: 231). The site is located within the townland of Huntstown which is within the ‘Dubber’ and ‘Airport’ Electoral Division (ED). The 2022 Census recorded ‘Dubber’ with a population of 8,931 and ‘Airport’ with a population of 6,152<sup>6</sup>.

According to the Geological Survey Ireland (GSI) online map viewer, the proposed development site is underlain by Calcareous shale, limestone conglomerate of the Tober Colleen Formation. Soils at the proposed development site are categorised predominantly as ‘Fine loamy drift with siliceous stones’. The

<sup>6 6</sup> <https://www.citypopulation.de/en/ireland/dublin/>

underlying GSI bedrock aquifer at most part of the site is categorized as a LI 'Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones'.

The Teagasc Soil Group of the site comprised 'Fine loamy drift with limestones' (0700d) of soil association Straffan (700d) Subgroup: Typical Surface-water Gleys, Great group: Surface Water Gley, in addition to soil association Elton (1000x), Subgroup: Typical Luvisols, Great group: Luvisol. The Soil Group of the lands encompassing the proposed site are described as "Acid Brown Earths" and "Brown Podzolics". The bedrock material of the site and skirting lands is described as "Tober Colleen Formation" consisting of Calcareous shale, limestone conglomerate<sup>7</sup>.



**Figure 6.2:** Aerial image of the proposed site

**Source:** MWP

<sup>7</sup> Geological information available at Geological Survey Ireland <https://dcenr.maps.arcgis.com/apps/MapSeries>

### Hydrology and Hydrogeology

The proposed site is situated within the 'Liffey and Dublin Bay' Catchment (Catchment ID 9)<sup>8</sup>, sub-catchment 'Mayne\_SC\_010' and the 'SLUICE\_010' WFD River Sub-basin. The Liffey catchment contains the largest population of any catchment in Ireland and is characterised by a sparsely populated, upland southeastern area underlain by granites and a densely populated, flat, low lying limestone area over the remainder of the catchment basin.

There are no water courses or water bodies within the proposed development site. Drainage is achieved primarily by field drains.

The National Groundwater Vulnerability Category of the site is assessed as High, with Moderate subsoil permeability and soil drainage regarded as Wet. The underlying aquifer is therefore considered to exhibit High Vulnerability. The Geological Survey Ireland (GSI) defines groundwater vulnerability as "a term used to represent the intrinsic geological and hydrogeological characteristics that determine the ease with which groundwater may be contaminated by human activities."

**Figure 6.3** shows the river networks in the vicinity of the site. **Table 6.4** summarises the proximal rivers and streams identified through the EPA's online mapping tools, including their approximate distances from the subject site and the Water Framework Directive (WFD) classification status for available monitoring cycles.

The nearest identified waterbody is Santry 010, located approximately 0.9 km to the south. Other notable watercourses in the surrounding area include the Cuckoo Stream and Mayne 09, situated to the west and southwest, respectively. To the east and northeast, the Huntstown 08, Millhead, Dunbro, and Barberstown 08 rivers form part of the 08W010300 sub-catchment, while the Sluice waterbody lies approximately 1.8 km to the northwest.

WFD monitoring data (2016–2021) indicate a general pattern of Poor status in the western and southern waterbodies (Cuckoo, Mayne, Santry) and Moderate status in the eastern and northern waterbodies (Huntstown, Millhead, Dunbro, Barberstown). These classifications are consistent with previous monitoring cycles.

Overall, the hydrological environment surrounding the site is characterised by small, low-order agricultural streams with limited hydrological connectivity to designated Natura 2000 sites. The identified waterbodies represent the primary surface water receptors in the local area, and the mitigation and monitoring measures proposed—such as protection of surface water quality, sediment control, and maintenance of buffer zones—remain appropriate to safeguard downstream water quality and ecological integrity.

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<sup>8</sup> District\_Code: IESE

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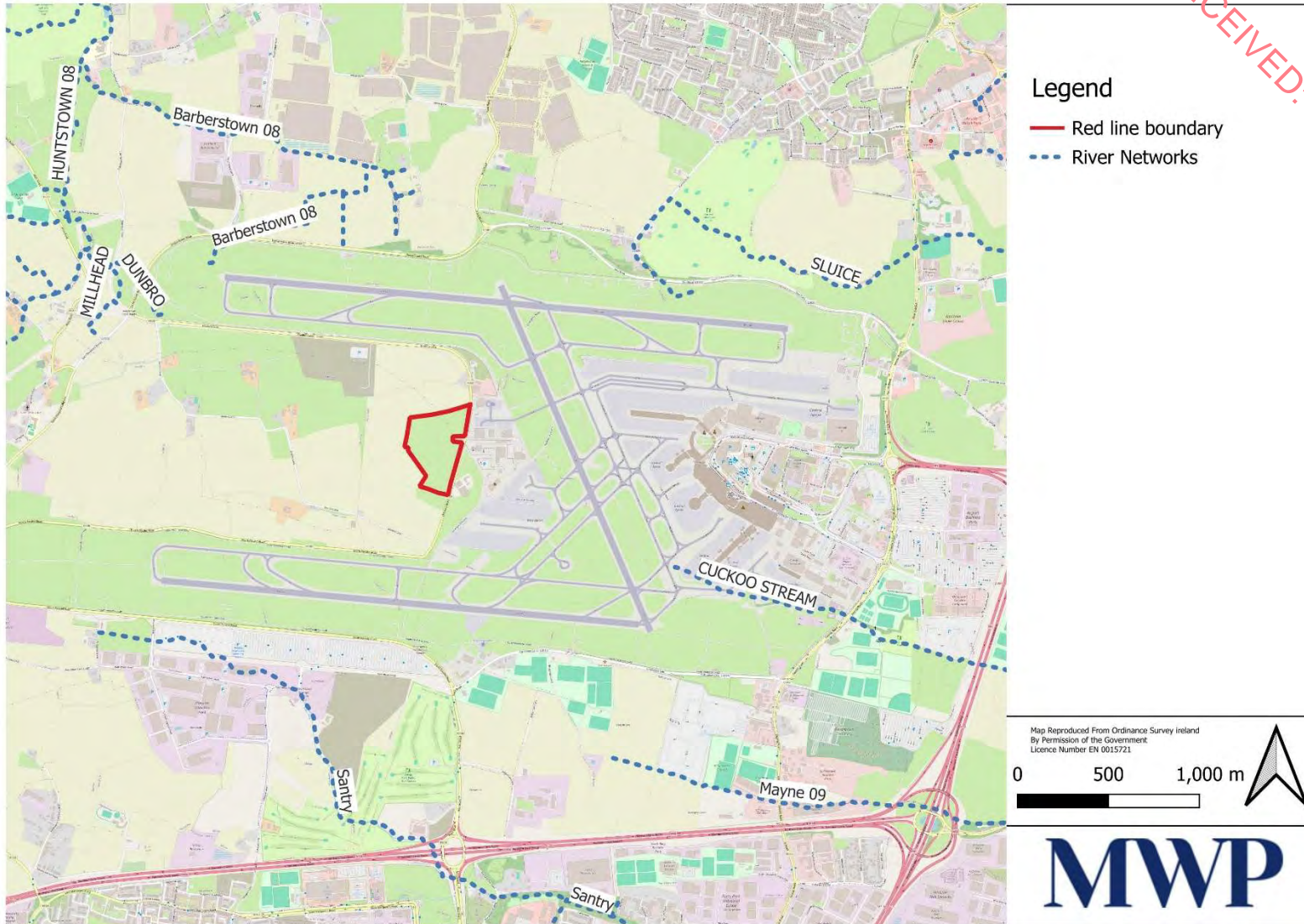


Figure 6.3: EPA River Networks in the vicinity of the subject site

Source: MWP

**Table 6.4:** River waterbody status of proximal River Networks

River Name	River Code	Distance	2016-2021	2013-2018	2010-2015	2010-2012	2007-2009
Cuckoo Stream	IE_EA_09 M030500	1.2km West	Poor	Poor	Poor	Poor	Poor
Mayne 09	IE_EA_09 M030500	1.4km SW	Poor	Poor	Poor	Poor	Poor
Santry 010	IE_EA_09S 010300	0.9km South	Poor	Poor	Poor	Poor	Poor
Huntstown 08	IE_EA_08 W010300	1.8km East	Moderate	Moderate	Good	Poor	Poor
Millhead	IE_EA_08 W010300	1.5km NE	Moderate	Moderate	Good	Poor	Poor
Dunbro	IE_EA_08 W010300	1.3km NE	Moderate	Moderate	Good	Poor	Poor
Barberstown 08	IE_EA_08 W010300	1.5km North	Moderate	Moderate	Good	Poor	Poor
Sluice	IE_EA_09S 071100	1.8km NW	Poor	Poor	Un- assigned	Un- assigned	Un- assigned

**Designated Sites**

**Sites of International Importance**

Special Areas of Conservation (SAC) are designated under the Conservation of Natural Habitats and of Wild Fauna and Flora Directive 92/43/EEC (“Habitats Directive”). Special Protection Areas (SPA) are classified under Directive 2009/147/EC of the European Parliament and of the Council of 30th November 2009 on the conservation of wild birds (“Birds Directive”). The European Communities (Birds and Natural Habitats Regulations 2011 (S. I. No. 477 of 2011) transpose the Habitats Directive and the Birds Directive.

European sites designated for nature conservation within the potential ZOI of the Proposed Development are listed in **Table 6.5** along with qualifying features and distance from the Proposed Development site. The locations of these designated sites in relation to the proposed development site are shown on a map in **Figure 6.4**.

**Table 6.512:** Sites of International Importance within the Potential ZOI

Designated Site	Qualifying features of conservation interest	Distance from the site
Malahide Estuary SAC (Site Code: 00205)	Mudflats and sandflats not covered by seawater at low tide [1140] <i>Salicornia</i> and other annuals colonising mud and sand [1310] Atlantic salt meadows ( <i>Glauco-Puccinellietalia maritimae</i> ) [1330] Mediterranean salt meadows ( <i>Juncetalia maritimi</i> ) [1410] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]	5 km Northeast
Baldoyle Bay SAC (Site Code: 000199)	Mudflats and sandflats not covered by seawater at low tide [1140] <i>Salicornia</i> and other annuals colonising mud and sand [1310] Atlantic salt meadows ( <i>Glauco-Puccinellietalia maritimae</i> ) [1330] Mediterranean salt meadows ( <i>Juncetalia maritimi</i> ) [1410]	8.8 km east
North Dublin Bay SAC (Site Code: 00206)	Mudflats and sandflats not covered by seawater at low tide [1140] Annual vegetation of drift lines [1210] <i>Salicornia</i> and other annuals colonising mud and sand [1310] Atlantic salt meadows ( <i>Glauco-Puccinellietalia maritimae</i> ) [1330] Mediterranean salt meadows ( <i>Juncetalia maritimi</i> ) [1410] Embryonic shifting dunes [2110] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] Humid dune slacks [2190] <i>Petalophyllum ralfsii</i> (Petalwort) [1395]	8.8 km southeast

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<p>Rogerstown Estuary SAC (Site Code: 00208)</p>	<p>Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] <i>Salicornia</i> and other annuals colonising mud and sand [1310] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]</p>	<p>8.8km northeast</p>
<p>South Dublin Bay SAC (Site Code: 00210)</p>	<p>Mudflats and sandflats not covered by seawater at low tide [1140] Annual vegetation of drift lines [1210] <i>Salicornia</i> and other annuals colonising mud and sand [1310] Embryonic shifting dunes [2110]</p>	<p>10.4 km southeast</p>
<p>Howth Head SAC (Site Code: 000202)</p>	<p>Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] European dry heaths [4030]</p>	<p>12.4 km southeast</p>
<p>Ireland's Eye SAC (Site Code: 002193)</p>	<p>Perennial vegetation of stony banks [1220] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]</p>	<p>12.9 km east</p>
<p>Rockabill to Dalkey Island SAC (Site Code: 03000)</p>	<p>Reefs [1170] <i>Phocoena phocoena</i> (Harbour Porpoise) [1351]</p>	<p>12.6 km east</p>
<p>Malahide Estuary SPA (Site Code: 004025)</p>	<p>Great Crested Grebe (<i>Podiceps cristatus</i>) [A005] Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] Shelduck (<i>Tadorna tadorna</i>) [A048] Pintail (<i>Anas acuta</i>) [A054] Goldeneye (<i>Bucephala clangula</i>) [A067] Red-breasted Merganser (<i>Mergus serrator</i>) [A069] Oystercatcher (<i>Haematopus ostralegus</i>) [A130] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Grey Plover (<i>Pluvialis squatarola</i>) [A141] Knot (<i>Calidris canutus</i>) [A143]</p>	<p>5.5 km Northeast</p>

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	<p>Dunlin (<i>Calidris alpina</i>) [A149]</p> <p>Black-tailed Godwit (<i>Limosa limosa</i>) [A156]</p> <p>Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157]</p> <p>Redshank (<i>Tringa totanus</i>) [A162]</p> <p>Wetland and Waterbirds [A999]</p>		
<p>South Dublin Bay and River Tolka Estuary SPA (Site Code: 004024)</p>	<p>Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046]</p> <p>Oystercatcher (<i>Haematopus ostralegus</i>) [A130]</p> <p>Ringed Plover (<i>Charadrius hiaticula</i>) [A137]</p> <p>Grey Plover (<i>Pluvialis squatarola</i>) [A141]</p> <p>Knot (<i>Calidris canutus</i>) [A143]</p> <p>Sanderling (<i>Calidris alba</i>) [A144]</p> <p>Dunlin (<i>Calidris alpina</i>) [A149]</p> <p>Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157]</p> <p>Redshank (<i>Tringa totanus</i>) [A162]</p> <p>Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179]</p> <p>Roseate Tern (<i>Sterna dougallii</i>) [A192]</p> <p>Common Tern (<i>Sterna hirundo</i>) [A193]</p> <p>Arctic Tern (<i>Sterna paradisaea</i>) [A194]</p> <p>Wetland and Waterbirds [A999]</p>	7.5 km	southeast
<p>Baldoye Bay SPA (Site Code: 004016)</p>	<p>Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046]</p> <p>Shelduck (<i>Tadorna tadorna</i>) [A048]</p> <p>Ringed Plover (<i>Charadrius hiaticula</i>) [A137]</p> <p>Golden Plover (<i>Pluvialis apricaria</i>) [A140]</p> <p>Grey Plover (<i>Pluvialis squatarola</i>) [A141]</p> <p>Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157]</p> <p>Wetland and Waterbirds [A999]</p>	8 km	east
<p>North Bull Island SPA (Site Code: 004006)</p>	<p>Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046]</p> <p>Shelduck (<i>Tadorna tadorna</i>) [A048]</p> <p>Teal (<i>Anas crecca</i>) [A052]</p> <p>Pintail (<i>Anas acuta</i>) [A054]</p> <p>Shoveler (<i>Anas clypeata</i>) [A056]</p> <p>Oystercatcher (<i>Haematopus ostralegus</i>) [A130]</p> <p>Golden Plover (<i>Pluvialis apricaria</i>) [A140]</p> <p>Grey Plover (<i>Pluvialis squatarola</i>) [A141]</p>	8.7 km	southeast

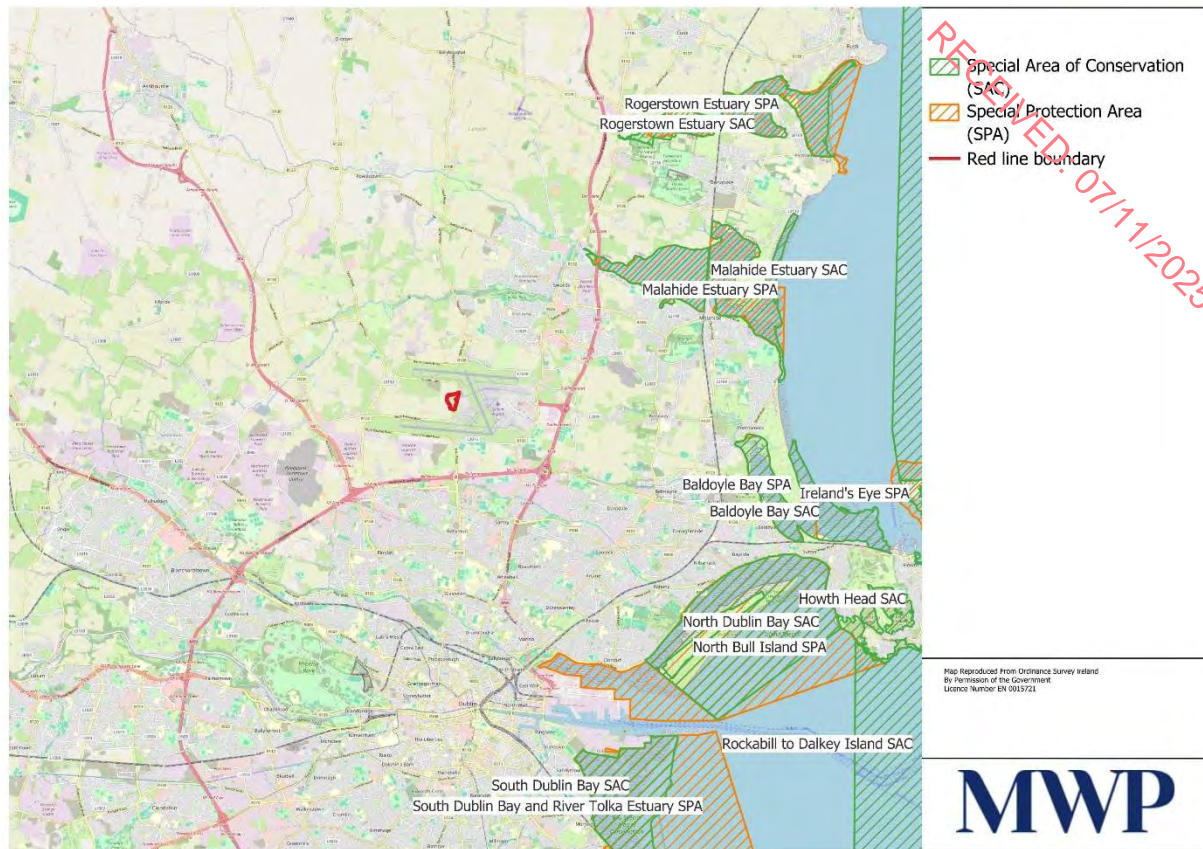
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	<p>Knot (<i>Calidris canutus</i>) [A143]                  Sanderling (<i>Calidris alba</i>) [A144]                  Dunlin (<i>Calidris alpina</i>) [A149]                  Black-tailed Godwit (<i>Limosa limosa</i>) [A156]                  Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157]                  Curlew (<i>Numenius arquata</i>) [A160]                  Redshank (<i>Tringa totanus</i>) [A162]                  Turnstone (<i>Arenaria interpres</i>) [A169]                  Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179]                  Wetland and Waterbirds [A999]</p>	
<p>Rogerstown Estuary SPA                  (Site Code: 004015)</p>	<p>Greylag Goose (<i>Anser anser</i>) [A043]                  Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046]                  Shelduck (<i>Tadorna tadorna</i>) [A048]                  Shoveler (<i>Anas clypeata</i>) [A056]                  Oystercatcher (<i>Haematopus ostralegus</i>) [A130]                  Ringed Plover (<i>Charadrius hiaticula</i>) [A137]                  Grey Plover (<i>Pluvialis squatarola</i>) [A141]                  Knot (<i>Calidris canutus</i>) [A143]                  Dunlin (<i>Calidris alpina</i>) [A149]                  Black-tailed Godwit (<i>Limosa limosa</i>) [A156]                  Redshank (<i>Tringa totanus</i>) [A162]                  Wetland and Waterbirds [A999]</p>	<p>9.3 km                  northeast</p>
<p>North-west Irish Sea SPA                  (Site Code: 004236)</p>	<p>Red-throated Diver (<i>Gavia stellata</i>) [A001]                  Great Northern Diver (<i>Gavia immer</i>) [A003]                  Fulmar (<i>Fulmarus glacialis</i>) [A009]                  Manx Shearwater (<i>Puffinus puffinus</i>) [A013]                  Cormorant (<i>Phalacrocorax carbo</i>) [A017]                  Shag (<i>Phalacrocorax aristotelis</i>) [A018]                  Common Scoter (<i>Melanitta nigra</i>) [A065]                  Little Gull (<i>Larus minutus</i>) [A177]                  Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179]                  Common Gull (<i>Larus canus</i>) [A182]                  Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183]                  Herring Gull (<i>Larus argentatus</i>) [A184]</p>	<p>9.8 km east</p>

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	<p>Great Black-backed Gull (<i>Larus marinus</i>) [A187]                  Kittiwake (<i>Rissa tridactyla</i>) [A188]                  Roseate Tern (<i>Sterna dougallii</i>) [A192]                  Common Tern (<i>Sterna hirundo</i>) [A193]                  Arctic Tern (<i>Sterna paradisaea</i>) [A194]                  Little Tern (<i>Sterna albifrons</i>) [A195]                  Guillemot (<i>Uria aalge</i>) [A199]                  Razorbill (<i>Alca torda</i>) [A200]                  Puffin (<i>Fratercula arctica</i>) [A204]</p>	
<p>Ireland's Eye SPA                  (Site Code: 004117)</p>	<p>Cormorant (<i>Phalacrocorax carbo</i>) [A017]                  Herring Gull (<i>Larus argentatus</i>) [A184]                  Kittiwake (<i>Rissa tridactyla</i>) [A188]                  Guillemot (<i>Uria aalge</i>) [A199]                  Razorbill (<i>Alca torda</i>) [A200]</p>	<p>12.7 km east</p>
<p>Howth Head Coast                  SPA                  (Site Code: 004113)</p>	<p>Kittiwake (<i>Rissa tridactyla</i>) [A188]</p>	<p>14.3 km                  southeast</p>

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**Figure 6.4:** Sites of International Importance within the Potential ZOI

**Source:** MWP

**Conservation Objectives**

According to the Habitats Directive, the conservation status of a natural habitat will be taken as ‘favourable’ within its biogeographic range when:

- its natural range and areas of cover within that range are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable as defined below.

According to the Habitats Directive, the 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. The conservation status will be taken as ‘favourable’ within its biogeographical range 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.

Individual conservation objectives for each site are available on [www.npws.ie](http://www.npws.ie). These have been accessed for the sites listed in the tables above on the 5th of February 2025.

Site-specific conservation objectives were available for the following sites:

- NPWS (2013) Conservation Objectives: Malahide Estuary SAC 000205. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS (2012) Conservation Objectives: Baldoyle Bay SAC 000199. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS (2013) Conservation Objectives: North Dublin Bay SAC 000206. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS (2013) Conservation Objectives: Rogerstown Estuary SAC 000208. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS (2013) Conservation Objectives: South Dublin Bay SAC 000210. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS (2016) Conservation Objectives: Howth Head SAC 000202. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.
- NPWS (2017) Conservation Objectives: Ireland's Eye SAC 002193. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.
- NPWS (2013) Conservation Objectives: Rockabill to Dalkey Island SAC 003000. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS (2013) Conservation Objectives: Malahide Estuary SPA 004025. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS (2010) Conservation Objectives: South Dublin Bay and River Tolka Estuary SPA 004024. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS (2013) Conservation Objectives: Baldoyle Bay SPA 004016. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS (2015) Conservation Objectives: North Bull Island SPA 004006. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS (2013) Conservation Objectives: Rogerstown Estuary SPA 004015. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS (2023) Conservation Objectives: North-west Irish Sea SPA 004236. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.

- NPWS (2024) Conservation Objectives: Ireland's Eye SPA 004117. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.

Management plans were not available for any of the sites. All conservation objectives together with other designated site information are available on [www.npws.ie/protectedsites](http://www.npws.ie/protectedsites).

### Sites of National Importance

In Ireland, sites of national importance are termed Natural Heritage Areas (NHAs) and proposed Natural Heritage Areas (pNHAs). While the Wildlife (Amendment) Act 2000 has been passed into law, pNHAs will not have legal backing until the consultative process with landowners has been completed. This process currently remains ongoing.

**Table 6.6** below lists the pNHA's located within the Potential ZOI of the proposal and includes each site's features of interest. No NHAs were identified during this process. The locations of these designated sites in relation to the proposed development site are shown on a map in **Figure 6.5**.

**Table 6.6:** Sites of National Importance within the Potential ZOI

Designated Site	Features of Interest	Distance from Subject Site
North Dublin Bay pNHA (Site Code: 000206)	Listed under similar conservation objectives as its SAC and SPA designations. (North Dublin Bay SAC and North Bull Island SPA)	8.8km southeast
Santry Demesne pNHA (Site Code: 000178)	The site comprises of the remnants of a former demesne woodland. The primary importance of this site is that it contains a legally protected plant species, <i>Hypericum hirsutum</i> (Hairy St John's-wort), and woodland that occurs in an area where little has survived of the original vegetation.	2.2km southeast
Baldoye Bay pNHA (Site Code: 000199)	Listed under similar conservation objectives as its SAC and SPA	8km east

	designations. (Baldoyle Bay SAC and Baldoyle Bay SPA)	
Feltrim Hill pNHA (Site Code: 001208)	Knoll reef Spring Squill <i>Scilla verna</i> Crane's-bill <i>Geranium columbinum</i>	5.3km northeast
Sluice River Marsh pNHA (Site Code: 001763)	Freshwater Marsh	5.9km south
Malahide Estuary pNHA (Site Code: 000205)	Listed under similar conservation objectives as its SAC and SPA designations (Malahide Estuary SAC and Malahide Estuary SPA)	5.5km northeast
Liffey Valley pNHA (Site Code: 000128)	Aquatic and Terrestrial habitats.	9km southwest
Royal Canal pNHA (Site Code: 002103)	Rare and legally protected floral species Otter ( <i>Lutra lutra</i> )	6km south
Grand Canal pNHA (Site Code: 002104)	Listed under similar conservation objectives as its SAC and SPA designations (Malahide Estuary SAC and Malahide Estuary SPA)	9km south
Rogerstown Estuary pNHA (Site Code: 000208)	Listed under similar conservation objectives as its SAC and SPA designations (Rogerstown Estuary SAC and Rogerstown Estuary SPA)	9.3km northeast
Dolphins, Dublin Docks pNHA (Site Code: 000201)	Listed under similar conservation objectives as its SPA designations. (South Dublin Bay and River Tolka Estuary SPA)	10.2km east
Howth Head pNHA (Site Code: 000202)	Listed under similar conservation objectives as its SAC and SPA designations. (Howth Head SAC and Howth Head Coast SPA)	12km east
Ireland's Eye pNHA (Site Code: 000203)	Listed under similar conservation objectives as its SAC and SPA designations (Ireland's Eye SAC and Ireland's Eye SPA)	13km east

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<p>South Dublin Bay pNHA (Site Code: 000210)</p>	<p>Listed under similar conservation objectives as its SAC and SPA designations (South Dublin Bay SAC and South Dublin Bay and River Tolka Estuary SPA SPA)</p>	<p>10.4km</p>
<p>Boosterstown Marsh pNHA (Site Code: 001205)</p>	<p>Boosterstown Marsh is the only saltmarsh in south Dublin and, despite some concerns about the increasing salinity of the site, it remains a valuable habitat for many birds as well as containing a diverse flora including the protected plant Borrer's Saltmarshgrass (<i>Puccinellia fasciculata</i>).</p>	<p>13.3km</p>
<p>Portraine Shore pNHA (Site Code: 001215)</p>	<p>Rocky bedrock shore with a typical flora and fauna. Important geological site.</p>	<p>11.2km</p>

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**Figure 6.5:** Sites of National Importance within the Potential ZOI

**Habitats and Flora**

The dominant habitat within the survey site comprised Improved Agricultural Grassland (GA1). Other habitats recorded within the site included Hedgerows (WL1), Treelines (WL2) and Buildings and Artificial Surfaces (BL3), comprising one, small area of hard standing. Hedgerows form the predominant field boundaries throughout the site, extending along the western boundary adjoining the R108 regional road and along internal divisions between adjoining agricultural parcels. A treeline runs through the central portion of the site, dividing the field into two main sections. The grassland areas are managed for **cattle grazing**, and cattle were observed within the site during the walkover survey.

No rare or protected flora species were recorded during the ecological survey of the proposed development site. No annexed habitats or species were recorded.

### Improved Agricultural Grassland (GA1)

This habitat is dominant within the proposed development site, encompassing two adjoining fields delineated by hedgerows and treelines. The grassland is intensively managed and currently used for cattle grazing. The sward is species-poor, typical of improved grassland, and dominated by perennial ryegrass (*Lolium perenne*) and other ryegrasses (*Lolium spp.*), with Yorkshire fog (*Holcus lanatus*), timothy grass (*Phleum pratense*), cock's-foot (*Dactylis glomerata*), and rough meadow-grass (*Poa trivialis*) also recorded. The herb layer includes creeping buttercup (*Ranunculus repens*), docks (*Rumex spp.*), white clover (*Trifolium repens*), and common mouse-ear (*Cerastium fontanum*).

This habitat type does not correspond to any Annex I habitat listed under the EU Habitats Directive. The entire extent of *Improved Agricultural Grassland (GA1)* within the site will be lost to accommodate the proposed development.



**Figure 6.6:** Example of 'Improved agricultural grassland (GA1)' within the site.

**Source:** Site visit

## Hedgerow (WL1)

Several existing perimeter and internal field boundaries within the site correspond to the Hedgerow (WL1) habitat type. Overall connectivity is limited, with gaps present along some internal sections. While the perimeter hedgerows connect to those beyond the site boundary, they are largely confined by surrounding infrastructure, including the R108 regional road and adjacent agricultural lands. The hedgerows are intensively managed and show variation in species richness and structure. Some support a diverse assemblage of trees, shrubs, and ground flora, whereas others are species-poor and dominated by a single species. Species recorded include hawthorn (*Crataegus monogyna*), blackthorn (*Prunus spinosa*), gorse (*Ulex europaeus*), holly (*Ilex aquifolium*), and bramble (*Rubus fruticosus agg.*), with occasional ash (*Fraxinus excelsior*) and beech (*Fagus sylvatica*).

This habitat does not correspond to any Annex I habitat listed under the EU Habitats Directive. Portions of the existing hedgerows will be removed or altered to facilitate the proposed development.



**Figure 6.7:** Examples of 'Hedgerow (WL1)' habitat found on boundary edges (left) and on site internally (right)

**Source:** Site visit

## Treeline (WL2)

A single treeline traverses the central portion of the site, forming a boundary between the two agricultural fields. The treeline provides internal structural diversity within the landscape and contributes limited connectivity to adjacent vegetation along the site's perimeter. Tree species recorded within this habitat include ash (*Fraxinus excelsior*), hawthorn (*Crataegus monogyna*), blackthorn (*Prunus spinosa*), and occasional sycamore (*Acer pseudoplatanus*). Ground flora at the base of the treeline consists of bramble (*Rubus fruticosus agg.*), nettles (*Urtica dioica*), and cleavers (*Galium aparine*), typical of hedgerow edge communities in intensively managed agricultural settings. The treeline is intensively maintained and of low ecological value beyond its function as a minor linear feature providing limited shelter and nesting opportunities for common bird species.

This habitat does not correspond to any Annex I habitat listed under the EU Habitats Directive. Sections of the treeline will be removed or altered to accommodate the proposed development.



**Figure 6.8:** Example of 'Treeline' habitat found centrally on site close to the southern boundary

**Source:** Site visit

### Buildings and Artificial Surfaces (BL3)

A small area of hardstanding, corresponding to the Buildings and Artificial Surfaces (BL3) habitat type, is located in the southern portion of the site at approximately grid reference O 15269 43237. The surface comprises gravel and compacted ground, with limited vegetation present. This feature is of negligible ecological value, providing no habitat suitable for flora or fauna of conservation concern.

The BL3 habitat does not correspond to any Annex I habitat listed under the EU Habitats Directive. This area will be removed to accommodate the proposed development.



**Figure 6.9:** Example of 'Buildings and artificial surfaces (BL3)' found on site

**Source:** Site visit

Rare and Protected Flora

Desk Study

An online search of the NBDC database for floral species of conservation interest recorded within the hectad O14 was carried out (Table 6.7). A data request for records of rare and protected species from the hectad O14 was submitted to NPWS and at time of writing, no data had been received.

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**Table 6.713:** Desktop NBDC records of Red Listed flora within hectad O14

Species name	Scientific name	Conservation Status <sup>9</sup>
Smooth Brome	<i>Bromus racemosus</i>	Vulnerable
Meadow Barley	<i>Hordeum secalinum</i>	Endangered
Blue Fleabane	<i>Erigeron acer</i>	Least Concern
Glebionis segetum	<i>Glebionis segetum</i>	Near Threatened

Field Survey

No rare or protected species of flora were encountered during the ecological field surveys.

Non-native/Invasive Flora

The NBDC online records for non-native/invasive flora species previously recorded in hectad O14 are listed in Table 6.8. In instances where IAS had widespread distributions, entire hectads were allocated and included smaller grid squares for other records within the hectad.

**Table 6.8:** NBDC records for Non-native/Invasive Flora Species identified within hectad O14

Species Name	Scientific Name	Invasive Impact	Regulation S.I 477
Butterfly Bush	<i>Buddleja davidii</i>	Medium	None
Canadian Fleabane	<i>Conyza canadensis</i>	Medium	None
Cherry laurel	<i>Prunus laurocerasus</i>	High	None
Common Cord Grass	<i>Spartina anglica</i>	High	Third Schedule Listed
Evergreen Oak	<i>Quercus ilex</i>	Medium	None

<sup>9</sup> [Ireland](#) – Red List of Vascular Plants (Nielson et al, 2021)

Giant Hogweed	<i>Heracleum mantegazzianum</i>	High	Third Schedule Listed
Himalayan Honeysuckle	<i>Leycesteria formosa</i>	Medium	None
Japanese Knotweed	<i>Fallopia japonica</i>	High	None
Russian Vine	<i>Fallopia baldschuanica</i>	Medium	None
Sycamore	<i>Acer pseudoplatanus</i>	Medium	None
Three cornered garlic	<i>Allium triquetrum</i>	Medium	Third Schedule Listed
Wild Parsnip	<i>Pastinaca sativa</i>	Medium	None

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Field Survey

No invasive flora species were encountered during the ecological field surveys.

## Non-native/Invasive Fauna

A review of NBDC online results for non-native/invasive fauna species within hectad O14 can be seen in **Table 6.9**. Higher-impact invasive species are listed under the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011, as amended).

**Table 6.9:** NBDC records for Non-native/Invasive fauna species identified within hectad O14

Species Name	Scientific Name	Impact
American mink	<i>Mustela vison</i>	High Impact
Brown Rat	<i>Rattus norvegicus</i>	High Impact
Eastern Grey Squirrel	<i>Sciurus carolinensis</i>	High Impact
European Rabbit	<i>Oryctolagus cuniculus</i>	Medium Impact

## Field Survey

No invasive faunal species were encountered during the ecological field surveys.

## Fauna (excluding bats)

### Desk Study

NBDC species lists, distribution maps generated on-line, and online data from NPWS, were examined to assess the distribution of protected terrestrial mammal species within the hectad O14. **Table 6.10** below lists protected mammal species which have been previously recorded in this hectad and summarises their legal and conservation status in Ireland with regards to national and international legislation, and the most recent Irish Red List for Mammals (2019)<sup>10</sup>.

<sup>10</sup> <https://www.npws.ie/sites/default/files/publications/pdf/Red%20List%20No.%2012%20Mammals.pdf>

**Table 6.10:** Desktop NBDC records of terrestrial mammal species (excluding bats) within hectad O14

Species	Distribution within Ireland	Conservation/Legal Status <sup>11</sup>	Approximate distance & location of closest species record to development site
Otter ( <i>Lutra lutra</i> )	Throughout	Irish Red Data Book: 'Least Concern'; EU Habitats Directive Annex II and IV; Wildlife Acts; CITES Appendix 1	3.7km east in 2013
Badger ( <i>Meles meles</i> )	Throughout	Irish Red Data Book: 'Least Concern'; Wildlife Acts	2.8km southeast in 2015
Pygmy shrew ( <i>Sorex minutus</i> )	Throughout	Irish Red Data Book: 'Least Concern'; Wildlife Acts	2.4km south in 2019
Pine marten ( <i>Martens martens</i> )	Throughout	Irish Red Data Book: 'Least Concern'; EU Habitats Directive Annex IV; Wildlife Acts	2.6km southwest in 2012
Red squirrel ( <i>Sciurus vulgaris</i> )	Throughout	Irish Red Data Book: 'Least Concern'; Wildlife Acts	4km southeast in 2011
Hedgehog ( <i>Erinaceus europaeus</i> )	Throughout	Irish Red Data Book: 'Least Concern'; Wildlife Acts	2.2km south 2021
Irish hare ( <i>Lepus timidus</i> subsp. <i>Hibernicus</i> )	Throughout	Irish Red Data Book: 'Least Concern'; Wildlife Acts; EU Habitats Directive Annex V	200m south in 2023
Irish stoat ( <i>Mustela erminea</i> subsp. <i>Hibernica</i> )	Throughout	Irish Red Data Book: 'Least Concern'; Wildlife Acts	3.3km southeast in 2012

<sup>11</sup> Marnell *et al.*, (2019)

## Field Survey

Non-volant mammals and/or evidence of their activity, such as prints, faecal pellets/droppings, burrow-holes/dens and food caches, activity trails and disturbed vegetation, were looked for during the walkover survey. In general, the Mammal Society publication 'How to Find and Identify Mammals' by Muir et al. (2013) was followed.

The site provides limited foraging opportunities for mammals such as badger *Meles meles* and European hedgehog *Erinaceus europaeus*. Some mammal pathways were recorded on site and there was also evidence of rabbit *Oryctolagus cuniculus* usage. No evidence of protected terrestrial mammals was recorded during the site walkover survey. No evidence of badger was found on site and there was very limited habitat within the improved grassland areas that badger could utilize. It is unlikely that the site provides important habitat for European hedgehog, considering the limited extents and isolation of potentially suitable habitat on site from wider areas of habitat suitability. The site has no hydrological connections to local rivers, which would suggest there are no other commuting routes to the site. Arboreal mammals such as pine marten and red squirrel have no ecological corridors or connections to the site.

Due to a lack of evidence and limited suitable habitat on site, impacts to terrestrial mammals will not be assessed further.

## Bats

### Desk Study

#### Bat Habitat Suitability Index (BHSI)

A review of the NBDC's Bat Habitat Suitability Index (BHSI)<sup>12</sup> available on-line determined that for the area encompassed within the proposed development site, and the lands extending away from it, the assigned BHSI rating for 'all bats' is 25.89 out of 100, based on the analysis of the habitat and landscape associations of Irish bats compiled in Lundy et al. (2011). The maximum rating given for any individual species is 42, with a minimum rating of 0 (see **Table 6.11**).

On the basis of the BHSI ratings assigned for all bats and for individual species, the proposed development site and surrounding lands are considered to be of low overall value for bats.

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<sup>12</sup> The BHSI consists of Geographical Information (GIS) layers that are a research outcome of a study by Lundy et al. (2011) examining the relative importance of landscape and habitat associations across Ireland. The study analysed data contained in the Irish National Bat Database, maintained by Bat Conservation Ireland and the National Lesser Horseshoe Bat database maintained by National Parks and Wildlife Service. The analysis was done for all bat species that commonly occur in Ireland.

**Table 6.11:** NBDC Bat Habitat Suitability Index within 2km square grid O14

Species name	Latin name	Suitability Index
All Bats		25.89
Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	40
Brown Long Eared	<i>Plecotus auritus</i>	27
Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	42
Lesser Horseshoe bat	<i>Rhinolophus hipposideros</i>	0
Leisler's Bat	<i>Nyctalus leisleri</i>	42
Whiskered bat	<i>Myotis mystacinus</i>	28
Daubenton's Bat	<i>Myotis daubentonii</i>	22
Nathusius's pipistrelle	<i>Pipistrellus nathusii</i>	6
Natterer's bat	<i>Myotis nattereri</i>	26

#### Bat Conservation Ireland dataset, NPWS Database & National Biodiversity Centre (NBDC) database

A review of data from Bat Conservation Ireland (BCI) include records for the following bat species within 10km of the site; common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *P. pygmaeus*, brown long-eared bat *Plecotus auritus*, Leisler's bat *Nyctalus leisleri*, Nathusius's pipistrelle *Pipistrellus nathusii*, Daubenton's bat *Myotis daubentonii*, Natterer's bat *Myotis nattereri* and whiskered bat *Myotis mystacinus*. The nearest in-flight records include for common pipistrelle and soprano pipistrelle (6.6km south), Daubenton's (3.3km north) with in-flight records also found for, brown long-eared and Leisler's, all within 10km of the site.

Roost records from BCI include for the following species: Natterer's, whiskered bat, brown long-eared, soprano pipistrelle and common pipistrelle and Leisler's bat, the closest of which is found approximately 6.7km southwest of the proposed development site (common pipistrelle and Leisler's bat).

Following a review of the NPWS database for records of lesser horseshoe bat (LHB) roosts in the area, there are no known LHB roosts within 10 km of the development site with the closest found over 150km to the west. In addition, the NBDC on-line database for all Irish bat species was checked for records within a 10km radius of the proposed development site, with a summary of these results provided in **Table 6.12**.

**Table 6.12:** NBDC records of bat species within hectad O14

Species name	Latin name	Level of Protection	Conservation status	Closest record to site
Brown Long Eared	<i>Plecotus auritus</i>	WA, Annex IV	LC	On site in 2002
Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	WA, Annex IV	NT	On site in 2002
Daubenton's Bat	<i>Myotis daubentonii</i>	WA, Annex IV	LC	3.2km south in 2008
Leisler's Bat	<i>Nyctalus leisleri</i>	WA, Annex IV	LC	On site in 2008
Natterer's bat	<i>Myotis nattereri</i>	WA, Annex IV	NT	3km north in 2006
Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	WA, Annex IV	LC	On site in 2002

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### Field Survey

#### Bat foraging and Commuting Habitat Suitability Survey

The site is situated within a predominantly rural setting, with arable land and improved pasture to the west and northwest. These areas are defined by a network of hedgerows and treelines that provide moderate to high foraging and commuting potential for bats within the wider landscape.

Dublin Airport lies immediately to the east, while to the north, northeast, and south, the surrounding area becomes increasingly urbanised, comprising residential and commercial development. There are no watercourses, waterbodies, or woodland areas within or immediately adjacent to the site.

Overall, the site itself offers limited commuting and foraging opportunities, primarily associated with field boundary hedgerows. Connectivity to the wider landscape is poor, with the site being encircled by road networks and urban development, which restricts movement and reduces habitat quality for bats.

#### Preliminary Roost Assessment

All trees within the site were inspected from ground level for Potential Roost Features (PRFs), and none were identified. Likewise, the single building present on site exhibited no features suitable for roosting bats.

Based on these findings, the site is considered to be of 'negligible' value for roosting bats. However, foraging and commuting bats are considered precautionarily to be of at least 'district importance', reflecting their potential use of the linear boundary features within and adjacent to the site.

## Amphibians and Reptiles

### Desk Study

Three records of smooth newt (*Lissotriton vulgaris*) were reported within hectad O14, with the closest record approximately 1.6 km north of the site (1978). The most recent record (2018) occurred c. 4.2 km southwest of the site.

Common frog (*Rana temporaria*) has been recorded on 15 occasions within the same hectad, the latest in 2019. There are no waterbodies within the proposed development site, and the nearest suitable aquatic habitat lies approximately 1.1 km southwest, separated from the site by major infrastructure, including airport runways and the R108 regional road.

The absence of suitable aquatic breeding habitats and limited ecological connectivity indicates that the site is unlikely to support amphibian populations. No reptile records are listed within hectad O14 in the National Biodiversity Data Centre (NBDC) database.

Overall, given the site's poor connectivity, lack of suitable habitat, and intensive agricultural use (grazing cattle), the site is assessed as being of negligible potential for amphibians and reptiles.

### Field Survey

During the walkover survey, no suitable breeding or spawning habitats for amphibians were identified. While hedgerows provide some limited potential for commuting or sheltering individuals, connectivity to the wider landscape is severely constrained by surrounding infrastructure, particularly the R108 road network and airport facilities.

Accordingly, the site is considered to be of low overall potential for amphibians and reptiles, and these taxa are not considered further within this assessment.

## Birds

### Desk Study

A wide variety of bird species, including species of conservation concern, are recorded within the hectad O14, with a total of 167 bird species.

The NBDC online records for protected bird species previously recorded in hectad O14 are provided in **Table 6.13** which also indicates species conservation status and level of protection.

**Table 6.13:** NBDC records of bird species present within hectad O14

Common Name	Species name	BOCCI Status <sup>13</sup>	Conservation	Legal Protection
Barn Owl	<i>Tyto alba</i>	Red Listed		WA
Barn Swallow	<i>Hirundo rustica</i>	Amber Listed		WA
Bar-tailed Godwit	<i>Limosa lapponica</i>	Amber Listed		WA, Annex I
Black-headed Gull	<i>Larus ridibundus</i>	Red Listed		WA
Black-tailed Godwit	<i>Limosa limosa</i>	Amber Listed		WA
Brent Goose	<i>Branta bernicla</i>	Amber Listed		WA
Common Coot	<i>Fulica atra</i>	Amber Listed		WA, Annex II, Annex III
Common Goldeneye	<i>Bucephala clangula</i>	Amber Listed		WA, Annex II
Common Grasshopper Warbler	<i>Locustella naevia</i>	Amber Listed		WA
Common Greenshank	<i>Tringa nebularia</i>	Amber Listed		WA
Common Kestrel	<i>Falco tinnunculus</i>	Amber Listed		WA
Common Kingfisher	<i>Alcedo atthis</i>	Amber Listed		WA, Annex I
Common Linnet	<i>Carduelis cannabina</i>	Amber Listed		WA
Common Pheasant	<i>Phasianus colchicus</i>	-		WA, Annex II, Annex III
Common Pochard	<i>Aythya ferina</i>	Amber Listed		WA, Annex II, Annex III
Common Redshank	<i>Tringa totanus</i>	Red Listed		WA
Common Sandpiper	<i>Actitis hypoleucos</i>	Amber Listed		WA
Common Shelduck	<i>Tadorna tadorna</i>	Amber Listed		WA
Common Snipe	<i>Gallinago gallinago</i>	Amber Listed		WA, Annex II, Annex III
Common Starling	<i>Sturnus vulgaris</i>	Amber Listed		WA
Common Swift	<i>Apus apus</i>	Amber Listed		WA
Common Tern	<i>Sterna hirundo</i>	Amber Listed		WA, Annex I
Common Wood Pigeon	<i>Columba palumbus</i>	-		WA, Annex II, Annex III
Corn Crake	<i>Crex crex</i>	Red Listed		WA, Annex I

<sup>13</sup> Only red and amber listed species from BOCCI 4 denoted

Dunlin	<i>Calidris alpina</i>	Amber Listed	WA, Annex I
Eurasian Curlew	<i>Numenius arquata</i>	Red Listed	WA, Annex II
Eurasian Oystercatcher	<i>Haematopus ostralegus</i>	Amber Listed	WA
Eurasian Teal	<i>Anas crecca</i>	Amber Listed	WA, Annex II, Annex III
Eurasian Tree Sparrow	<i>Passer montanus</i>	Amber Listed	WA
Eurasian Wigeon	<i>Anas penelope</i>	Amber Listed	WA, Annex II, Annex III
Eurasian Woodcock	<i>Scolopax rusticola</i>	Amber Listed	WA, Annex II, Annex III
European Golden Plover	<i>Pluvialis apricaria</i>	Red Listed	WA, Annex I, Annex II, Annex III
Great Black-backed Gull	<i>Larus marinus</i>	Amber Listed	WA
Great Cormorant	<i>Phalacrocorax carbo</i>	Amber Listed	WA
Great Crested Grebe	<i>Podiceps cristatus</i>	Amber Listed	WA
Greater Scaup	<i>Aythya marila</i>	Amber Listed	WA, Annex II, Annex III
Grey Partridge	<i>Perdix perdix</i>	Red Listed	WA, Annex II, Annex III
Grey Plover	<i>Pluvialis squatarola</i>	Amber Listed	WA
Hen Harrier	<i>Circus cyaneus</i>	Amber Listed	WA, Annex I
Herring Gull	<i>Larus argentatus</i>	Red Listed	WA
House Martin	<i>Delichon urbicum)</i>	Amber Listed	WA
House Sparrow	<i>Passer domesticus</i>	Amber Listed	WA
Lesser Black-backed Gull	<i>Larus fuscus</i>	Amber Listed	WA
Little Egret	<i>Egretta garzetta</i>	-	WA, Annex I
Little Grebe	<i>Tachybaptus ruficollis</i>	Amber Listed	WA
Little Gull	<i>Larus minutus</i>	-	WA, Annex I
Mallard	<i>Anas platyrhynchos</i>	-	WA, Annex II, Annex III
Mediterranean Gull	<i>Larus melanocephalus</i>	Amber Listed	WA, Annex I
Mew Gull	<i>Larus canus</i>	Amber Listed	WA
Mute Swan	<i>Cygnus olor</i>	Amber Listed	WA
Northern Goshawk	<i>Accipiter gentilis</i>	Amber Listed	WA
Northern Lapwing	<i>Vanellus vanellus</i>	Red Listed	WA, Annex II
Northern Shoveler	<i>Anas clypeata</i>	Red Listed	WA, Annex II, Annex III

Northern Wheatear	<i>Oenanthe oenanthe</i>	Amber Listed	WA
Peregrine Falcon	<i>Falco peregrinus</i>	-	WA, Annex I
Pink-footed Goose	<i>Anser brachyrhynchus</i>	-	WA, Annex II
Red Kite	<i>Milvus milvus</i>	Amber Listed	WA
Red Knot	<i>Calidris canutus</i>	Red Listed	WA
Red-breasted Merganser	<i>Mergus serrator</i>	-	WA, Annex II
Ringed Plover	<i>Charadrius hiaticula</i>	Amber Listed	WA
Rock Pigeon	<i>Columba livia</i>	-	WA, Annex II
Ruff	<i>Philomachus pugnax</i>	Amber Listed	WA, Annex I
Sand Martin	<i>Riparia riparia</i>	Amber Listed	WA
Sandwich Tern	<i>Sterna sandvicensis</i>	Amber Listed	WA, Annex I
Short-eared Owl	<i>Asio flammeus</i>	Amber Listed	WA, Annex I
Sky Lark	<i>Alauda arvensis</i>	Amber Listed	WA
Slavonian Grebe	<i>Podiceps auritus</i>	Amber Listed	WA
Snowy Owl	<i>Bubo scandiaca</i>	Amber Listed	WA, Annex I
Spotted Flycatcher	<i>Muscicapa striata</i>	Amber Listed	WA
Stock Pigeon	<i>Columba oenas</i>	Amber Listed	WA
Tufted Duck	<i>Aythya fuligula</i>	Amber Listed	WA, Annex II, Annex III
Twite	<i>Carduelis flavirostris</i>	Red Listed	WA
Velvet Scoter	<i>Melanitta fusca</i>	-	WA, Annex II
Water Rail	<i>Rallus aquaticus</i>	Amber Listed	WA
Whinchat	<i>Saxicola rubetra</i>	Amber Listed	WA
White-tailed Eagle	<i>Haliaeetus albicilla</i>	-	WA
Whooper Swan	<i>Cygnus cygnus</i>	Amber Listed	WA, Annex I
Wood Lark	<i>Lullula arborea</i>	-	WA
Yellowhammer	<i>Emberiza citrinella</i>	Red Listed	WA

## Field Survey

Common species of birds that are on the green list of Birds of Conservation Concern, such as pied wagtail *Motacilla alba*, robin *Erthacus rubecula* and blackbird *Turdus merula*, were recorded at the site. There are also records of more notable bird species within 2km of the site, including swift *Apus apus* and kestrel *Falco tinnunculus*. The hedgerow and trees found on site may provide nesting opportunities and foraging habitat for a range of bird species. The site has potential to provide nesting and foraging opportunities for notable bird species and, as such, birds will be considered further and are considered to be of (at least) local value.

## Identification and Evaluation of IEFs

The habitats and associated flora, fauna and other ecological features or resources identified in this report thus far, will now be evaluated based on their local, national and international conservation importance using the evaluation criteria described in the Methodology section.

On the basis of these evaluations an assessment will then be made as to which of these habitats or species are considered to comprise IEFs that may be impacted upon by the project i.e. which habitat or species has potential to be significantly impacted during the construction or operational phase of the proposed project (see **Table 6.14** and **Table 6.15** below).

## Designated Sites

There are no international or nationally designated sites located within the site boundary or within a 2km radius of the site. With the nearest found approximately 5km southeast of the site. It was concluded within the AA screening report for this site that, on the basis of objective information, that the proposed development, individually or in combination with other plans or projects, will not have a significant effect on designated sites listed within the ZOI. It is considered that both the international and national sites found within the proposal's ZOI will not be impacted due to the absence of plausible impact pathways and/or the attenuating effect of the distance intervening. Therefore, these sites will not be considered further in this report.

## Habitats

The following table presents an evaluation of the importance value of the habitats identified within the receiving environment of the proposed development, and rationale for inclusion, or exclusion as an IEF.

**Table 6.14:** Evaluation of habitats within the study area

Habitat type	Ecological value relative to study area (NRA, 2009)	Important Ecological Feature (Y/N)	Rationale
Amenity grassland (improved) (GA2)	Local importance (lower value)	No	Modified and intensively managed habitat. Species-poor. Limited Ecological Value
Hedgerows (WL1)	Local importance (Higher value)	Yes	Provides nesting and foraging habitat for bird species. Provides cover and ecological corridors for birds, bats, small mammals, reptiles and amphibians. Precautionary Principle
Treeline (WL2)	Local importance (Higher value)	Yes	Provides nesting for bird species. Provides cover and ecological corridors for birds, bats, small mammals, reptiles and amphibians. Precautionary Principle
Buildings and artificial surfaces (BL3)	Local importance (lower value)	No	Artificial habitat with negligible ecological value.

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**Rare and Protected Flora Species**

There are no records for rare and protected plant species within the subject site, and none were recorded during the ecological walkover. The habitats which occur on site are not considered suitable for the vast majority of these species. No rare and protected plant species are considered to comprise IEFS for the project and so will not be considered further in this evaluation.

**Fauna**

The following table (Table 6.15) presents an evaluation of the ecological value/importance of the faunal species identified as occurring or having the potential to occur within the receiving environment of the proposed development and rationale for inclusion, or exclusion, as an IEF.

**Table 6.1514:** Evaluation of faunal species in relation to the proposed works

Species	Ecological value relative to study area (NRA, 2009)	Description at the site	Important Ecological Feature (IEF) (Y/N)	Rationale
Hedgehog <i>Erinaceus europaeus</i>	Local importance (higher value)	Not recorded during surveys.	Yes	No evidence of this species recorded within the site; however, potentially suitable habitat occurs, and species records exist in the general area. Precautionary principle.
Irish stoat <i>Mustela erminea</i>	Local importance (lower value)	Not recorded during surveys.	No	No evidence of this species recorded within the site. No records from the area. Habitats not considered suitable.
Otter <i>Lutra lutra</i>	Local importance (lower value)	Not recorded during surveys.	No	No evidence of this species recorded within the site. No records from the area. Habitats not considered suitable.
Red squirrel <i>Sciurus vulgaris</i>	Local importance (lower value)	Not recorded during surveys.	No	No evidence of this species recorded within the site. No records from the area. Habitats within the subject setting not considered suitable.
Pygmy shrew <i>Sorex minutus</i>	Local importance (higher value)	Not recorded during surveys.	No	No evidence of this species recorded within the site. No records from the area.
Badger <i>Meles meles</i>	Local importance (lower value)	Not recorded during surveys.	Yes	No evidence of this species recorded within the site. No records from the area. Suitable foraging habitat (only) recorded on site.

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<b>Pine marten</b> <i>Martes martes</i>	Local importance (lower value)	Not recorded during surveys.	No	No evidence of this species recorded within the site. No records from the area. Habitats within the subject setting not considered suitable.
<b>Irish hare</b> <i>Lepus timidus</i> subsp. <i>Hibernica</i>	Local importance (lower value)	Not recorded during surveys.	No	No evidence of this species recorded within the site. No records from the area. Habitats within the site not considered suitable.
<b>Birds</b>	Local importance (higher value)	Small number of bird species typical of habitats occurring recorded during the survey.	<b>Yes</b>	Habitats within the site of limited value to birds although may provide potential foraging and breeding habitat for a range of species, likely comprising mainly passerines.
<b>Amphibians and Reptiles</b>	Local importance (lower value)	Not recorded during surveys.	No	No evidence recorded within the site. No records from the area. Suitable commuting habitat found on site (low potential)
<b>Bats</b>	Local importance (higher value)	Not recorded during surveys.	<b>Yes</b>	No bat roosts recorded. Low amount of suitable foraging and commuting habitat found on site.

**Do Nothing Scenario**

The proposed development site is comprised mainly of improved farmland that is currently being used as pasture. Some areas of semi-natural habitat occur, mainly in the form of hedgerows and scattered trees comprising existing field boundaries.

If the proposed development does not progress beyond the planning application stage, it is likely that the current land-use practices will continue at the site.

## 6.4 Characteristics of the Development

### 6.4.1 Development Description

The proposed project comprises of the construction of four cargo handling units, offices, parking spaces and associated works. The proposed site layout can be seen in Chapter 4. The proposed project will cover an area of approximately 10.7 hectares. Additional Site Layouts and Proposed Site Plans can be seen in Appendix.

Permission is sought for –

1. Construction of four aviation-related cargo handling units with ancillary office space:
  - i. Unit 1: c.10,869.7 m<sup>2</sup> (including 940.9 m<sup>2</sup> office space)
  - ii. Unit 2: c.9,151.3 m<sup>2</sup> (including 751.3 m<sup>2</sup> office space)
  - iii. Unit 3: c.6,024.9 m<sup>2</sup> (including 497.7 m<sup>2</sup> office space)
  - iv. Unit 4: c.8,577.7 m<sup>2</sup> (including 751.3 m<sup>2</sup> office space)

The proposed units will have an overall combined total gross floor area (GFA) of c. 34, 623.6m<sup>2</sup> (alongside ancillary ESB substations, 4 no. security huts with a combined GFA of 30 sqm and pumphouses). The warehouses are c. 12m in height, with the office element being c. 3.3 m in height and located within a landscaped campus on a site of c. 10.7 Ha

2. Provision of 390 car parking spaces, including 39 EV charging points, 19 accessible spaces, and motorcycle bays.
3. Provision of 230 secure bicycle parking spaces, of which 100 are short stay spaces and 130 are sheltered long stay spaces.
4. Provision of approx. 77 truck parking spaces and 5 van spaces.
5. Hard and soft landscaping, new boundary treatments, including a c. 2m high System Wire Fence to site boundary.
6. Construction of new site entrance onto the R108.
7. Wastewater treatment plant and infiltration area for 250 PE.

8. All necessary site development and engineering and ancillary site works, including provision of ESB substations and switchrooms, sprinkler tanks and pumphouses, bin store and recycle store, lighting, signage, underground services, photovoltaic panel zones at roof level and sustainable drainage systems (SuDS).

## 6.4.2 Operational Measures

### Operation

When operational, the facility will run 24 hours per day, 7 days per week.

### Waste management

All wastes will be disposed of appropriately and in accordance with the procedures and controls outlined in the CEMP. There will be no requirement for long term storage of waste oils etc. Any surplus or excavated materials (e.g. from underground trench excavation) will be reused as backfill on site and any excess will be used in landscaping.

Other construction phase waste may consist of surplus hardcore, stone, concrete, ducting, shuttering timber and unused oil and diesel.

Wastewater from welfare facilities on site will drain to integrated wastewater holding tanks. The stored effluent will then be collected on a regular basis from site by a permitted waste contractor and removed to a licensed/permitted waste facility for treatment and disposal.

All waste to be taken off-site will be collected an approved contractor and recycled or disposed at an approved facility.

The proposed logistics units on area A will be served by a private proprietary wastewater treatment plant on the site.

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### 6.4.3 Predicted impacts

#### Construction Phase

The construction phase effects associated with the proposed development will/may comprise the following, see **Table 6.16** below:

**Table 6.16:** Construction Phase Effects and their Sources

Construction Phase Effect	Source
Habitat loss/alteration Potential spread of invasive species	Temporary site compound, vegetation clearance, excavation/groundworks, movement of plant and machinery, storage of materials and spoil, ancillary site works. Disturbance of ground and soils; movement/storage of soils and materials; plant/machinery movement. Many IAPS colonise disturbed ground; spread can occur via seeds or vegetative fragments if inadvertently introduced.
Indirect/direct water quality effects	Sediment/pollutant-laden runoff from exposed ground, stockpiles, plant/vehicle areas, and temporary welfare facilities; accidental spillage/leaching of fuels/oils, cementitious materials, or chemicals.
Direct species disturbance/displacement	Increased human presence; construction noise/vibration; lighting and general activity.
Indirect species disturbance/displacement	Pathways via water quality effects; loss/fragmentation or alteration of foraging/commuting/breeding/resting habitat; impacts on prey biomass.

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### 6.4.4 Operational Phase

The operational phase effects associated with the proposed development will/may comprise the following, see **Table 6.17** below:

**Table 6.17:** Operational phase effects potentially associated with the project

Operation Phase Effect	Source
Habitat loss/alteration Potential spread of invasive species	Fixed outcome of the development footprint established during construction (no additional operational loss anticipated). Landscape maintenance/ground disturbance, movement of soils/materials; poor management of imported soils or planting stock. (Chemical control, if required, to follow best-practice with controls on drift.)
Indirect/direct water quality effects	Surface water runoff from paved areas if unmanaged; accidental spills/leaks from vehicles/plant.
Direct species disturbance/displacement	Ongoing human activity; traffic; operational noise; lighting.
Indirect species disturbance/displacement	As above via lighting/noise; minor changes in habitat structure/function within landscaped areas.

#### Assessment of Potentially Significant Effects

A significant ecological effect is an effect that undermines biodiversity in general, while in broad terms it is the impact on the structure and function of designated sites, habitats or ecosystems. A significant effect is one that is of sufficient importance to require an assessment so that the decision maker is adequately informed of the environmental consequences of permitting a project (CIEEM, 2018). The significance of the potential ecological effects of the proposed development at Dublin Airport, County Dublin was determined using professional judgement and with reference to the following guidance:

- Guidelines for Ecological Impact Assessment in the UK and Ireland - Terrestrial, Freshwater, Coastal and Marine (CIEEM, 2018)
- Draft Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, 2022)

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### 6.4.5 Construction Phase

#### Potential Habitat Loss/Alteration Impacts

Site habitats are predominantly man-made/managed and of low ecological value, dominated by Improved Agricultural Grassland (GA1). Remaining habitats are minor in extent.

All habitats other than two were evaluated Local importance (lower value) and are not IEFs; loss of these areas equates to permanent, not significant, negative effects.

The following table (**Table 6.18**) describes the potential implementation phase effects on habitats classed as IEFs at the proposed works site, and the significance of the impact.

**Table 6.18:** Description and evaluation of the significance of unmitigated impacts to habitats identified as IEFs

Important Ecological Features (IEFs)	Extent/Location/Evaluation (NRA, 2009)	Description of Unmitigated Impact	Significance of unmitigated impact (EPA, 2022)
Hedgerows (WL1)	Occurs within the proposed development site. Of local biodiversity value for range of fauna. Evaluated as Local importance (higher value).	<u>Habitat Loss</u> Potential bird nesting habitat and potential bat foraging and commuting habitat may be lost due to proposals  <u>Habitat Alteration/Disturbance</u> Habitat alteration/disturbance will occur solely within the proposed works footprint.	Direct habitat loss effects are assessed as <b>permanent, slight, negative effect.</b>  Habitat alteration effects are assessed as <b>permanent, slight, negative effect.</b>
Scattered Trees (WD5)	Occurs within the proposed development site. Of local biodiversity value for range of fauna.	<u>Habitat Loss</u> Potential bird nesting habitat and potential bat foraging and commuting habitat may be lost due to proposals	Direct habitat loss effects are assessed as <b>permanent, slight, negative effect.</b>

	<p>Evaluated as Local importance (higher value).</p>	<p><u>Habitat Alteration/Disturbance</u> Habitat alteration/disturbance will occur solely within the proposed works footprint.</p>	<p>Habitat alteration effects are assessed as <b>permanent, slight, negative effect.</b></p>
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**Impacts on faunal species**

The following table (Table 6.19) describes the potential construction phase effects on faunal IEFs at the proposed development site, and the significance of the impact.

In terms of potentially significant disturbance/displacement of species, it is considered that habitat loss, noise and increased human activity required for the construction of the development, and potential water quality impacts on the local field drain network only, have the most potential for disturbance/displacement effects to faunal IEFs. Highly mobile species, such as birds, are expected to temporarily leave the area once work begins owing to noise and human activity.

**Table 6.19:** Description and evaluation of the significance of unmitigated impacts to faunal species identified as IEFs

Important Ecological Feature (IEF)	Ecological value relative to study area	Unmitigated Impacts	Significance of unmitigated impacts ( EPA, 2022)
Hedgehog	Local importance (higher value)	Minor loss of potential foraging/commuting habitat; potential disturbance from noise, lighting, human activity in an already urban-influenced context.	<p>Potential habitat effects on hedgehog assessed as <b>Temporary Slight Negative effects.</b></p> <p>Potential direct disturbance/ displacement effects on hedgehog assessed as <b>Temporary Not Significant Negative.</b></p>

<p><b>Badger</b></p>	<p>Local importance (higher value)</p>	<p>No evidence on site; minor loss of potential foraging habitat; potential disturbance as above.</p>	<p>Potential habitat effects on hedgehog assessed as <b>Temporary Slight Negative effects.</b></p> <p>Potential direct disturbance/ displacement effects on hedgehog assessed as <b>Temporary Not Significant Negative.</b></p>
<p><b>Birds</b></p>	<p>Local importance (higher value)</p>	<p>Minor loss of nesting/foraging habitat (hedgerows/trees). Disturbance from activity/noise; potential indirect effects via water quality (managed).</p>	<p>Potential habitat effects on birds assessed as <b>Temporary Slight Negative effects.</b></p> <p>Potential direct disturbance/ displacement effects on birds assessed as <b>Short-term Not Significant Negative Effects.</b></p> <p>Potential indirect disturbance/ displacement effects on birds assessed as <b>Temporary to Short-term Slight Negative Effects.</b></p>
<p><b>Bats</b></p>	<p>Local importance (higher value)</p>	<p>No roosts; limited foraging/commuting habitat. Possible effects from lighting/noise and minor linear feature loss.</p>	<p>Potential direct/indirect effects on bats assessed as <b>Short-term Slight Negative Effects.</b></p>

### Impacts to water quality/Indirect habitat alteration

Construction works in general can pose a risk to the aquatic environment via several mechanisms. Excavation works, ground movement and disturbance, storage and stockpiling of materials can result in sediment erosion and run-off which can lead to siltation of the aquatic environment. Use of plant and machinery poses a risk of accidental ingress of fuel, oils, lubricants etc, to the aquatic environment, as does on-site storage of these and other such substances. Use of concrete and other cementitious materials, generation of washout and use of chemicals also poses a risk to water quality. In general, such materials can enter the aquatic environment via direct discharges to drainage features, overland flow and/or leaching to groundwater in the event of a spillage/leakage. Use of temporary on-site welfare facilities will result in the generation of effluent/wastewater. These on-site welfare facilities will be maintained accordingly by an approved and permitted contractor who will remove effluent to a licenced facility for disposal. In addition, a Construction Waste Manager shall be appointed from the Contractor's Staff and have overall responsibility for the implementation of a project Waste Management Plan (WMP) during the construction phase.

There are no watercourses or water bodies within or in the vicinity of the subject site; therefore, there will be no direct impacts on water quality as a result of construction of the proposed development. Site drainage is achieved primarily by field drains and therefore these could be susceptible to surface water run off during construction. This will be managed and controlled at source by the appointed contractor on-site as per construction industry best practice guidelines (Construction Industry Research and Information Association – CIRIA guidance) and the Construction and Environmental Management Plan (CEMP) that has been prepared for the development prior to works commencing. Construction run-off will be intercepted via measures such as temporary drainage in use with measures such as silt traps and settlement areas/tanks. Wheel-wash facilities will also be present for vehicles leaving site.

Bearing the above in mind, it is considered that the project has some potential to result in **Temporary to Short-term, Slight Negative Effects** on water quality.

Based on the precautionary principle, standard best practice construction phase water quality protection measures are included in the subsequent mitigation section of this chapter.

## Operational Phase

### Impacts to water quality/Indirect habitat alteration

During the operational phase of the development, surface run-off from roads, car parks and other paved areas will discharge to the public stormwater network, and wastewater will discharge to the public foul sewer system. These are the most likely sources of indirect water quality/habitat alteration impacts during the operational phase, which could potentially result in secondary effects on receiving aquatic habitats and/or species.

There is a theoretical risk to surface water quality in receiving watercourses via storm run-off from built areas which has the potential to result in ingress of fuel and oil residues, sediment/silt to the aquatic environment. This risk is heightened during periods of heavy rainfall. In the absence of appropriate mechanisms to control both the rate and quality of storm run-off from the operational development, storm water generated could therefore impair water quality within receiving watercourses which could impact on aquatic species/habitats. However, management of surface water during the operational phase of the development has been considered in detail at project design stage.

The proposal shall incorporate the use of Sustainable Urban Drainage Systems (SUDS). SUDS elements are widely used to alleviate detrimental effects of urban stormwater drainage on receiving watercourses. The Greater Dublin Strategic Drainage Study (GDSDS) Final Strategy Report outlines the systematic implementation of best practice stormwater management systems, including SUDS, which are to be employed for all new developments<sup>14</sup>. The proposed development shall incorporate SUDS at the design stage to allow for stormwater treatments and storage and/or attenuation functions by which surface run-off from the development will be managed prior to leaving the site and entering the public system. These measures will seek to improve the quality of the discharge by capturing all possible debris and hydrocarbons pollution from the development.

Bearing the above in mind, it is considered that generation of stormwater during operation could result in **Long-term, Not Significant Negative Effects** on water quality.

### Impacts to Faunal Species

No significant disturbance or displacement impacts are expected to birds or to terrestrial mammals selected as IEFs during the operational phase of the project. Once the construction phase ceases, any IEFs temporarily displaced during construction works are expected to utilise the habitats in the vicinity of the development within a short period of time.

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<sup>14</sup> [Microsoft Word - GDSDS Final Strategy Report - April 05.doc \(greaterdublindrainage.com\)](#) Accessed 07/10/2021

During the operational phase, there may be some disturbance to terrestrial mammals and birds owing to increased noise, traffic and human activity associated with the day-to-day operation of the development. With regard to terrestrial mammals, it is expected that human activity will be greatest during the day with relatively low levels at night, during which time many mammal species are more active. It is also considered that on-going land-uses at the site and its surrounds currently comprise existing commercial/industrial activity, and as such terrestrial mammals and birds are expected to be habituated to human activity within/around the site to some degree.

It is considered that any potential disturbance or displacement impacts to mammals and birds as a result of the operational phase of the proposed development would be **Long-term, Not Significant Negative Effects**.

While there may be an increase in human activity (noise and light levels) as a result of the proposed development during operation, due to the low bat biodiversity and low bat activity, it is not considered that this will impact on local bat populations. Therefore, the potential impacts of the proposed development on bats are, overall, considered to be **Long-term, Imperceptible Negative Effects**. Bat mitigation measures are presented in the mitigation section of this chapter in order to ensure that the lighting scheme for the proposed development has a neutral residual impact on local bat populations and that landscaping will have a positive residual impact on local biodiversity.

## 6.5 Mitigation and Monitoring

This section outlines the environmental and ecological mitigation measures proposed to avoid, reduce, or remedy potential impacts arising from the construction, operational, and decommissioning phases of the project. All measures shall be incorporated into the Construction Environmental Management Plan (CEMP) and overseen by a competent Environmental Manager, with ecological supervision provided by a suitably qualified Ecological Clerk of Works (ECOW) where required.

### 6.5.1 Construction Phase

#### Construction Environmental Management Plan (CEMP)

A Construction Environmental Management Plan (CEMP) has been developed by Waterman Moylan Consulting Engineers Limited. This document outlines construction practices and environmental management measures which will be implemented to ensure that best practice measures are applied, with minimum impact on the surrounding environment. The CEMP ensures that the proposed development will be carried out in accordance with any planning conditions applicable.

The CEMP will be submitted to the planning authority for agreement and approval prior to the commencement of any construction activity. The CEMP includes, but is not limited to, the following environmental controls:

- Water Quality/Sediment and Erosion Control
- Noise, Vibration, Dust and Air Control
- Management of Construction and Demolition Waste
- Fuel and Oils Management
- Management of Concrete
- Emergency Response Plan

The CEMP takes cognisance of the following Best Practice Guidance:

- CIRIA C692: Environmental Good Practice on Site, (Audus et al., 2010)
- National Roads Authority (2010). The Management of Noxious Weeds and Non-native Invasive Plant Species on National Roads
- Transport Infrastructure Ireland (2020). The Management of Invasive Alien Plant Species on National Roads (GE-ENV-01104)

### Ecological/Environmental Clerk of Works (ECoW)

An Ecological Clerk of Works will be appointed to oversee vegetation clearance, monitor compliance with ecological mitigation measures, and provide on-site advice in relation to protected species and habitats.

A suitably qualified and experienced Ecological/Environmental Clerk of Works (ECoW) will be appointed for the duration of the construction phase. The ECoW will work closely with the Environmental Manager and Contractor to ensure implementation of ecological mitigation and adherence to environmental best practice on-site.

The ECoW will oversee vegetation clearance, installation of environmental protection measures (such as silt fences and drainage controls), and will ensure compliance with construction-phase ecological commitments.

Prior to the commencement of works, the ECoW will conduct a general pre-construction walkover survey to confirm the absence of active badger setts, bat roosts, breeding birds, or other protected fauna within the footprint of works.

The ECoW will deliver environmental toolbox talks to construction crews, highlighting relevant ecological sensitivities, the location of exclusion zones (if any), and specific site rules relating to protected species and habitat management.

The ECoW will carry out regular inspections during construction to ensure that works remain within the defined works footprint, that all mitigation measures are maintained, and that no unapproved habitat disturbance occurs.

Should any previously unidentified ecological constraints arise during the course of works (e.g., discovery of a protected species), the ECoW will have the authority to halt works and liaise with the Project Ecologist and NPWS as necessary.

### Environmental Officer

A competent Environmental Manager will be appointed for the duration of the works and will report to the Project Manager. The Construction Manager will communicate regularly with the Environmental Manager to ensure mitigation measures are applied to specific works. The Environmental Manager will carry out tasks as required, including installation and maintenance of sediment control measures, and implementing and maintaining approved waste management control measures. The use of dedicated staff under the direction of the Environmental Manager will ensure the environmental controls are *in situ* ahead of the works on site.

### Temporary Site Compounds

Adequate parking facilities will be made available within the construction compounds for all site workers during the course of construction. There is to be no parking of vehicles outside of designated parking areas during the construction phase.

Surface water runoff from the construction compounds will be managed through the installation of temporary drainage measures, including silt traps, settlement ponds, or other appropriate sediment control systems, to prevent contaminated water entering nearby drainage ditches. These measures will be implemented prior to the commencement of construction and will be maintained for the duration of the works.

### Management of Fuel/Oil etc.

The management of fuel/oil and other chemicals on site will have regard to the following elements:

- Chemicals will be banded and where applicable, stored within double skinned tanks/containers with the capacity to hold 110% of the volume of chemical contents. Ancillary equipment such as hoses and pipes will be contained within the bund.

- Measures will be implemented throughout the construction stage to prevent contamination of the soil from oil and petrol leakages.
- Where required, refuelling of plant on-site will only be carried out at a designated area within the site compound. Only designated trained operators will be authorised to refuel plant on site. Rigid and articulated vehicles will be fuelled off site as will all site vehicles (jeeps, cars and vans).
- Only mechanically sound plant will be permitted access to the Site. All plant used should be regularly inspected for leaks and fitness for purpose.
- Procedures and contingency plans will be set up to deal with emergency accidents or spills. An emergency spill kit with oil boom and absorbers will be kept on site in the event of an accidental spill/emergency. The contents of the spill kit will be replenished if used and they will be checked on a scheduled basis during environmental inspections and audits. All crews will be trained in the use of spill kit equipment.
- All emergency procedures and equipment will be in place prior to the commencement of any works.
- An Emergency Response Plan will be implemented in the event of any environmental incidents such as spillage of oil/fuel during the construction phase of the project. All emergency procedures and equipment will be in place prior to the commencement of any works.
- The local authority will be informed immediately of any spillage or pollution incident that may occur on-site during the construction phase.

### Management of Construction Waste

A Construction Phase Waste Management Plan will be developed to control all site-generated construction waste and the storage and disposal of same. The Contractor's waste management plan will be incorporated into the CEMP. Any introduced semi-natural (road building materials) or artificial (PVC piping, cement materials, electrical wiring) materials will be taken off site at the end of the construction phase. Any accidental spillage of solid state introduced materials will be removed from the site by the appropriate means.

### Wastewater Sanitation

During the construction phase, an integrated wastewater holding tank will be used on site for toilet. The stored effluent will then be collected on a regular basis from site by a permitted waste contractor and removed to a licensed/permitted waste facility for treatment and disposal. The holding tank will be

maintained by a service contractor on a regular basis and will be removed from the site on completion of the construction phase.

### Excavations

An Excavation Works Management Plan will be developed and incorporated into the finalised CEMP. The earthworks required are relatively minor and localised. The following mitigation measures will be implemented for the construction phase:

- All site excavations and construction will be supervised by a suitably qualified and experienced engineer. The contractor's method statements for each element of work will be reviewed and approved by the engineer prior to commencement.
- Drainage infrastructure will be constructed in parallel with the Battery Energy Storage System (BESS) and underground grid connection to minimise risks associated with uncontrolled runoff. This will be complemented by the installation of silt fencing and other sediment control measures in advance of excavation activities.
- Plant and materials will only be stored in designated, approved locations (such as the proposed site compound) and will not be positioned or trafficked in a manner that could surcharge existing or newly formed slopes.
- Excavated topsoil and subsoil will be stored onsite for reuse or removed to an authorised facility. Temporary stockpiles will be located away from watercourses and will not be permitted within 50 metres of any waterbody. Stockpiles will be managed to prevent erosion, compaction, or sediment-laden runoff.
- Where necessary, excavated areas will be promptly backfilled or stabilised to reduce the risk of soil erosion, water contamination, and habitat degradation.

### Storage of Materials

- The storage of materials, containers, stockpiles and waste, however temporary, should follow best practice at all times and be restricted to designated areas only within the demarcated extent of works footprint.
- Material stockpiles should be kept to a minimum size, and be located on impermeable bases, where necessary.
- Storage of materials will be located away from any temporary drains and moving plant, machinery and vehicles.

- Fuel, oils etc. will be stored in a secure, bunded area within a designated location and under cover to prevent damage from the elements.
- Excavated material will be deposited in designated material deposition areas only

### General Protection of Fauna

- The extent of construction works area within the development site boundary is to be clearly marked out using temporary stakes and high-visibility tape/bunting such that the construction zone, including extent of access for all construction plant and machinery, site compound and materials storage areas, is defined and is clearly visible to all contractor staff and machine operators.
- Movement of construction vehicles is to be restricted as much as is practicably possible to within the extent of works footprint within the development site boundary.
- Disturbance of fauna will be limited by controlling the movement of construction vehicles and personnel. Construction vehicles and personnel will not encroach onto habitats beyond the proposed development footprint.
- Construction materials and wastes are to be kept in designated areas to reduce risk of accidental injury/entrapment of any wildlife on-site.
- Removal of any suitable nesting habitat found on site for breeding birds, will ideally be undertaken outside the main breeding season (March to August inclusive). If this is not possible, pre-clearance nesting checks would be required no more than 48 hours prior to the start of clearance and demolition works. Should an occupied nest be found, an adequate buffer zone will be created under the guidance of the ECoW which will remain in place until the nest is no longer in use.
- Vegetation removal is to be minimised within the proposed development site.
- All temporary construction lighting is to be turned off outside daylight hours

### Construction Site Biosecurity

The following measures are recommended in relation to construction site biosecurity and reducing the risk of introduction or spread of invasive species within the proposed development site.

- All vehicles, machinery and equipment/tools are to arrive to site clean, and steam washed. Visual inspections are to take place. Any machinery or equipment returning from a different construction site will be cleaned, steam washed and visually inspected again before re-entering the site.

- All PPE brought to site is to be clean and dry. All PPE will be visually inspected, and any attached vegetation or debris removed. Work boots will be dipped in or scrubbed with a disinfectant solution and thoroughly dried afterwards before being used on the site for the first time. PPE and tools will remain on site for the duration of construction.
- Where any IAPS is identified within the works footprint, the appointed contractor is to develop and implement an appropriate method statement regarding managing IAPS on-site. Fencing and/or advisory signage is to be erected. Where stands are small, comprising individual plants, the use of signage may suffice. Exclusion zones will be established to prevent access by plant or operatives to the invasive species plant area to prevent any further potential spread of the invasive species.
- Where IAPS are encountered on-site, all management and treatment measures will strictly follow 'Guidelines on the Management of Noxious Weeds and Non-native Invasive Plant Species on National Roads' (TII, 2010).

## 6.5.2 Operational Phase

The following measures will be implemented during the operational phase to minimise ecological impacts:

### Wastewater Management

The proposed cargo facilities will be served by a proprietary wastewater treatment plant, licensed and maintained in accordance with EPA regulations and local authority requirements.

### Waste Management

Operational waste will be managed in accordance with a site-specific Waste Management Plan, with provisions for segregation, recycling, and disposal by licensed contractors to appropriate facilities.

### Operational Phase Lighting

Specific measures to avoid unnecessary light spill from the proposed development are recommended to reduce any potential impacts to any roosting, foraging and commuting bats. The following guidelines, taken from the Bat Conservation Trust 2023 'Guidance Note 08/23' are recommended.

- LED luminaires to be used since they are highly directional, have sharp cut-off, a lower intensity, good colour rendition and dimming capability.
- All luminaires used to lack UV elements to reduce impact. Metal halide, compact fluorescent sources should not be used.
- A warm white light source (<2700 Kelvins) is to be adopted to reduce the blue light component).

- Light sources should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats.
- Internal luminaires can be recessed (as opposed to using a pendant fitting) where installed in proximity to windows to reduce glare and light spill.
- Waymarking inground markers (low output with cowls or similar to minimise upward light spill) to delineate path edges.
- Column heights will be carefully considered to minimise light spill and glare visibility. This should be balanced with the potential for increased numbers of columns and upward light reflectance as with bollards. The shortest column height allowed will be used where possible.
- Only luminaires with a negligible or zero upward light ratio and with good optical control will be used.
- Luminaires should always be mounted horizontally, with no light output above 90° and/or no upward tilt.
- Where appropriate, external security lighting should be set on motion sensors and set to as short a possible a timer as the risk assessment will allow. For most general residential purposes, a 1- or 2-minute timer is likely to be appropriate.
- Use of a Central Management System (CMS) with additional web-enabled devices to light on demand.
- Use of motion sensors for local authority street lighting may not be feasible unless the authority has the potential for smart metering through a CMS.
- The use of bollard or low-level downward-directional luminaires is strongly discouraged. This is due to a considerable range of issues, such as unacceptable glare, poor illumination efficiency, unacceptable upward light output and increased upward light scatter from surfaces. Therefore, they should only be considered in specific cases where these issues can be resolved.
- Only if all other options have been explored, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed. However, due to the lensing and fine cut-off control of the beam inherent in modern LED luminaires, the effect of cowls and baffles is often far less than anticipated and so should not be relied upon solely.

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## 6.6 Residual Impacts

### 6.6.1 Construction Phase

Residual effects are impacts that remain once mitigation has been implemented or impacts that cannot be mitigated against. **Table 6.20** below provides a summary of the predicted residual effects for the IEFs identified at the site during the construction phase.

**Table 6.20:** Construction Phase - Predicted residual effects on IEFs

Important Ecological Features (IEF)	Aspect	Impact	Significance of Unmitigated Impact	Mitigation Measures	Residual Effects
Hedgerows (WL1)	Direct habitat loss	Areas of hedgerow will be removed in order to facilitate the proposed development. Potential bird nesting habitat may be lost.	<b>Permanent, slight, negative effect.</b>	Presence of ECoW Construction site biosecurity CEMP Best Practice Methodology	<b>Permanent, Slight, Negative residual effects at the local level.</b>
	Habitat alteration/disturbance	Habitat alteration/disturbance will occur during proposed works.	<b>Permanent, slight, negative effect.</b>	Presence of ECoW Construction site biosecurity CEMP Best Practice Methodology	<b>Permanent, Slight, Negative residual effects.</b>

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Important Ecological Features (IEF)	Aspect	Impact	Significance of Unmitigated Impact	Mitigation Measures	Residual Effects
Treeline (WL2)	Direct habitat loss	Areas of treeline will be removed in order to facilitate the proposed development. Potential bird nesting habitat may be lost.	<b>Permanent, slight, negative effect.</b>	Presence of ECoW  Construction site biosecurity  CEMP  Best Practice Methodology	<b>Permanent, Slight, Negative residual effects at the local level.</b>
	Habitat alteration/disturbance	Habitat alteration/disturbance will occur during proposed works.	<b>Permanent, slight, negative effect.</b>	Presence of ECoW  Construction site biosecurity  CEMP  Best Practice Methodology	<b>Permanent, Slight, Negative residual effects.</b>
Hedgehog and badger	Habitat loss	Loss of potential foraging and commuting habitat	<b>Temporary Slight Negative effects.</b>	Compliance with Wildlife Acts  Presence of ECoW  CEMP  Pre-Construction Surveys	<b>Temporary, Not Significant, Negative effects.</b>

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Important Ecological Features (IEF)	Aspect	Impact	Significance of Unmitigated Impact	Mitigation Measures	Residual Effects
	Direct/indirect disturbance and /or displacement	Potential for disturbance/ displacement effects from proposed works	<b>Temporary, Slight Negative effects.</b>	Compliance with Wildlife Acts  Presence of ECoW CEMP  Pre-Construction Surveys	<b>Temporary, Not Significant, Negative effects.</b>
Birds	Habitat loss	Potential bird nesting habitat may be lost with the removal of hedgerow and or trees	<b>Short-term, not significant, Negative effects.</b>	CEMP  Presence of ECoW  Compliance with Wildlife Acts  Pre-construction breeding survey if works occur during breeding season	<b>Long-term, Slight, Negative residual effects.</b>
	Direct/indirect disturbance and /or displacement	Potential for disturbance/ displacement effects from proposed works	<b>Short-term, Not Significant, Negative Effects.</b>	CEMP  Presence of ECoW  Compliance with Wildlife Acts  Pre-construction breeding survey if works occur during breeding season	<b>Temporary, Not Significant, Negative effects.</b>

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Important Ecological Features (IEF)	Aspect	Impact	Significance of Unmitigated Impact	Mitigation Measures	Residual Effects
Bats	Habitat loss	Potential foraging and or commuting habitat may be lost with the removal of hedgerow and or trees	<b>Permanent, not significant, Negative effects.</b>	Compliance with Wildlife Acts Presence of ECoW CEMP	<b>Long-term, Slight, Negative effects.</b>
	Direct/indirect disturbance and /or displacement	Potential for disturbance/ displacement effects from proposed works	<b>Short-term, Slight Negative Effects.</b>	Compliance with Wildlife Acts Presence of ECoW CEMP	<b>Short-term, Slight, Negative effects.</b>

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### 6.6.2 Operational Phase

Residual effects are impacts that remain once mitigation has been implemented or impacts that cannot be mitigated against. Table 6.21 below provides a summary of the predicted residual effects for the IEFs identified at the site during the construction phase.

**Table 6.21:** Operational Phase - Predicted residual effects on IEFs

Important Ecological Features (IEF)	Aspect	Impact	Significance of Unmitigated Impact	Mitigation Measures	Residual Effects
Hedgerows (WL1)	Direct habitat loss	None at operation	Neutral	N/A	<b>Neutral residual effects</b>
	Habitat alteration/disturbance	No alteration/disturbance to occur during operational phase	Neutral	N/A	<b>Neutral residual effects</b>
Treeline (WL2)	Direct habitat loss	None at operation	Neutral	N/A	<b>Neutral residual effects</b>
	Habitat alteration/disturbance	No alteration/disturbance to occur during operational phase	Neutral	N/A	<b>Neutral residual effects</b>
Hedgehog and badger	Habitat loss	None at operation	Neutral	N/A	<b>Neutral residual effects</b>
	Direct/indirect disturbance and /or displacement	Minor direct/indirect disturbance and /or displacement disturbance to occur during operational phase	<b>Permanent, not significant, Negative effects</b>	Where possible 'hedgehog highways' and mammal pathways will be implemented	<b>Neutral residual effects</b>
Birds	Habitat loss	None at operation	Neutral	N/A	<b>Neutral residual effects</b>
	Direct/indirect disturbance and /or displacement	Minor direct/indirect disturbance and /or displacement disturbance to	<b>Permanent, not significant, Negative effects</b>	Nest boxes where feasible	<b>Neutral residual effects</b>

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Important Ecological Features (IEF)	Aspect	Impact	Significance of Unmitigated Impact	Mitigation Measures	Residual Effects
		occur during operational phase			
Bats	Habitat loss	None at operation	Neutral	N/A	<b>Neutral residual effects</b>
	Direct/indirect disturbance and /or displacement	Potential for direct/indirect disturbance and /or displacement disturbance to occur during operational phase through artificial lighting usage	<b>Permanent, significant, Negative effects</b>	BCT (2023) lighting design and controls	<b>Neutral residual effects</b>

## 6.7 Cumulative Impacts

A cumulative effect arises from incremental changes caused by other past, present or reasonably foreseeable future actions together with the proposed development. According to EPA (2022), cumulative effects can be described as “the addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects”.

Relevant plans and projects have been identified below.

### 6.7.1 Plans

**The Dublin City Biodiversity Action Plan (2021-2025)**<sup>15</sup> was also considered regarding local ecology and action plans put in place to achieve the protection and enhancement of the Dublin’s biodiversity. The plan outlines Dublin City Council's strategy to conserve and enhance biodiversity within the city from 2021 to 2025. It emphasises the importance of biodiversity for the city's ecological health, climate resilience, and residents' well-being. The plan's objectives align with the conservation goals of the Habitats Directive. Actions proposed within the plan aim to protect and enhance habitats and species, contributing positively to the integrity of Natura 2000 sites within Dublin City.

**The Fingal Development Plan 2023 – 2029**<sup>16</sup> was finalised on 22<sup>nd</sup> February 2023 and came into effect on 5<sup>th</sup> April 2023. The Fingal Development Plan prioritizes the protection and enhancement of biodiversity, ecological networks, and designated conservation sites, including Natura 2000 sites. It includes policies to safeguard habitats, species, and ecological corridors, ensuring no significant adverse effects on protected areas. The plan promotes native tree planting, green infrastructure, and nature-based solutions to mitigate climate change and support ecosystem services. Strict controls are in place to prevent habitat fragmentation, pollution, and encroachment on ecologically sensitive areas. Additionally, development proposals must comply with EU and national environmental legislation, including the Habitats and Birds Directives, to maintain ecological integrity and sustainable land use. The plan encourages high-density, mixed-use employment and commercial developments within the airport zone, aiming to optimize land use and bolster economic growth.

**The Dublin Airport Local Area Plan (LAP) 2020-2026**<sup>17</sup> incorporates key environmental considerations, including climate action, sustainable transport, flood risk management, and biodiversity protection. It highlights the need for strategic water management and emission reduction measures to mitigate the

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<sup>15</sup> [https://www.dublincity.ie/sites/default/files/2022-07/dcc-bioap-2021-2025-webv\\_21.07.22.pdf](https://www.dublincity.ie/sites/default/files/2022-07/dcc-bioap-2021-2025-webv_21.07.22.pdf)

<sup>16</sup> <https://www.fingal.ie/development-plan>

<sup>17</sup> <https://www.fingal.ie/dublin-airport-local-area-plan-2020>

environmental impact of airport expansion. The plan acknowledges the presence of Natura 2000 sites and ensures compliance with the EU Habitats and Birds Directives through Appropriate Assessment screening. This process evaluates potential impacts on designated ecological sites, ensuring that no significant adverse effects occur. The LAP aims to balance airport development with environmental sustainability and habitat conservation. Dublin Airport LAP was amended to extend to the year 2030 earlier in 2025 – expand on this.

**The Dublin City Development Plan 2022-2028**<sup>18</sup> was adopted at a Special Council meeting on the 2<sup>nd</sup> of November 2022. The Dublin City Development Plan 2022-2028 emphasises a commitment to climate action, aiming for a 40% reduction in the Council's greenhouse gas emissions by 2030, with a more ambitious target of 55% as a signatory to the Covenant of Mayors. The plan outlines strategies across various sectors, including energy-efficient building practices, sustainable transportation, flood resilience, and the promotion of green infrastructure, all aimed at transitioning Dublin into a low-carbon, climate-resilient city.

The management of the Dublin Airport follows the Bird and Wildlife Management at Aerodromes Plan (NBWHC)<sup>19</sup>, which documents the approved management controls for the safe operation of the airport. It is primarily concerned with bird control and reducing the potential for bird strikes. Other elements covered by the plan include the management of open grasslands to discourage ground nesting birds, as well as the annually licenced capture and release of Irish hare.

Regarding the potential for interaction between the proposed development and the Dublin City Development Plan 2022-2028, the Dublin City Biodiversity Action Plan (2021-2025), the Fingal Development Plan (2023 – 2029), the Dublin Airport Local Area Plan (LAP) 2020-2026 and the Bird and Wildlife Management at Aerodromes Plan (NBWHC), these plans incorporate a range of environmental and natural heritage policy safeguards. These safeguards to protect the natural environment will also apply to the proposal described in this report. No significant cumulative impacts or in-combination effects are predicted between the proposal and any of the plans outlined above.

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<sup>18</sup> <https://www.dublincity.ie/residential/planning/strategic-planning/dublin-city-development-plan/development-plan-2022-2028>

<sup>19</sup> Bird and Wildlife Management at Aerodromes, (2021), Issue 1, Published by the National Bird and Wildlife Hazard Committee (NBWHC)

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### 6.7.2 Permitted and Proposed Developments in the Locality

A search of Fingal County Council’s online planning enquiry system<sup>20</sup> for granted or on-going planning applications that have the potential for in-combinations effects with the proposed development on nearby Natura 2000 sites was undertaken on the 25<sup>th</sup> of September 2025.

A radius of 5km was chosen as it was considered that anything outside of this distance would have a negligible in combination effect due to large amounts of road and rail infrastructure encircling the site and large amounts of urban sprawl with little to no connectivity found outside of the aforementioned infrastructure.

**Table 6.22:** List of granted and/or on-going planning applications within 5km of proposed development

Application No.	Applicant	Distance from Site	Proposed Development	Status
FW25A/0055E	Horizon Logistics Lt	0.5 km E	Construction of aviation-related logistics and warehousing units with ancillary offices, parking, and site works at Horizon Logistics Park, Dublin Airport vicinity.	Grant Permission
VA29N.317831	ESB	0.6 NSEW	Proposed development of three 110kV electricity circuits Electricity Development Application	Live Case
PL06F.310169 FW20A/0029	St. Margaret's Recycling & Transfer Centre Ltd Jerry Beades PC	0.9 SW	Retention for permanent continuation of use of the existing waste processing and transfer facility & the continued use of the existing buildings on site associated. Planning permission is sought for new proposed stormwater attenuation storage tanks and associated stormwater treatment infrastructure.	1st Refuse permission
SI06F.318538	Brian McDonnell, St. Margaret Recycling Centre Ltd	0.9 SW	Request to enter into pre-application consultation pursuant to Section 177E(1A) of the Planning and Development Act 2000, as amended.	Lodged Consultations Closed
NA29N.314724	Transport Infrastructure Ireland	1.3 E	Metrolink. Estuary through Swords, Dublin Airport, Ballymun, Glasnevin and City Centre to Charlemont, Co. Dublin. Railway (Metrolink - Estuary to	Requires Further Consideration

<sup>20</sup> <https://planning.agileapplications.ie/fingal/search-applications/>

Application No.	Applicant	Distance from Site	Proposed Development	Status
			Charlemont via Dublin Airport) Order [2022]	
PA06F.312131	Irish Water	1.9 SE	Greater Dublin Drainage Project consisting of a new wastewater treatment plant, sludge hub centre, orbital sewer, outfall pipeline and regional biosolids storage facility	Private Development – Application Case is ongoing
PL06F.247035 F16A/0060	Tony and Christine Daly Boroimhe Management No. 3 Limited	2.3 N	Construction of 6 no. houses with access from adjacent residential estate at Boroimhe Aspen and all associated works.	Planning Appeal Grant permission with revised conditions
PL06F.316184 F22A/0422	Degaemad Developments	2.4 NE	To consist of the following: (a) demolition of storage warehouse and construction of a replacement storage warehouse at the same site location; (b) the extension and upgrading of cladding on storage shed and removal of towers and silos; (c) minor internal changes to the trade counter building and provision of parking, building signage and all associated site and development works.	Planning Appeal Grant permission with conditions
PL06F.314040 F21A/0654	Dunne Better Build Limited Board of Management Holy Family SNS Joe Newman Angelo Cunningham Board of Cllr Joe Newman	2.5 N	Construction of parish centre and 58 unit sheltered housing apartments.	Planning Appeal Grant permission with revised conditions
PL06F.317687 FW23A/0149	Melvin Properties Limited	2.7 NW	Proposed development of a 220kV Gas Insulated Switchgear (GIS) substation on lands at Kilshane Road, and an underground 220kV transmission line connection to the existing Cruiserath 220kV substation.	Planning Appeal Grant Permissions with Conditions

Application No.	Applicant	Distance from Site	Proposed Development	Status
PL06F.309158 F20A/0023	Port Side Investments Ltd Joe Duffy Property Company Limited	3.4 NE	Construction of 3 no. buildings for motor vehicle service, sales & ESB substation	Planning Appeal Grant permission with revised conditions
VA06F.314894	Kilshane Energy Ltd.	4.2 SW	Proposed development of a 220kV Gas Insulated Switchgear (GIS) substation on lands at Kilshane Road, and an underground 220kV transmission line connection to the existing Cruiserath 220kV substation.	Electricity Development Application Approve with Conditions
JP06F.310145	Fingal County Council	4.7 NE	R132 Connectivity Project, to carry out road alteration works along the R132 at Sword, Co. Dublin	L.A. Dev. - AA Application Approve with Conditions

The proposed works will result in the loss of predominantly improved agricultural grassland. No significant habitat loss impacts are predicted as a result of the proposal. Likewise, no significant cumulative habitat effects are anticipated arising from potential interactions between the proposed works and other permitted or proposed developments in the vicinity.

In relation to cumulative disturbance or displacement effects on fauna due to increased activity or noise levels, none are envisaged, as only a minor increase in existing baseline levels is foreseen. Therefore, no significant cumulative disturbance or displacement effects on fauna are predicted.

The recent grant of permission under Ref F24A/0156 / 100460 and F25W/0055E (Horizon Logistics Ltd) are noted as a relevant and positive precedent for aviation-related logistics uses within the vicinity of Dublin Airport. No other additional developments of relevance for in-combination ecological effects were identified.

Given the scale, nature, and location of the proposed development, along with the embedded mitigation measures, no significant cumulative or in-combination impacts on biodiversity are predicted with any of the developments listed above.

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### EPA Licensed Facilities

A review of the EPA mapping tool determined that there are no IPPC, IPC or IEL<sup>21</sup> within the immediate vicinity of the site. The facilities listed in **Table 6.23** are located outside of the red line boundary and not within any SAC or SPA and are unlikely to influence the activities of the proposed development site.

**Table 6.23:** IEL/ IPC Licensed Facilities Proximal to the Proposed Development Site

IEL/IPC Name	License Number	License Status Type	Type/Category	Distance from the Proposed Development Site (PDS)
International Aerospace Coatings Limited	P0921-01	2gcl Licensed	IPC - Industry	1.5 km east of PDS
Dublin Aerospace Limited	P0480-02	Licensed	IEL - Industry	1.5 km east of PDS
Team Aer Lingus Limited	P0421-01	Other	IEL - Industry	1.6 km east of PDS
Anglo Beef Processors Ireland (Swords)	P0189-01	Industry	IPPC – Industry	3km east of PDS

Given the nature, scale and location of the proposed development considered in this report, significant cumulative impacts due to potential interaction with EPA licenced facilities are not envisaged.

### Existing Land-use and On- going Activities

Surrounding areas are primarily agriculture focused with numerous farmlands surrounding the site. The immediate surrounding land use comprises crop lands and grasslands. The neighbouring areas to the north and west are predominately comprised of agriculture, consisting of arable crops, animal grazing/silage harvesting, To the east of site, the airport is found along with all associated infrastructure. The proposed

<sup>21</sup> Integrated Pollution Control (IPC) Licence (formerly IPPC Licence), and Industrial Emissions Licence (IEL)

<sup>22</sup> [EPA Maps](#)

site, as well as the airport, lies within a network of major roadways; M1, M2, M3, and M50 motorways and also has major public transport corridors from the centre of Dublin serving the airport. To the north (beyond the agricultural land), northeast, and south of the site, urban sprawl, in the form of housing and commercial areas are present.

Given the nature, scale and location of the proposed development considered in this report, significant cumulative impacts due to potential interaction with existing land-use and on-going activities are not envisaged.

## 6.8 Monitoring and Reinstatement

### 6.8.1 Construction Phase

As part of monitoring for Invasive Alien Plant Species (IAPS) on site, a regular schedule of full site inspections should be undertaken by the ECoW across the main growing season for the full duration of the construction phase.

As per the CEMP document, the project ecologist shall supervise the sampling of suspended solids downstream prior to commencement of works, and weekly during remediation works. Samples will be analysed on site. Should results show a 10% increase in suspended solids downstream of the site this will be brought to the attention of the contractor by the Project Ecologist and any suitable contingency measures will be instigated.

The project ecologist will also keep a record of any works undertaken.

### 6.8.2 Operational Phase

As part of monitoring for IAPS on site, a regular schedule of full site inspections should be undertaken by the ECoW across the first two years of the proposal's site operation.

## 6.9 Summary

The Proposed Development at Dublin Airport Western Campus has been subject to a comprehensive Ecological Impact Assessment (EclA) in accordance with CIEEM (2018) and EPA (2022) guidance.

Baseline surveys confirmed that the site is primarily of low ecological value, supporting common agricultural habitats with limited connectivity to ecologically sensitive receptors. No Annex I habitats or protected flora were recorded on-site.

Potential impacts on ecological features during construction and operation have been fully assessed. Mitigation measures have been incorporated into the project design, and best practice construction and operational management procedures will be implemented to avoid or minimise effects on local biodiversity.

With the application of the mitigation measures outlined, including sensitive lighting design, biosecurity controls, and ecological supervision, no significant residual impacts on Key Ecological Receptors are predicted.

The EclA (CIEEM, 2018; EPA, 2022) confirms a **low ecological baseline**, no Annex I habitats, and **limited connectivity** to sensitive receptors. With the **embedded design** and **mitigation** (CEMP, SuDS, on-site WWTP, lighting controls, biosecurity, and ecological supervision), **no significant residual impacts** are predicted - alone or in combination with other plans/projects. It is concluded that the proposed development will not result in significant negative effects on biodiversity, either alone or in combination with other projects.

All conclusions have been drawn based on available best scientific evidence and in accordance with current guidance (CIEEM, 2018; EPA, 2022).

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## 7.0 Land, Soils and Geology

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### 7.1 Introduction

The aims of this EIAR section are to establish the following:

- Baseline conditions relevant to the land, soil and geological environment within the site boundary, and the local surrounding environs;
- Significant impacts, if any, on the land, soil and geological environment, which occurred as a result of the subject development;
- Cumulative impacts with respect to subject activities within the application site and other nearby activities of a similar nature;
- Suitable mitigation measures to address identified adverse impacts.

#### 7.1.1 Competency Statement

The following EIAR chapter has been prepared by Peter McCormick and Martijn Leenheer of ESC Environmental Ltd.

Peter McCormick is a Senior Consultant with ESC Environmental Ltd., and has 7 years' experience in the Environmental Sector, working with both the public and private sector. He holds a degree in Level 8 BSc (Hons) degree in Environmental Science from Atlantic Technological University (previously IT Sligo). He has experience in many aspects of environmental works including wastewater treatment system design, environmental permitting, water management, and specialises in ecological assessments (EclAs), Appropriate Assessments and Natura Impact Statements.

Martijn Leenheer BSc (Hons) of ESC Environmental LTD and assesses the Air Quality and Climate Impacts associated with the proposed continued use of the existing waste processing and transfer facility at St. Margaret's, Co. Dublin, together with proposed works described in further detail below. Martijn Leenheer holds a 1st Class BSc (Hons) degree in Environmental Science from Atlantic Technological University (previously IT Sligo) and has 11 years' experience in Ireland in soil remediation, invasive species commercial Wastewater Treatment, Discharge Licences, Waste Permits and Licences has been involved in Risk

Assessments, NIS and EIAR reports for various commercial projects. Before moving to Ireland Martijn worked in the Netherlands as an Environmental Field Technician in soil research. He has been an Operations Director of Environmental Services Consultancy for 11 Years and a Founding Director of ESC Environmental LTD since 2021.

## 7.2 Research Methodology

### 7.2.1 Criteria for Rating of Effects

This chapter evaluates the effects, if any, which the Proposed Development will have on Land, Soils, Geology and Hydrogeology as defined in the Environmental Protection Agency (EPA) 'Guidelines on the Information to be contained in Environmental Impact Assessment Reports' (EPA, 2022).

Due consideration is also given to the guidelines provided by the Institute of Geologists of Ireland (IGI) in the document entitled Guidelines for the Preparation of Soils, Geology and Hydrogeology Chapters of Environmental Impact Statements' (IGI, 2013).

The rating of potential environmental effects on the land, soil, and geological environment is based on the standard EIAR impact predictions which takes account of the quality, significance, duration, and type of effect characteristic identified (in accordance with impact assessment criteria provided in the EPA Guidelines (2022) publication).

The duration of each effect is considered to be either momentary, brief, temporary, short-term, medium term, long-term, or permanent. Momentary effects are considered to be those that last from seconds to minutes. Brief effects are those that last less than a day. Temporary effects are considered to be those which are construction related and last less than one year. Short term effects are seen as effects lasting one to seven years; medium-term effects lasting seven to fifteen years; long-term effects lasting fifteen to sixty years; and permanent effects lasting over sixty years.

The principal attributes (and effects) to be assessed include the following:

- Geological heritage sites in the vicinity of the perimeter of the development site;
- Landfills, industrial sites in the vicinity of the subject site and the potential risk of encountering contaminated ground.
- The quality, drainage characteristics and range of agricultural uses of soil around the site.
- Quarries or mines in the vicinity, the potential implications (if any) for existing activities and extractable reserves.

- The extent of topsoil and subsoil cover and the potential use of this material on site as well or requirement to remove it off-site as waste for disposal or recovery.
- High-yielding water supply springs/ wells in the vicinity of the subject site to within a 2km radius and the potential for increased risk presented by the Proposed Development.
- Classification (regionally important, locally important etc.) and the extent of aquifers underlying the site perimeter area and increased risks presented to them by the Proposed Development associated with aspects such as for example removal of subsoil cover, removal of aquifer (in whole or part), drawdown in water levels, alteration in established flow regimes, change in groundwater quality.
- Natural hydrogeological/karst features in the area and potential for increased risk presented by the activities at the site.
- Groundwater-fed ecosystems and the increased risk presented by operations both spatially and temporally.

### 7.2.2 Sources of Information

The initial evaluation consisted of inspections of the site and adjacent lands through the examination of aerial photography and Ordnance Survey plans, followed by a site walkover survey April 2025. As part of a desktop study relevant data was collated and reviewed from sources at Geological Survey of Ireland (1:100,000 Sheet 13: Geology of Dublin), Fingal County Council, Environmental Protection Agency (EPA), National Parks & Wildlife Service (NPWS), Ordnance Survey of Ireland (OSI), Teagasc and Met Eireann. A review of previous site investigation data was also included.

The report has been compiled primarily taking cognisance of:

- Guidelines for the preparation of soils, geology and hydrogeology chapters of environmental impact statement. Institute of Geologists of Ireland (2013);
- Revised guidelines on the information to be contained in Environmental Impact
- Guidelines on the information to be contained in Environmental Impact Assessment Reports, Environmental Protection Agency (2022);
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment. Department by the Department of Housing, Planning and Local Government (August 2018 and last updated on 18 December 2019).

## 7.3 Development Description

The proposed development, subject of this EIAR is as follows –

Permission is sought for –

1. Construction of four aviation-related cargo handling units with ancillary office space:
  - i. Unit 1: c.10,869.7 m<sup>2</sup> (including 940.9 m<sup>2</sup> office space)
  - ii. Unit 2: c.9,151.3 m<sup>2</sup> (including 751.3 m<sup>2</sup> office space)
  - iii. Unit 3: c.6,024.9 m<sup>2</sup> (including 497.7 m<sup>2</sup> office space)
  - iv. Unit 4: c.8,577.7 m<sup>2</sup> (including 751.3 m<sup>2</sup> office space)

The proposed units will have an overall combined total gross floor area (GFA) of c. 34, 623.6m<sup>2</sup> (alongside ancillary ESB substations, 4 no. security huts with a combined GFA of 30 sqm and pumphouses). The warehouses are c. 12m in height, with the office element being c. 3.3 m in height and located within a landscaped campus on a site of c. 10.7 Ha

2. Provision of 390 car parking spaces, including 39 EV charging points, 19 accessible spaces, and motorcycle bays.
3. Provision of 230 secure bicycle parking spaces, of which 100 are short stay spaces and 130 are sheltered long stay spaces.
4. Provision of approx. 77 truck parking spaces and 5 van spaces.
5. Hard and soft landscaping, new boundary treatments, including a c. 2m high System Wire Fence to site boundary.
6. Construction of new site entrance onto the R108.
7. Wastewater treatment plant and infiltration area for 250 PE.
8. All necessary site development and engineering and ancillary site works, including provision of ESB substations and switchrooms, sprinkler tanks and pumphouses, bin store and recycle store, lighting, signage, underground services, photovoltaic panel zones at roof level and sustainable drainage systems (SuDS).

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## 7.4 Receiving Environment

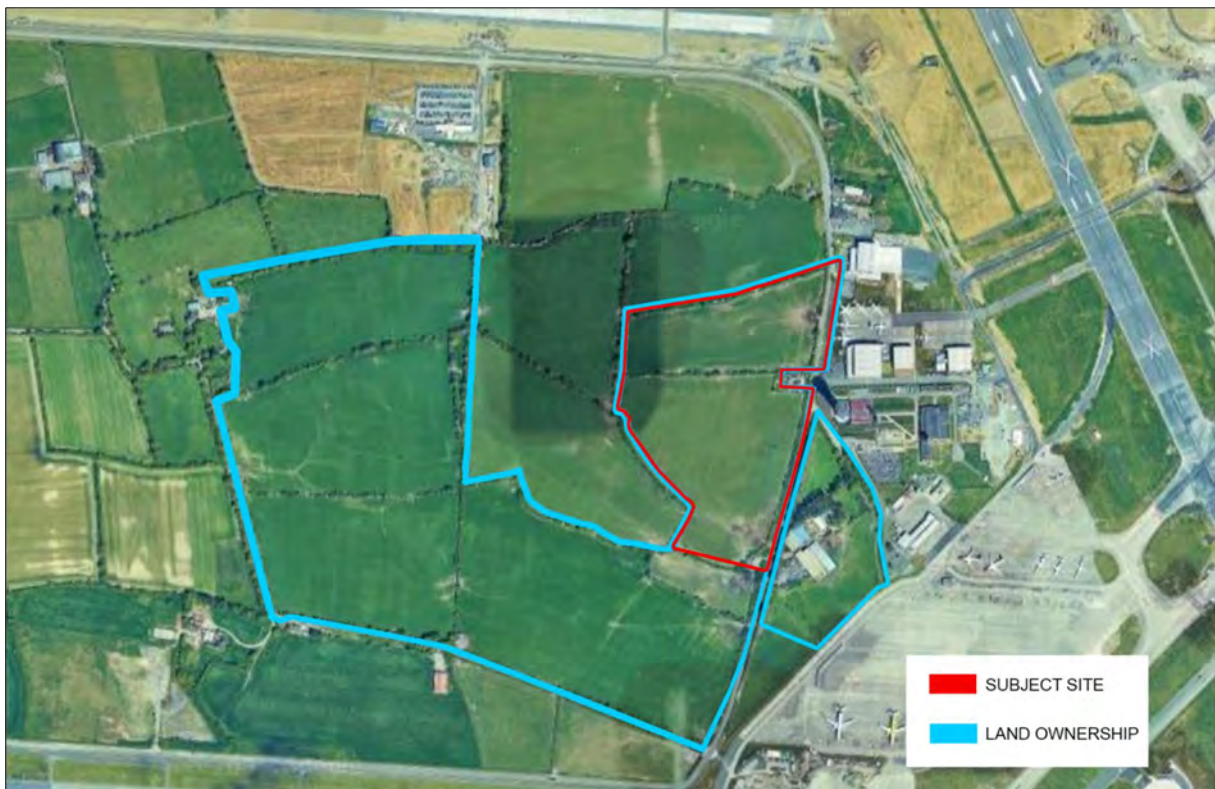
The receiving environment is discussed in terms of land, geology, soils and site history including potential for existing and historical contamination.

### 7.4.1 General Description of the Site

The site is located to the west of the R108 approximately 1.5 km east of St. Margarets townland, Co. Dublin.

In terms of regional topography, lands are considered to be flat and low lying, decreasing in gradient from west to east towards the coastline. Undulations are within a narrow range between 70-85 mOD. On a more local scale topography is very flat and shown on OSI 1: 50,000 Discovery maps to be at an elevation between 70-80 mOD.

The site is bounded on all sides by agricultural fields which support a mixture of medium to high intensity grassland and tillage production. The boundary of Dublin Airport lands comes to within 20 m of the eastern site boundary. This part of the airport contains the west apron where aircraft are parked. The lands containing the Southern Runway from Dublin Airport are located approx. 310m to the South. The nearest buildings directly connected to airport activity are 2.3 km to the east.



**Figure 7.1:** Site Outline

**Source:** Google Earth

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### 7.4.2 Land Use

The site comprises entirely of agricultural fields. The site is bounded to the north west and south by agricultural fields which support a mixture of medium to high intensity grassland and tillage production. The R108 is located on the eastern boundary, with Dublin Airport facilities located 15m east of the boundary.

### 7.4.3 Soils

EPA soil maps of the site location show that the agricultural soils that originally overlaid ground at the existing facility, consisted principally of deep mineral soils displaying good drainage, although a large part of the target site is predicted as Gley soils which do not have the good drainage properties.

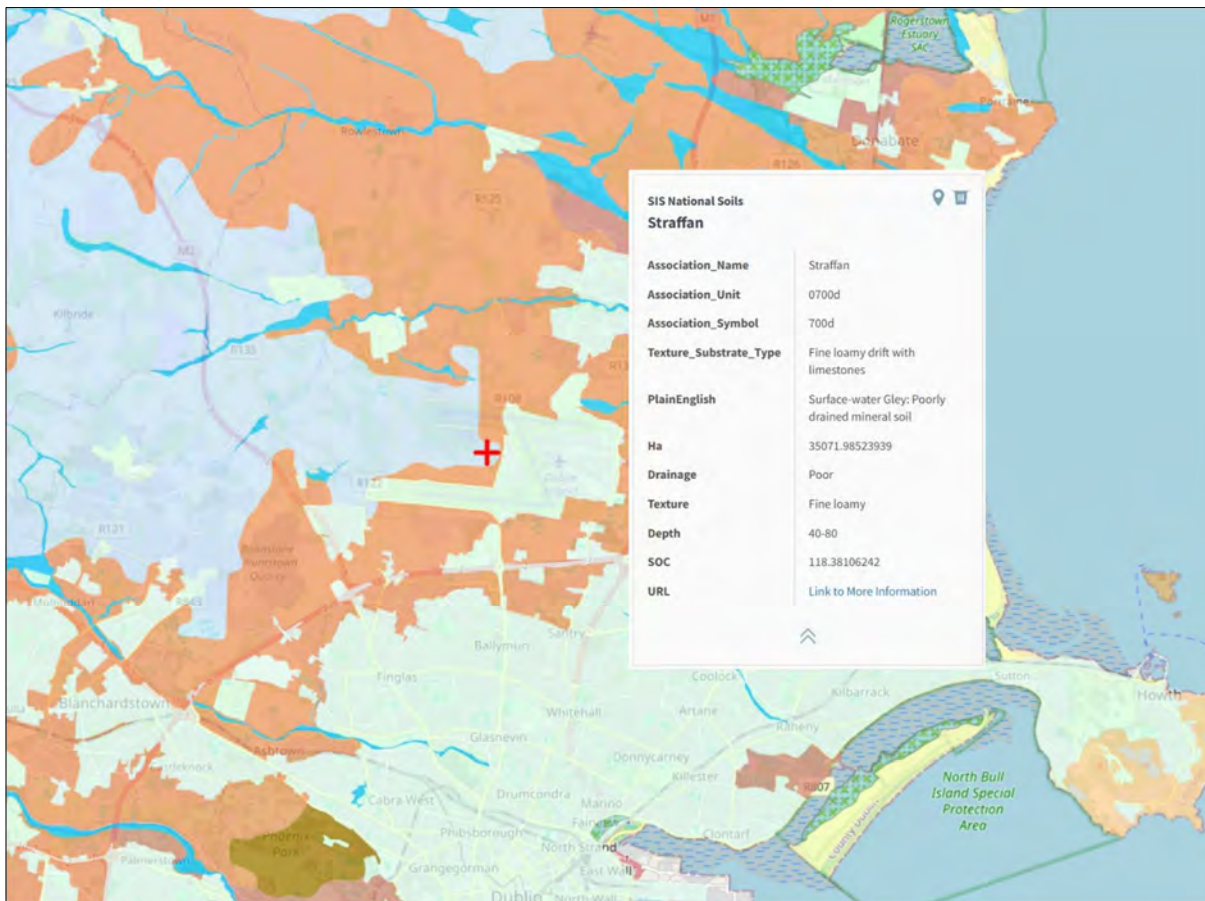


Figure 7.2: Soil Type Map

Source: EPA Maps

The Soils in the area are a mix of:

- Surface water Gleys, Ground water Gleys
- Grey-Brown Podzolics, Brown Earths (medium-high base status)
- Made ground

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### 7.4.4 Subsoils

The subsoil found throughout the site and surrounding area is till derived chiefly from limestone.

Figure 7.3 shows that subsoils underlying the site and the subsoil found throughout the site and in the surrounding areas is limestone-derived till, most of which was carried in from the Irish Sea and intermixed with the local limestone and shale.

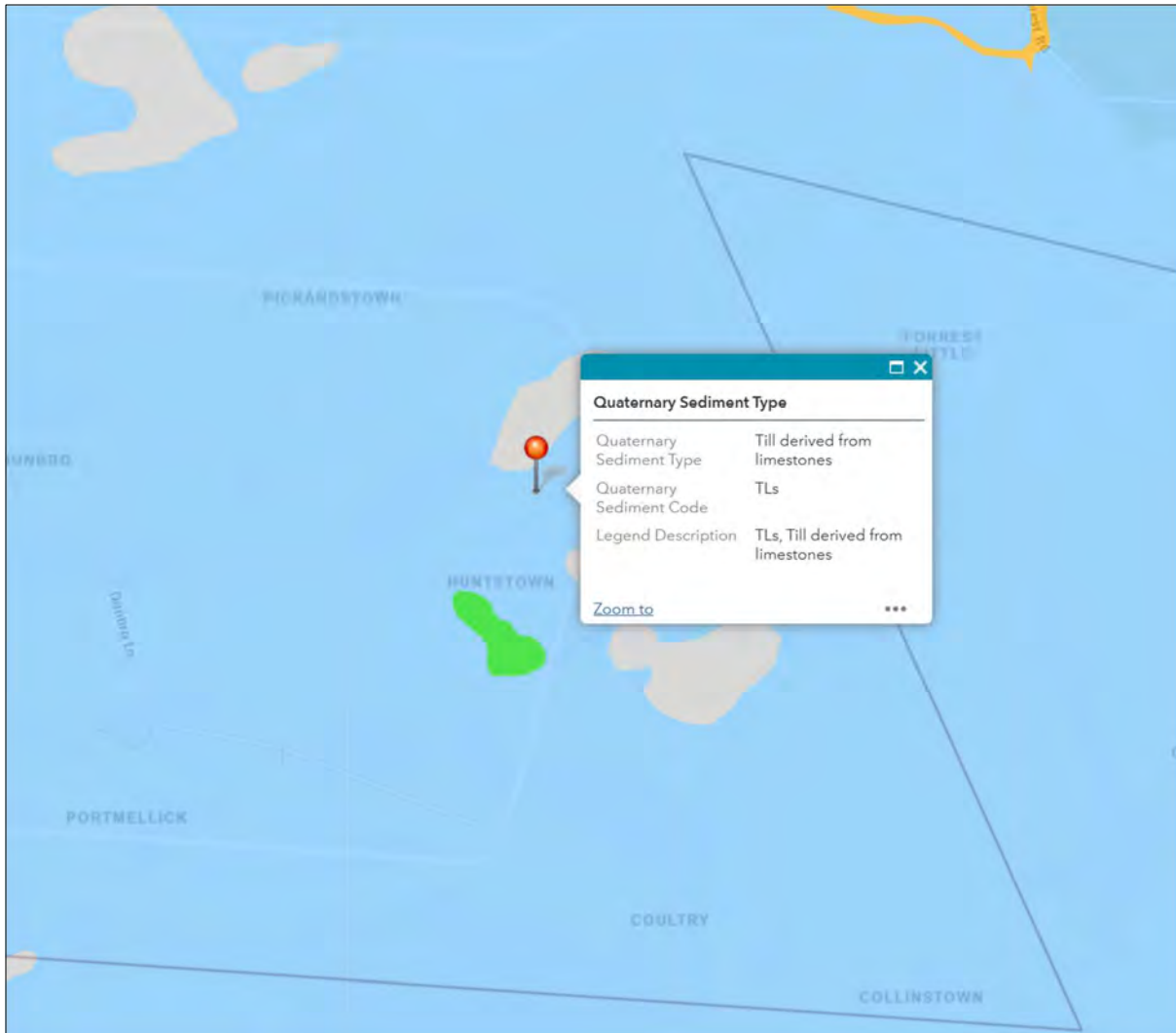


Figure 7.3: Site Subsoil Map

Source: Geological Survey Ireland

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### 7.4.5 Bedrock Geology

The bedrock in the proposed site area is Calcareous shale, limestone conglomerate from the Tober Colleen Formation as can be seen in Figure 7.4 below.

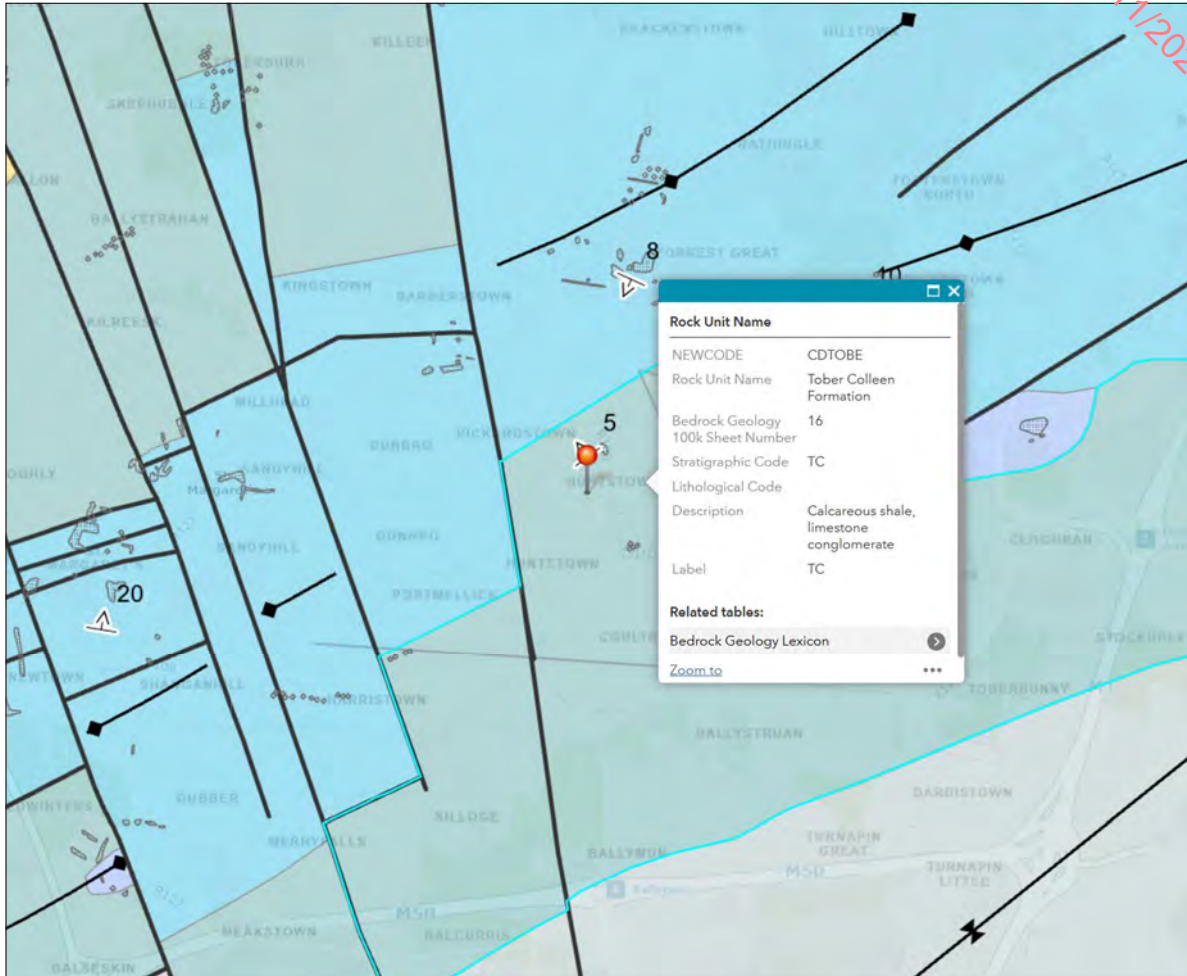


Figure 7.4: Bedrock Type Map

Source: Geological Survey Ireland

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### 7.4.6 Regional Hydrogeology

Locally Important Aquifers: Locally important aquifers are capable of supplying locally important abstractions (e.g. smaller public water supplies, group schemes), or good yields (100-400 m<sup>3</sup>/d). In the bedrock aquifers, groundwater predominantly flows through fractures, fissures, joints or conduits. Locally important sand/gravel aquifers are typically >1 km<sup>2</sup>, and groundwater flows between the sand and gravel grains. This group is subdivided into the following types: Lm Locally Important Bedrock Aquifer which is Generally Moderately Productive, LI Locally Important Bedrock Aquifer which is Moderately Productive only in Local Zones, Lk Locally Important Karstified Bedrock Aquifer, and Lg Locally Important Sand/Gravel Aquifer.

The aquifer around the proposed site is classed as LI, Moderately Productive only in Local Zones. This is further discussed in chapter 8 Water and Hydrology.

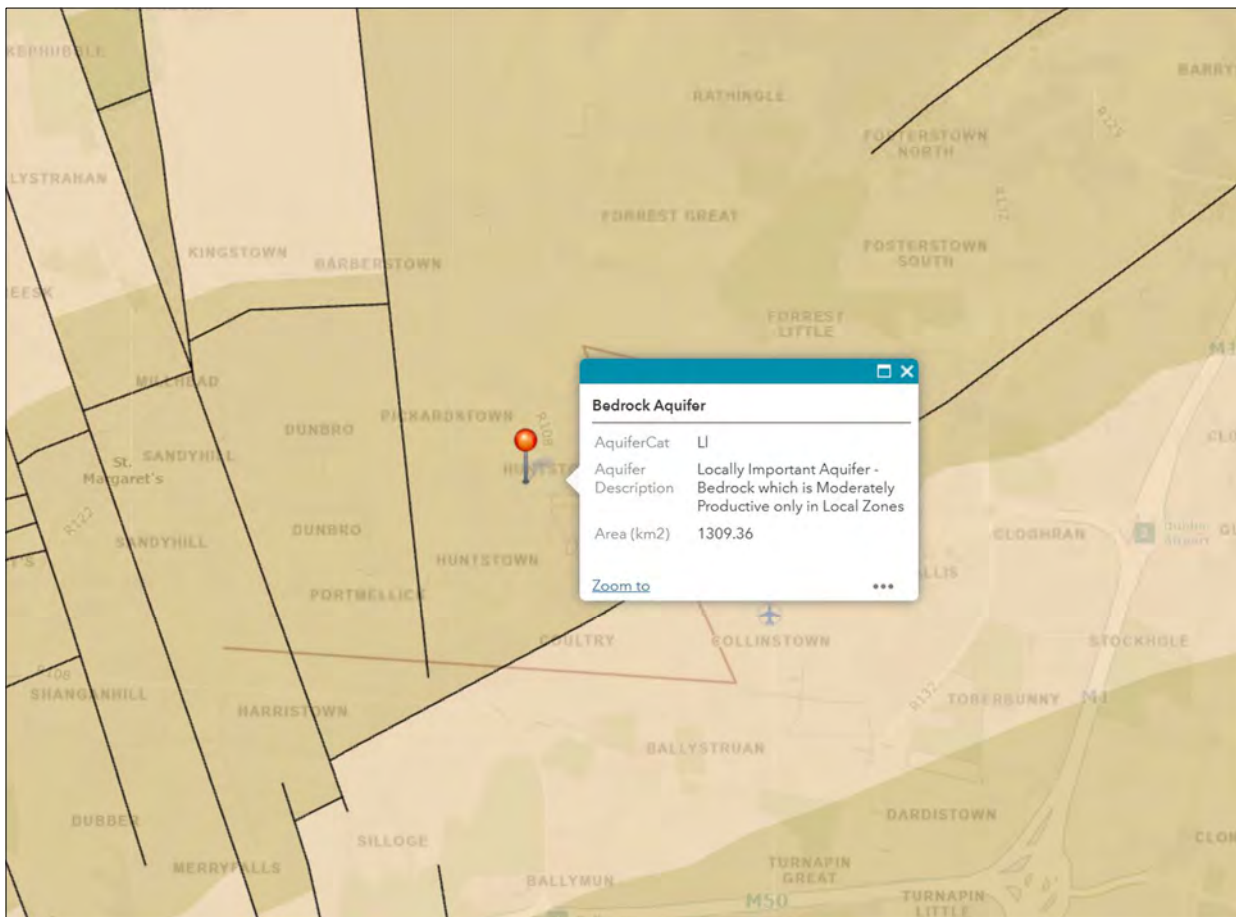
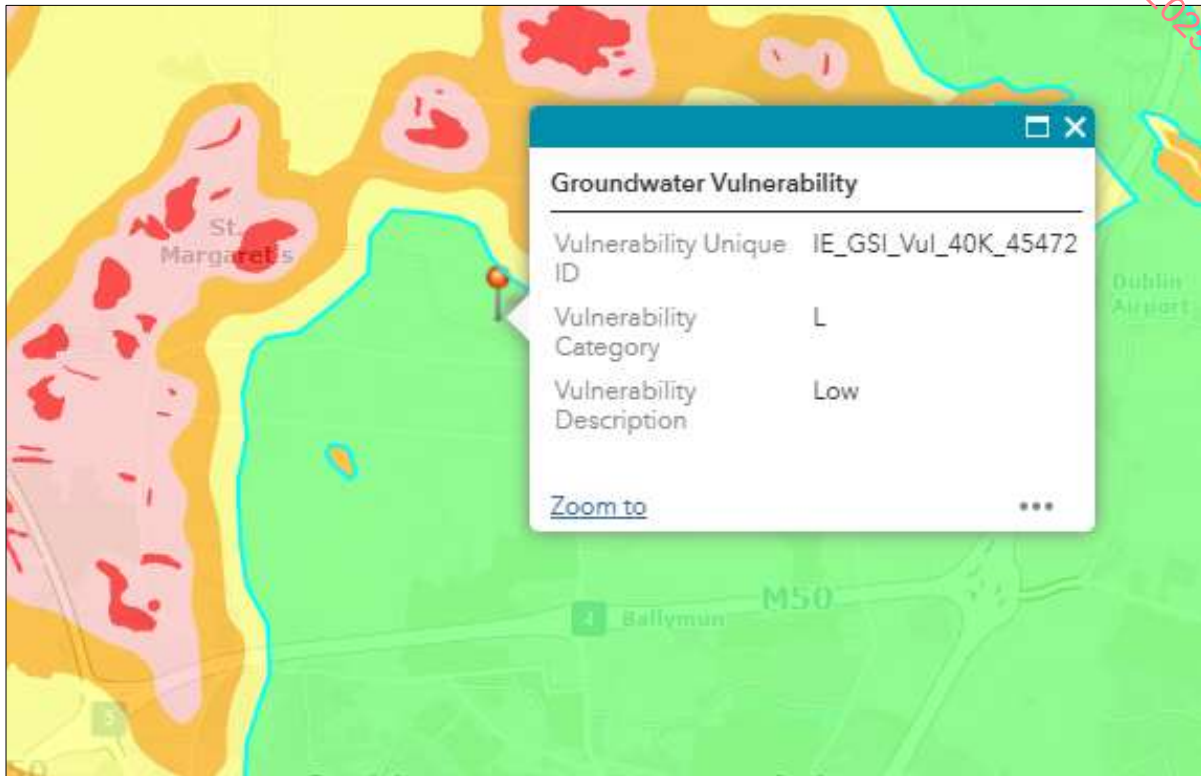


Figure 7.5: Aquifer Category Map

Source: Geological Survey Ireland

### 7.4.7 Aquifer Vulnerability

The aquifer vulnerability of the proposed site is classified as High (H) on the GSI mapping tool. This is further discussed in chapter 8 Hydrogeology and Hydrology.



**Figure 7.6:** Aquifer Vulnerability Map

**Source:** Geological Survey Ireland

### 7.4.8 Economic Geology

The GSI (2024) mineral database was consulted to determine whether there were any mineral sites in the area of the subject site. As stated, the Huntstown Quarry is relatively close to the subject site (c. 4.2 km to the southwest) and is an active limestone quarry.

### 7.4.9 Geologic Heritage

There are no sites of geological heritage on the site or in the immediate surrounding area. The closest geological heritage site is Huntstown Quarry, 4.2 km to the southwest.

#### 7.4.10 Geohazards

Much of the Earth's surface is covered by unconsolidated sediments which can be especially prone to instability. Water often plays a key role in lubricating slope failure. Instability is often significantly increased by man's activities in building houses, roads, drainage and agricultural changes. Landslides, mud flows, bog bursts (in Ireland) and debris flows are a result. In general, Ireland suffers few landslides. Landslides are more common in unconsolidated material than in bedrock, and where the sea constantly erodes the material at the base of a cliff and leads to recession of the cliffs. Landslides have also occurred in Ireland in recent years in upland peat areas due to disturbance of peat associated with construction activities. The GSI landslide database was consulted and the landslide in closest proximity to the proposed development was approximately 2 km to the southwest of the site, referred to as the M3 J4 Clonee 2014 which occurred on 3rd February 2014. There have been no recorded landslide events at the site. Due to the generally flat/level local topography and the underlying strata there is a negligible risk of a landslide event occurring at the site.

In Ireland, seismic activity is recorded by the Irish National Seismic Network. The Geophysics Section of the School of Cosmic Physics at the Dublin Institute for Advanced Studies (DIAS) has been recording seismic events in Ireland since 1978. The station configuration has varied over the years. Currently there are five permanent broadband seismic recording stations in Ireland and operated by DIAS. The seismic data from the stations comes into DIAS in real-time and are studied for local and regional events. Records since 1980 show that the nearest seismic activity to the proposed location was in the Irish sea (1.0 – 2.0 Ml magnitude) and ~55 km to the south in the Wicklow Mountains.

There is a very low risk of seismic activity in the vicinity of the proposed development site. There are no active volcanoes in Ireland so there is no risk from volcanic activity.

### 7.5 Predicted Impacts

The procedure for determination of the potential impacts on the receiving soil and geological environment is to identify potential receptors within the site boundary and surrounding environment and use the information gathered during the desk study and field work to assess the degree to which these receptors will be impacted upon. Impacts are described in terms of quality, significance, duration and type in accordance with current EIA guidelines (EPA, 2017; DHPLG, 2018). The impact definitions and criteria are further detailed in Table 1.2..

In accordance with the NRA Guidelines (2009) (as included in 'Guidelines for the Preparation of Soils, Geology and Hydrogeology Chapters of Environmental Impact Statements' (IGI, 2013)), the site is deemed to be an attribute of medium quality, significance or value on a local scale in its current use as agricultural field.

The potential impacts from the construction and operational phases of the proposed development are summarised below and in further detail.

### 7.5.1 Construction Phase

In advance of work starting on site, the works Contractor will prepare a detailed Construction Environmental Management Plan (CEMP)/Resource Waste Management Plan (RWMP). The detailed CEMP/ RWMP will set out the overarching vision of how the construction of the Proposed Development will be managed in a safe and organised manner by the Contractor. The CEMP/ RWMP will be a live document and it will go through a number of iterations before works commence and during the works. It will set out requirements and standards which must be met during the construction stage and will include the relevant mitigation measures outlined in the EIA Report and any subsequent planning conditions relevant to the Proposed Development.

As a minimum, the CEMP will be formulated in accordance with best international practice including but not limited to:

- CIRIA, (2001), Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors, (C532) Construction Industry Research and Information Association
- CIRIA (2002) Control of water pollution from construction sites: guidance for consultants and contractors (SPI56) Construction Industry Research and Information Association
- CIRIA (2005), Environmental Good Practice on Site (C650); Construction Industry Research and Information Association
- BPGCS005, Oil Storage Guidelines;
- Eastern Regional Fisheries Board, (2006), Fisheries Protection Guidelines: Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites;
- CIRIA 697, The SUDS Manual, 2007; and
- UK Pollution Prevention Guidelines (PPG) UK Environment Agency, 2004.
- BEST PRACTICE GUIDELINES for the preparation of resource & waste management plans for construction & demolition projects, EPA (2021)

In order to reduce impacts on the soil, geological and hydrogeological environment, a number of mitigation measures will be adopted as part of the construction works on site as outlined below.

### 7.5.2 Excavation and Infilling

Due to the lack of previous development at the site and the historical agricultural use at the site, the risk of contaminated soils being present onsite is low. Nonetheless material, which is exported from site, if not correctly managed or handled, could impact negatively on human beings (onsite and offsite) as well as water and soil environments.

The levelling of ground and excavation for foundations will require the excavation of topsoil, subsoil and bedrock,

All this excavated material will be reused on site for landscaping of the berms where possible. Import of fill will not be required. Site preparation, excavations and levelling works required to facilitate construction of foundations, access roads and the installation of services will require imported material. Suitable soils will be reused on site as backfill in the grassed areas, where possible.

It is expected during the excavation works that localised dewatering of the subsoils will be required to address perched groundwater. It can be expected minor ingress of rainfall in the excavation to occur during construction phase.

In the absence of mitigation, the effect on the local and regional environment is likely to be **temporary, slight and negative**. The effect is considered to be 'slight' due to the fact that there will not be intervention on the geological and hydrological regime on a local or regional scale.

According to desktop investigations, the groundwater vulnerability is 'Low'. The removal and reinstatement of subsoil cover will not alter the vulnerability. The deposition of infill soil would increase the overburden thickness and thus may even decrease the groundwater vulnerability.

Stockpiles have the potential to cause negative impacts on air and water quality.

### 7.5.3 Accidental Spills and Leaks

As with all construction projects there is potential for water (rainfall and/or groundwater) to become contaminated with pollutants associated with construction activity. Contaminated water which arises from construction sites can pose a significant temporary risk to groundwater quality for the duration of the construction if contaminated water is allowed percolate to the aquifer.

During construction of the development, there is a risk of accidental pollution incidences from the following sources:

- Suspended solids (muddy water with increase turbidity) – arising from excavation and ground disturbance;
- Cement/concrete (increase turbidity and pH) – arising from construction materials;
- Hydrocarbons (ecotoxic) – accidental spillages from construction plant or onsite storage;
- Wastewater (nutrient and microbial rich) – arising from accidental discharge from on-site toilets and washrooms.

Accidental spillages which are not mitigated may result in localised contamination of soils and groundwater underlying the site should contaminants migrate through the subsoils and impact the underlying groundwater. Groundwater vulnerability at the site is currently classified as extreme, high, and moderate in the south, central portion, and north of the site respectively. Any soil stripping will also further reduce the thickness of subsoil and the natural protection they provide to the underlying aquifer.

In the absence of mitigation, the effect on the local and regional environment is likely to be **temporary**, **slight** and **negative**. The effect is considered to be 'slight' due to the fact that there will not be intervention on the geological and hydrological regime on a local or regional scale.

#### 7.5.4 Loss of Agricultural Land

There will be local loss of agricultural soil however the area of development is small in the context of the overall agricultural land available in the region. The majority of the land is zoned for development. Within the overall context of Ireland's available farmland, the loss is negligible. There will be no impact to mineral resources in the area as a result of the Proposed Development.

#### 7.5.5 Control of Water During Construction

Care will be taken to ensure that exposed soil surfaces are stable to minimise erosion. All exposed soil surfaces will be within the main excavation site which limits the potential for any offsite impacts.

Should any discharge of construction water be required during the construction phase, discharge will be to the local drainage ditches. Pre-treatment and silt reduction measures on site will include a combination of

silt fencing, settlement measures (silt or sediment traps, 20 m buffer zone between machinery and watercourses, refuelling of machinery off site) and hydrocarbon interceptors where required.

Any minor ingress of groundwater and collected rainfall in the excavation will be pumped out during construction. It is estimated that the inflow rate of groundwater will be low. It is therefore proposed that the water be discharged via the existing drain network. Extensive monitoring will be adopted to ensure that the water is of sufficient quality to discharge to the local drainage ditch. The use of slit traps and an oil interceptor (if required) will be adopted if the monitoring indicates the requirements for the same with no silt or contaminated water permitted to discharge to the sewer. There may be localised pumping of surface run-off from the excavations during and after heavy rainfall events to ensure that the excavations are kept relatively dry. Due to the very low permeability of the underlying gley soil on site and the relative shallow nature for excavations, infiltration to the underlying aquifer is not anticipated.

### 7.5.6 Operational Phase

There is limited potential of impact during the operational phase as the warehouse units will form a low risk to soil and groundwater.

The design includes hardstand cover and permeable paving across the site prior to discharge into the attenuation system. Therefore, the risk of accidental discharge has been adequately addressed through design.

Petrol interceptors will be installed as part of the SuDS measures to capture any potential oil or hydrocarbon contamination prior to discharge into the attenuation system on site. This together with hardstand cover and permeable paving will minimise the potential for any impact to the hydrological environment.

### 7.5.7 Do Nothing Scenario

In the do-nothing scenario the land will remain agricultural fields.

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## 7.6 Mitigation Measures

### 7.6.1 Construction Phase

#### 7.6.1.1 Control of Soil Excavation

Temporary storage of soil will be carefully managed in such a way as to prevent any potential negative impact on the receiving environment and the material will be stored away from any open surface water drains. Movement of material will be minimised in order to reduce degradation of soil structure and generation of dust.

Although there is no evidence of historical contamination in the proposed development area, all excavated materials will be visually assessed for signs of possible contamination such as staining or strong odours. Should any unusual staining or odour be noticed, samples of this soil will be analysed for the presence of possible contaminants in order to ensure that historical pollution of the soil has not occurred. Should it be determined that any of the soil excavated is contaminated, this will be disposed of by a licensed waste disposal contractor.

Stockpiles have the potential to cause negative impacts on air and water quality. The effects of soil stripping and stockpiling will be mitigated against through the implementation of appropriate earthworks handling protocol during construction. It is anticipated that any stockpiles will be formed within the boundary of the site and there will be no direct link or pathway from this area to any surface water body. Overburden material will be protected from exposure to wind by storing the material in sheltered parts of the site, where possible.

Contractors shall be required to submit and adhere to a method statement indicating the extent of areas likely to be affected and demonstrating that this is the minimum disturbance necessary to achieve the required works.

#### 7.6.1.2 Fuel and Chemical Handling

To minimise any impact on the underlying subsurface strata from material spillages, all oils, solvents and paints used during construction will be stored within temporary bunded areas. Oil and fuel storage tanks shall be stored in designated areas, and these areas shall be bunded to a volume of 110% of the capacity of the largest tank/container within the bunded area(s) (plus an allowance of 30 mm for rainwater ingress). Drainage from the bunded area(s) shall be diverted for collection and safe disposal.

Refuelling of construction vehicles and the addition of hydraulic oils or lubricants to vehicles will take place in a designated area (or where possible off the site) which will be away from surface water gulleys or drains. In the event of a machine requiring refuelling outside of this area, fuel will be transported in a mobile double

skinned tank. An adequate supply of spill kits and hydrocarbon adsorbent packs will be stored in this area. All relevant personnel will be fully trained in the use of this equipment. Guidelines such as "Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors" (CIRIA 532, 2001) will be complied with.

Where feasible all ready-mixed concrete will be brought to site by truck. A suitable risk assessment for wet concreting will be completed prior to works being carried out which will include measures to prevent discharge of alkaline wastewaters or contaminated storm water to the underlying subsoil.

Wash down and washout of concrete transporting vehicles will take place at an appropriate facility offsite.

In the case of drummed fuel or other chemical which may be used during construction, containers will be stored in a dedicated internally banded chemical storage cabinet and labelled clearly to allow appropriate remedial action in the event of a spillage.

#### 7.6.1.3 Control of Water During Construction

Care will be taken to ensure that exposed soil surfaces are stable to minimise erosion. All exposed soil surfaces will be within the main excavation site which limits the potential for any offsite impacts.

Should any discharge of construction water be required during the construction phase, discharge will be to the local drainage ditches. Pre-treatment and silt reduction measures on site will include a combination of silt fencing, settlement measures (silt or sediment traps, 20 m buffer zone between machinery and watercourses, refuelling of machinery off site) and hydrocarbon interceptors. All water runoff from designated refuelling areas will be channelled to an oil interceptor or an alternative treatment system prior to discharge if required.

Any minor ingress of groundwater and collected rainfall in the excavation will be pumped out during construction. It is estimated that the inflow rate of groundwater will be low. It is therefore proposed that the water be discharged via the existing drain network. Extensive monitoring will be adopted to ensure that the water is of sufficient quality to discharge to the local drainage ditch. The use of slit traps and an oil interceptor (if required) will be adopted if the monitoring indicates the requirements for the same with no silt or contaminated water permitted to discharge to the sewer. There may be localised pumping of surface run-off from the excavations during and after heavy rainfall events to ensure that the excavations are kept relatively dry. Due to the very low permeability of the Dublin Boulder Clay and the relative shallow nature for excavations, infiltration to the underlying aquifer is not anticipated.

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## 7.7 Monitoring Measures

Daily visual inspection will be undertaken by the contractor at the silt trap/ settlement tank to ensure adequate internal settlement is occurring. Where the visual assessment highlights elevated suspended sediments higher than expected, the water will be re-circulated for further settlement.

Weekly checks will be carried out to ensure surface water drains are not blocked by silt, or other items, and that all storage is located at least 10 m from surface water receptors. Regular inspection of surface water run-off and any sediment control measures will be carried out during the construction phase.

Regular auditing of construction / mitigation measures will be undertaken, e.g. concrete pouring, refuelling in designated areas, etc. A log the regular inspections will be maintained, and any significant blockage or spill incidents will be recorded for root cause investigation purposes and updating procedures to ensure incidents do not occur.

## 7.8 Residual Impacts

### 7.8.1 Construction Phase

The implementation of mitigation measures highlighted above will ensure that the predicted impacts on the Land, Soils & Geology do not occur during the construction phase and that the residual impact will be **permanent, imperceptible** and **neutral**.

### 7.8.2 Operational Phase

The implementation of mitigation measures highlighted above will ensure that the predicted impacts on the Land, Soils & Geology do not occur during the construction phase and that the residual impact will be **permanent, imperceptible** and **neutral**.

## 7.9 Cumulative Assessment

### 7.9.1 Construction Phase

No cumulative impacts are predicted on Land, Soils & Geology

### 7.9.2 Operational Phase

No cumulative impacts are predicted on Land, Soils & Geology

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## 8.0 Hydrology and Hydrogeology

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### 8.1 Introduction

This chapter assesses and evaluates the potential impacts of the Proposed Development on the hydrological aspects of the site and surrounding area, in accordance with the requirements of Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (i.e. the EIA Directive) (European Union, 2014a).

The aims of this EIA Section are to establish the following:

- Baseline conditions relevant to the hydrological and hydrogeological environment within the site boundary and the local surrounding environs
- Significant impacts, if any, on the water environment, which can be reasonably expected to occur as a result of the proposed development
- Cumulative impacts with respect to proposed activities within the application site and other nearby activities of a similar nature
- Suitable mitigation measures to address identified adverse impacts

#### 8.1.1 Statement of Competency

The following EIA section has been prepared by Peter McCormick, Martin Leenheer and Dylan Cox of ESC Environmental Ltd. This Chapter also provides a characterisation of the receiving hydrological environment within the proposed Project and within a wider study area in the vicinity of the proposed Project. In assessing likely potential and predicted effects, account is taken of both the importance of the attributes and the predicted scale and duration of the likely effects.

Martijn Leenheer BSc (Hons) of ESC Environmental LTD and assesses the Air Quality and Climate Impacts associated with the proposed development of an aviation related cargo handling facility at Huntstown, Co.

Dublin together with proposed works described in further detail below. Martijn Leenheer holds a 1st Class BSc (Hons) degree in Environmental Science from Atlantic Technological University (previously IT Sligo) and has 11 years' experience in Ireland in soil remediation, invasive species commercial Wastewater Treatment, Discharge Licences, Waste Permits and Licences has been involved in Risk Assessments, NIS and EIAR reports for various commercial projects. Before moving to Ireland Martijn worked in the Netherlands as an Environmental Field Technician in soil research. He has been an Operations Director of Environmental Services Consultancy for 11 Years and a Founding Director of ESC Environmental LTD since 2021.

Dylan Cox holds a BSc (Hons) in Environmental Science and Ecology from ATU Sligo. He has a multidisciplinary background in environmental science, with demonstrated competencies in ecology, water quality assessment, energy management, and Environmental Impact Assessment (EIA) planning. Dylan has practical experience in both laboratory and field-based environmental monitoring, including spectroscopy and in-situ water quality testing. He has contributed to environmental compliance and sustainability initiatives through his work with the Waste Enforcement and Green Team at Sligo University Hospital.

Design Input for the Subject Site Wastewater Treatment Plant was provided by Gordon Mitchell B.Eng MIEI. Gordon holds a Diploma in Civil Engineering from DIT Bolton Street and a B.Eng in Structural Engineering from Cork Institute of Technology (CIT). With over 25 years of experience in civil and structural engineering, he has played a lead role in the design and delivery of wastewater treatment infrastructure across multiple developments. His contributions to EIARs include technical design input, infrastructure integration, and construction-phase mitigation planning, in full compliance with EPA guidelines and the EIA Directive (2014/52/EU).

### 8.1.2 Relevant Guidance

The hydrological baseline assessment has been carried out in accordance with the following guidance and established best practice:

- Environmental Protection Agency (EPA) Advice notes on current practice in the preparation of Environmental Impact Statement (EPA, 2015) and Guidelines on the Information to be contained in Environmental Impact Statements (EPA, 2022).

- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment. Department by the Department of Housing, Planning and Local Government (August 2018 and last updated on 18 December 2019)
- Environmental Impact Assessment of Projects, Guidance on the preparation of the Environmental Impact Assessment Report (European Commission, 2017).
- Transport Infrastructure Ireland - Road Drainage and Water Environment (TII, 2015).
- Transport Infrastructure Ireland (previously National Road Authority) - Guidelines on Procedures for Assessment and Treatment of Geology, Hydrology and Hydrogeology for National Road Schemes (TII, 2009).
- Water Framework Directive (WFD) - Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy. This relates to the improvement of water quality across Ireland including rivers and groundwater bodies.
- The Planning System and Flood Risk Management, Guidelines for Planning Authorities (Department of the Environment, Heritage and Local Government (DoEHLG) and the Office of Public Works (OPW)).
- Guidelines on protection of fisheries during construction works in and adjacent to waters (Inland Fisheries Ireland, 2016).
- Guidelines for the Crossing of Watercourses during Construction of National Road Schemes, (TII, 2008)

Water resource management in Ireland is dealt with in the following key pieces of legislation and guidelines:

- European Communities Environmental Objectives (Surface Waters); Regulations, 2009 (S.I. No. 272 of 2009 as amended by SI No. 77 of 2019).
- Part IV of the First Schedule of the Planning and Development Act 2000, as amended.
- European Communities (Water Policy) Regulations 2003 (S.I. No. 722 of 2003).
- Environmental Protection Agency 'Towards Setting Guideline Values for the Protection of Groundwater in Ireland Interim Report', (EPA 2003).
- European Union (Drinking Water) Regulations 2014 (S.I. No. 122/2014).
- European Union (Drinking Water) (Amendment) Regulations (S.I. No. 464 of 2017).

### 8.1.3 Criteria for Rating of Effects

This chapter evaluates the effects, if any, which the development has had or will have on Hydrology as defined in the Environmental Protection Agency (EPA) 'Guidelines on the Information to be contained in Environmental Impact Assessment Reports' (EPA, 2022). The Draft EPA document entitled '*Advice Notes for*

*Preparing Environmental Impact Statements'* (EPA, 2015) is also followed in this hydrological assessment and classification of environmental effects. In addition, the document entitled '*Guidelines on Procedures for Assessment and Treatment of Geology, Hydrology and Hydrogeology for National Road Schemes*' by the National Roads Authority (NRA, 2009) is referenced where the methodology for assessment of impact is appropriate.

The rating of potential environmental effects on the hydrological environment is based on the standard EIA impact predictions table included in Chapter 1 Introduction which takes account of the quality, significance, duration, and type of effect characteristic identified (in accordance with impact assessment criteria provided in the EPA Guidelines (2022) publication).

The duration of each effect is considered to be either momentary, brief, temporary, short-term, medium term, long-term, or permanent. Momentary effects are considered to be those that last from seconds to minutes. Brief effects are those that last less than a day. Temporary effects are considered to be those which are construction related and last less than one year. Short term effects are seen as effects lasting one to seven years; medium-term effects lasting seven to fifteen years; long-term effects lasting fifteen to sixty years; and permanent effects lasting over sixty years.

The principal attributes (and effects) to be assessed include the following:

- River and stream water quality in the vicinity of the site (where available);
- Surface watercourses near the site and potential impact on surface water quality arising from proposed development related works including any discharge of surface water run-off;
- Localised flooding (potential increase or reduction) and floodplains including benefitting lands and drainage districts (if any); and
- Surface water features within the area of the site.

#### 8.1.4 Sources of Information

Desk-based hydrological information on the substrata (both Quaternary deposits and bedrock geology) underlying the extent of the subject site was obtained through accessing databases and other archives where available. Data was sourced from the following:

- Environmental Protection Agency (EPA) – website mapping and database information. Envision water quality monitoring data for watercourses in the area;
- River Basin Management Plan for Ireland 2018-2021.
- The Planning System and Flood Risk Management, Guidelines for Planning Authorities (Department of the Environment, Heritage and Local Government (DoEHLG) and the Office of Public Works (OPW));
- Office of Public Works (OPW) flood mapping data ([www.floodmaps.ie](http://www.floodmaps.ie))
- Flood Risk Assessment and Management Plan for the Meath CDP 2021-2027.
- 'Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors' (CIRIA 532, 2001);
- National Parks and Wildlife Services (NPWS) – Protected Site Register.

Site specific data was derived from the following sources:

- Various design site plans and drawings
- Consultation with site engineers.

The initial evaluation consisted of inspections of the site and adjacent lands by examination of aerial photography and Ordnance Survey plans, followed by a site walkover survey on 15<sup>th</sup> of May 2025. Relevant hydrogeological data from the Geological Survey of Ireland (1:100,000 Sheet 16: Geology of Meath) was reviewed, together with additional data collated from data sources at Fingal County Council, Environmental Protection Agency (EPA), Ordnance Survey of Ireland (OSI), National Parks and Wildlife Service (NPWS), the Office of Public Works, (OPW) and Met Eireann.

A review of historical groundwater and surface water sampling data was undertaken with additional sampling of receiving surface waters, along with a groundwater and surface water level survey.

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## 8.2 The Receiving Environment

### 8.2.1 Hydrogeology

#### 8.2.1.1 Aquifer Classification

The site is underlain by a locally important bedrock aquifer (LI), consisting of bedrock which is generally moderately productive only in local zones. This aquifer is made up of a limited and relatively poorly connected network of fractures, fissures and joints, giving low permeability, which decreases with depth. The aquifer has a low recharge acceptance. Most groundwater flows occur in an upper zone of about 15 m with a zone of interconnected fissures that extends approximately 10 m below this. Some recharge in the upper, more weathered zone (3-5 m) is likely to flow along the relatively short flow paths and rapidly discharge to streams, small springs and seeps. Baseflow to streams can significantly decrease in the drier summer months, resulting in low dry weather flows.

There are no karst features in the surrounding area. The site straddles the Dublin Groundwater Body (IE\_EA\_G\_008) and the Swords Groundwater Body (IE\_EA\_G\_011). Both the Dublin Groundwater body and the Swords Groundwater Body are considered "Good" quality according to EPA groundwater monitoring in the period 2019 – 2024.

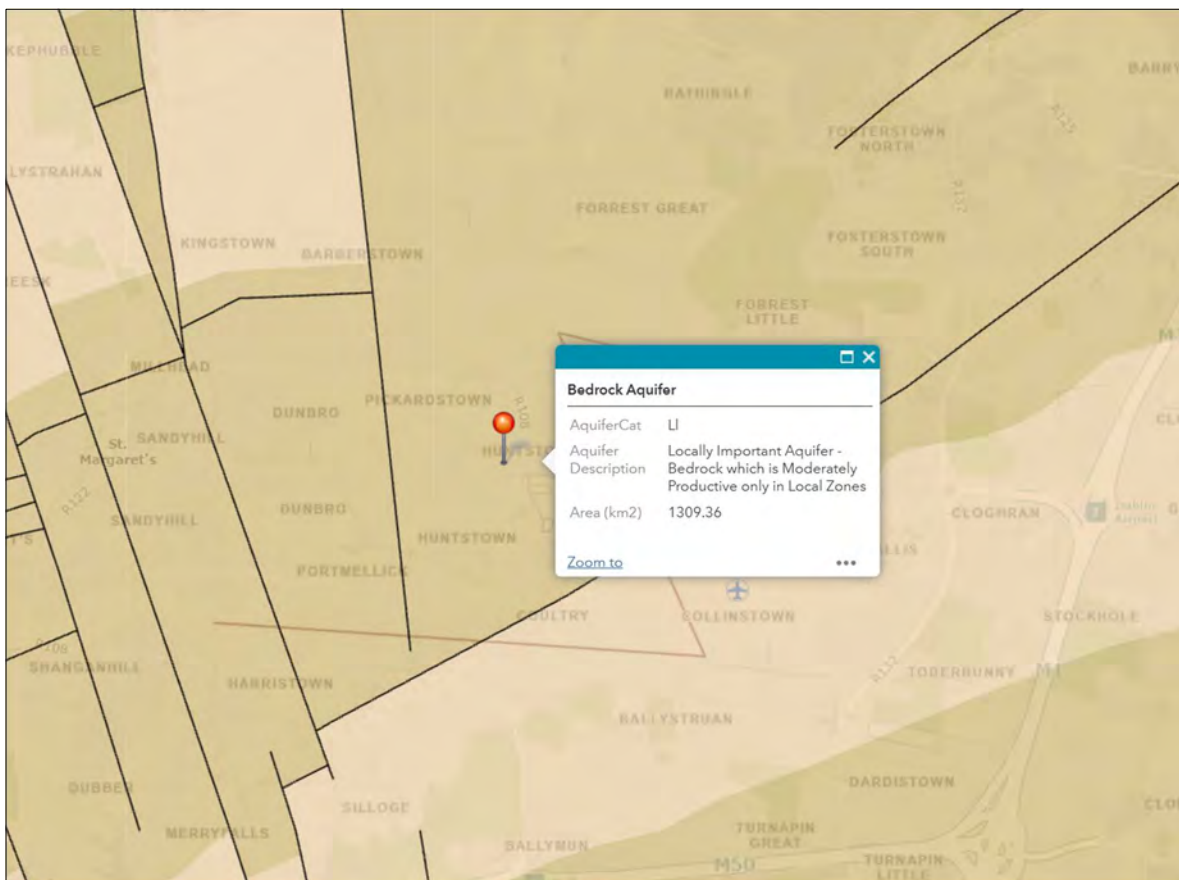


Figure 8.1 Aquifer Category Map

Source: Geological Survey Ireland

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8.2.1.2 Vulnerability

The vulnerability categories, and methods for determination, are presented in Groundwater Protection Schemes (1999). The guidelines state that 'as all groundwater is hydrologically connected to the land surface, it is the effectiveness of this connection that determines the relative vulnerability to contamination. Groundwater that readily and quickly receives water (and contaminants) from the land surface is considered to be more vulnerable than groundwater that receives water (and contaminants) more slowly and in lower quantities. The travel time, attenuation capacity and quantity of contaminants are a function of the following natural geological and hydrogeological attributes of any area:

- The soils that overlie the groundwater;
- The type of recharge - whether point or diffuse; and
- The thickness of the unsaturated zone through which the contaminant moves.

As shown on the GSI mapping tool the site is stated to have a groundwater vulnerability classification of High (H) throughout the proposed site and its surrounding areas.

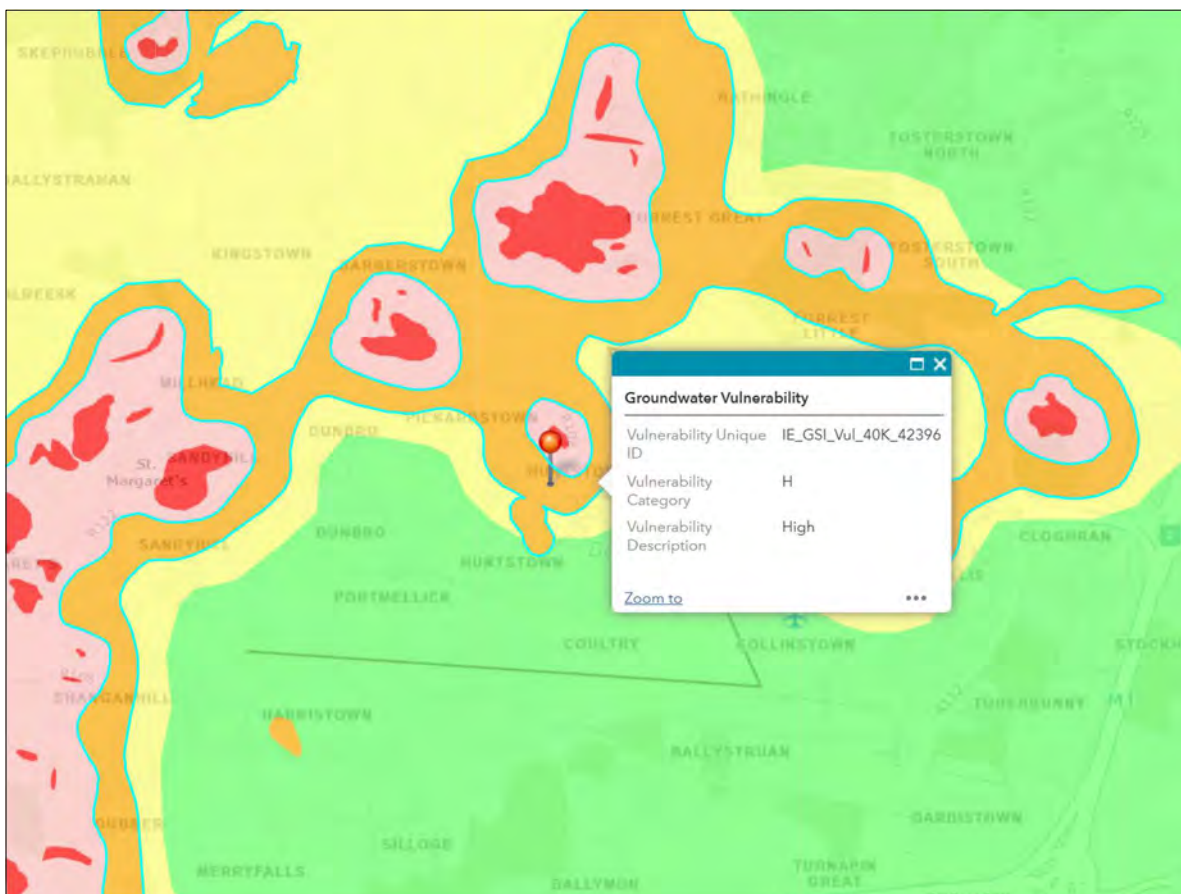


Figure 8.2 Aquifer Vulnerability Map

Source: Geological Survey Ireland

## 8.2.2 Hydrology

There is negligible natural surface water catchment upgradient of the site. The site is within the Liffey and Dublin Bay Water Framework Directive (WFD) catchment area, and within the Mayne\_SC\_10 subcatchment area.

The closest surface water feature to the proposed project is the Cuckoo Stream (IE\_EA\_09M030500), a tributary of the Mayne River, which is located c.1.3 km southeast of the site. The Mayne River flows in a southeastern direction and flows out into the Baldoyle Bay SPA (Special Protection Area) and SAC (Special Area of Conservation) located approximately 8.8 km southeast of the site.

There is no direct surface water connection with the Mayne River from the proposed project. Upon study of the area using a combination of aerial photography, OS and GSI maps, and the site walkover it has been determined that the drainage ditches in the vicinity of the area flow into the Santry River (IE\_EA\_09S010300), located c.1.6 km south of the site. This river flows into the North Bull Island SPA located c.9 km southeast of the site.

### 8.2.2.1 Surface Water Quality

The main monitoring point located on the Mayne River is at Hole-in-the-Wall Rd Bridge (Station code: RS09M030500). The monitoring carried out at this point is for General Conditions and Invertebrate status and potential. The conditions for the river are considered to have an Ecological and Biological Status which is "Poor", with the rest of the parameters being "Good" in the most recent monitoring period of 2019-2024. WFD risk classification for the Santry River as being 'At Risk'

The main monitoring point located on the Santry River is at Clonshaugh Rd Bridge (Station code: RS09S010300). The monitoring carried out at this point is for General Conditions and Invertebrate status and potential. The conditions for the river are considered to have an Ecological and Biological Status which is "Poor", with the rest of the parameters being "Good" in the most recent monitoring period of 2019-2024. WFD risk classification for the Santry River as being 'At Risk'.

### 8.2.2.2 Designated Areas

There are no designated areas on the site or in the surrounding area. The closest designated area is the Malahide Estuary SAC (IE000205) and SPA (IE004025) located approx. 6 km northeast of the site.

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### 8.2.3 Flood Risk

A screening of online flood risk data sources is summarised as follows:

- No indicators on historical maps suggest the site may be at risk of flooding.
- No historical flood events within the vicinity of the site.
- OPW pFRA maps show that the site is not at risk of fluvial or pluvial flooding.
- The site is not covered under the more detailed OPW CFRAM and Fingal FEM FRAM maps.

### 8.2.4 Rating of Importance of Hydrological Attributes

Due to the distance of the site there may be no hydrological connections other than groundwater. However, due to the nature of the development and current groundwater vulnerability in the area there appears to be minimal risk of groundwater contamination.

## 8.3 Development Description

1. Construction of four aviation-related cargo handling units with ancillary office space:
  - i. Unit 1: c.10,869.7 m<sup>2</sup> (including 940.9 m<sup>2</sup> office space)
  - ii. Unit 2: c.9,151.3 m<sup>2</sup> (including 751.3 m<sup>2</sup> office space)
  - iii. Unit 3: c.6,024.9 m<sup>2</sup> (including 497.7 m<sup>2</sup> office space)
  - iv. Unit 4: c.8,577.7 m<sup>2</sup> (including 751.3 m<sup>2</sup> office space)

The proposed units will have an overall combined total gross floor area (GFA) of c. 34, 623.6m<sup>2</sup> (alongside ancillary ESB substations, 4 no. security huts with a combined GFA of 30 sqm and pumphouses). The warehouses are c. 12m in height, with the office element being c. 3.3 m in height and located within a landscaped campus on a site of c. 10.7 Ha

2. Provision of 390 car parking spaces, including 39 EV charging points, 19 accessible spaces, and motorcycle bays.
3. Provision of 230 secure bicycle parking spaces, of which 100 are short stay spaces and 130 are sheltered long stay spaces.
4. Provision of approx. 77 truck parking spaces and 5 van spaces.

5. Hard and soft landscaping, new boundary treatments, including a c. 2m high System Wire Fence to site boundary.
6. Construction of new site entrance onto the R108.
7. Wastewater treatment plant and infiltration area for 250 PE.
8. All necessary site development and engineering and ancillary site works, including provision of ESB substations and switchrooms, sprinkler tanks and pumphouses, bin store and recycle store, lighting, signage, underground services, photovoltaic panel zones at roof level and sustainable drainage systems (SuDS).

The water supply for the site is to be connected to the mains public water supply.

## 8.4 Predicted Impacts

### 8.4.1 Construction Phase

The construction of the proposed project consists mainly of excavation of topsoil and the construction of the four warehouses, car parks, and the wastewater treatment system.

During the construction phase of the development, the main potential impacts on hydrology and hydrogeology are:

- Surface water run-off containing silt, sediments and/or other pollutants into nearby waterbodies.
- Uncontrolled release of pollutants to groundwater

Best Available Techniques will be applied during construction to minimize any environmental risks. The site is removed from major surface water features and is connected to the Santry River via drainage ditches in the vicinity.

In the absence of mitigation, the effect on the hydrological environment due to the construction is considered **short-term, not significant**, and **temporary**.

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#### 8.4.2 Operation Phase

There are two discharges from the site which have potential for impact on the environment: Surface water discharge and Foul water discharge.

#### 8.4.3 Surface Water

During the operational phase of the site, there are two sources of surface water discharge, the clean stormwater which falls on the roof of the proposed warehouse buildings, and the stormwater which falls on the car parking areas.

The stormwater which falls on the site is to be directed to an on-site soakaway after being serviced by a bypass oil separator. Due to this, the operational phase of the site has no potential to impact on groundwater.

The proposed project has no operational aspects or processes which have potential for impact on hydrology and hydrogeology.

#### 8.4.4 Foul Water

The foul water on site is all to be discharged to a newly designed on site wastewater treatment system. This system is to be designed by Mitchell Environmental and has been designed according to all relevant standards and guidelines. Due to this aspect of the design, the potential for impact on the environment due to the foul water discharge from the site is considered to be **long-term, imperceptible** and **neutral**.

#### 8.4.5 Direct or indirect Discharges

The proposed project area is to be fully concreted and all rainfall landing in these areas is captured, via a series of gulleys, in a subsurface piped network and diverted towards the stormwater soakaway system.

In the absence of mitigation, the effect on the hydrological environment is likely to be **long-term, imperceptible** and **neutral**. The effect is considered to be 'imperceptible' because there will not be intervention on the hydrological regime on a local or regional scale due to the aforementioned design measures included in the surface water and foul water drainage.

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#### 8.4.6 Accidental Spill and Leaks

The development does not include the storage and use of fuel oil or other potential pollutants. Any accidental emissions of oil, petrol or diesel could cause contamination if the emissions enter the water environment unmitigated. However, any accidental discharge will be mitigated by following the emergency procedures and ultimately through petrol interceptors.

In the absence of mitigation, the effect on the hydrological environment is likely to be **long-term, imperceptible** and **neutral**. The effect is considered to be 'imperceptible' because there will not be intervention on the hydrological regime on a local or regional scale due to the aforementioned design measures.

#### 8.4.7 Do Nothing Scenario

If the proposed development was not to go ahead (i.e. in the Do-Nothing scenario) there would be no change to the current operation of the site. There would, therefore, be a **long-term, imperceptible** and **neutral** effect on the hydrological environment in terms of hydrological environment.

### 8.5 Mitigation and Monitoring Measures

The design has taken account of the potential impacts of the development on the hydrology environment local to the area where construction is taking place and containment of contaminant sources during operation. Measures have been incorporated in the design and operational procedures to mitigate the potential effects on hydrology.

The potential risk is imperceptible as potential contaminant would be attenuated, diluted and dispersed below statutory guidelines (i.e., S.I. European Communities Environmental Objectives Regulations, 2009 [S.I. No. 272 of 2009 as amended by SI No. 77 of 2019]).

Due to the inter-relationship between soils, geology, hydrogeology and hydrology, the following mitigation measures discussed will be considered applicable to all.

### 8.5.1 Construction Phase

Mitigation measures to be put in place for this site expansion will consist of using the Best Available Techniques for surface water management during construction, including but not limited to the following:

- All potentially polluting substances will be stored on impermeable surfaces with controlled drainage or at least 10m away from storm water sewers, grids, channels, watercourses and ditches.
- All fuel, chemicals and oils will be stored within bunded areas.
- All tank discharge pipes, valves and trigger guns will be contained securely within the bund when not in use.
- Bowsers will be stored within secure areas when not in use to protect against theft or vandalism.
- Leaking or empty drums will be removed and stored in a suitably bunded area separating from other drums prior to disposal by an appropriate licensed waste disposal contractor.
- All hazardous substances on site will be controlled in accordance with COSHH Regulations (2004).
- Refuelling of plant and machinery will take place on concrete hard standing with controlled drainage.
- Wheel washing will be undertaken in a designated area if required.
- Washing out of plant will take place in areas away from storm water sewers, grids, channels and watercourses.
- Spill kits will be held on site with a variety of absorbent materials to be used in the event of a spill of fuel, oil or chemicals.

Due to this, the potential impacts are considered **long-term, imperceptible** and **neutral**.

### 8.5.2 Operational Phase

#### 8.5.2.1 Emergency Response Procedures

An Environmental Safety and Health Management System (EMS) are implemented at the subject site during operations. An environmental management plan will apply to the overall development during the operational phase incorporating mitigation measures and emergency response measures.

#### 8.5.2.2 Environmental Procedures

There will be comprehensive emergency response procedures and standard operating procedures to respond to chemical spillage all types. All employees will be provided with such equipment, information, training and supervision as is necessary to implement the emergency response procedures and standard operating procedures

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### 8.5.2.3 Storm Water & Foul Sewer Drainage

A number of measures will be put in place to minimise the likelihood of any spills entering the water environment to include the design of the car park and on-site speed restrictions.

Surface Water is ultimately discharged to ground after passing through silt and oil interceptors.

Maintenance of the surface water drainage system and wastewater treatment systems as per normal developments is recommended to minimise any accidental discharges to ground.

### 8.5.2.4 Conclusion

Due to the existing systems in place to ensure good quality of surface water being discharged from the site, it is considered that with mitigation measures, the potential impact during the operational phase is **long-term, imperceptible** and **neutral**.

## 8.6 Residual Impacts

### 8.6.1 Construction Phase

The implementation of mitigation measures highlighted above will ensure that the predicted impacts on the hydrological environment do not occur during the construction phase and that the residual impact will be **long-term, imperceptible** and **neutral**.

### 8.6.2 Operational Phase

The implementation of mitigation measures highlighted above will ensure that the predicted impacts on the hydrological environment do not occur during the operational phase and that the residual impact will be **long-term, imperceptible** and **neutral**.

## 8.7 Cumulative Impacts

The following considers the cumulative impacts of the proposed development and proposed and permitted and operating facilities in the surrounding area in relation to Hydrology. This considers the proposed

development and other surrounding proposed and permitted developments considered in Chapter 4 Project Description.

As has been identified in the receiving environment section all cumulative developments that are already built and in operation contribute to our characterisation of the baseline environment. As such any further environmental impacts that the proposed development may have in addition to these already constructed and operational cumulative developments has been assessed in the preceding sections of this chapter.

Cumulative impacts to the surface water and groundwater environments may occur where activities of a similar nature are taking place within the upgradient and downgradient surface water catchment with respect to the site.

Measures have been proposed to mitigate against impacts from the site. Infrastructure and monitoring regime at the subject site has been established to allow the effectiveness of these measures to be presented quantitatively to the local authority.

The site is entirely covered in impermeable hardstanding and there are no groundwater discharges from the site other than the wastewater treatment system. Hence it is considered that the site cannot contribute to any cumulative impacts to the aquifer in terms of quality that may be occurring from other facilities of a similar nature.

### 8.7.1 Construction Phase

Due to the scope of the construction phase being considered **long-term, imperceptible** and **neutral** in terms of direct and indirect impacts, it has been deemed that the cumulative impact is **long-term, imperceptible** and **neutral**.

### 8.7.1 Operational Phase

Taking into account the attenuation control measures within the cumulative developments, along with the design measures to compensate from impacts to recharge rates to the underlying aquifer due to additional hardstanding there will be minimal cumulative potential for change in surface water quality or the natural hydrological regime during the operational phase.

The cumulative impact during the operational phase is considered to be **long-term, neutral** and **imperceptible**.

## 9.0 Air Quality and Climate

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### 9.1 Introduction

Chapter 9 of this Environmental Impact Assessment Report will identify, describe and assess the impact of the subject development in terms of air quality during the construction and operational phases of the scheme. Particular attention will be focused on sensitive receptors, such as residential areas adjacent to the site, and local amenities such as schools and shopping centres. Increased traffic volumes associated with the subject site is likely to be the main impact source.

This assessment was prepared in accordance with the EIA Directive 2014/52/EC and having regard for the following guidance:

- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, May 2022)
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment. Department by the Department of Housing, Planning and Local Government (August 2018 and last updated on 18 December 2019)

This section should be read in conjunction with the site layout plans for the site and project description sections of this EIAR.

#### 9.1.1 Competency Statement

The following EIAR chapter has been prepared by Martijn Leenheer and Peter McCormick of ESC Environmental Ltd.

Martijn Leenheer is the Operations Director of Environmental Services Consultancy for 11 Years and a Founding Director of ESC Environmental LTD since 2021. He holds a 1st Class BSc (Hons) degree in Environmental Science from Atlantic Technological University (previously IT Sligo) and has 11 years' experience in Ireland in soil remediation, invasive species commercial Wastewater Treatment, Discharge Licences, Waste Permits and Licences has been involved in Risk Assessments, NIS and EIAR reports for various commercial projects. Before moving to Ireland Martijn worked in the Netherlands as an Environmental Field Technician in soil research.

Peter McCormick is a Senior Consultant with ESC Environmental Ltd., and has 7 years' experience in the Environmental Sector, working with both the public and private sector. He holds a degree in Level 8 BSc (Hons) degree in Environmental Science from Atlantic Technological University (previously IT Sligo). He is an Associate member of the Chartered Institute of Ecology and Environmental Management. He has experience in many aspects of environmental works including wastewater treatment system design, environmental permitting, water management, and specialises in Strategic Environmental Assessments (SEAs) Ecological Assessments (EclAs), Natura Impact Statements (NIS), and Environmental Impact Assessment Reports (EIAR).

## 9.2 Research Methodology

Existing EPA air quality data has been examined in order to assess the background air quality in the area. It is used to identify the existing pollutant trends in the area and to establish spatial information in order to determine compliance with relevant ambient air legislation.

### 9.2.1 Criteria for Rating of Effects

In May 2008, the European Commission introduced a revised Directive on ambient air quality and cleaner air for Europe (2008/50/EC), which has been transposed into Irish Legislation through the revised Air Quality Standards Regulations (S.I. 180 of 2011).

The Directive and Regulations specify limit values in ambient air for sulphur dioxide (SO<sub>2</sub>), lead, benzene, particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), carbon monoxide (CO) and nitrogen dioxide (NO). These limits are mainly for the protection of human health and are largely based on review of epidemiological studies on the health impacts of these pollutants. In addition, there are limits that apply to the protection of the wider environment (ecosystems and vegetation). The site does not have emissions which impact these parameters in a significant manner. The main emissions that will be on site are expected to be from fugitive dust, and emissions from the amount of diesel and petrol engines used for logistics and commuting to and from the site. The scale of the diesel and petrol engine usage has the largest potential for impact on ambient air quality. However, it is significantly outclassed by the impact from the volume of aircraft passing overhead on a regular basis.

### 9.2.1.1 Dust Deposition Guidelines

The concern from a health perspective is focused on particles of dust which are less than 10 microns and the EU ambient air quality standards outlined in the previous section have set ambient air quality limit values for PM<sub>10</sub> and PM<sub>2.5</sub>. With regard to larger dust particles that can give rise to nuisance dust, there are no statutory guidelines regarding the maximum dust deposition levels that may be generated during the construction and decommissioning phases of a development in Ireland.

With regard to dust deposition, the German TA-Luft standard for dust deposition (non-hazardous dust) sets a maximum permissible emission level for dust deposition of 350 mg/m<sub>2</sub>/day averaged over a one-year period at any receptors outside the site boundary. The TA-Luft standard has been applied for the purpose of this assessment based on recommendations from the EPA in Ireland in the document titled '*Environmental Management Guidelines - Environmental Management in the Extractive Industry (Non-Scheduled Minerals)*'. The document recommends that the Bergerhoff limit of 350 mg/m<sub>2</sub>/day be applied to the site boundary of quarries. This limit value shall be implemented with regard to dust impacts from construction of the Proposed Development.

### 9.2.1.2 Climate Agreements

Ireland is party to both the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol. The Paris Agreement, which entered into force in 2016, is an important milestone in terms of international climate change agreements and includes an aim of limiting global temperature increases to no more than 2°C above pre-industrial levels with efforts to limit this rise to 1.5°C. The aim is to limit global GHG emissions to 40 gigatonnes as soon as possible whilst acknowledging that peaking GHG emissions will take longer for developing countries. Contributions to GHG emissions will be based on Intended Nationally Determined Contributions (INDCs) which will form the foundation for climate action post 2020. Significant progress was also made in the Paris Agreement on elevating adaptation onto the same level as action to cut and curb emissions.

In order to meet the commitments under the Paris Agreement, the EU enacted Regulation (EU) 2018/842 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement and amending Regulation (EU) No. 525/2013 (the Regulation). The Regulation aims to deliver, collectively by the EU in the most cost-effective manner possible, reductions in GHG emissions from the Emission Trading Scheme (ETS) and non-ETS

sectors amounting to 43% and 30%, respectively, by 2030 compared to 2005. Ireland's obligation under the Regulation is a 30% reduction in non-ETS greenhouse gas emissions by 2030 relative to its 2005 levels.

Following on from the recently published European Climate Law Regulation (EU) 2021/1119, and as part of the EU's "Fit for 55" legislative package where the EU has recently committed to a domestic reduction of net greenhouse gas emissions by at least 55% compared to 1990 levels by 2020, the Effort Sharing Regulation is proposed to be strengthened with increased ambition by the year 2030. The proposal for Ireland is to increase the GHG emission reduction target from 30% to 42% relative to 2005 levels whilst the ETS market will also have more stringent reductions from the currently proposed reduction of 43% by 2030 compared to 2005 to a 61% reduction by 2030 based on annual reductions of 4.2% compared to the previous annual reduction level of 2.2% per year (EU, 2021). In terms of the current operation of the ETS, the European Commission reported that the ETS Carbon Market reported a fall of 9% in emissions in 2019 relative to 2018 levels.

In 2015, the Climate Action and Low Carbon Development Act 2015 (No. 46 of 2015) was enacted (the 2015 Act). The purpose of the Act was to enable Ireland 'to pursue, and achieve, the transition to a low carbon, climate resilient and environmentally sustainable economy by the end of the year 2050' (3.(1) of No. 46 of 2015). This is referred to in the Act as the 'national transition objective'.

The Climate Action Plan (CAP24), published in 2024, outlines the current status across key sectors including Electricity, Transport, Built Environment, Industry and Agriculture and outlines the various broadscale measures required for each sector to achieve ambitious decarbonization targets. The CAP also details the required governance arrangements for implementation including carbon-proofing of policies, establishment of carbon budgets, a strengthened Climate Change Advisory Council and greater accountability to the Oireachtas. The CAP has set a built environment sector reduction target of 40 - 45% relative to 2030 pre-NDP (National Development Plan) projections.

In June 2020, the Government published the Programme for Government – Our Shared Future. In relation to climate, there is a commitment to an average 7% per annum reduction in overall greenhouse gas emissions from 2021 to 2030 (51% reduction over the decade) with an ultimate aim to achieve net zero emissions by 2050. Policy changes include the acceleration of the electrification of the transport system, including electric bikes, electric vehicles and electric public transport, alongside a ban on new registrations

of petrol and diesel cars from 2030. In addition, there is a policy to ensure an unprecedented model shift in all areas by a reorientation of investment into walking, cycling and public transport.

### 9.3 The Receiving Environment

The proposed site for the development is located to the west of Dublin Airport on the R108 approximately 1.5 km east of St. Margarets townland, Co. Dublin. This development does not have prior planning permission. The site is bounded by agricultural lands to the north, west, and south and the R108 to the east with Dublin Airport further to the east. The surrounding area is primarily used for aviation, industrial, storage/distribution and agricultural purposes.

Air quality data available from the Environmental Protection Agency (EPA) monitoring network was assessed. Four air quality zones have been defined for Ireland as follows:

**Zone A** - Dublin Conurbation

**Zone B** - Cork Conurbation

**Zone C** - Other cities and large towns comprising Galway, Limerick, Waterford, Clonmel, Kilkenny, Sligo, Drogheda, Wexford, Athlone, Ennis, Bray, Naas, Carlow, Tralee, Dundalk, Navan, Letterkenny, Celbridge, Newbridge, Mullingar and Balbriggan.

**Zone D** - Rural Ireland i.e. the remainder of the state excluding Zones A, B and C.

The subject site is located within air quality Zone A, the Dublin Conurbation. From the EPA report on ambient air quality in 2023 the most representative monitoring station in terms of the subject site and its location is Dublin Airport, County Dublin. The Dublin Airport monitoring station records all ambient air quality parameters outlined in the Directive on ambient air quality and cleaner air for Europe (2008/50/EC) except benzene which is only recorded in Rathmines and Kilkenny respectively. For this particular parameter the data is described using the average annual mean value concentrations from both monitoring stations.

Table 7.1 shows the annual mean value concentrations measured for SO<sub>2</sub>, PM<sub>10</sub>, NO<sub>2</sub>, CO and benzene in Zone A for 2023. The table compares the annual mean measured levels with the limit values defined in the National Air Quality Standards Regulations 2011 (S.I No. 180 of 2011).

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In summary, existing baseline levels of SO<sub>2</sub>, PM<sub>10</sub>, NO<sub>2</sub>, CO and benzene based on data from the EPA monitoring network are currently below ambient air quality limit values in Zone A and by extension the levels in the vicinity of the subject site are also considered to be below the limit values.

Ireland met all of its EU Cleaner Air for Europe Directive (CAFE Directive) legal requirements in 2023 and 2024. Ireland was also compliant with EU limits in 2023 and 2024; however it failed to meet the stricter World Health Organization guidelines. As these guidelines are not legally binding and used as recommended targets they have not been used in this report.

**Table 9.1:** Extract of summary data from EPA Ambient Air Monitoring in 2023

Pollutant	Unit	Annual Mean Concentration in 2023	Annual Limit for Protection of Human Health
<b>Sulphur Dioxide (SO<sub>2</sub>)</b>	µg/m <sup>3</sup>	5.3	20
<b>Particulate Matter (PM<sub>10</sub>)</b>	µg/m <sup>3</sup>	11.9	40
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>	µg/m <sup>3</sup>	20.5	40
<b>Carbon Monoxide (CO)</b>	mg/m <sup>3</sup>	0.2	10
<b>Benzene</b>	µg/m <sup>3</sup>	0.4	5

### 9.3.1 Climate Baseline

The weather in Ireland is influenced by the Atlantic Ocean, resulting in mild, moist weather dominated by maritime air masses. The prevailing wind direction is from a quadrant centered west-southwest. These are relatively warm winds from the Atlantic and frequently bring rain. Easterly winds are weaker and less frequent and tend to bring cooler weather from the northeast in spring and warmer weather from the southeast in summer. The site of the proposed development close to the

east coast would experience a higher frequency of easterly winds than more inland locations or those on the west coast.

The nearest meteorological station to the subject site is the Met Eireann Station in Dublin Airport which lies approximately 1km southwest of the subject site. The 30-year averages from the station at Dublin Airport are presented in Table 9.2

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**Table 9.2:** 30-year Average Meteorological Data from Dublin Airport (Annual Values from 1991-2020, source: www.met.ie)

Parameter	30-year Average
Mean Temperature (°C)	9.7
Mean Relative Humidity at 0900UTC (%)	83.5
Mean Daily Sunshine Duration (hours)	4
Mean Annual Total Rainfall (mm)	772.5
Mean Wind Speed (knots)	10.5

The prevailing wind direction for the area is between west and southwest as presented in the windrose for Dublin Airport Met Station for 1942 to 2014 in Figure 9.1. Northerly winds tend to be very infrequent (less than 5%) with easterly winds marginally more frequent (5-10%). Wind characteristics are typically moderate with relatively infrequent gales (average only 8.2 days with gales per annum). The 30 year period of 1991-2020 (Figure 9.2) shows the same trends Northerly winds tend to be very infrequent (less than 6%) with easterly winds marginally more frequent (6-12%). Wind characteristics are typically moderate with relatively infrequent gales (average only 7.8 days with gales per annum)

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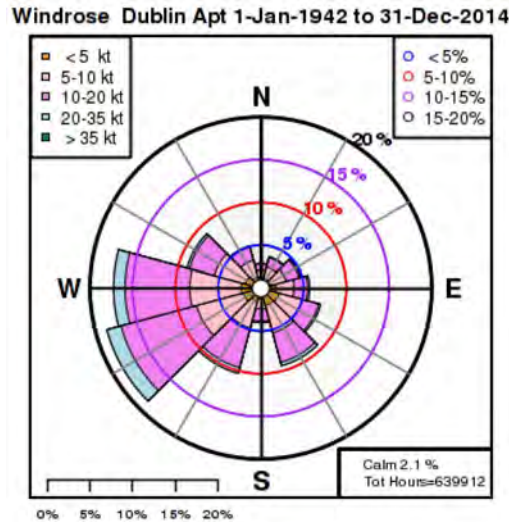


Figure 9.1: Windrose for the Dublin Airport Met Station 1942 to 2014

(source: [www.met.ie](http://www.met.ie))

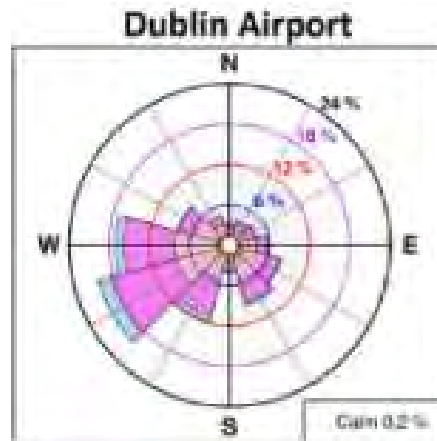


Figure 9.2: Windrose for the Dublin Airport Met Station 1991 to 2020

(source: [www.met.ie](http://www.met.ie))

The National Policy Position on climate action and low carbon development was published on the 23<sup>rd</sup> April 2014. The policy sets a fundamental national objective to achieve transition to a competitive, low-carbon, climate-resilient and environmentally sustainable economy by 2050. The policy states that greenhouse gas (GHG) mitigation and adaptation to the impacts of climate change are to be addressed in parallel national strategies - respectively through a series of National Mitigation Plans and a series of National Climate Change Adaptation Frameworks.

The National Policy Position envisages that development of National Mitigation Plans will be guided by a long-term vision of low carbon transition based on the following:

- An aggregate reduction in carbon dioxide (CO<sub>2</sub>) emissions of at least 80% (compared to 1990 levels) by 2050 across the electricity generation, built environment and transport sectors; and
- In parallel, an approach to carbon neutrality in the agriculture and land-use sector, including forestry, which does not compromise capacity for sustainable food production.

With reference to this project, the aggregate reduction emissions of at least 80% from the residential and transport sectors by 2050 are the relevant policy targets.

Further to the National Policy Position, the Climate Action and Low Carbon Development Act 2015 (No. 46 of 2015) was enacted on the 10th of December 2015. The Climate Act sets out the proposed national objective to transition to a low carbon, climate resilient and environmentally sustainable economy by the end of 2050.

Ireland reported an emission level of 61.55 million tonnes carbon dioxide equivalent (Mt CO<sub>2</sub>eq). This is 3.6% higher (2.12 Mt CO<sub>2</sub>eq) than emissions in 2015 and returns greenhouse gas emissions to 2009 levels. When compared to the 1990 baseline, Ireland has increased greenhouse emissions by 9.8% which is well below the 20% reduction target set for Ireland under the EU 2020 strategy.

Transport is currently the second largest contributor of GHG emissions (after agriculture) at 20.5% (which predominately consists of road transport). Between 1990 and 2016, the transport sector showed the greatest overall sectoral increase of 138.6% and increases are linked to economic prosperity with year-on-year increases observed up to 2007 followed by five years of year on year decrease during the economic downturn.

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## 9.4 The Subject Development

### 9.4.1 Development Description

The proposed development, subject of this EIAR is as follows –

Permission is sought for –

1. Construction of four aviation-related cargo handling units with ancillary office space:

- i. Unit 1: c.10,869.7 m<sup>2</sup> (including 940.9 m<sup>2</sup> office space)
- ii. Unit 2: c.9,151.3 m<sup>2</sup> (including 751.3 m<sup>2</sup> office space)
- iii. Unit 3: c.6,024.9 m<sup>2</sup> (including 497.7 m<sup>2</sup> office space)
- iv. Unit 4: c.8,577.7 m<sup>2</sup> (including 751.3 m<sup>2</sup> office space)

The proposed units will have an overall combined total gross floor area (GFA) of c. 34, 623.6 sq.m (alongside ancillary ESB substations, 4 no. security huts with a combined GFA of 30 sqm and pumphouses). The warehouses are c. 12m in height, with the office element being c. 3.3 m in height and located within a landscaped campus on a site of c. 10.7 Ha.

2. Provision of 390 car parking spaces, including 39 EV charging points, 19 accessible spaces, and 39 motorcycle bays.
3. Provision of 230 secure bicycle parking spaces, of which 100 are short stay spaces and 130 are sheltered long stay spaces.
4. Provision of approx. 77 truck parking spaces and 5 van spaces.
5. Hard and soft landscaping, new boundary treatments, including a c. 2m high System Wire Fence to site boundary.
6. Construction of new site entrance onto the R108.
7. Wastewater treatment plant and infiltration area for 250 PE.
8. All necessary site development and engineering and ancillary site works, including provision of ESB substations and switchrooms, sprinkler tanks and pumphouses, bin store and recycle store, lighting, signage, underground services, photovoltaic panel zones at roof level and sustainable drainage systems (SuDS).

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### 9.4.2 Demolition Phase

The entirety of the site is greenfield and covers an area of 10.7 ha. Due to this, there is no demolition phase for the development.

### 9.4.3 Construction Phase

The construction to take place consists of 4 warehouse units the sizes of which are:

- Unit 1: c.10,869.7 m<sup>2</sup>
- Unit 2: c.9,151.3 m<sup>2</sup>
- Unit 3: c.6,024.9 m<sup>2</sup>
- Unit 4: c.8,577.7 m<sup>2</sup>

These sizes consist of the office spaces and cargo handling areas of each unit. There will also be a significant number of parking spaces made for both cars, trucks, motorbikes, and EV charging spaces with a total of 472 new spaces, including 390 car spaces, 77 truck spaces, and 5 van spaces. There will also be 230 bicycle parking spaces provided. These parking spaces will be constructed of a permeable membrane in line with government legislation and sustainable drainage system (SuDS) guidance.

The construction phase's main impact on air quality will be due to dust and debris from the building of foundations and construction of the main buildings. To minimize any potential environmental impacts due to the build Best Available Techniques will be used. The site plan also includes on-site WWTP, and this will be a tertiary treatment system which is designed in specification to all relevant standards and guidance.

During the construction phase the main source of air quality impacts will be from dust emissions due to the construction process.

### 9.4.4 Operational Phase

During the operational phase of the development there will be a large number of cars and trucks used in the site to transport goods for storage to the 4 warehouses and to facilitate works and office personnel in each warehouse. The operation of the site is mainly for cargo handling and logistics.

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During the operational phase the main source of air quality impacts will be as a result of the large number of vehicles going to and from the area and parking on site. There may also be potential for fugitive dust emissions depending on the cargo being moved with trucks to and from the site. The emissions from these vehicles have the potential to impact the climate. This is quantified in Section 9.5.3.1.

The construction of the warehouses will not cause any increase in the flights from or to Dublin Airport, so there will be no impact during the operational phase by an intensification of flights in Dublin Airport.

## 9.5 Predicted Impacts

### 9.5.1 Do Nothing Scenario

In a do-nothing scenario planning permission would not be granted and the development would not occur. If the development does not go ahead there would be no change from the current situation as regards air and climate.

### 9.5.2 Construction Phase

The construction of the aviation related cargo handling facility is expected to have temporary impacts on air quality. These impacts are due to construction stages such as soil clearance and other groundworks, moving and processing of materials and the use and operation of construction machinery and vehicles. The potential quantity of dust emissions will depend on the type of construction activity being carried out such as excavations, mixing concrete, sawing wood and construction traffic travelling across exposed ground. The generation of fugitive dusts could also vary due to weather affecting the area such as levels of rainfall, wind speed and wind direction and these conditions may affect air quality in the area. These emissions will be the same as ones mentioned previously in this report such as nitrogen oxides and particulate matter. The overall impact on air quality should be minimal if Best Available Techniques, mitigation measures, and practices are used in the construction phase. This site will be surrounded by hedgerows and tree lines which can be a natural barrier for the escape of dust off site.

Overall, the predicted impact on Air and Climate due to the construction phase is considered to be **temporary, negative, and slight.**

### 9.5.3 Operational Phase

#### 9.5.3.1 Traffic

During the operational phase of the site there will be parking for cars, trucks, motorbikes, and EV charging spaces with a total of 472 new spaces to be used as part of the logistics operation. The main impact of this will be on the increase in vehicle emissions and exhaust pollutants such as nitrogen oxide, carbon monoxide and some particulate matter from staff cars, vans and heavy goods vehicles such as trucks. The intensification of traffic in the area will increase emissions in the local environment. There is no increase in flights from Dublin Airport due to the proposed project.

With the small overall effect of this number of vehicles compared the emissions generated by planes using the adjacent airport, the long-term operational phase impact to air quality due to traffic using the site should be minor.

The traffic movements predicted in the traffic modelling show that the site will receive approximately development will be receiving approximately 350 HGVs and 56 passenger cars daily.

The proposed development is to facilitate aviation related logistics for Dublin Airport. Due to this, any good being transported to and from the warehouses will be only transported nationally. The Eurostat statistics state that the average distance HGVs travel on national journeys is 95.6 km for Europe. HGVs emit an average of 57 g CO<sub>2</sub>/tonne/km with an average load of 20 tonnes. This leads us to total emission of 108.98 kg CO<sub>2</sub>/day due to cargo transport from the site.

The average commute for the Fingal area is 12.3 km according to the 2022 census data. A private car in 2023 emits an average of 98.4 g CO<sub>2</sub>/km according to data from Mobility Partnership Ireland. This means that the passenger cars will emit 1.21 kg CO<sub>2</sub>/day due to commuting to and from the development.

Overall, the predicted impact on Air and Climate due to traffic during the operational phase is considered to be **permanent, negative, and slight**.

#### 9.5.3.2 Climate

Climate change has the potential to alter weather patterns and increase the frequency of rainfall in future years. The increase in traffic due to the logistics operation being carried out will cause an increase in greenhouse gases being emitted by the trucks and cars which are part of the operation.

Overall, the predicted impact on Climate due to the operational phase is considered to be **permanent, negative, and slight**.

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### 9.5.3.3 Human Health

Traffic related air emissions have the potential to impact human health if they do not comply with the ambient Air Quality Standards detailed in Table 7.1. However, while the site will have many vehicles present the emissions caused by this will not be of significant amount to impact human health.

Dust emissions could have adverse effects on human health but during the operational phase the car park and driveway surfaces will be impermeable which significantly reduces the potential for dust emissions from the site during operation. The main potential for an impact on human health is the potential for increased greenhouse gas emissions from the increased traffic which has been discussed in detail in the previous section. Due to this the amount of expected impact on human health due to the operational phase is considered to be **long term, imperceptible and negative**.

### 9.5.3.4 Conclusion

Overall, the predicted impact on Air and Climate due to the operational phase is considered to be **long term, negative, and slight**. This is due to the increased greenhouse gas emissions from the increased vehicle use in the area.

## 9.6 Mitigation Measures

The main impact on air and climate from the proposed development is due to traffic emissions. Mitigation measures are to be introduced to reduce unnecessary emissions. Unnecessary acceleration and driving at high speeds can both increase fuel consumption and emissions. Limiting the speed on site will reduce emissions produced from traffic. Fuel waste is minimised by stopping the engine whenever vehicles are idle. On site it will be enforced that vehicles will not sit in idle for prolonged periods of time.

## 9.7 Residual Impacts

Once the mitigation measures previously discussed are implemented, the residual impacts on air quality or climate from the construction of the proposed development will be **temporary, negative, and slight**. The residual impacts on air quality for the operational phases of the proposed development will be **long-term, negative and imperceptible**. The impacts on climate will be **long-term, negative and imperceptible**.

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## 9.8 Cumulative Impacts

### 9.8.1 Construction Phase

Due to its location and the size of the development the cumulative impacts should be considered such as planned or existing developments within proximity to the airport. Extraction of existing ground and construction activities such as material processing and transport and use of construction vehicles and machinery may contribute to elevated levels of particulate matter, oxides such as nitrogen and carbon dioxide. When these emissions are combined with airport operations, possible traffic in the area and other projects could lead to a decrease to local air quality and contribute to greenhouse gas emissions which may have a knock-on effect for national climate targets. It is important that during construction that air dispersion modelling and incorporation of EPA emissions data is used to inform mitigation strategies and ensure adherence to the EU Ambient Air Quality Directive and Ireland's Climate Action Plan.

### 9.8.1 Operational Phase

Due to the number of vehicles going to and from the site there would be potential impacts on air quality due to the increased levels of vehicle emissions such as carbon dioxide. This could be a compounding increase when considering the site's location and proximity to Dublin Airport. The energy needed to heat and cool office areas and potentially sensitive cargo at the site would add to the sites the overall carbon footprint and add increased stresses to the local environment. Because of the presence of vehicles coming to and from the site, the integration of renewable energy systems such as solar panelling, electric vehicle charging systems and transport initiatives such as busses would aid in mitigating long term climate effects.

In accordance with the EPA Guidelines the cumulative impacts to air quality are predicted to be **long-term, negative** and **imperceptible**.

## 9.9 Interactions

Air quality does not have a significant number of interactions with other topics. The most significant interactions are between population and human health and air quality. An adverse impact due to air quality in either the construction or operational phase has the potential to cause health and dust nuisance issues. The mitigation measures that will be put in place at the subject site will ensure that the impact of the proposed development complies with all ambient air quality legislative limits and therefore the predicted

impact is **temporary, negative** and **slight** with respect to the construction phase and **long-term, negative** and **slight** with respect to the operational phase in terms of human health impacts.

Interactions between air quality and traffic can be significant. The impacts of the proposed development on air quality are assessed by reviewing the change in annual average daily traffic on roads close to the site. Due to the nature of the warehouses being used for aviation related logistics, the impact of the interactions between traffic and air quality are not possible to be considered separately. The operational impacts with consideration to traffic are considered to be **long-term, negative** and **slight**.

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# 10.0 Noise & Vibration

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## 10.1 Introduction

D.A. Terminal 3 Ltd. has engaged iAcoustics to prepare this Noise & Vibration Chapter of the EIAR for the Proposed Aviation related Cargo Handling facility at Western Campus, Dublin Airport. This report describes the noise & vibration impacts that will arise during the construction and operational phases of the development and assessed the inward noise impact of existing noise sources on future building occupants.

### 10.1.1 Competency Statement

This chapter was written and prepared by Glen Plunkett and Eoghan Tyrell.

Glen Plunkett is a Senior Acoustic Consultant at iAcoustics, Member of the Institute of Acoustics (MIOA), P.G.Dip Acoustics & Noise Control, MSc Applied Acoustics. Glen has over 7 years relevant experience in the preparation of noise impact assessments. This chapter is overseen by Jim Dunne, Managing Director at iAcoustics, MIOA, MSc. Jim Has over 35 years' experience in acoustics and over 23 years of relevant experience in the area of environmental acoustics.

Eoghan Tyrell is a qualified Acoustic Consultant with over 10 years of experience in the audio and acoustics industry. He holds an MSc in Applied Acoustics from the University of Derby, a Postgraduate Diploma in Acoustics and Noise Control from the Institute of Acoustics, and an M.Phil. in Music and Media Technologies (Distinction) from Trinity College Dublin. Eoghan specialises in environmental noise and vibration assessment, and predictive modelling of room acoustics using 3D computational simulations.

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### 10.1.2 Glossary of Terms

**Table 10.1** - Glossary of terms

Term	Description
<b>A-weighting</b>	<i>A frequency-dependent correction that is applied to a measured or calculated sound of moderate intensity to mimic the varying sensitivity of the ear to sound for different frequencies.</i>
<b>Ambient Sound</b>	<i>The all-encompassing sound at a given location, comprised of many sound sources near and far.</i>
<b>Ambient sound level, <math>L_{Aeq,T}</math></b>	<i>Defined in BS 4142:2014 as the equivalent continuous A-weighted sound pressure level of the totally encompassing sound in a given situation at a given time at the assessment location over a given time interval, T</i>
<b>Background sound level, LA90</b>	<i>Defined in BS 4142:2014 as the A-weighted sound pressure level that is exceeded by the residual sound at the assessment location for 90% of a given time interval, T, measured using time weighting F and quoted to the nearest whole number of decibels</i>
<b>Break-in/out</b>	<i>Noise transmission into a building from outside, or noise transmission from a building to outside.</i>
<b>Cumulative effects</b>	<i>Those that result from additive impacts caused by other past, present or reasonably foreseeable actions together with the plan, programme or project itself and synergistic effects which arise from the reaction between impacts of a development plan on aspects of the environment</i>
<b><math>L_{A10,T}</math></b>	<i>The A-weighted sound pressure level exceeded for 10% of the measurement time. Used to assess traffic noise.</i>
<b><math>L_{A90,T}</math></b>	<i>The A-weighted sound pressure level exceeded for 90% of the measurement time. Used as an indicator for the relative 'quietness' of a given location.</i>
<b><math>L_{Aeq,T}</math></b>	<i>Defined in ISO 1996-1:2016 as A-weighted, equivalent continuous sound pressure level during a stated time interval, expressed in decibels (dB), at a given point in space.</i>

<b><math>L_{AF,max}</math></b>	Maximum time-weighted and A-weighted sound pressure level with a FAST time constant (125ms) within a stated time interval $t$ .
<b>Measurement time interval</b>	The total time over which measurements are taken
<b>PPV</b>	Peak Particle Velocity – Defined in BS 7385-2:1993 as the maximum instantaneous velocity of a particle at a point during a given time interval.
<b>Rating Level, <math>L_{Ar}</math></b>	Defined in BS 4142 as the specific sound level plus any adjustment for the characteristic features of the sound
<b>Reference time interval</b>	The specified interval over which the specific sound level is determined. This is typically 1 h during the day (0700-2300) and a shorter period of 15 min at night (2300-0700)
<b>Residual sound</b>	Defined in BS 4142:2014 as the ambient sound remaining at the assessment location when the specific sound source is suppressed to such a degree that it does not contribute to the ambient sound
<b>Residual sound level, <math>L_r</math></b>	Defined in BS 4142:2014 as the equivalent continuous A-weighted sound pressure level of the residual sound at the assessment location over a given time interval, $T$
<b>Specific sound level, <math>L_{Aeq,Tr}</math></b>	Defined in BS 4142:2014 as the equivalent continuous A-weighted sound pressure level produced by the specific sound source at the assessment location over a given reference time interval, $Tr$ .
<b>Specific sound source</b>	The sound source being assessed
<b>VDV</b>	Vibration Dose Value. A measure of human exposure to vibration in buildings over time (typically 16h day, 8h night), accounting for the magnitude, number, and duration of events. Unlike PPV (single events), VDV captures total exposure to continuous, impulsive, or intermittent vibration, expressed in $m/s^{1.75}$ .

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## 10.2 Methodology

### 10.2.1 Scope

To assess potential noise and vibration impacts arising from construction and operation of the development, and to evaluate the inward impact of existing noise (mainly from Dublin Airport) on future building occupants.

### 10.2.2 Relevant Standards, Guidance & Legislation

This section describes the key standards, guidance, and policies relevant to the development. A complete list of referenced documents is provided in Appendix A – References.

#### 10.2.2.1 National Planning Framework First Revision (2025)

**National Policy Objective (NPO) 94:** *Promote the pro-active management of noise where it is likely to have significant adverse impacts on health and quality of life and support the aims of the Environmental Noise Regulations through Strategic Noise Maps, Noise Action Plans and national planning guidance.*

In addressing these issues, the NPF will support:

- **Noise Management and Action Planning**

Measures to avoid, prevent, mitigate, and minimise or promote the pro-active management of environmental noise, where it is likely to have significant adverse impacts on health and quality of life, through strategic noise mapping, noise action plans and suitable development plan objectives and planning conditions.

- **Noise, Amenity and Privacy**

This includes but is not limited to, good acoustic design for proposed new developments, in particular residential development, through a variety of measures such as setbacks and separation between noise sources and receptors, good acoustic design of buildings, building orientation, internal layout, building materials and noise barriers and buffer zones between various uses and thoroughfares. Cognisance of competing demands between internal acoustics, ventilation and thermal comfort and the design of private external amenity areas is essential so that developments can be enjoyed as intended.

- **Quiet Areas**

The further enjoyment and protection of natural resources, such as our green spaces and sea frontage, through the preservation of low sound levels or a reduction in undesirably high noise levels, is particularly important for providing respite from high levels of urban noise. As part of noise action plans, an extra value placed on these areas, in terms of environmental quality and the consequential positive impact on quality of life and health, due to low environmental noise, can assist in achieving this. National Policy Objective 94 Promote the pro-active management of noise where it is likely to have significant adverse impacts on health and quality of life and support the aims of the Environmental Noise Regulations through Strategic Noise Maps, Noise Action Plans and national planning guidance.

#### 10.2.2.2 Fingal Development Plan 2023 – 2029

The Fingal Development Plan 2023 – 2029 contains a number of policy objectives relating to noise; these are mainly concerning housing and other noise-sensitive development in proximity to noise sources, such as Dublin Airport. It also discusses the Dublin Airport Noise Zones which have been in place for many years to aid land use planning.

Commercial-use buildings are not typically classed as ‘noise-sensitive uses’ in planning or guidance at the same level as dwellings, schools, or hospitals. However, certain types of offices, such as those requiring quiet for tasks involving concentration or communication can have some sensitivity to noise, and relevant internal noise level guidance does exist with BS 8233:2014 which is discussed in a later section.

The Development Plan gives examples of buildings which it regards as noise-sensitive, which does not include commercial buildings,

*“Where development includes other non-residential noise-sensitive receptors, alternative design guidance will need to be considered by the developer. Non-residential buildings and uses which are viewed as being noise sensitive within the functional area of FCC include hospitals, residential care facilities and schools.”*

There are no objectives within the *Fingal Development Plan 2023-2029* or *Dublin Agglomeration Draft Noise Action Plan 2024-2028* restricting new non-sensitive development within the Dublin Airport Noise Zones. Only housing and other noise-sensitive developments as defined in the Plan are subject to restrictions under Objective SPQHO82.

Nevertheless, noise impacts should be considered for all development types in potentially high-noise areas in support of National Policy Objective 94 set out in the Department of Housing Planning and Local Government’s (DHPLG) *National Planning Framework 2040*, to “promote the pro-active management of

noise where it is likely to have significant adverse impacts on health and quality of life and support the aims of the Environmental Noise Regulations through national planning guidance and Noise Action Plans.”

The subject site is within **Aircraft Noise Zone A** as defined under the Fingal Development Plan 2023 – 2029 (Refer to Appendix D for Map no.12). Potential noise exposure values for Zone A are **≥63 dB LAeq,16hr and ≥55 dB Lnight.**

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**Table 10.2** Description of Airport Noise Zones

**Source:** FDP 2023-2029

Zone	Indication of Potential Noise Exposure during Airport Operations	Objective
D	≥ 50 and < 54 dB LAeq, 16hr and ≥ 40 and < 48 dB Lnight	To identify noise sensitive developments which could potentially be affected by aircraft noise and to identify any larger residential developments in the vicinity of the flight paths serving the Airport in order to promote appropriate land use and to identify encroachment. All noise sensitive development within this zone is likely to be acceptable from a noise perspective. An associated application would not normally be refused on noise grounds, however where the development is residential-led and comprises non-residential noise sensitive uses, or comprises 50 residential units or more, it may be necessary for the applicant to demonstrate that a good acoustic design has been followed. Applicants are advised to seek expert advice
C	≥ 54 and < 63 dB LAeq, 16hr and ≥ 55 dB Lnight	To manage noise sensitive development in areas where aircraft noise may give rise to annoyance and sleep disturbance, and to ensure, where appropriate, noise insulation is incorporated within the development Noise sensitive development in this zone is less suitable from a noise perspective than in Zone D. A noise assessment must be undertaken in order to demonstrate good acoustic design has been followed. The noise assessment must demonstrate that relevant internal noise guidelines will be met. This may require noise insulation measures. An external amenity area noise assessment must be undertaken where external

		<p>amenity space is intrinsic to the development's design. This assessment should make specific consideration of the acoustic environment within those spaces as required so that they can be enjoyed as intended. Ideally, noise levels in external amenity spaces should be designed to achieve the lowest practicable noise levels. Applicants are strongly advised to seek expert advice</p>
<p><b>B</b></p>	<p>≥ 54 and &lt; 63 dB LAeq, 16hr and ≥ 55 dB Lnight</p>	<p>To manage noise sensitive development in areas where aircraft noise may give rise to annoyance and sleep disturbance, and to ensure noise insulation is incorporated within the development. Noise sensitive development in this zone is less suitable from a noise perspective than in Zone C. A noise assessment must be undertaken in order to demonstrate good acoustic design has been followed. Appropriate well-designed noise insulation measures must be incorporated into the development in order to meet relevant internal noise guidelines. An external amenity area noise assessment must be undertaken where external amenity space is intrinsic to the developments design. This assessment should make specific consideration of the acoustic environment within those spaces as required so that they can be enjoyed as intended. Ideally, noise levels in external amenity spaces should be designed to achieve the lowest practicable noise levels. Applicants must seek expert advice.</p>
<p><b>A</b></p>	<p>≥ 63 dB LAeq, 16hr and/or ≥ 55 dB Lnight</p>	<p>To resist new provision for residential development and other noise sensitive uses. All noise sensitive developments within this zone may potentially be exposed to high levels of aircraft noise, which may be harmful to health or otherwise unacceptable. The provision of new noise sensitive developments will be resisted.</p>
<p><b>Notes</b></p>	<ul style="list-style-type: none"> <li>• 'Good Acoustic Design' means following the principles of assessment and design as described in ProPG: Planning &amp; Noise – New Residential Development, May 2017;</li> <li>• Internal and External Amenity and the design of noise insulation measures should follow the guidance provided in British Standard BS8233:2014 'Guidance on sound insulation and noise reduction for buildings</li> </ul>	

### 10.2.2.3 Dublin Agglomeration Noise Action Plan 2024-2028

The Environmental Noise Directive (END) (2002/49/EC) establishes a Europe-wide system to identify sources of environmental noise, inform the public, and reduce noise exposure. It was transposed into Irish law via the Environmental Noise Regulations 2006 (S.I. 140/2006), revised by S.I. 549/2018, and amended through S.I. 663/2021.

Under these Regulations, Dublin City Council (DCC), Dún Laoghaire-Rathdown County Council (DLRCC), Fingal County Council (FCC), South Dublin County Council (SDCC), Kildare County Council (KCC), and Wicklow County Council (WCC) are designated as Noise-Mapping Bodies, tasked with creating strategic noise maps for the Dublin Agglomeration. They also serve as Action Planning Authorities (APAs), responsible for preparing a Noise Action Plan.

The Dublin Agglomeration Noise Action Plan (2024–2028) assesses noise sources from road traffic, rail traffic, and industrial activities for 2021. Airport noise is addressed separately. Based on strategic noise maps, the plan identifies Priority Important Areas for noise management and Candidate Quiet Areas for potential preservation of noise quality.

APAs will evaluate Priority Important Areas to determine noise management measures using cost-benefit and health impact analyses. Candidate Quiet Areas will also be assessed for possible designation as Quiet Areas. The Plan is underpinned by a set of overarching noise policy principles outlined in the Noise Policy Statement, which are supported by a series of Responsible Aims with the APA's will strive to achieve.

Noise Policy Statement:

*"Dublin City Council, Dún Laoghaire-Rathdown County Council, Fingal County Council, South Dublin County Council, Kildare County Council and Wicklow County Council will adopt a strategic approach to managing environmental noise from road traffic, rail traffic, airports and industrial activity sites, including ports, within its functional area, including the following:*

- 1. Prevention** – *manage the risk of additional members of the community being exposed to undesirable noise levels where it is likely to have significant adverse impact on health and quality of life.*
- 2. Protection** - *protect areas which are desirably quiet, or which offer a sense of tranquillity through a process of identification and validation followed by formal designation of 'Quiet Areas'.*
- 3. Mitigation** – *identify and prioritise appropriate mitigation measures to reduce noise levels where they are potentially harmful."*

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**Responsible Aims:**

*"Dublin City Council, Dún Laoghaire-Rathdown County Council, Fingal County Council, South Dublin County Council, Kildare County Council and Wicklow County Council commit to the following Responsible Aims during current and future noise action planning:*

**RA\_1 - Policy and Guidance Development:** *Encourage the integration of noise considerations into the ongoing process of policy and guidance development, and actively promote existing policies and guidance related to noise.*

**RA\_2 - Working Groups:** *Establish and participate in Noise Action Plan technical and implementation working groups.*

**RA\_3 - Noise Mitigation:** *In collaboration and consultation with relevant Noise Mapping Bodies, noise management interventions shall be applied on a priority basis during existing maintenance and improvement programs, where appropriate. This application will be based on a relevant evaluation of whole-life costs and benefits*

**RA\_4 – Protection:** *Assess and, where appropriate, propose Candidate Quiet Areas to the Environmental Protection Agency for designation as Quiet Areas by the Minister*

**RA\_5 – Prevention:** *Evaluate and condition planning proposals for noise sensitive development near major noise sources.*

**RA\_6 - Community Engagement:** *Commit to proactive and inclusive engagement with communities and collaboratively address noise issues for the improvement of our shared living environment*

**RA\_7 – Manage Noise Complaints:** *Review and respond to all environmental noise complaints in accordance with their Customer Charter.*

**RA\_8 - Regulatory Engagement:** *Report the progress on the implementation of Noise Action Plans, including the investigation and implementation of noise management measures in Priority Important Areas, and the assessment of Candidate Quiet Areas for preservation of environmental noise quality, to the Environmental Protection Agency on an annual basis."*

**10.2.2.4 BS 8233:2014 'Guidance on sound insulation and noise reduction for buildings'**

This British Standard provides guidance for controlling noise in buildings. It is included as a reference in the *Fingal Development Plan 2023-2029* and the *Noise Action Plan 2024-2028 – Dublin Agglomeration* and is widely used in Ireland. The Standard provides a range of guidance thresholds for design purposes for

residential settings, both internal and external noise criteria which reflect the guidance contained in various WHO publications (See Appendix A – References). These values are commonly used as a benchmark to assess the potential impact of a development on nearby noise-sensitive dwellings, summarised as follows:

Living rooms:  $L_{Aeq,16hr}$  (0700-2300 hrs):  $\leq 35$  dB.

Dining rooms/kitchens:  $L_{Aeq,16hr}$  (0700-2300 hrs):  $\leq 40$  dB.

Bedrooms (day):  $L_{Aeq,16hr}$  (0700-2300 hrs):  $\leq 35$  dB, Bedrooms (night):  $L_{Aeq,8hr}$  (2300-0700 hrs):  $\leq 30$  dB.

Regarding noise levels in external amenity areas, BS 8233:2014 states:

*"it is desirable that the steady state noise level does not exceed 50 dB  $L_{Aeq,T}$ , with an upper guideline value of 55 dB  $L_{Aeq,T}$ ...it is also recognized that these guideline values are not achievable in all circumstances."*

Usefully, the Standard provides typical design values for non-residential buildings; these values are considered 'good practice' values and are often referenced by Local Authorities throughout Ireland. An excerpt of Table 6 from BS 8233:2014 is outlined below, which suggests design target values for  $L_{Aeq,T}$  for office-type spaces, ranging from 35 – 45dB  $L_{Aeq,T}$ . For this assessment, a design target of 40 dB  $L_{Aeq,T}$  is deemed appropriate for the inward noise assessment.

**Table 10.3** Extract from BS 8233:2014, Table 6.

Activity	Location	Design range dB LAeq
<b>Speech or Telephone communications</b>	Department store	50-55
	Cafeteria canteen, kitchen	
	Concourse	45-55
	Corridor, circulation space	
<b>Study and work requiring concentration</b>	Library, gallery, museum	40-50
	Staff/meeting, training room	35-45
	Executive office	35-40
<b>Listening</b>	Place of worship, counselling, meditation, relaxation	30-35

### 10.2.2.5 Environmental Noise Standards & Guidance

In 2016, the EPA issued 'Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4)'. An updated version of this document was issued in 2024 in draft format for consultation. This guidance document provides acoustic guidelines to the operators of activities subject to Integrated Pollution Prevention and Control (IPPC) and waste licences. As part of the IPPC and waste licensing systems, certain scheduled activities and operations have conditions attached to their licences which affect control over emissions of noise. In the absence of any other noise guidelines in Ireland, the NG4 guidelines are widely used by local authorities for sectors outside the remit of the EPA. The following absolute noise limits are suggested in NG4:

- Daytime (07:00 to 19:00hrs): 55 dB  $L_{Ar,T}$
- Evening (19:00 to 23:00hrs): 50 dB  $L_{Ar,T}$
- Night-time (23:00 to 07:00hrs): 45 dB  $L_{Aeq,T}$  & no tonality.

$L_{Ar,T}$  is the rating level as defined in BS 4142:2014.

The NG4 values are reflected in planning conditions for other logistics/warehousing units in Dublin Airport Logistics Park. No noise conditions were found for F16A/0128 & F07A/0389. Reg Ref. FW19A/0143 has the following condition:

*"Noise due to the normal operation of the proposed development shall not cause a noise nuisance to nearby noise-sensitive locations and shall not exceed the background level by 10 dB(A) or more or exceed NG4 limits whichever is lesser*

- *Daytime (07:00 to 19:00 hrs) – 55dB*
- *Evening (19:00 to 23:00 hrs) – 50dB*
- *Night-time (23:00 to 07:00 hrs) – 45dB (measured from the nearest noise-sensitive location).*

*Clearly audible and impulsive tones at noise sensitive locations during evening and night shall be avoided irrespective of the noise level"*

BS 4142:2014 'Method for rating and assessing industrial and commercial sound' is an applicable standard which describes a method for rating and assessing sound of an industrial and/or commercial nature, which includes sound from fixed installations which comprise mechanical and electrical plant and equipment.

The assessment method described in the Standard is based on a comparison between the level of noise from the source under investigation (i.e. mechanical plant), called the *specific noise level* and the *background noise level*. The specific noise may be determined by prediction or measurement, in which case it should be corrected for the influence of ambient noise on the measurement, if necessary. It may then be subject to a character correction to determine the Rating level to be used in the assessment.

Certain acoustic features such as tonality, impulsivity or intermittency can increase the significance of a noise impact. The character correction can be determined by either subjective or objective methods to arrive at a rating level which is the specific sound level plus any acoustic feature correction. Where the rating level does not exceed the background sound level, this indicates the specific sound source having a low impact, depending on the context. Depending on the context, a difference of around +5 dB will likely indicate an adverse impact; a difference of around +10 dB will likely indicate a significant adverse impact.

#### 10.2.2.6 Vibration

Vibration criteria are dealt with in two aspects: criteria for building response and for human response.

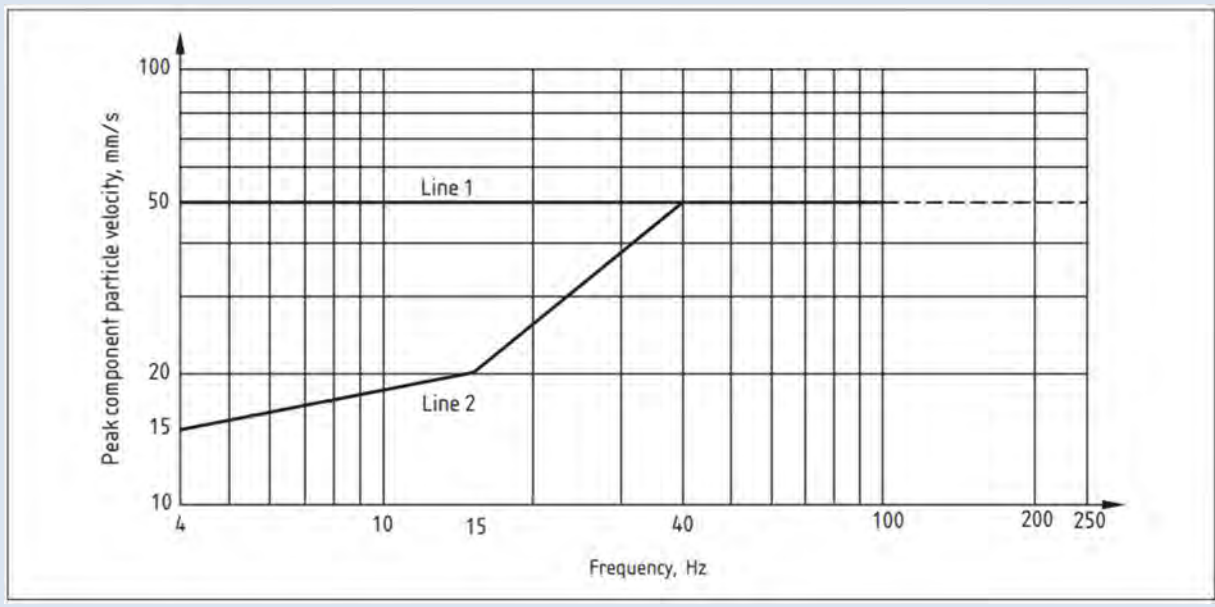
##### **Building Response**

In the absence of Irish guidance, there are two relevant British Standards: British Standard BS 7385-2:1993: '*Evaluation and measurement for vibration in buildings Part 2: Guide to damage levels from ground borne vibration*' and British Standard BS 5228-2:2009+A1:2014: '*Code of practice for noise and vibration control on construction and open sites – Vibration.*'

BS 7385-2 provides guidance on the assessment of the possibility of vibration-induced damage in buildings due to a variety of sources; note, these values are repeated in BS 5228-2. BS 7385-2 provides guide values for transient vibration above which cosmetic damage could occur; these values are reproduced below. These guide values are judged to give a minimal risk of vibration induced damage. 'Minimal risk' is usually taken as a 95% probability of no effect. A probabilistic basis is used because the combination of building types, age and conditions may not permit the establishment of an absolute criterion. Minor damage to buildings is possible at vibration magnitudes which are greater than *twice* the tabulated values and major damage can occur at values greater than *four* times the tabulated values. The probability of damage tends towards zero at 12.5 mm/s PPV.

**Table 10.4** - Reproduction of Table 1 and Figure 1 from BS 7385-2:1993, showing the transient vibration guide values for cosmetic damage to buildings.

Line	Type of Building	Peak component particle velocity in frequency range of predominant pulse	
		4 Hz to 15 Hz	15 Hz and above
1	Reinforced or framed structures Industrial and heavy commercial buildings	50 mm/s at 4 Hz and above	
2	Unreinforced or light framed structures Residential or light commercial type buildings	15 mm/s at 4 Hz increasing to 20 mm/s at 15 Hz	20 mm/s at 15 Hz increasing to 50 mm/s at 40 Hz and above



**Human Response:**

Relevant guidance is contained in BS 6472-1: 2008 'Guide to evaluation of human exposure to vibration in buildings, Part 1 Vibration sources other than blasting.' BS 6472 uses the Vibration Dose Value (VDV) which is measured or forecast over the day or night-time periods, expressed in  $m.s^{-1.75}$ . The VDV parameter takes into account how people respond to vibration in terms of frequency content, vibration magnitude and the number of vibration events during an assessment period.

The following Table, as set out in the standard, details the values of VDV where various comments from occupiers are possible. The standard notes that the values are applicable for both vertical and horizontal vibration with the appropriate weighting applied. Values are given for residential, office and workshop environments.

**Table 10.6:** VDV ( $m.s^{-1.75}$ ) above which various degree of adverse comment may be expected in residential buildings.

Building Type	Low probability of adverse comment, VDV
Residential building – 16hr Day	0.2 to 0.4
Residential building – 8hr Night	0.1 to 0.2
Office – 16hr Day	0.4 to 0.8
Workshop– 16hr Day	0.8 to 1.6

### 10.2.3 Inward Noise & Vibration Assessment Criteria

During the developments operational phase, the following inward noise & vibration criteria are deemed appropriate assessment criteria.

- **Noise:** All internal areas of the development shall achieve acceptable indoor ambient noise levels in line with BS 8233:2014 ‘typical noise levels in non-domestic spaces’.
- **Vibration:** The Vibration Dose Value (VDV) as defined BS 6472-1:2008 shall not exceed a value of  $0.8 m.s^{-1.75}$  (16hr day) measured in any building area.

### 10.2.4 Construction Phase Noise & Vibration Criteria

The measured Sound Pressure Level (SPL) at any noise-sensitive receptor shall not exceed the following Category A values set out in BS 5228-1:2009.

Monday to Friday (07:00 – 19:00)	<b>65dB <math>L_{Aeq,T}</math></b>
Saturdays (07:00 – 13:00hrs)	<b>65dB <math>L_{Aeq,T}</math></b>
Evening and Saturday (13:00 – 23:00hrs)	<b>55 dB <math>L_{Aeq,T}</math></b>
Night-time (23:00 to 07:00hrs) weekdays	<b>45 dB <math>L_{Aeq,T}</math></b>

Vibration levels, expressed as PPV in mm/s, assessed at any noise-sensitive receptor shall not exceed the stated values.

**Table 10.6** Construction vibration criteria.

Type of Building	Peak component particle velocity in frequency range of predominant pulse	
	4 Hz to 15 Hz	15 Hz and above
Reinforced or framed structures Industrial and heavy commercial buildings	50 mm/s at 4 Hz and above	
Unreinforced or light framed structures Residential or light commercial type buildings	15 mm/s at 4 Hz increasing to 20 mm/s at 15 Hz	20 mm/s at 15 Hz increasing to 50 mm/s at 40 Hz and above

### 10.2.5 Operational Noise & Vibration Assessment Criteria

The measured Sound Pressure Level (SPL) at any noise-sensitive receptor shall not exceed the following.

**Table 10.7-** Proposed assessment criteria.

Period	Absolute Criteria (Reference: EPA Guidance)	Relative Criteria (Reference: BS 4142:2014)
Daytime 07:00 to 19:00hrs	55 dB $L_{Ar,T}$	Rating Level $L_{Ar,T}$ no more than 10dB above background sound
Evening 19:00 to 23:00hrs	50 dB $L_{Ar,T}$	Rating Level $L_{Ar,T}$ no more than 5dB above background sound
Night-time 23:00 to 07:00hrs	45 dB $L_{Aeq,T}$ & no tonal or impulsive sounds	Rating Level $L_{Ar,T}$ no more than background sound level $L_{A90}$ .

*$L_{Ar,T}$  is the rating level as defined in BS 4142:2014.*

*Values based on free-field levels at the façade of a noise-sensitive receptor*

Operational phase vibration criteria shall adopt with stated threshold values of BS 6472-1:2008 Guide to Evaluation of Human Exposure to Vibration in Buildings – Part 1: Vibration Sources Other than Blasting and BS 7385-2:1993 Evaluation and Measurement for Vibration in Buildings – Part 2: Guide to Damage Levels from Groundborne Vibration.

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## 10.2.6 Difficulties Encountered

As specific details for the speculative units are not yet available, the precise operational characteristics of the development are difficult to define. Therefore, in line with EPA guidance, the assessment of operational phase impacts has been carried out using a series of 'what if' scenarios based on conservative assumptions.

As is common at the planning stage, detailed information on the construction programme and methodologies is not yet available, limiting the accuracy of construction impact predictions. Accordingly, the assessment relies on outline information and conservative assumptions, consistent with the methodology set out in BS 5228-1:2009.

Noise data for the Wastewater Treatment facilities were not made available for assessment. In our experience, the facilities do not produce significant audible noise. Nevertheless, noise emissions from this aspect of the development shall meet the specified noise criteria set out in 10.2.5.

## 10.3 Receiving Environment

### 10.3.1 Development Description

1. Construction of four aviation-related cargo handling units with ancillary office space:

- i. Unit 1: c.10,869.7 m<sup>2</sup> (including 940.9 m<sup>2</sup> office space)
- ii. Unit 2: c.9,151.3 m<sup>2</sup> (including 751.3 m<sup>2</sup> office space)
- iii. Unit 3: c.6,024.9 m<sup>2</sup> (including 497.7 m<sup>2</sup> office space)
- iv. Unit 4: c.8,577.7 m<sup>2</sup> (including 751.3 m<sup>2</sup> office space)

The proposed units will have an overall combined total gross floor area (GFA) of c. 34, 623.6 sq.m (alongside ancillary ESB substations, 4 no. security huts with a combined GFA of 30 sqm and pumphouses). The warehouses are c. 12m in height, with the office element being c. 3.3 m in height and located within a landscaped campus on a site of c. 10.7 Ha

2. Provision of 390 car parking spaces, including 39 EV charging points, 19 accessible spaces, and 39 motorcycle bays.
3. Provision of 230 secure bicycle parking spaces, of which 100 are short stay spaces and 130 are sheltered long stay spaces.
4. Provision of approx. 77 truck parking spaces and 5 van spaces.

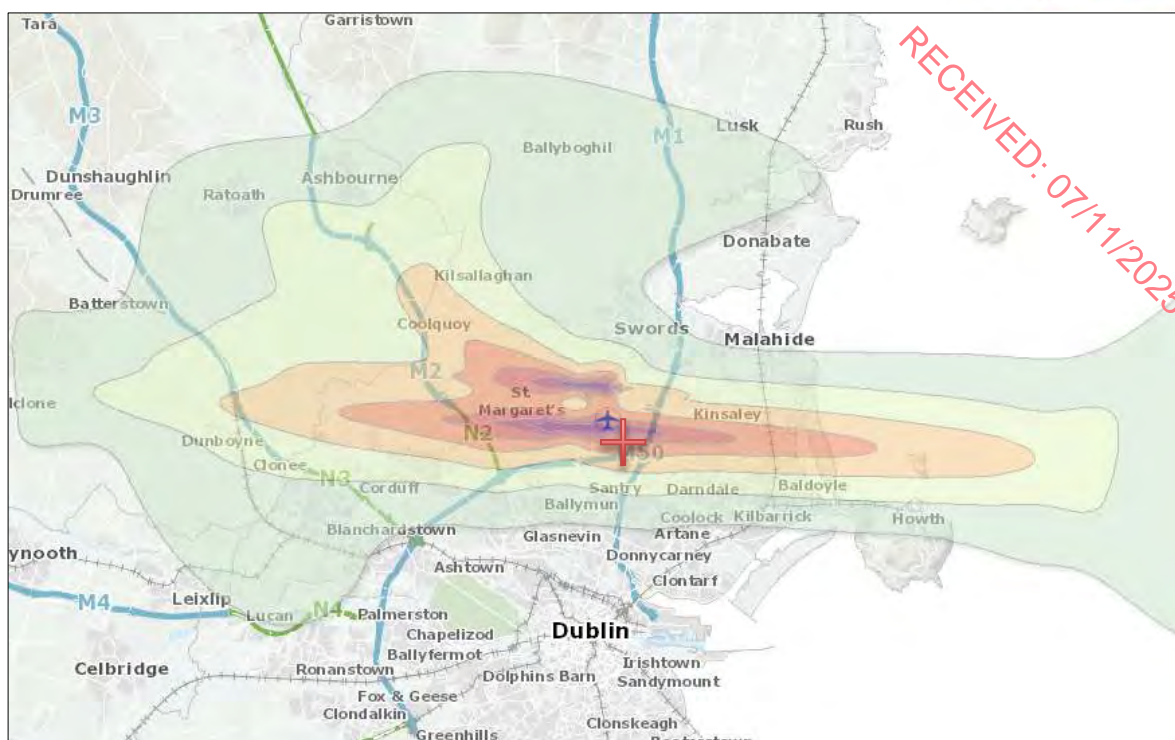
5. Hard and soft landscaping, new boundary treatments, including a c. 2m high System Wire Fence to site boundary.
6. Construction of new site entrance onto the R108.
7. Wastewater treatment plant and infiltration area for 250 PE.
8. All necessary site development and engineering and ancillary site works, including provision of ESB substations and switchrooms, sprinkler tanks and pumphouses, bin store and recycle store, lighting, signage, underground services, photovoltaic panel zones at roof level and sustainable drainage systems (SuDS).

### 10.3.2 Site Location & Context

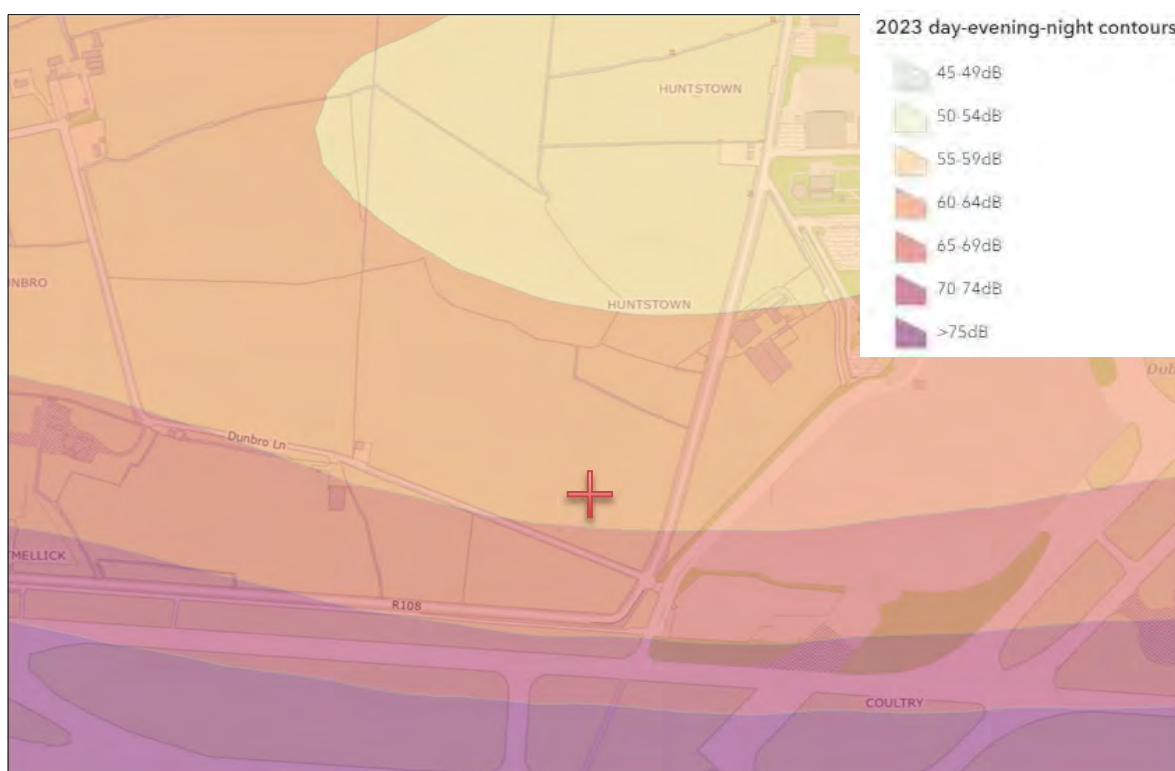
Area A is situated on a greenfield site nestled between Dublin Airport's north and south runway, within the overall T3 masterplan. Refer to site location drawings in the planning pack. The subject site is exposed to relatively high levels of aviation noise.

### 10.3.3 Strategic Noise Mapping Extracts

Extracts from the Strategic Noise Mapping of airports are presented below; these noise contour maps are *indications* of the potential noise exposure from aviation noise for Dublin Airport and are derived from predictive modelling, not measured data. Strategic Noise Mapping extracts are provided here for context to illustrate the prevailing noise environment arising from aviation noise sources; readers should refer to the measured baseline noise data in section 10.3.4 for detailed information.



**Figure 10.1** Extract from the Strategic Noise Mapping of Dublin Airport (2023 data).



**Figure 10.2** Extract from the Strategic Noise Mapping of Dublin Airport (2023 data).

It is evident from the noise mapping, and indeed simply from the site's close proximity to Dublin Airport, that elevated noise levels are present across both the site and its surrounding areas. As anticipated, these elevated levels are driven almost entirely by aviation noise, which overwhelmingly dominates the local acoustic environment

The noise climate at the development location is dependent on the operational characteristics of the airport's runways, i.e. whether a plane is taking off, taxiing or landing and in which direction. Dublin Airport has three runways: 10R/28L (South Runway), 10L/28R (North Runway), 16/34 (Crosswind Runway); 10R/28L (South) is the most relevant runway for this study. According to the DAA, runway operations are dictated by factors such as wind direction and weather conditions, operational requirements, planning conditions and maintenance.

For aerodynamic reasons, aircraft generally take off and land facing into the wind. At Dublin Airport, the two parallel runways (oriented east-west) are used for most operations. The Crosswind Runway (16/34) is only used occasionally. Since winds in Dublin are predominantly westerly (occurring about 70–80% of the time), Arrivals approach from the east over the Irish Sea and departures head west using Runways 28L and 28R. When winds shift and become easterly, (approx. 30% of the time), arrivals approach from the west and Departures head east towards the Irish Sea, using Runways 10L and 10R.

The criterion for determining which runway is used for aircraft departures and arrivals at Dublin Airport are outlined in the 2007 North Runway Planning Permission Condition 3. Mode of Operation 7B includes:

- Runway Preference: The parallel runways, 10R/28L (South Runway) and 10L/28R (North Runway), are preferred over 16/34 (Crosswind Runway).
- Westerly Operations: When winds are westerly (about 70% of the time), Runway 28L is preferred for arriving aircraft. Either Runway 28L or 28R can be used for departing aircraft, as determined by air traffic control.
- Easterly Operations: When winds are easterly (about 30% of the time), either Runway 10L or 10R can be used for arriving aircraft, as determined by air traffic control. Runway 10R is preferred for departing aircraft.

The above is particularly relevant to this Chapter as it is important that the baseline noise survey accounts for both westerly and easterly operations. Given that the prevailing noise environment is largely shaped by aviation activity, it is essential that the survey captures the full range of operational modes to provide a complete and robust understanding of baseline noise.

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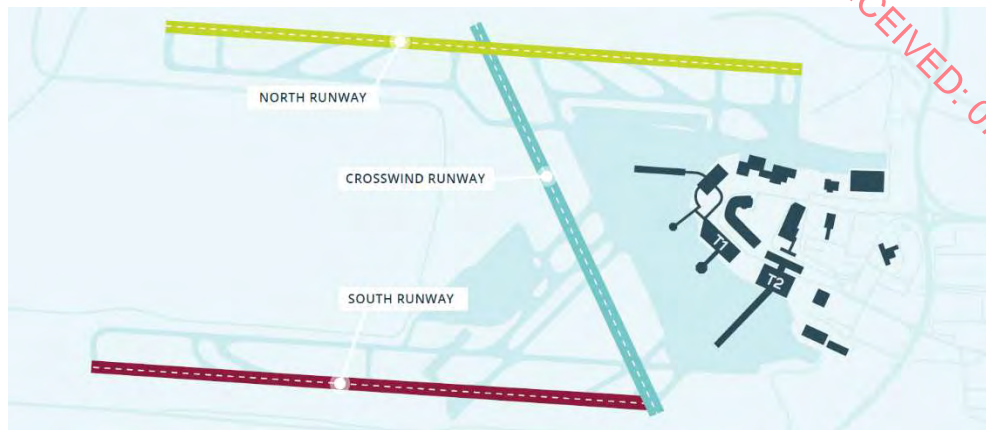


Figure 10.3 Dublin airport runway operations.

Source: DAA.

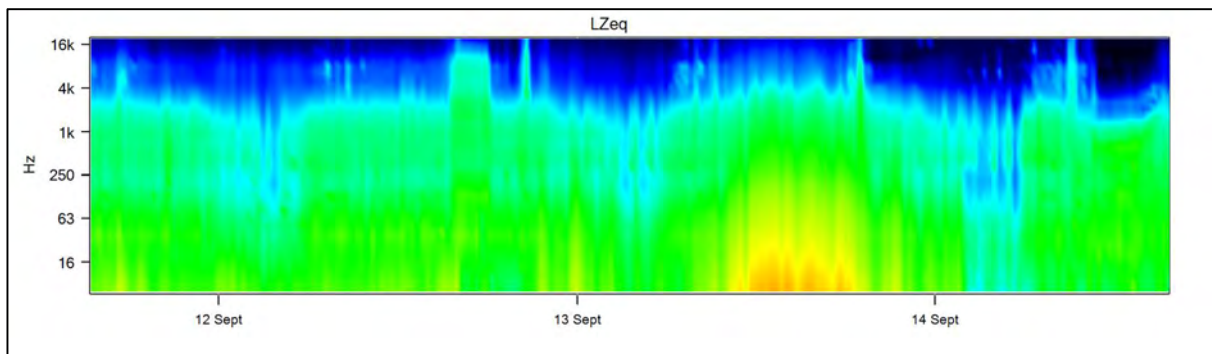
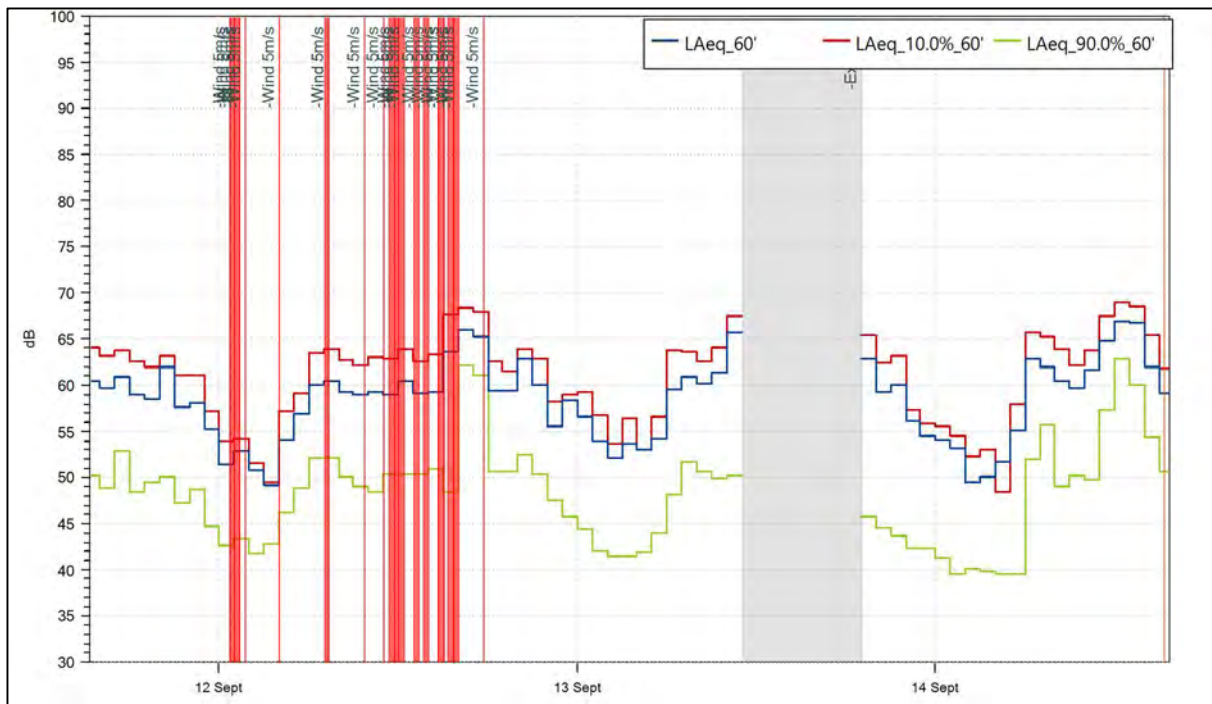
### 10.3.4 Baseline Noise

iAcoustics conducted a baseline noise survey of the receiving environment to establish representative background levels of noise prior to the commencement of the development. The baseline data encompasses the noise conditions experienced during both westerly and easterly runway operations. A detailed account of the survey methodology, including the measurement standards, equipment, survey

locations, monitoring durations and weather conditions is provided in Appendix B. The results for the day 07:00–23:00, and night 23:00–07:00 periods are summarized below using LAeq, LA10, and LA90.

**Table 10.8** Baseline noise sampling results.

Period	Start Date and Time	Meas. Duration	LAeq, dB	LA10%, dB	LA90%, dB
L <sub>day</sub>	11/09/2025 15:13	07:45:59	59.8	62.6	49.1
L <sub>day</sub>	12/09/2025 07:00	14:00:00	61.3	65.4	50.2
L <sub>day</sub>	13/09/2025 07:00	08:00:00	61.6	63.8	46.1
L <sub>night</sub>	11/09/2025 23:00	07:15:00	55.3	58	43.4
L <sub>night</sub>	12/09/2025 23:00	08:00:00	56	58.7	42.2
L <sub>night</sub>	13/09/2025 23:00	08:00:00	56.2	58.7	40



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Key findings are as follows:

- Values for LAeq and LA10 are relatively similar, but LA90 values are significantly lower than LAeq and LA10. The LA90 value is a good indicator of the relative quietness of a location and may be taken as an indicator of the background sound levels between take-offs/landings.
- The baseline levels remain consistent with the predictive noise model data contained in the published Strategic Noise Maps (see section 10.3.3).
- The baseline noise conditions at the subject site would be best characterised as comprising high levels of aviation traffic noise that is transient in nature, with an underlying low-to-moderate level of ambient noise arising from sources other than aviation traffic.

### 10.3.5 Baseline Vibration

**Table 10.9** Measured baseline VDV

		X	Y	Z
Start date & time	Duration	VDV m.s <sup>-1.75</sup>	VDV m.s <sup>-1.75</sup>	VDV m.s <sup>-1.75</sup>
25/05/2025 07:00:00	08:00:00	0.006	0.006	0.041
25/05/2025 15:00:11	08:00:00	0.007	0.008	0.057
25/05/2025 23:00:11	07:59:30	0.984	0.140	0.535
26/05/2025 07:00:00	08:00:00	0.003	0.003	0.012
26/05/2025 15:00:12*	08:00:00*	2.366*	1.702*	12.345*
26/05/2025 23:00:12	07:59:30	0.334	0.084	0.521
27/05/2025 07:00:00	07:59:30	0.054	0.005	0.225
27/05/2025 14:59:59	08:00:00	0.434	0.002	0.139
27/05/2025 22:59:59	08:00:00	0.002	0.0001	0.017
28/05/2025 07:00:00	08:00:00	0.003	0.0002	0.049
28/05/2025 15:00:26	08:00:00	0.012	0.0001	0.100
28/05/2025 23:00:26	07:59:30	0.154	0.0004	0.144

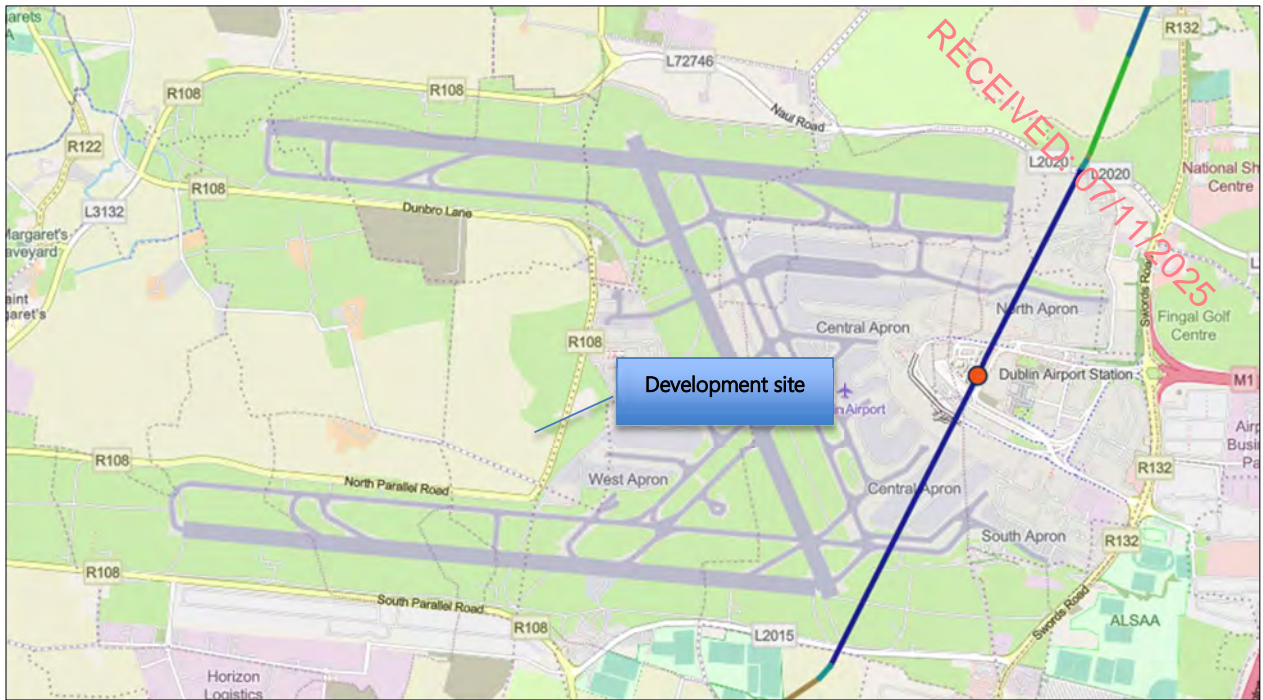
Values for VDV are significantly below the established threshold for 'low probability of adverse effect' defined as 0.4 to 0.8 VDV m.s<sup>-1.75</sup> for offices. Based on these results, it is anticipated that the proposed development will be able to achieve acceptable VDV levels within the finished buildings in line with relevant guidance.

### 10.3.6 Future Changes in Baseline Conditions

At the time of writing, there are several development scenarios that may affect the future noise climate at Dublin Airport.

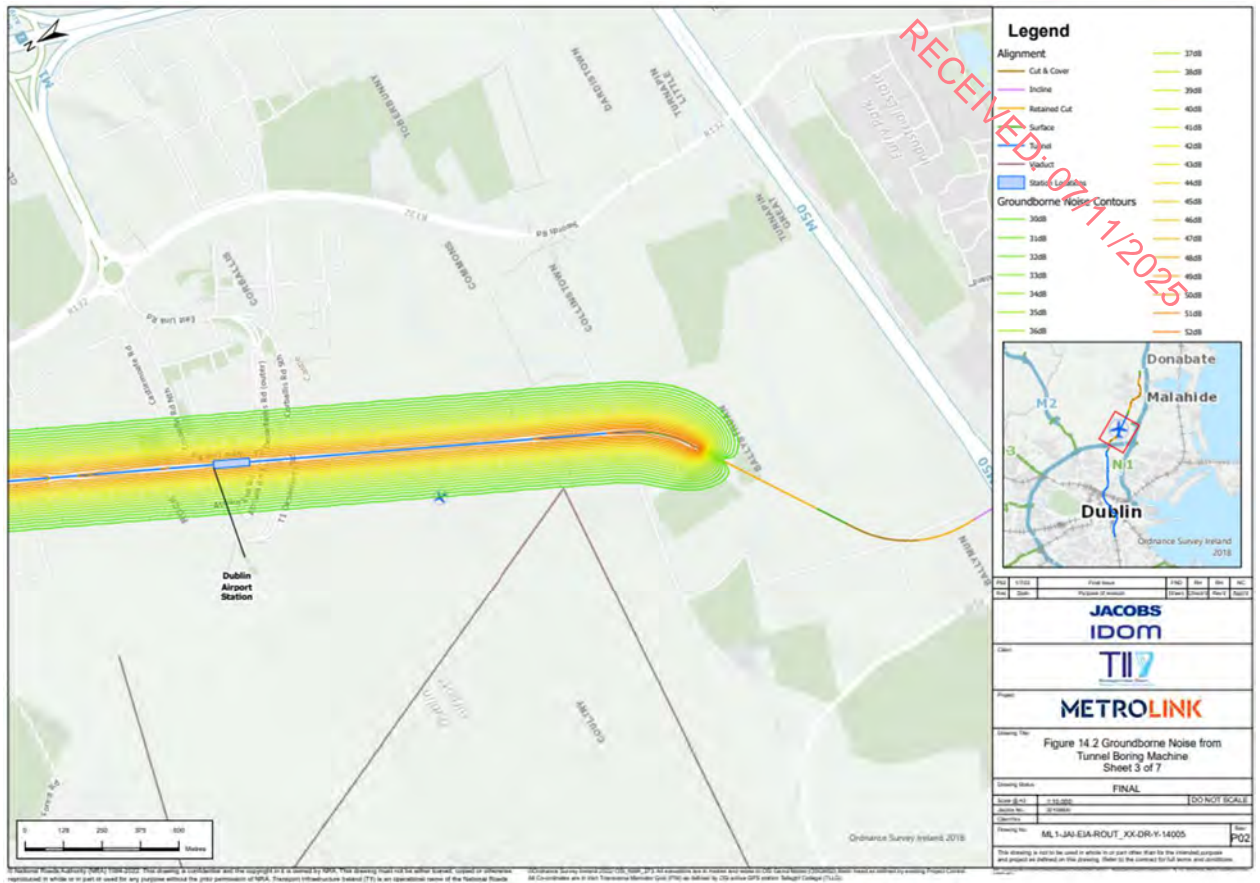
- North Runway Relevant Action (PL06F.314485, F20A/0668). In December 2020, DAA applied to amend night-time operating restrictions for Dublin Airport's North Runway. The proposal sought to allow extended runway use and replace flight limits with a Night-time Noise Quota Scheme, along with introducing a noise insulation grant. ANCA assessed the proposals and issued a Regulatory Decision in June 2022 supporting the changes. The planning authority adopted this, but the decision was appealed to An Bord Pleanála, with potential implications for Dublin Airport's future noise environment. An Bord Pleanála issued a draft decision on 17/09/2025 which indicates that it is considering adopting noise mitigation measures and operating restrictions which were not the subject of previous consultations between the local planning authority and the competent authority under the Aircraft Noise Regulation. The case remains live.
- Infrastructure Application (F23A/0781). In December 2023, daa submitted a planning application (F23A/0781) for infrastructure upgrades at Dublin Airport to support growth to 40 million passengers annually, up from the current 32 million permitted. The proposed development includes enhancements across terminals, aprons, car parks, drainage, and transport links. In January 2024, ANCA determined that a noise-related assessment is required under Section 34B of the Act, due to potential increases in aircraft movements and operational changes, and to assess impacts on the Noise Abatement Objective (NAO).
- Passenger quota (F25A/0094E). The application will seek planning permission to replace the 32mppa Conditions with a limit that a maximum of 36 million air passengers will be permitted to use the infrastructure at Dublin Airport per annum (36mppa).

As regards baseline vibration, there are no foreseeable changes likely to occur into the future. We have undertaken a review of the predicted noise and vibration impacts of the proposed MetroLink project. The MetroLink will pass beneath Dublin Airport with a station proposed at the location of T2 surface parking. At its closest point, the tunnel is approximately 1.5km from the boundary of the Subject Site. Potential sources of ground borne noise during the Construction Phase are the passage of the Tunnel Boring Machine (TBM) and mechanical excavation.



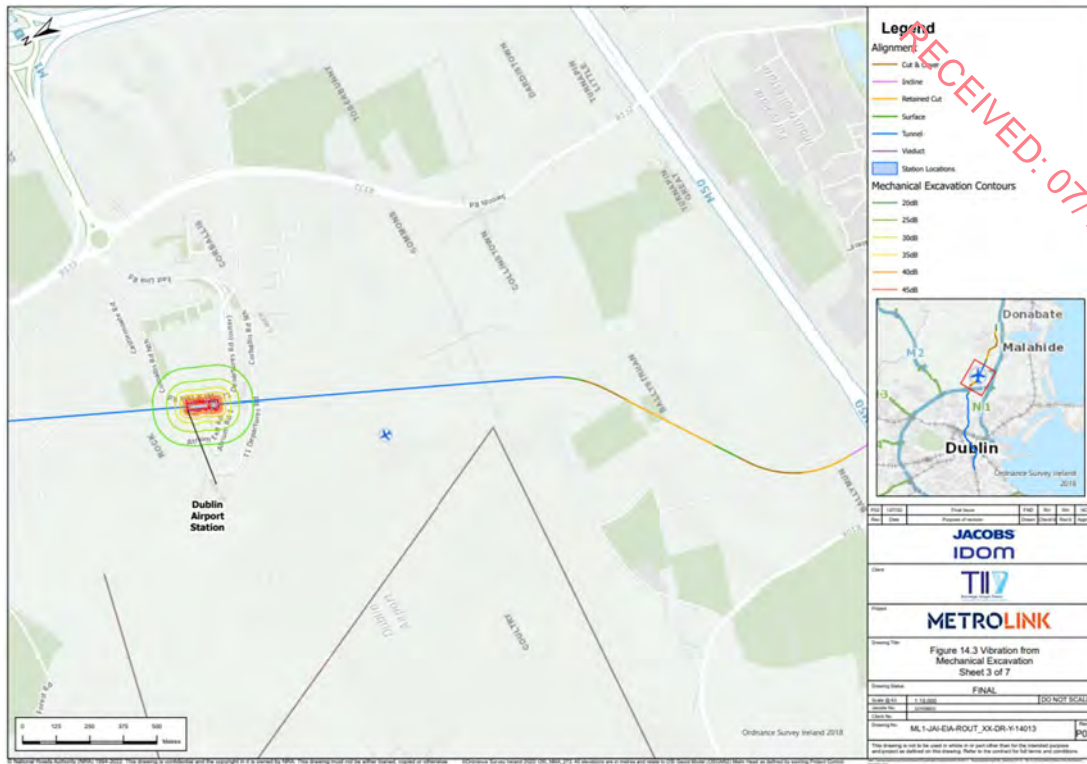
**Figure 10.4** Extract showing the preferred route of the MetroLink. **Source:** <https://www.metrolinkro.ie/>.

The Figures presented below are taken from the EIA for MetroLink which show the predicted ground borne noise, vibration and air overpressure contours for the MetroLink Construction Phase. The Proposed Development area is well outside the contours of predicted impact; therefore we can state with confidence that the MetroLink will have no noticeable impact on the Proposed Development.



**Figure 10.5** Extract from MetroLink EIAR,

**Source:** Groundborne Noise from Tunnel Boring Machine Sheet 3 of 7, Ref: ML1-JAI-EIA-ROUT\_XX-DR-Y-14005, Rev P02.



**Figure 10.6** Extract from MetroLink EIAR

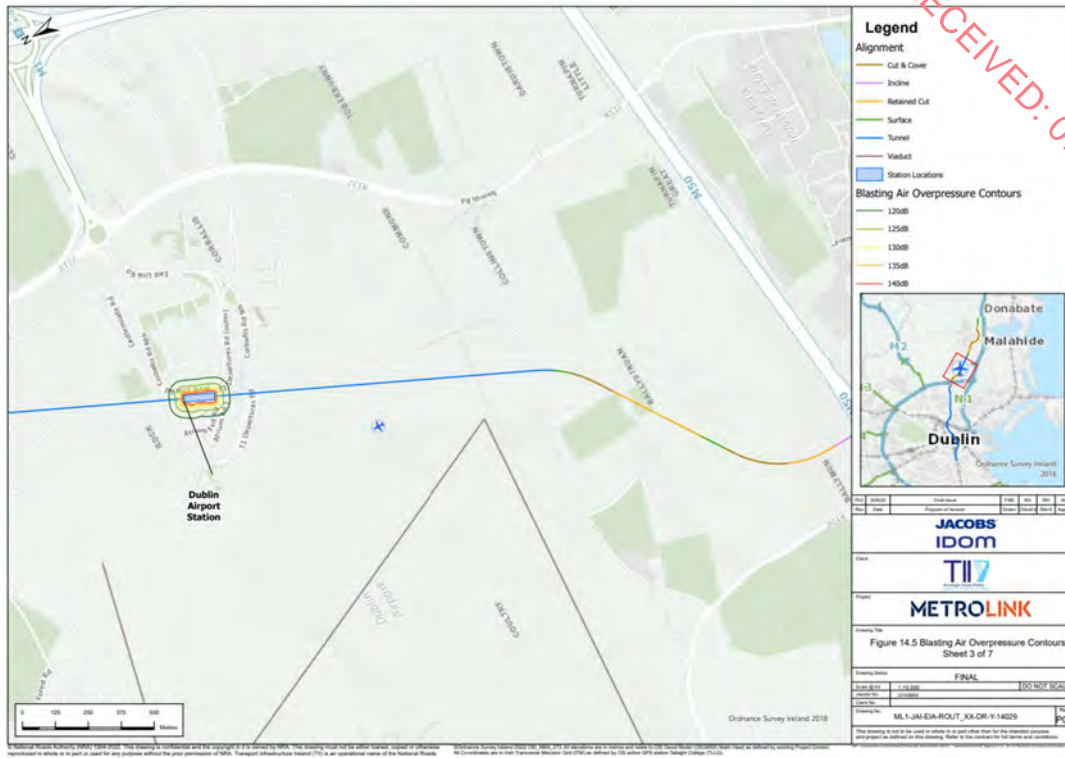
**Source:** Vibration from Mechanical Excavation Sheet 3 of 7, Ref: ML1-JAI-EIA-ROUT\_XX-DR-Y-14013, Rev P02.



**Figure 10.7** Extract from MetroLink EIAR,

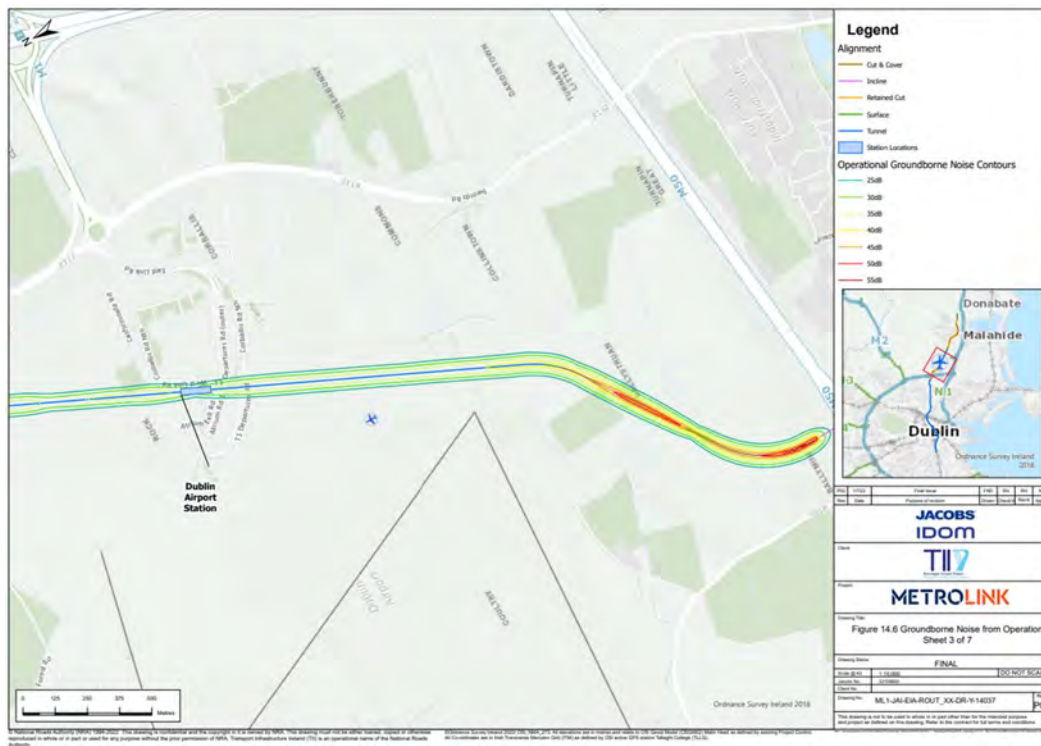
**Source:** Blasting Contours of PPV (Peak Particle Velocity) Sheet 3 of 7, Ref: ML1-JAI-EIA-ROUT\_XX-DR-Y-14021, Rev P02.

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**Figure 10.8** Extract from MetroLink EIAR,

**Source:** Blasting Air Overpressure Contours Sheet 3 of 7, Ref: ML1-JAI-EIA-ROUT\_XX-DR-Y-14029, Rev P02.



**Figure 10.9** Extract from MetroLink EIAR,

**Source:** Groundborne Noise from Operation Sheet 3 of 7, Ref: ML1-JAI-EIA-ROUT\_XX-DR-Y-14037, Rev P02.

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## 10.4 Predicted Impacts

### 10.4.1 Identification of Nearest Noise-Sensitive Locations

The predicted impacts have been assessed at four Noise-Sensitive Locations (NSLs) which represent the nearest noise-sensitive residential receptors. NSL 1 and NSL 3 are both derelict unoccupied properties.



**Figure 10.10** Nearest Noise-Sensitive Locations.

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### 10.4.2 Impact Terminology

**Table 10.10:** Impact terminology.

Characteristic	Term	Description
<b>Quality</b>	Positive	<i>A change which improved the quality of the environment</i>
	Neutral	<i>A change which does not affect the quality of the environment</i>
	Negative	<i>A change which reduces the quality of the environment</i>
<b>Significance</b>	Imperceptible	<i>An impact which causes noticeable changes in the character of the environment without affecting its sensitivities</i>
	Slight	<i>An impact which causes noticeable changes in the character of the environment without affecting its sensitivities.</i>
	Moderate	<i>An impact that alters the environment in a manner that is consistent with existing or emerging trends.</i>
	Significant	<i>An impact, which by its character, magnitude or duration or intensity alters a sensitive aspect of the environment.</i>
	Profound	<i>An impact which obliterates sensitive characteristics</i>
<b>Duration</b>	Short term	<i>Impact lasting one to seven years</i>
	Medium term	<i>Impact lasting seven to fifteen years</i>
	Long-term	<i>Impact lasting fifteen to sixty years</i>
	Permanent	<i>Impact lasting over sixty years</i>
	Temporary	<i>Impact lasting one year or less</i>
<b>Type</b>	Irreversible	<i>When the character, distinctiveness, diversity or reproductive capacity of an environment is permanently lost.</i>
	Residual	<i>Degree of environmental change that will occur after the proposed mitigation measures have taken effect.</i>
	Synergistic	<i>Where the resultant impact is greater significance than the sum of its constituents.</i>
	Worst case	<i>The impacts arising from a development in the case where the mitigation measures may substantially fail.</i>

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### 10.4.3 Inward Noise Impacts

The baseline noise survey, described in Section **10.3.4**, outlines the current noise levels expected to occur at the proposed buildings. These levels, while measured in today's noise climate, are reasonably anticipated to remain the same or similar in the long term.

It is necessary to provide reasonable accommodation for future employees and building occupants, which may be achieved through designing the building envelope with adequate levels of airborne sound resistance. BS 8233:2014 provides a method for obtaining initial estimates for indoor noise levels based on single-figure data. This method is suitable for planning stage and considers the noise level at the building's proposed location and the sound reduction of appropriate parts of the building envelope, e.g., estimated from values of  $R_w$ .

The highest external ambient sound pressure level at the proposed office block during a typical daytime period is expected to be circa. 62 dB LAeq,T. To achieve a suitable design target of 40 dB LAeq,T for open plan offices, the average Sound Reduction Index (SRI) of the building envelope should achieve at least  $R_w$  22 dB. Achieving values  $\leq$  30 dB LAeq,T would necessitate average SRI values of  $R_w$  32 dB or greater.

The building envelope will likely be constructed as a steel frame building with a composite 'sandwich' panel envelope with plasterboard internal wall and ceiling finishes. A typical composite panel is rated  $\approx$   $R_w$  25dB (based on Kingspan KS1000 RW/30), rising to 40 – 50 dB  $R_w$  when tested with internal plasterboard finishes. The upper floor should be provided with acoustic-rated ceiling tiles. Standard double and triple-glazed systems will typically achieve a minimum of  $R_w$  29dB.

Target acoustic performance values for building elements is proposed in Section **10.5.3**

## 10.4.4 Construction Phase

### 10.4.4.1 Noise

The Construction and Environmental Management Plan (CEMP) sets out the proposed works as follows:

- Site preparation.
- Erection of security fencing/perimeter fencing.
- Setting up a secure site compound including wash down area.
- Site clearance including topsoil stripping and any rock excavation.
- Earthworks to bring the ground to the proposed formation level

- Construction of infrastructure including access road, cycle paths, footpaths, drainage and services.
- Construction of SuDS components including detention basins, swales, and tree pit attenuation areas.
- Construction of 4 No. cargo handling units.

The construction phase of the development is expected to be 18 months duration as per the CEMP; according to EPA guidance this would classify as a short-term impact. The closest noise sensitive location is NSL 1 which abuts directly along the eastern site boundary; Unit 3 is approximately 15m to the boundary and 25m to the façade of NSL 1.

Based on the prevailing noise environment measured and the likely prevailing noise levels in the absence of other construction activities present at the time of the noise survey undertaken by iAcoustics, the construction noise thresholds have been defined as Category A (BS 5228-1).

Category A sets the following construction noise thresholds.

Monday to Friday (07:00 – 19:00)                      **65dB L<sub>Aeq,T</sub>**

Saturdays (07:00 – 13:00hrs)                              **65dB L<sub>Aeq,T</sub>**

Evening and Saturday (13:00 – 23:00hrs)              **55 dB L<sub>Aeq,T</sub>**

Night-time (23:00 to 07:00hrs) weekdays              **45 dB L<sub>Aeq,T</sub>**

iAcoustics understands the the buildings will most likely be steel framed portal structures with reinforced concrete floors to support racking loads.

Estimated noise levels from construction processes can be evaluated using the approach detailed in BS 5228-1, which provides reference data on the typical sound output of machinery commonly used on construction sites. This enables a broad estimation of environmental noise levels during construction based on limited information on the construction program or methodologies.

**Table 10.11:** Predicted construction noise impacts based on library noise data contained in BS 5228-1.

Activity	Equipment Description	L <sub>Aeq</sub> @10m NSL 1	L <sub>Aeq</sub> @70m NSL 2	L <sub>Aeq</sub> @125 m NSL 2	L <sub>Aeq</sub> @130m NSL 3
Site clearance	Tracked loader	83 dB	66 dB	61 dB	61 dB
Earth excavation	Tracked excavator	85 dB	66 dB	63 dB	63 dB
Ground-breaking (hard)	Pneumatic breaker (27 kg)	87 dB	68 dB	65 dB	65 dB
Ground compaction	Vibratory roller (7,000 kg)	78 dB	60 dB	56 dB	56 dB
Foundation concreting	Concrete truck mixer	82 dB	64 dB	60 dB	60 dB
Structural steel erection	Tracked crane (moving)	86 dB	67 dB	64 dB	64 dB
Car park surfacing – tipping fill	Tipper lorry	85 dB	66 dB	63 dB	63 dB
Car park construction	Road roller	80 dB	62 dB	58 dB	58 dB
Cutting concrete floor slab	Petrol hand-held circular saw	91 dB	72 dB	69 dB	69 dB
Power	15kW diesel generator	65 dB	49 dB	43 dB	43 dB
<b>Attenuation = 20log<sub>10</sub>(r/10)</b>					

At all NSL's, the highest noise levels will be generated during groundbreaking and excavation. During the site excavation and foundation construction phase, the resulting effect at **NSL 1** will be **temporary, negative** and **significant**. It is reiterated that NSL 1 is a derelict unoccupied property. **At NSL 2**, the resulting effect will be **temporary, negative** and of **slight to moderate significance**. At NSL's 3 & 4, the resulting effect will be **temporary, negative** and of **slight significance**.

During the construction phase, traffic associated with the Proposed Development would consist of a mix of Light Goods Vehicles (LGVs) and Heavy Goods Vehicles (HGVs) travelling to and from the site. In terms of the additional construction traffic on local roads that will be generated as a result of the Proposed Development, the following comment is presented: As stated in the DMRB Noise and Vibration (UKHE 2020), Volume 11, Section 3, Part 7, in order to increase traffic noise levels by 1 dB traffic volumes would need to increase by 25% it is considered that additional traffic introduced onto the local road network due to the construction phase associated with various phases of the development will introduce a level of traffic that will not result in a significant noise impact. However, a series of mitigation measures will be implemented to ensure that noise from vehicle movements during construction are reduced to a minimum.

#### 10.4.4.2 Vibration

The main potential source of vibration during the construction programme is expected to come from initial groundbreaking activities, carried out using standard excavation equipment. Although BS 5228-2 does not provide empirical data for this specific activity, the anticipated vibration levels are expected to be below the thresholds associated with building damage. The resulting impact is expected to be **temporary, neutral** and **slight**.

### 10.4.5 Operational Phase

#### 10.4.5.1 Noise

The warehouse/logistics buildings are speculative, with no confirmed tenants, so exact as set out conditions are unknown. Noise impact estimates for the operational phase therefore rely on stated assumptions. The main noise source will be loading and unloading goods from HGVs at the loading bays.

Noise modelling was carried out in CadnaA<sup>®</sup>, a software package which integrates the calculation procedure of ISO 9613:2024. The acoustic model provides a single scenario output representative of only the specified configuration of the model and for the specified source levels. [Appendix C – Noise Modelling Configuration](#) reports the model's configuration, settings, and applied calculation methods.

While there is a standardised noise propagation procedure in ISO 9613:2024, there is no standardised or widely established methodology for the treatment of noise modelling of speculative commercial units.

The approach we have taken for other speculative commercial/industrial units on nearby permitted developments (FW24A/0373E – Drake House, Dublin Airport Logistics Park & FW23A/0299 - Unit A8, North City Business Park) is to apply conservative noise assumptions for the primary and dominant noise source (i.e. loading bay). There are currently no standardised sound levels for loading bay activities; iAcoustics have undertaken previous field measurements of loading bay noise which we have used to carry out our predictions.

**Table 10:12:** Noise source input data.

Activity:	Method of Modelling	Representative source activity level
Loading of goods into rigid 'box' truck using manual pallet truck	Vertical area source with area equal to loading bay opening	77 dB $L_{Aeq,10min}$ SPL@3m

Operational noise from the development has been identified as potentially impulsive in character. The recommendation set out in NG4 has been applied for a + 5dB penalty for the impulsive character associated with operational noise from loading bays. The correction is applied to the value for  $L_{Aeq}$  to arrive at Rating Level  $L_{Ar}$ .

Noise sources have been represented in the model as point sources positioned along the façade at a height of 1.5 m above finished level (AFL) at each loading bay. An on-time correction of 50% has been applied to all source levels, reflecting that each loading bay is assumed to be 'active' for 8 hours within the 16-hour daytime period (07:00–23:00) and for 4 hours within the 8-hour night-time period (23:00–07:00).

It is not likely that all loading bays would operate simultaneously or for the full durations stated. However, the assessment has been modelled on this conservative basis to ensure that the predicted noise levels represent a worst-case scenario.

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**Figure 10.11:** :  $L_{Day}$  noise map 4m above ground. Stated values are A-Weighted for the specific sound level.



**Figure 10.12:**  $L_{\text{Night}}$  noise map 4m above ground. Stated values are A-Weighted for the specific sound level.

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**Table 10.13:** Predicted operational phase levels.

Noise-Sensitive Receptor	Predicted Specific Sound Level, $L_s$		Predicted Rating Level, $L_{Ar}$	
	Day (7am-11pm)	Night (11pm-7am)	Day (7am-11pm)	Night (11pm-7am)
<b>NSL 1</b>	42 dB(A)	41 dB(A)	47 dB(A)	46 dB(A)
<b>NSL 2</b>	45 dB(A)	44 dB(A)	50 dB(A)	49 dB(A)
<b>NSL 3</b>	35 dB(A)	33 dB(A)	40 dB(A)	38 dB(A)
<b>NSL 4</b>	32 dB(A)	31 dB(A)	37 dB(A)	36 dB(A)

The calculated Rating Level  $L_{Ar}$  at NSL 1 & 2 is predicted to occur at levels below the prevailing background sound level  $L_{A90}$  for the day but between 3 – 6 dB higher than the representative nighttime background sound level. This is an indication that mitigation during nighttime operation may be warranted, refer to section 10.5.

The calculated Rating Level  $L_{Ar}$  at NSL 3 & 4 is predicted to occur at levels below the prevailing background sound level  $L_{A90}$  for the day and nighttime periods. These findings demonstrate compliance with the assessment criteria set out at the beginning of the report.

The resulting impact is expected to be **long-term, negative** and **slight significance** at **NSL's 3 & 4**, and **long-term, negative** and **moderate significance** at **NSL's 1 & 2**. It's reiterated that **NSL 1 & 3** are derelict properties.

**10.4.5 2 Operational Phase Traffic Noise Impacts:**

Traffic noise impacts have been assessed based on information provided to us by Waterman Moylan. The existing and future traffic movements post development are expressed as Annual Average Daily Traffic (AADT) which is the total volume of traffic passing a point or segment of a road for one year, divided by the number of days in the year.

The primary road to the subject site is the R122 St Margarets Road; This road forms the western boundary of the block in which the site is located. The northern, eastern and southern boundaries of the block are formed by the R108 which with the R122 forms a road box around the block. The southern junction between R122 and R108 North Parallel Road is a four-arm roundabout.

The AADT figures for the surrounding road network are presented for the Survey Year 2025, Opening Year 2030, Design Year 2035, and Future Year 2045. Design Manual for Roads and Bridges (DMRB) LA 111 provides guidance on the long-term magnitude of impact for a given change in noise level:

Negligible: 3 dB or less

Minor: 3-5 dB

Moderate: 5-10 dB

Major: More than 10dB

**Table 10.14** Operational Traffic Noise Assessment.

	Survey	Opening Year 2030	Design Year 2035	Future Year 2045
<b>R122 North of Junction 1</b>				
<b>Base Flow</b>	1,425 (1,451)	1,523 (1,552)	1,627 (1,657)	1,740 (1,772)
<b>Development</b>	-	55 (55)	55 (55)	55 (55)
<b>Post Development</b>	-	1,578 (1,607)	1,682 (1,712)	1,795 (1,827)
<b>AADT</b>	18,202	20,158	21,481	22,924
<b>Change in Noise Level</b>		+ 0.44 dB	+ 0.72 dB	+ 1.00 dB
<b>Long-term impact</b>		<i>Negligible</i>	<i>Negligible</i>	<i>Negligible</i>
<b>R122 South of Junction 1</b>				
<b>Base Flow</b>	1,247 (1,308)	1,333 (1,398)	1,424 (1,493)	1,523 (1,597)
<b>Development</b>	-	0	0	0
<b>Post Development</b>	-	1,333 (1,398)	1,424 (1,493)	1,523 (1,597)
<b>AADT</b>	16,171	17,285	18,462	19,747
<b>Change in Noise Level</b>		+ 0.29 dB	+ 0.58 dB	+ 0.87 dB
<b>Long-term impact</b>		<i>Negligible</i>	<i>Negligible</i>	<i>Negligible</i>
<b>R122 North of Junction 2</b>				
<b>Base Flow</b>	1,368 (1,402)	1,462 (1,499)	1,562 (1,601)	1,670 (1,712)
<b>Development</b>	-	0	0	0

<b>Post Development</b>	-	1,462 (1,499)	1,562 (1,601)	1,670 (1,712)
<b>AADT</b>	17,532	18,741	20,019	21,405
<b>Change in Noise Level</b>		+ 0.29 dB	+ 0.58 dB	+ 0.87 dB
<b>Long-term impact</b>		<i>Negligible</i>	<i>Negligible</i>	<i>Negligible</i>
<b>R122 South of Junction 2</b>				
<b>Base Flow</b>	1193(1129)	1,275 (1,207)	1,362 (1,289)	1,457 (1,379)
<b>Development</b>	-	193 (193)	193 (193)	193 (193)
<b>Post Development</b>	-	1,468 (1,400)	1,555 (1,482)	1,650 (1,572)
<b>AADT</b>	17,532	18,741	20,019	21,405
<b>Change in Noise Level</b>		+ 0.29 dB	+ 0.58 dB	+ 0.87 dB
<b>Long-term impact</b>	Opening Year2030	<i>Negligible</i>	<i>Negligible</i>	<i>Negligible</i>
<b>R122 North of Junction 3</b>				
<b>Base Flow</b>	1,183 (1,125 )	1,265 (1,203)	1,351 (1,285)	1,444 (1,374)
<b>Development</b>	-	193 (193)	193 (193)	193 (193)
<b>Post Development</b>	-	1,458 (1,396)	1,544 (1,478)	1,637 (1,567)
<b>AADT</b>	14,608	18,063	19,127	20,278
<b>Change in Noise Level</b>		+ 0.92 dB	+ 1.17 dB	+ 1.42 dB
<b>Long-term impact</b>		<i>Negligible</i>	<i>Negligible</i>	<i>Negligible</i>
<b>R122 South of Junction 3</b>				
<b>Base Flow</b>	996 (848)	1,064 (906)	1,137 (968)	1,216 (1,035)
<b>Development</b>	55 (55)	55 (55)	55 (55)	
<b>Post Development</b>	-	1,119 (961)	1,192 (1,023)	1,271 (1,090)
<b>AADT</b>	11,671	13,165	14,019	14,943
<b>Change in Noise Level</b>		+ 0.52 dB	+ 0.80 dB	+ 1.07 dB
<b>Long-term impact</b>	Opening Year2030	<i>Negligible</i>	<i>Negligible</i>	<i>Negligible</i>
<b>R108 Dunbro Lane</b>				
<b>Base Flow</b>	67 (91)	72 (97)	77 (104)	82 (111)

<b>Development</b>	-	69 (69)	69 (69)	69 (69)
<b>Post Development</b>	-	141 (166)	146 (173)	151 (180)
<b>AADT</b>	1,000	1,943	2,019	2,095
<b>Change in Noise Level</b>		+ 2.88 dB	+ 3.05 dB	+ 3.21 dB
<b>Long-term impact</b>		<i>Negligible</i>	<i>Negligible</i>	<i>Negligible</i>
<b>R108 North Parallel Road</b>				
<b>Base Flow</b>	51 (65)	55 (70)	58 (74)	62 (80)
<b>Development</b>	-	207 (207)	207 (207)	207 (207)
<b>Post Development</b>	-	262 (277)	265 (281)	269 (287)
<b>AADT</b>	734	3,411	3,457	3,519
<b>Change in Noise Level</b>		+ 6.67 dB	+ 6.73 dB	+ 6.81 dB
<b>Long-term impact</b>		<i>Moderate</i>	<i>Moderate</i>	<i>Moderate</i>
<b>R108 South Parallel Road</b>				
<b>Base Flow</b>	585 (465)	626 (498)	668 (531)	714 (568)
<b>Development</b>	-	138 (138)	138 (138)	138 (138)
<b>Post Development</b>	-	764 (636)	806 (669)	852 (706)
<b>AADT</b>	6,646	8,861	9,335	9,861
<b>Change in Noise Level</b>		+ 1.25 dB	+ 1.48 dB	+ 1.71 dB
<b>Long-term impact</b>		<i>Negligible</i>	<i>Negligible</i>	<i>Negligible</i>

The anticipated rise in road traffic during the operational phase is expected to have a largely negligible effect on noise levels. The resulting impact is **long-term, negative** and **negligible**. The only notable exception is the R108 North Parallel Road, where a moderate increase is anticipated resulting in a **long-term, negative** impact of **moderate significance**. However, the dominant source of noise in the area will remain aviation activity, which is expected to generate noise levels significantly higher than those produced by the relatively low volumes of road traffic.

### 10.4.5.3 Vibration

Typical sources of continuous vibration include mechanical plant such as rotating, reciprocating, and impulsive machinery, for example engines, reciprocating compressors, textile machines, presses, and so on. None of this heavy-duty machinery is proposed for this development. Any potential continuous vibration sources are limited to the HVAC equipment serving the building and the various systems associated with the wastewater treatment facility. Any required control measures can be identified and addressed at the equipment selection process during the design phase. We do not foresee any changes in vibration conditions at NSL's during the operational phase. The resulting effect at all NSL's will be **long-term, neutral** and **negligible**.

Idling vehicles, particularly HGVs, can produce low frequency sound from their exhaust units. This sound may couple into the structure and cause building elements to vibrate, potentially resulting in disturbance. There is no indication that this is likely to occur; precautionary mitigation is provided in section 10.5.2.1.2 as an overprotective measure.

## 10.5 Mitigation

### 10.5.1 Construction Phase

#### 10.5.1.1 Noise

Mitigation is recommended for the construction phase in respect of site vehicles which may operate in proximity (i.e. less than 50m) from NSL 1. The following general mitigation measures combine all relevant best practices from BS 5228-1:2009 and the DCC Construction and Demolition Good Practice Guide (2022).

Site Vehicles operating in proximity ( $\leq 50\text{m}$ ) to NSL 1.

- Avoid unnecessary engine revving.
- Switch off engines when vehicles are idle or waiting.
- Restrict vehicle operations to agreed working hours unless formal approval for out-of-hours work is granted.
- Plan deliveries and movements to avoid queues or idling on access road or surrounds; engines must be off if waiting.
- Design internal haul routes to avoid steep gradients and ensure they are well maintained.
- Route vehicles away from noise-sensitive receptors (NSRs) where practicable.
- Coordinate deliveries to reduce frequency of opening and closing site gates.

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- Locate the site entrance to minimise disturbance to NSRs.
- Minimise reversing through effective site layout planning.
- Use broadband reversing alarms, or disengage alarms and use banksmen where safe.
- Select the quietest available vehicles and plant suitable for the job.
- Replace particularly noisy equipment with quieter alternatives where feasible.
- Keep acoustic enclosures and engine covers closed when equipment is operating.
- Orient directional noise sources (e.g., exhausts, engines) away from receptors.
- Use vehicles only for their intended tasks, and avoid unnecessary vehicle activity.
- Install rubber/neoprene lining in tippers and transport vehicles to reduce first-drop noise.
- Regularly maintain vehicles and plant to prevent increased noise due to mechanical wear.
- Power plant and equipment using mains electricity instead of generators where possible.
- Use mufflers or silencers recommended by manufacturers on all mobile equipment.

These measures should be implemented as part of the site's Construction Environmental Management Plan (CEMP) and monitored during the works. All other construction activities shall be carried out in accordance with the guidance contained in Chapter 8 – Control of Noise, from BS 5228-1:2009.

All construction work will be carried out only during the conditioned working hours imposed by FCC. Permitted construction hours can vary between developments within the window of 7am to 7pm Monday to Friday, and 8am to 4:30 pm on Saturdays. Some construction activities, such as service connections or fit-out works, may occasionally need to occur outside standard working hours. These will only proceed with prior agreement from Fingal County Council, will be limited in duration and frequency, and are not expected to cause significant disturbance.

#### 10.4.5 3 Vibration

The predicted impact of construction-related vibration on nearby noise-sensitive receptors is expected to be low; however, the following mitigation measures are recommended. These measures are indicative of the practices to be incorporated within the Construction Environmental Management Plan (CEMP).

- Prior to the commencement of the works, the CEMP shall identify all vibration-inducing activities
- Where reasonably practicable, plant and/or methods of work causing significant levels of vibration at sensitive premises should be replaced by other less intrusive plant and/or methods of working.
- The Contractor shall note the proximity of NSL 1 and NSL 2 and position vibrating equipment as far as possible from these receptors.
- Limit working hours and plan construction timing to reduce disturbance during sensitive periods, particular for excavation works or other vibration-inducing works.

- Implement site monitoring and maintenance programs to ensure equipment operates within expected vibration levels.
- Maintain good community relations in accordance with BS 5228; inform and communicate with nearby residents to address concerns and manage perceptions.
- The Contractor shall comply with the thresholds contained in BS 6472-1:2008 *Guide to Evaluation of Human Exposure to Vibration in Buildings – Part 1: Vibration Sources Other than Blasting* and BS 7385-2:1993 *Evaluation and Measurement for Vibration in Buildings – Part 2: Guide to Damage Levels from Groundborne Vibration*.

## 10.5.2 Operational Phase

### 10.5.2.1 Noise

During the operational phase, it is recommended that noise mitigation measures be implemented specifically in relation to heavy goods vehicle (HGV) movements within and around the site compound. The Operational Traffic Management Plan shall consider the potential for HGVs to idle in proximity to NSL 1 and NSL 2 while awaiting access through the site's entry points.

Although there is currently no evidence to suggest that prolonged idling will occur, precautionary mitigation is advised on an "if and only if" basis. If vehicle idling becomes a potential source of noise impact, it shall be actively controlled and restricted. Appropriate alternative operational procedures such as scheduling, holding areas or coordinated gate access should be employed where necessary to minimise noise exposure. The responsibility for the implementation, monitoring, and enforcement of these traffic and noise control measures is with the site operator.

Conservative estimations indicate that operations may give rise to adverse nighttime noise impacts at NSL 2. It is recommended that operational conditions are assessed in respect of nighttime hours and the development of a noise management plan for nighttime operations which may include prohibiting the use of loading bays closest to the noise-sensitive receptors.

### 10.5.2.2 Vibration

The following mitigation is proposed in respect of potential operational vibration impacts:

1. Operational controls shall be implemented to prevent the idling of vehicles within 50 meters from any identified noise-sensitive residential property. This measure is particularly important in relation to the security hut for Unit 1, which is located less than 50 meters from Noise Sensitive Location 1 (NSL 1). The Applicant and/or site operator will be responsible for developing and managing appropriate strategies to achieve this, which may include but are not limited to:

- Installation of clear on-site signage instructing drivers not to idle near sensitive locations;
- Staff training and operational protocols for security personnel and delivery drivers;
- Use of automatic engine shut-off systems for delivery and service vehicles;
- Designated waiting or layover areas located at a sufficient distance from sensitive receptors.

(Note, these measures are indicative only).

2. The road surfaces within Application site be designed and constructed to minimize surface imperfections that could generate additional vibration during vehicle movements. This includes careful attention to the design and finishing of the following elements:

- Surface flatness and smoothness to avoid uneven patches or potholes.
- Proper installation and levelling of any ramps, speed bumps, or expansion joints to ensure smooth transitions.
- Design of drainage systems, including grates or covers, to avoid creating gaps or depressions that could lead to vibration or rattling noises.
- Use of appropriate pavement materials and jointing techniques to withstand the expected vehicle loads without rapid deterioration over time.

These vibration mitigation measures are aimed at preventing the occurrence of vibration impacts *at-source*. Accordingly, the revised assessment of effects at all NSL's is **long-term, neutral** and **imperceptible**.

### 10.5.3 Inward Noise

Non-glazed building elements should have an average Sound Reduction index of **45 dB R<sub>w</sub>**, including cladding and ventilation elements, to ensure adequate indoor acoustic comfort. Glazed elements should be rated at a minimum of **30 dB R<sub>w</sub>**. The R<sub>w</sub> dB performance applies to the complete glazing system, including the window frame, tested EN ISO 10140 (or equivalent) and rated according to EN ISO 717.

These recommendations will ensure acceptable acoustic conditions for open-plan office spaces following current office acoustic design standards. A higher standard of acoustic performance can be attained at the office fitout stage, depending on the tenant's design requirements.

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## 10.6 Residual Impacts

### 10.6.1 Construction Phase

The construction phase will incorporate best practice noise control measures, including working within conditioned working hours, strategic scheduling of high-impact activities during less sensitive periods, and on-site noise monitoring to ensure compliance. General construction methods will be employed for most of the works, with residual noise levels expected to remain within the Construction Noise Threshold (CNT). As such, the resulting noise impact is classified as temporary to **short-term, negative,** and **slight significance.**

Residual construction vibration effects are anticipated to be short-term, neutral, and not significant, based on the limited duration and scope of vibration-generating activities. The Contractor shall comply with the thresholds contained in BS 6472-1:2008 – *Guide to Evaluation of Human Exposure to Vibration in Buildings – Part 1: Vibration Sources Other than Blasting* (BSI, 2008) and BS 7385-2:1993 – *Evaluation and Measurement for Vibration in Buildings – Part 2: Guide to Damage Levels from Groundborne Vibration* (BSI, 1993).

### 10.6.2 Operational Phase

Following the implementation of mitigation measures, residual operational noise levels at all identified noise-sensitive locations are predicted to remain below background levels, in line with BS 4142:2014. As such, operational noise impacts are considered long-term, negative, but of slight significance.

Operational vibration impacts are expected to be negligible, with no high-vibration machinery proposed. Mitigation measures, including controls on vehicle idling and surface design, ensure the residual vibration impact remains long-term, neutral, and imperceptible.

Traffic-related noise increases are mostly negligible, except for a moderate increase on the R108 North Parallel Road. However, aviation noise will continue to dominate the environment, limiting the perceptibility of road noise increases. The residual traffic noise impact is long-term, negative, and of slight to moderate significance.

### 10.6.3 Inward Noise

With the mitigation measures detailed in this report (section 10.5.3), internal noise levels within office spaces are expected to meet the best practice design targets specified in BS 8233:2014. As a result, no adverse residual impacts from noise ingress are anticipated.

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## 10.7 Cumulative Impacts

### 10.7.1 Construction Phase

If construction activities at nearby sites were to take place concurrently with the proposed development, there is potential for cumulative noise and vibration impacts to arise. However, the Western Campus is being developed on a phased basis, and it is therefore not anticipated that overlapping construction activities will occur in the vicinity of NSL 1, NSL 2, or NSL 3. A review of recent planning applications in the surrounding area was undertaken to assess the likelihood of cumulative effects, and no nearby sites have been identified where development is currently expected to proceed alongside this project.

In the scenario where concurrent construction activities do arise elsewhere within the wider Western Campus, these locations would be situated at a significantly greater distance from NSL 1 and NSL 2, reducing the potential for cumulative effects at those receptors. At NSL 3, the risk of cumulative impacts would be comparatively higher due to its proximity to other campus areas. Nevertheless, it is important to reiterate that our present understanding no concurrent construction activity at adjacent sites is expected.

Overall, the cumulative noise and vibration impacts associated with the construction phase are assessed as **short-term, negative**, and of **slight** significance.

### 10.7.2 Operational Phase

The proposed development forms part of the broader Western Campus masterplan. While other areas within the campus will be brought forward through separate planning applications, they may influence the same noise-sensitive receptors (NSRs), potentially resulting in cumulative noise impacts when considered alongside the proposed development. In addressing these potential cumulative effects, it is important to reiterate the point made in the previous section: adjacent developments within the Western Campus are further removed from NSLs than Area A, significantly reducing the likelihood of cumulative impacts at those receptors.

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## 10.8 Monitoring and Reinstatement

### 10.8.1 Monitoring

Noise and vibration monitoring shall be carried out during the construction phase on a sample basis to establish baseline conditions and assess compliance with the noise and vibration limits, following relevant standards (e.g., BS 5228-1:2009, BS 5228-2:2009). Temporary calibrated monitoring equipment (Class 1 noise meters and PPV-capable vibration monitors) will be installed at representative locations near sensitive receptors (e.g., NSL 1, NSL 2, NSL 3) during key high-activity periods such as excavation. The monitoring will capture continuous and event-based data, which will be assessed against baseline levels, statutory thresholds, and project-specific criteria. The need for further or continuous monitoring will be evaluated on review of the results. All monitoring activities, data analysis, and reporting will be undertaken by a qualified acoustic and vibration specialist, with results reviewed by the Environmental or Construction Manager as part of the Construction Environmental Management Plan (CEMP).

### 10.8.2 Reinstatement

Not applicable to this chapter.

## 10.9 Conclusion

The Noise & Vibration assessment for the proposed aviation-related cargo handling facility at Dublin Airport's Western Campus has been completed for the purpose of assessing inward and outward noise impacts during the construction and operational phases. Baseline measurements confirm an environment dominated by aviation activity, with daytime LAeq,16h of approximately 60 – 62 dB and night-time LAeq,8h of approximately 55 – 56 dB. The LA90 values are markedly lower, evidencing transient noise/aircraft events over a quieter background. Baseline vibration is well below BS 6472 human comfort office thresholds indicating negligible existing vibration risk.

Construction noise predictions based on BS 5228 library data and Category A thresholds indicate that the noisiest activities, such as hard groundbreaking and excavation, may exceed 65 dB LAeq,T at the boundary with NSL 1, which is derelict and unoccupied, with lower effects at NSL 2–4. Construction vibration associated with standard excavation methods is expected to remain below cosmetic damage criteria in BS 7385-2 and within low human response ranges in BS 6472-1. With implementation of a CEMP encompassing hours control, plant selection, routing, good site practice and sample monitoring, residual construction

noise impacts are temporary to short-term and slight and residual construction vibration impacts are not significant.

Operational noise modelling in accordance with ISO 9613, incorporating conservative loading-bay source terms, 50% on-time, and a +5 dB impulsivity correction per NG4, predicts façade Rating Levels  $L_{Ar}$  at NSL 1 and NSL 2 that are below background by day but between 3 and 6 dB above representative night-time  $LA_{90}$  if unmitigated. At NSL 3 and NSL 4, predicted rating levels are below background during both day and night. With implementable operational controls principally night-time bay management and idling prevention, façade rating levels are reduced to at or below background, such that residual operational noise effects are long-term and slight.

For inward noise, envelope performance targets of  $R_w$  45 dB for non-glazed elements and  $R_w \geq 30$  dB for complete glazing systems tested to EN ISO 10140 and rated to EN ISO 717 will achieve BS 8233:2014 internal design targets for open-plan offices  $\approx 40$  dB  $LA_{eq,T}$ , with scope to achieve  $\leq 35$  dB  $LA_{eq,T}$  at fit-out if required.

Assessment of traffic indicates negligible long-term noise changes on most links given the forecast AADT deltas, except for the R108 North Parallel Road where a moderate increase of approximately +6.7 dB is predicted. Notwithstanding this, the soundscape at receptors remains dominated by aviation noise and the contribution from road traffic is comparatively limited.

Cumulative effects from concurrent construction are unlikely at the closest NSLs due to phasing and separation distances within the Western Campus; any broader campus overlap would occur at greater distances and is expected to be short-term and slight. Operational cumulative effects at the assessed NSLs are similarly limited provided the same management controls are applied.

In summary, with the specified construction controls, operational management focused on night-time loading-bay use and idling prevention and the defined inward acoustic design targets, the development is capable of complying with NG4 external limits and BS 4142 context at NSLs, achieving BS 8233 internal criteria for offices, and meeting BS 6472/BS 7385 vibration requirements. On this basis, no significant residual noise or vibration effects are anticipated for surrounding receptors or future building occupants, subject to verification by monitoring during key construction activities and operational management controls once a vendor is appointed.

## Appendix A – References

- i. BS 4142:2014 +A1:2019 – *Methods for Rating and Assessing Industrial and Commercial Sound* (BSI, 2019)
- ii. BS 5228-1:2009 +A1:2014 – *Code of Practice for Noise and Vibration Control on Construction and Open Sites – Part 1: Noise* (BSI, 2014a)
- iii. BS 5228-2:2009 +A1:2014 – *Code of Practice for Noise and Vibration Control on Construction and Open Sites – Part 2: Vibration* (BSI, 2014b)
- iv. BS 6472-1:2008 – *Guide to Evaluation of Human Exposure to Vibration in Buildings – Part 1: Vibration Sources Other than Blasting* (BSI, 2008)
- v. BS 7385-2:1993 – *Evaluation and Measurement for Vibration in Buildings – Part 2: Guide to Damage Levels from Groundborne Vibration* (BSI, 1993)
- vi. BS 8233:2014 – *Guidance on Sound Insulation and Noise Reduction for Buildings* (BSI, 2014)
- vii. Calculation of Road Traffic Noise (CRTN) – *UK Department of Transport* (UK DoT, 1998)
- viii. Design Manual for Roads and Bridges (DMRB) LA 111 – *Sustainability and Environmental Appraisal, LA 111 Noise and Vibration, Revision 2* (UK Highways England, 2020)
- ix. International Standard ISO 9613-2:1996 – *Acoustics – Attenuation of Sound During Propagation Outdoors – Part 2: General Method of Calculation* (ISO, 1996)
- x. ISO 1996-1:2016 – *Acoustics – Description, Measurement and Assessment of Environmental Noise – Part 1: Basic Quantities and Assessment Procedures* (ISO, 2016)
- xi. ISO 1996-2:2017 – *Acoustics – Description, Measurement and Assessment of Environmental Noise – Part 2: Determination of Sound Pressure Levels* (ISO, 2017)
- xii. ProPG: Planning & Noise – *Professional Guidance on Planning & Noise: New Residential Development* (IOA/CIEH/ANC, 2017)
- xiii. S.I. No. 241/2006 – *European Communities Noise Emission by Equipment for Use Outdoors (Amendment) Regulations 2006*
- xiv. S.I. No. 549/2018 – *European Communities (Environmental Noise) Regulations 2018*
- xv. DART+ Southwest EIAR Volume 2 – *Environmental Impact Assessment Report, February 2023*
- xvi. MetroLink EIAR Volume 3 – Book 1 – *Population and Human Health, Traffic, Noise and Vibration, and EMI/EMC – Chapter 14: Groundborne Noise and Vibration*

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- xvii. World Health Organization. *Guidelines for Community Noise* (1999).
- xviii. World Health Organization. *Night Noise Guidelines for Europe* (2009)
- xix. World Health Organization. *Environmental Noise Guidelines for the European Region* (2018)

## Appendix B – Baseline Noise & Vibration Survey Methodology & Results

### Start & End:

- SLM 1: 11<sup>th</sup> – 13<sup>th</sup> September 2025.
- VIB 1: 22<sup>nd</sup> May – 25<sup>th</sup> May 2025.

### Measurement Locations:



### Measurement Standards.

- ISO 1996-1:2016 Acoustics — Description, measurement, and Assessment of environmental noise — Part 1: Basic quantities and assessment procedures.
- ISO 1996-2:2017 Acoustics — Description, measurement, and Assessment of environmental noise — Part 2: Determination of sound pressure levels.

- BS 7385-2:1993 Evaluation and measurement for vibration in buildings – Part 2: Guide to damage levels from groundborne vibration
- BS 6472-1:2008 Guide to evaluation of human exposure to vibration in buildings – Part 1: Vibration sources other than blasting

**Equipment.** The complete sound measuring system deployed conforms to BS EN 61672-1, Class 1. Sound calibrators are compliant with IEC 60942-1:2017, Class 1. The microphone was fitted with an all-weather protection kit (NTI WP30), which fulfils the Class 1 requirements according to IEC 61672 for horizontal and vertical sound incidence.

Name	Sound Level Meter	Calibrator	Vibration Meter
<b>Make &amp; Model</b>	NTI XL3-TA	NTI CAL200	Svantek SV 803
<b>Serial No</b>	A3A-00790-D1	21287	142335
<b>Microphone Model</b>	NTi M2230		
<b>Preamplifier Model   Serial Number</b>	MA220   13820		
<b>Microphone Capsule Model   Serial Number</b>	MC230A   A25831		
<b>Last Calibration</b>	04/12/2023	17/09/2024	14/03/2025
<b>Next Calibration</b>	04/12/2025	17/09/2025	14/03/2026
<b>Cert. Number</b>	UK-23-141	AC240267	

## Appendix C – Noise Modelling Configuration

ISO 9613-2:2024 *Acoustics — Attenuation of sound during propagation outdoors — Part 2: Engineering method for the prediction of sound pressure levels outdoors*, specifies a method for calculating sound attenuation outdoors to predict environmental noise levels from various sources. It predicts the equivalent continuous A-weighted sound pressure level (as described in ISO 1996 series) under meteorological conditions favourable to propagation, such as downwind or moderate ground-based temperature inversions on clear, calm nights.

**Calculation formulae:**

$$L_{rT}(DW) = L_w + D_c - A, \text{ where}$$

$L_{rT}(DW)$  equivalent continuous downwind octave band sound pressure level at a receiver location

- $L_w$  octave band sound power level produced by the point sound source relative to a reference sound power of one picowatt (1 pW), expressed in decibels
- $D_c$  directivity correction, in decibels, that describes the extent by which the equivalent continuous sound pressure level from the point sound source deviates in a specified octave band attenuation that occurs during propagation from the point sound source to the receiver, expressed in decibels.

$D_c = 10 \log(4\pi/\Omega)$  where  $\Omega$  is the solid angle remaining for radiation.

$A = A_{div} + A_{atm} + A_{gr} + A_{bar} + A_{misc}$ , where,

- $A_{div}$  is the attenuation due to geometrical divergence
- $A_{atm}$  is the attenuation due to atmospheric absorption, expressed in decibels
- $A_{gr}$  is the attenuation due to the ground effect
- $A_{bar}$  is the attenuation due to a barrier
- $A_{misc}$  is the attenuation due to miscellaneous other effects

CadnaA® model configuration:

#### Treatment of noise sources.

**Ground absorption.** A default ground absorption coefficient of  $G = 0.5$  was applied as the default ground absorption coefficient to account for the predominantly grassy ground conditions.

**Topography.** Modelling assumes flat topography. A calculation height of 4m has been selected to account for minor changes in ground height.

**Diffraction around objects.** To account for the screening effect of buildings and other objects, lateral diffraction is traced in a convex path around the objects.

**Meteorological conditions.** Yearly average temperature / relative humidity values were set to 10°C / 70%.

**Terrain.** Flat terrain was assumed. The presence of foliage was deemed minimal and was excluded from our model.

**Calculation grid spacing:** 2m x 2m

**Treatment of buildings:** Building heights as per drawings.

# 11.0 Landscape Visual Impact

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## 11.1 Introduction

This Landscape and Visual Impact Assessment (LVIA) prepared by Ronan MacDiarmada & Associates Ltd (RMDA) was informed by a desktop study and a survey of the site and receiving environment in April 2025. The assessment is in accordance with the methodology prescribed in the Guidelines for Landscape and Visual Impact Assessment, 3rd edition, 2013 (GLVIA) published by the UK Landscape Institute and the Institute for Environmental Management and Assessment.

The report identifies and discusses the impact the proposed development has on the existing Landscape and surrounding environment at lands located within the townland of Huntstown, Swords, Co. Dublin. The subject site fronts onto the R108 to the East.

RMDA has been commissioned by D A Terminal 3 Ltd, to prepare a Landscape and Visual Impact Assessment to accompany a submission on the subject lands for freight storage for a third terminal at Huntstown. This assessment should be read in conjunction with Images that have been prepared for the scheme (refer to the proposed views for photos in attached report), which should also be read in conjunction with this report.

The aims of this EIAR section are to establish the following:

- Assess the sensitivity of the receiving landscape and visual receptors (such as residents, road users, and visitors).
- Evaluate the magnitude and significance of landscape changes and visual alterations resulting from both the construction and operational phases.
- Understand how the proposed development will integrate into the surrounding environment over time, especially in the context of a changing and industrialised landscape.
- Propose mitigation and enhancement measures to minimise negative impacts and support biodiversity and amenity value.
- Ensure compliance with relevant planning policy, environmental guidance, and best practice standards.

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Ultimately, the LVIA provides decision-makers with a clear and objective analysis of how the development will affect the visual and landscape quality of the area, both in the short term (construction) and long term (operational) and ensures that any adverse impacts are appropriately mitigated.

### 11.1.1 Competency Statement

The following EIAR chapter has been prepared by Ronan MacDiarmada and Associates Ltd (RMDA Ltd). RMDA Ltd provides specialist landscape and visual services for projects from inception, through site/route selection, environmental impact assessment (EIA) and the planning process, to detailed design and construction. The company specialises in landscape character assessment (LCA) and landscape and visual impact assessment (LVIA) – for a wide variety of projects.

Ronan MacDiarmada is the chapter's main author, and Ciarán MacDiarmada provided oversight and review. Ronan MacDiarmada, B.Agr. Sc. (Land. Hort.) is the director of Ronan MacDiarmada & Associates Ltd and is graduate of University College Dublin. He is a qualified Landscape Architect and a Corporate Member of the Irish Landscape Institute. He is specialised in Landscape and Visual Assessment (LVIA) and has over twenty years of experience in a range of projects, from large scale strategic design, master planning and detailed design to LVIA and landscape planning, including Strategic Housing Developments throughout Ireland.

## 11.2.1 Research Methodology

### 11.2.1 Methods Used

The Landscape and Visual Impact Assessment (LVIA) has been conducted using a combination of desk-based research, site investigation, and professional judgment. The following methodologies were employed to inform and structure the assessment:

- **Desktop Study:** A comprehensive review of existing mapping and data sources was undertaken,

including Ordnance Survey Ireland (OSI) maps, aerial photography, and other cartographic resources. This helped establish the baseline context of the site, including land use, topography, settlement patterns, and landscape character.

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- **Site Survey:** A detailed field survey was conducted during May 2025 to observe and document the physical characteristics of the site and its surrounding landscape. The survey involved a qualitative assessment of landscape elements, features, and condition, and included the preparation of a photographic record of key views and visual receptors from public and accessible areas.
- **Review of Planning Context:** Relevant statutory documents were reviewed, including the Fingal County Development Plan 2023–2029, the Landscape Character Assessment for Fingal, and the Record of Protected Structures. This helped assess the policy context, zoning, and visual or cultural sensitivities of the area.
- **Development Appraisal:** The proposed development was evaluated through analysis of the site layout plans, elevations, and cross-sections provided by the design team. This allowed for a prediction of visual and landscape effects at both construction and operational stages.
- **Impact Evaluation:** The potential impacts of the proposed development were evaluated using the criteria outlined in the EPA Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (2017) and the GLVIA 3rd Edition (2013). This involved determining the sensitivity of the landscape and visual receptors, the magnitude of change, and the significance of potential effects.
- **Cumulative Consideration:** The site was assessed in relation to existing and planned developments in the area, particularly the proximity to Dublin Airport and other industrial land uses, to consider potential cumulative impacts.

## 11.3 The Statutory Development

The proposed development, subject of this EIAR is as follows:

1. Construction of four aviation-related cargo handling units with ancillary office space:

- i. Unit 1: c.10,869.7 m<sup>2</sup> (including 940.9 m<sup>2</sup> office space)
- ii. Unit 2: c.9,151.3 m<sup>2</sup> (including 751.3 m<sup>2</sup> office space)
- iii. Unit 3: c.6,024.9 m<sup>2</sup> (including 497.7 m<sup>2</sup> office space)
- iv. Unit 4: c.8,577.7 m<sup>2</sup> (including 751.3 m<sup>2</sup> office space)

The proposed units will have an overall combined total gross floor area (GFA) of c. 34, 623.6 sq.m (alongside ancillary ESB substations, 4 no. security huts with a combined GFA of 30 sqm and pumphouses). The warehouses are c. 12m in height, with the office element being c. 3.3 m in height and located within a landscaped campus on a site of c. 10.7 Ha

2. Provision of 390 car parking spaces, including 39 EV charging points, 19 accessible spaces, and 39 motorcycle bays.
3. Provision of 230 secure bicycle parking spaces, of which 100 are short stay spaces and 130 are sheltered long stay spaces.
4. Provision of approx. 77 truck parking spaces and 5 van spaces.
5. Hard and soft landscaping, new boundary treatments, including a c. 2m high System Wire Fence to site boundary.
6. Construction of new site entrance onto the R108.
7. Wastewater treatment plant and infiltration area for 250 PE.
8. All necessary site development and engineering and ancillary site works, including provision of ESB substations and switchrooms, sprinkler tanks and pumphouses, bin store and recycle store, lighting, signage, underground services, photovoltaic panel zones at roof level and sustainable drainage systems (SuDS).

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## 11.4 Receiving Environment

### 11.4.1 General Description of the Site

The proposed development is located at Huntstown, within the overall Dublin Airport complex, directly adjacent to the existing Terminal 3 cargo infrastructure and to the northwest of Terminal 1 and the Air Traffic Control Tower. The site lies immediately adjacent to the northern runway and is part of a broader zone designated for aviation and cargo-related development within the Fingal Development Plan 2023– 2029.

The surrounding landscape includes a mix of heavily industrialised airport infrastructure and intermittent rural elements, particularly to the west along Dunbro Lane, where a small number of residential properties and agricultural sheds are located. The area retains fragments of its rural character, though this is increasingly isolated due to the dominant and expanding aviation infrastructure.

This duality is reflected in Fingal County Council's landscape characterisation, which describes Huntstown and its environs as a rural setting isolated within an intensive industrial landscape. This hybrid nature is recognised in the Guidelines for Landscape and Visual Impact Assessment (GLVIA), 3rd Edition (2013), which defines landscape as "... the relationship between people and place. It provides the setting for our day to day lives. The term does not mean just special or designated landscape, and it does not only apply to the countryside" (Section 2.2, GLVIA 3).

In this context, Huntstown functions not as an untouched rural landscape, but as a transitional zone at the interface between longstanding rural land uses and an evolving high-intensity aviation and industrial hub.

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**Figure 11.1:** Site Outline

**Source:** Google Earth

**Surrounding Land Use and Sensitivities**

**Residential Receptors**

A number of dwellings are situated along the R108 adjoining the eastern boundary of the subject site; however, most of these are currently derelict. The nearest occupied residential cluster is located at Dunbro Lane, approximately 600 metres from both the eastern and western boundaries of the site. Although these dwellings are relatively close to the proposed development area, the presence of existing airport infrastructure and intervening vegetation provides a notable degree of visual and acoustic screening, thereby mitigating potential impacts on residential amenity.

## Heritage Features

There are no protected structures within the development site. The nearest protected structure is the Millhead Windmill, located approximately 1,650 metres to the northwest. Due to distance, topography, and existing built form, no direct or indirect visual or physical impact on this heritage asset will occur.

## Topography and Visual Context

The site is generally flat and open, in line with the surrounding airport lands. The visual envelope of the site is contained by existing built structures, airport fencing, and planting, limiting long-distance visibility, particularly to the north and west.

### 11.4.2 Land Use

The development site lies within an area zoned DA - Dublin Airport under the Fingal Development Plan 2023–2029, which supports aviation-related operations. The land use proposed is consistent with the zoning and ongoing expansion of logistics and cargo facilities at the airport. The site is bounded on all sides by agricultural fields which support a mixture of medium to high intensity grassland and tillage production. The boundary of Dublin Airport lands comes to within c. 27m of the eastern site boundary.

This part of the airport contains the west apron where aircraft are parked. The lands containing the Southern Runway from Dublin Airport are located approx. 470m to the South. The nearest buildings directly connected to airport activity are 1.43 km to the east.

### 11.4.3 Relevant Site Characteristics

The receiving environment exhibits the following key characteristics:

**Land Use:** The site itself is currently composed of open, undeveloped land with flat topography. The wider context includes aviation infrastructure, cargo facilities, and runway operations, combined with agricultural holdings and scattered rural dwellings along Dunbro Lane.

**Residential and Agricultural Features:** A limited number of residential properties and agricultural sheds are located to the south and west along Dunbro Lane. These are the nearest potential visual receptors to the proposed development.

**Cultural Heritage:** There are no protected structures on the site. The nearest protected structure, Millhead Windmill, lies approximately 1,650 metres to the northwest. Due to distance, topography, and existing airport structures, there will be no visual or physical impact on this asset.

**Landscape Character:** The Huntstown area is defined as an isolated rural setting within an intensively industrialised context, according to the Fingal Landscape Character Assessment. This reflects the fragmented and transitional nature of the landscape, where agricultural remnants are set within a dominant airport infrastructure.

This setting is consistent with the description of landscape in GLVIA3 (2013), which states: "Landscape is about the relationship between people and place. It provides the setting for our day to day lives. The term does not mean just special or designated landscapes, and it does not only apply to the countryside."

**Visual Context:** The site is visually contained due to existing built form, fencing, and topography. Views toward and from the site are limited, especially from the north and east due to the scale of existing airport development.

**Sensitivity:** Given the site's proximity to a working airport, its landscape sensitivity is assessed as low to medium, with a high capacity to accommodate development of a similar industrial or aviation-related nature.

#### 11.4.4 Subject Development

The proposed development, subject of this EIAR is as follows: The construction of 4 no. aviation related cargo-handling units, including entrance / reception areas and ancillary office space. The proposed units will have an overall combined total gross floor area (GFA) of c. 34, 623.6 sq. (along with ancillary ESB substations and pumphouses with a combined GFA 30 sq.m.), on a site of c. 10.7 Ha.

**The development includes:**

Four purpose-built cargo-handling units, each incorporating dedicated entrance/reception areas and ancillary office accommodation. The units are designed to support aviation logistics and freight operations linked to the planned expansion of cargo capacity at Dublin Airport as part of a future Terminal 3 development. The total combined gross floor area (GFA) of the cargo-handling units is approximately 34,623.6 sqm. In addition to the primary units, the development will include ancillary utility structures, including ESB substations and pumphouses, with a combined GFA of approximately 30 sqm. The proposed units will be of modern industrial design, consistent with existing airport-related facilities, and will be supported by internal circulation roads, service yards, car parking areas, and security infrastructure. The overall site layout has been designed to accommodate operational efficiency, accessibility, and integration with existing and planned aviation infrastructure within the Dublin Airport campus. This large-scale, logistics-driven development is intended to meet the growing demand for air freight services and to future-proof Dublin Airport's capacity for handling goods and cargo through a purpose-built, consolidated Terminal 3 cargo zone.

As part of the proposed development, a comprehensive suite of site infrastructure, landscaping, and environmental enhancement measures are included to support functionality, sustainability, and integration with the surrounding environment. These include:

- **Hard and Soft Landscaping:** The development will incorporate extensive soft and hard landscaping across the site. Portions of the existing hedgerows will be retained along site boundaries and within the interior layout. Where hedgerows must be removed, replacement planting will be carried out nearby, ensuring a net gain in overall hedgerow coverage. Additionally, 340 new trees will be planted across the site, exceeding the number of existing trees currently present, to reinforce site character, support biodiversity, and provide visual screening.
- **Topographical Integration and Biodiversity Enhancement:** Native soil excavated during construction will be re-used to create sculpted mounds within the site. These will serve both ecological and visual functions, helping to integrate the development with the landscape, enhance biodiversity through habitat creation, and contribute to the visual screening of built form from nearby receptors.
- **Boundary Treatments:** New boundary treatments will be installed, comprising a combination of secure 2m high wire fencing, planted buffers, and screening vegetation designed to enhance the visual and ecological character of the development edge.

- **Road Infrastructure Improvements:** The proposal includes the construction of a new entrance on the R108 to the northeast of the site to facilitate efficient and safe access to the site. A two-way cycle lane and footpath will also be provided through the site

These integrated measures aim to create a functional, sustainable, and visually considerate development, ensuring that the proposal contributes positively to both the operational needs of Dublin Airport and the broader environmental and landscape context.

#### 11.4.5 Subject Development Landscape Strategy

The proposed development will involve the transformation of the existing grassland area to accommodate built infrastructure, internal access roads, and supporting services. However, the landscape design strategy seeks to ensure a sensitive and environmentally responsible approach to the treatment of the site's green infrastructure.

A key component of the landscape approach involves the retention and enhancement of existing hedgerow features. Where feasible, sections of established hedgerows will be retained along internal and external site boundaries to maintain visual continuity and local ecological value. In locations where hedgerow removal is unavoidable due to construction, replacement planting will occur within a short distance of the original alignment, ensuring minimal disruption and continuity of habitat corridors.

To support ecological enhancement and improve the green character of the development, it is proposed to introduce additional hedgerow planting, resulting in a net gain in total hedgerow length across the site.

This is intended to improve biodiversity, provide visual screening, and contribute to the long-term sustainability of the site's landscape framework.

In addition, the development will include the planting of approximately 340 new trees, significantly exceeding the number currently present on site. These trees will be strategically placed along roads, open spaces, and site boundaries to provide structure, seasonal interest, and ecological benefit.

Site-won topsoil and subsoil will be reused where possible to form sculpted mounds within landscaped areas. These mounds will serve multiple functions, including:

- Visual buffering of built elements.
- Habitat creation for flora and fauna.
- Enhancement of site character through varied topography and naturalistic landforms.

This landscape strategy reflects best practice in integrated development design, ensuring that the proposed cargo facility not only accommodates operational requirements but also delivers a net positive contribution to local landscape character and biodiversity.

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## 11.5 Construction

### 11.5.1 Construction Measures

During the construction phase of the proposed development, specific measures will be implemented to protect retained landscape features, support the successful establishment of new planting, and minimise temporary landscape and visual impacts. These measures will form part of the Construction Environmental Management Plan (CEMP).

Key landscape-related construction measures include the Protection of Retained Hedgerows and Vegetation:

- All existing hedgerows and trees identified for retention will be clearly marked and fenced off with protective barriers in accordance with BS 5837:2012 Trees in Relation to Design, Demolition and Construction.
- Kept free from construction activity, vehicle access, material storage, or excavation within their root protection zones.
- Subject to monitoring by a landscape supervisor throughout construction.
- Controlled Hedgerow Removal and Replanting Preparation:
- Where hedgerow removal is necessary, it will be undertaken in a phased and controlled manner, outside the bird nesting season (March–August).
- Carried out under the supervision of a qualified ecologist

### 11.5.2 Operational Measures

As part of the ongoing operational phase of the proposed development, a landscape management regime will be implemented to ensure that newly planted and retained green infrastructure is properly maintained, contributes to long-term site character, and supports biodiversity.

Key operational measures will include:

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- Hedgerow Management:
- All existing and newly planted hedgerows will be managed to promote healthy growth and ecological value. This will involve:
  - Regular maturation pruning and shaping to maintain structure.
  - Rotational cutting (outside the bird nesting season) to encourage density and habitat quality.
  - Monitoring to ensure successful establishment of newly planted sections and to replace any failed plants during the first five years of growth.
- Grassland Maintenance:
- Grassland areas retained within the site, particularly along verges, banks, and around mounded areas, will be:
  - Periodically mown to maintain a tidy appearance, reduce weed growth, and support species diversity.
  - Where designated as biodiversity or wildflower zones, a low intervention mowing regime will be adopted (e.g. cut once or twice annually) to encourage pollinators and native species.
- Tree Care and Monitoring:
  - All trees planted as part of the development (approx. 340 no.) will be:
    - Monitored annually to assess health, stability, and growth.
    - Mulched and watered as required during the establishment phase.
    - Replaced where necessary under a planting guarantee period to ensure full landscape coverage is achieved.
- Soil Mounds and Planted Embankments:
  - Mounded areas created using site-won material will be:
    - Stabilised with grass or native shrub planting to prevent erosion.

Inspected and maintained to ensure they retain their shape and support the intended landscape and screening function.

These operational measures are intended to ensure that the landscape components of the development continue to function effectively, remain visually attractive, and deliver long-term environmental and biodiversity benefits as the site matures.

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## 11.6 Predicted Impacts

### 11.6.1 Predicted Landscape and Visual Impacts During Construction

The construction phase of the proposed development will result in a series of temporary landscape and visual impacts as site works progress. These impacts are assessed as follows:

- **Visual Intrusion:** The presence of construction plant, machinery, materials, and workforce activity will lead to temporary visual disturbance in the immediate vicinity of the site, particularly visible from the nearest residential cluster located at Dunbro Lane and nearby rural residences. Construction compounds, scaffolding, and hoardings may obscure views and alter the visual character of the area.
- **Loss of Vegetation:** The removal of portions of existing grassland and some hedgerows will occur to facilitate site clearance and development. While hedgerow removal will be minimised and managed carefully, this will result in a temporary reduction in landscape greenery and habitat connectivity during construction.
- **Soil Disturbance and Erosion:** Excavation and earthworks activities will disturb existing soil profiles, potentially leading to soil erosion and sediment run-off if not properly managed. This may affect the visual appearance of the site and have minor indirect impacts on adjacent vegetation.
- **Noise and Dust Impacts:** Construction activities are likely to generate noise and dust emissions, which can temporarily affect the perceived tranquillity and sensory experience of the landscape for nearby residents and road users, impacting their enjoyment of the surroundings.
- **Reduction in Landscape Character and Quality:** The temporary loss of vegetation and the industrialising influence of construction activity will result in a short-term reduction in the rural and semi-natural landscape character of the site and its immediate surrounds.
- **Potential Impact on Visual Receptors:** Views from residents, road users, and airport staff may be

affected during the construction period, with temporary views of construction works and associated infrastructure. However, the limited number of residential receptors and the airport's existing industrial context will help mitigate the perceived severity of impacts.

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### 11.6.2 Predicted Landscape and Visual Impacts During Operational Phase

Following completion of construction, the proposed development will enter its operational phase, during which the following landscape and visual impacts are anticipated:

- **Permanent Change to Landscape Character:** The introduction of four large-scale aviation-related cargo handling units, along with associated infrastructure, will result in a permanent alteration of the existing rural and semi-industrial landscape character of the site. The replacement of grassland and open fields with extensive buildings, paved surfaces, and infrastructure will significantly change the visual and functional nature of the area.
- **Visual Impact on Local Receptors:** The scale and massing of the cargo buildings may be visible from nearby points along Dunbro Lane and from some elevated or distant viewpoints. However, the existing industrial and airport context, including adjacent terminals and runways, will partially mitigate the visual contrast introduced by the development. The retention and enhancement of hedgerows and tree planting will also help to soften the visual presence of the new structures over time.
- **Lighting and Night-Time Visual Effects:** Operational lighting required for safety and security, including exterior floodlighting and illuminated signage, may introduce increased night-time light spill compared to the existing situation. This could affect visual amenity for nearby residents and transient receptors unless appropriately managed through lighting design and mitigation.
- **Impact on Biodiversity and Green Infrastructure:** While there will be a loss of existing grassland habitats, the landscape strategy's inclusion of new hedgerows, extensive tree planting, and soil mounding will create new habitat features, enhancing the biodiversity value of the site over time and partially compensating for habitat loss.
- **Screening and Integration Over Time:** The proposed landscape mitigation planting will mature progressively, providing increasing visual screening and softening the built form's impact in the medium to long term. This will improve integration of the development into the surrounding landscape and reduce the operational visual impact.

Overall, while the operational phase represents a significant and permanent change to the site's landscape character, the design and mitigation measures included in the proposal will reduce the overall visual impact and deliver net benefits in terms of biodiversity and landscape quality. The development is consistent with the broader industrial and aviation land uses in the Huntstown area.

## 11.7 Mitigation and Monitoring Measures

### 11.7.1 Mitigation and Monitoring During Construction Phase

To minimise landscape and visual impacts during construction, a robust Construction Environmental Management Plan (CEMP) will be implemented. Protective fencing and buffer zones will safeguard retained trees and hedgerows, preventing accidental damage. Hedgerow removal will be carefully phased and timed to avoid sensitive ecological periods, such as the bird nesting season. Soil management practices will ensure topsoil is preserved and reused for landscaping mounds and planting areas. Dust and erosion controls will be employed to reduce temporary visual and environmental disturbance. Regular site inspections and monitoring by a dedicated landscape supervisor will ensure compliance with mitigation measures and facilitate prompt remedial action if needed. Early planting of boundary vegetation where feasible will help screen construction activities and reduce visual intrusion for nearby receptors.

### 11.7.2 Mitigation and Monitoring During Operational Phase

During the operational phase, landscape elements will be managed in accordance with an ongoing Landscape Management Plan designed to ensure the health, maturity, and visual effectiveness of all retained and newly planted hedgerows, trees, and grassland areas. Regular maintenance of hedgerows through appropriate cutting regimes will promote structural density and support biodiversity. Tree health will be monitored annually, with replacement planting implemented as necessary to sustain landscape quality and continuity. Lighting systems will be carefully designed and controlled to minimise light spill and glare, thereby protecting the amenity of nearby residential and natural areas. Periodic monitoring reports will evaluate the effectiveness of the landscape measures and allow adaptive management to optimise biodiversity enhancement and integration with the surrounding environment.

The mitigation measures incorporated into the scheme, many of which have been refined throughout the design process and are detailed in the Landscape Plan, include:

- The reintroduction and planting of native hedgerows and trees.
- The augmentation of existing hedgerows with native species planting.
- Provision of comprehensive hedge and mature tree planting around the site perimeter to provide screening and habitat connectivity.
- Inclusion of native and pollinator-friendly plant species, aligned with the All-Ireland Pollinator Plan 2021–2025, to enhance biodiversity value.

Operationally, the cargo handling warehouses will be visually screened by this planting, limiting their visibility from surrounding areas. While noise and vehicle movements - including lorries, trucks, and aircraft - will be the primary landscape impacts during operation, the presence of two existing terminals in the vicinity means that these effects are consistent with the established industrial and aviation context of Huntstown

## 11.8 Residual Impacts

### 11.8.1 Residual Impact Construction Phase

Following the implementation of the outlined mitigation measures, the residual landscape and visual impacts during the construction phase are anticipated to be moderate and temporary. While construction activities will inevitably cause short-term visual intrusion, vegetation removal, and noise disturbance, these effects will be limited in extent and duration. Protective measures for retained hedgerows and trees, dust and erosion control, and phased vegetation clearance will minimise adverse effects on the landscape fabric and nearby receptors.

With ongoing monitoring and adherence to best practice construction protocols, no significant long-term damage to landscape features is expected. Upon completion of construction, the site will undergo restoration, and planting works to facilitate rapid landscape recovery and reintegration into the surrounding environment, further reducing any remaining impacts.

### 11.8.2 Residual Impact Operational Phase

The primary residual impact during the operational phase relates to the permanent removal of existing grassland and the necessary removal of some hedgerows and trees to facilitate access roads and site infrastructure. However, this loss will be effectively mitigated through the extensive planting of new native trees and hedgerows, particularly along the R108 and throughout the site.

As a result, the development will achieve a net gain in both the range and number of hedgerow and tree species on the site, enhancing the landscape structure and biodiversity value over time. While the site's character will shift from predominantly open grassland to a more industrial landscape, the proposed landscape mitigation measures will help integrate the development into its surroundings and maintain visual screening, thereby reducing the overall residual impact to minor and acceptable levels

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## 11.9 Cumulative Assessment

### 11.9.1 Construction Phase

In accordance with Schedule 6, Part 2(c) of the Planning and Development Regulations 2001, this section assesses the cumulative impact of the proposed development on the subject site and the surrounding area. The assessment follows guidance from the European Commission's May 1999 report, Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions, which defines cumulative impacts as: "Impacts that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the project."

The primary source consulted for this assessment is the Fingal County Council Development Plan, which provides the policy context for land use and development within the area.

The proposed development is located on greenfield lands that were formerly used for agricultural purposes but no longer fulfil that function. These lands now represent undeveloped infill within the expanded airport boundary and are part of the broader comprehensive redevelopment and rejuvenation strategy for the existing airport infrastructure.

From a landscape and visual perspective, the cumulative impact of the proposed development alongside existing and planned airport-related developments is expected to be moderately positive in the long term. The integration of the new cargo-handling units and associated infrastructure will complement the evolving industrial and commercial character of the airport environment, supporting its operational growth and visual coherence.

During the construction phase, there will be short to medium-term moderate negative cumulative impacts associated with construction activities across multiple phases. As construction is likely to proceed sequentially, some level of overlapping disturbance may occur; however, adherence to best practice mitigation and phased implementation will minimise these effects.

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### 11.9.2 Operational Phase

in the operational phase, the proposed development will contribute positively by providing modern, purpose-built commercial warehouse facilities that serve airport needs. This will enhance the functionality and visual integration of the airport complex, resulting in a long-term positive cumulative impact on landscape character and visual amenity in the area.

## 11.10 Monitoring and Reinstatement

### 11.10.1 Construction Phase

A qualified Landscape Architect will be appointed to oversee and monitor all landscape-related aspects throughout the construction and operational stages of the project. This specialist will work closely with the resident engineer, project team, and contractor to ensure that both hard and soft landscape works are executed in accordance with the approved plans and specifications.

During construction, the Landscape Architect will conduct regular site inspections, with particular focus during and immediately following the civil works phase, to monitor the protection of retained trees, hedgerows, and other vegetation. They will review the installation and health of soft planting, including trees and native hedgerow species, and provide timely guidance to address any issues that arise.

In addition to planting supervision, the Landscape Architect will oversee the installation of a security fence surrounding the development to protect both the site and sensitive landscape elements.

Following construction, a comprehensive reinstatement programme will be implemented to restore any disturbed areas, including replanting removed vegetation where possible, and ensuring that landscaping is established to achieve the intended design and biodiversity benefits.

This proactive monitoring and reinstatement approach will help safeguard the landscape's integrity throughout the construction process and facilitate successful transition to the operational phase.

### 11.10.2 Operational Phase

During the operational phase, ongoing monitoring of the landscape features will be conducted as part of a comprehensive Landscape Management Plan. The appointed Landscape Architect, or designated landscape management team, will regularly inspect the health and condition of all retained and newly planted vegetation, including trees, hedgerows, and grassland areas. This will ensure early detection of any issues such as disease, damage, or poor establishment.

Routine maintenance activities, such as pruning, cutting, watering, and replacement planting, will be undertaken to maintain and enhance the landscape's structural integrity, biodiversity value, and visual amenity. Any planting failures or losses will be addressed promptly with appropriate reinstatement measures to ensure the landscape objectives are consistently met.

In addition, monitoring of lighting schemes and site infrastructure will be carried out to minimise potential impacts on surrounding areas, including light spill and glare. Periodic review reports will document the condition of the landscape and the effectiveness of management practices, enabling adaptive management to optimise long-term outcomes.

This continuous monitoring and reinstatement framework will help ensure that the site remains well-integrated within the wider environment, providing lasting ecological and aesthetic benefits throughout the operational lifespan of the development.

## 11.11 Visual Impact Statement

Within this chapter, it is essential to provide a clear understanding of the visual impact of the proposed development. The construction of the four aviation-related cargo handling units will introduce new built elements into the existing airport environment, altering the current visual composition of the site. While the scale of the development is substantial, the design incorporates measures to minimise visual intrusion, including the strategic retention and enhancement of existing hedgerows and tree planting to screen views.

Visual receptors in the vicinity, would include dwellings along the R108 though now predominantly derelict. The residents of Dunbro Lane, the nearest occupied residential cluster and users of nearby transport routes, will experience temporary visual effects during construction, such as increased activity, machinery, and

partial views of construction works. However, these impacts will be mitigated through phased works and temporary screening.

In the long term, the development will integrate with the evolving industrial landscape of Huntstown, where existing terminals and infrastructure set a precedent for such facilities. The proposed landscaping strategy will further soften and screen the built form, resulting in a visual impact that is consistent with the wider airport setting and considered acceptable within this context.

This statement provides a transparent basis for understanding how the visual character of the site and its surroundings will be influenced, forming a critical part of the overall environmental assessment.



**Figure 11.2:** Landscape Masterplan

**Source:** RMDA Ltd

## 11.12 Summary

This EIAR chapter presents a comprehensive Landscape and Visual Impact Assessment (LVIA) of the proposed construction of four aviation-related cargo handling units at Huntstown, adjacent to the existing airport terminal. The assessment follows recognized guidelines and includes a detailed analysis of the site context, landscape character, and potential visual effects on nearby receptors.

The site, previously agricultural land now forming part of the expanded airport boundary, will undergo significant transformation. Construction phase impacts are anticipated to be moderate but temporary, involving vegetation clearance and increased activity. Mitigation measures such as retention and replanting of native hedgerows, extensive tree planting, and the use of soil mounding for screening and biodiversity will reduce these effects.

Operationally, the development is expected to contribute positively to the landscape by enhancing biodiversity and integrating with the existing industrial and aviation environment. Monitoring and management plans will ensure ongoing maintenance of landscape elements, securing long-term visual and ecological benefits.

Cumulative impacts, considering other airport developments and the Fingal County Council Development Plan context, indicate an overall moderately positive effect on the landscape and visual amenity.

In conclusion, with the implementation of proposed mitigation and management strategies, the development will be compatible with its surroundings and deliver sustainable landscape outcomes.

## 11.13 References

- Fingal County Council. Landscape Character Assessment of Fingal County Council (as contained within the Fingal County Development Plan 2023–2029).
- Fingal County Council (2023–2029). Fingal County Development Plan
- Fingal County Council (2023–2029). Record of Protected Structures, Appendix of the Fingal County Development Plan.
- Environmental Protection Agency (EPA) (1995). Advice Notes on Current Practice in the Preparation of Environmental Impact Statements.

- Environmental Protection Agency (EPA) (2002). Guidelines on the Information to be Contained in Environmental Impact Statements.
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- Environmental Protection Agency (EPA) (2017). EPA EIAR Guidelines – Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (Final).
- Landscape Institute & Institute of Environmental Management and Assessment (2013). Guidelines for Landscape and Visual Impact Assessment, 3rd Edition.
- Government of Ireland. Planning and Development Act 2000, as amended.

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**Table 11.3:** Landscape Visual Impact Predictions Terminology

Impact Characteristic	Term	Description
Quality	Positive	A change which improves the quality of the environment
	Neutral	A change which does not affect the quality of the environment
	Negative	A change which reduces the quality of the environment
Significance	Imperceptible	An impact capable of measurement but without noticeable consequences
	Slight	An impact which causes noticeable changes in the character of the environment without affecting its sensitivities
	Moderate	An impact that alters the character of the environment in a manner consistent with existing and emerging trends
	Significant	An impact, which by its character, magnitude, duration or intensity alters a sensitive aspect of the environment
	Profound	An impact which obliterates sensitive characteristics
Duration	Short-term	Impact lasting one to seven years
	Medium-term	Impact lasting seven to fifteen years
	Long-term	Impact lasting fifteen to sixty years
	Permanent	Impact lasting over sixty years
	Temporary	Impact lasting for one year or less
	Cumulative	The addition of many small impacts to create one larger,

<b>Type</b>		more significant impact
	'Do Nothing'	The environment as it would be in the future should no development of any kind be carried out
	Indeterminable	When the full consequences of a change in the environment cannot be described
	Irreversible	When the character, distinctiveness, diversity, or reproductive capacity of an environment is permanently lost
	Residual	Degree of environmental change that will occur after the proposed mitigation measures have taken effect
	Synergistic	Where the resultant impact is of greater significance than the sum of its constituents
	'Worst Case'	The impacts arising from a development where the mitigation measures may substantially fail

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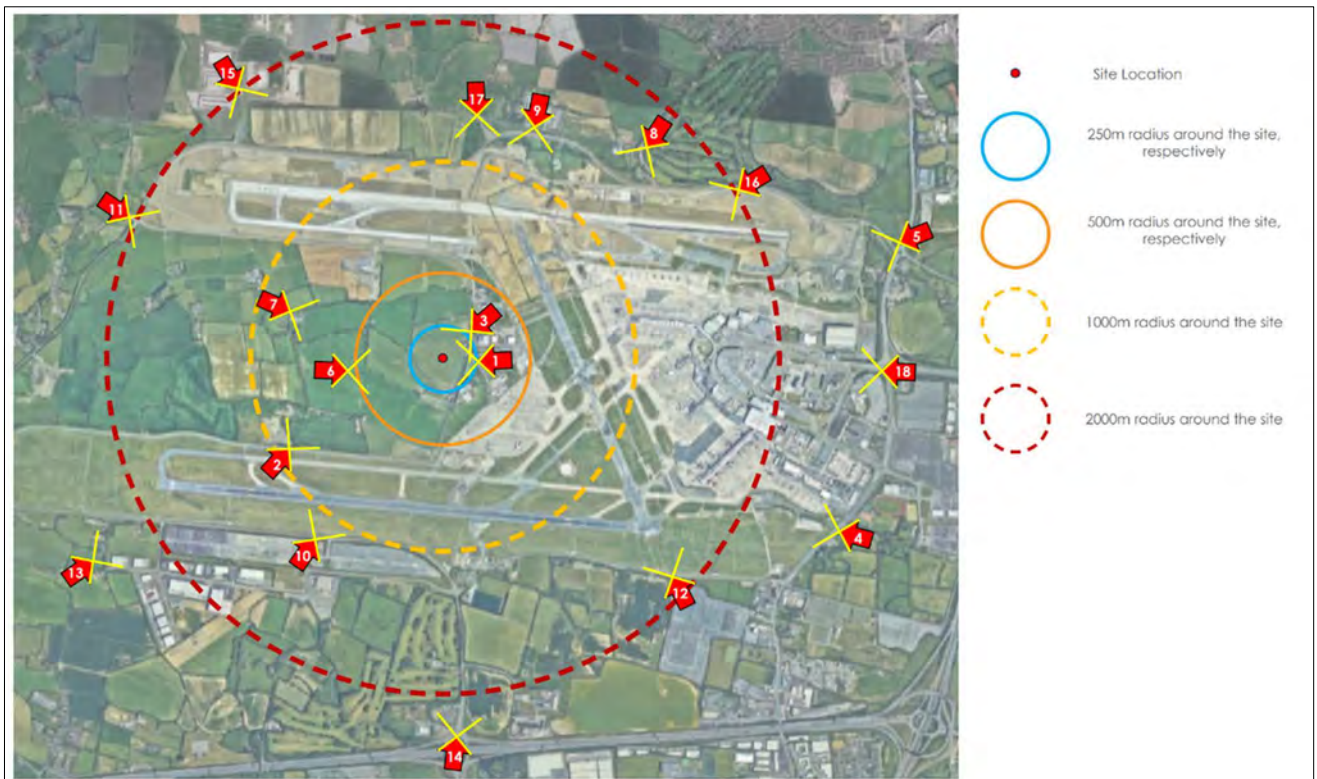
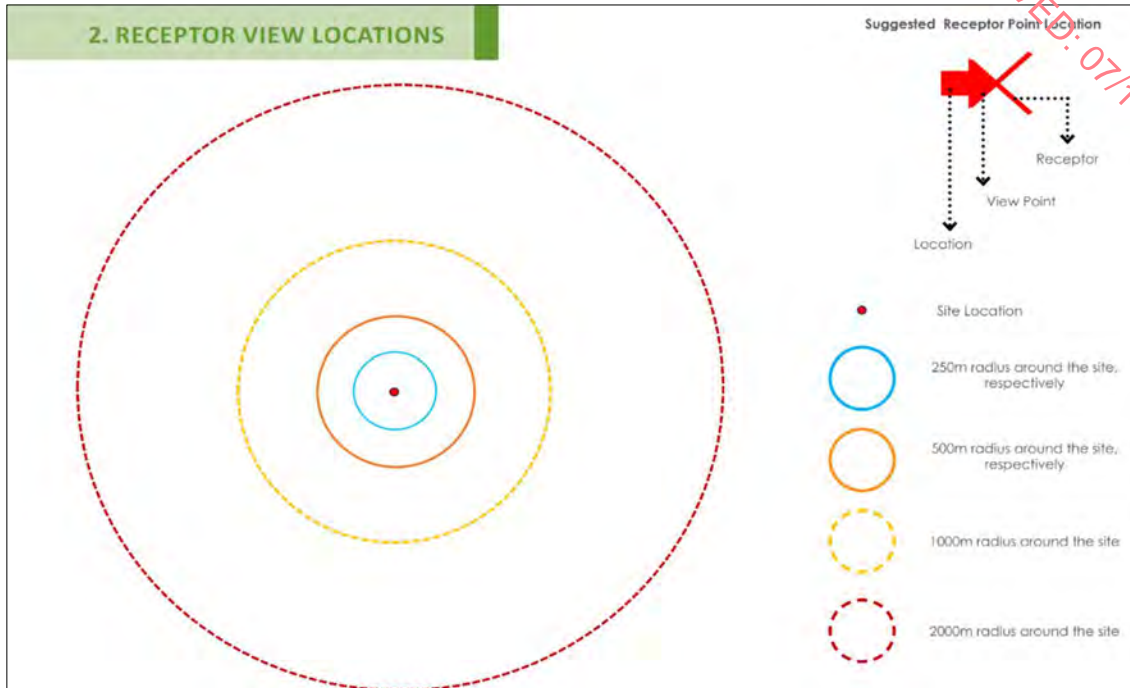
Appendix B – Chapter 11

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CRITERIA	DETAILED QUESTIONS – TO DETERMINE WHETHER THE EIAR HAS:
Magnitude and the spatial extent of the effects	<ul style="list-style-type: none"> <li>• Clarified the size and scale of the effects?</li> <li>• Indicated the spatial extent of the extent of the effects (will some, much or all the areas be affected?)</li> </ul>
Nature of the effects	<ul style="list-style-type: none"> <li>• Clarified which part of the environment will be affected and how significantly?</li> <li>• Identified the aspect of the environment affected?</li> <li>• Described whether the effects are positive, neutral or negative?</li> </ul>
Transboundary nature of the effects	<ul style="list-style-type: none"> <li>• Indicated the spatial extent of the transboundary effects (will some, much or all the jurisdictions be affected?)</li> </ul>
Intensity and complexity of the effects	<ul style="list-style-type: none"> <li>• Quantified the amount or intensity by which the character/quality of any environmental factor will change?</li> <li>• Described the degree of change (e.g. imperceptible, slight or significant)?</li> <li>• Identified the significance of the effect (e.g. profound or significant)</li> </ul>
Probability of the effects	<ul style="list-style-type: none"> <li>• Established the level of certainty of the assessment’s findings?</li> <li>• Highlighted consequence that cannot be determined?</li> </ul>
Expected onset, duration, frequency and reversibility of the effects	<ul style="list-style-type: none"> <li>• Stated whether the effects will be continuous, intermittent or occasional?</li> <li>• Indicated whether the effects will be temporary, short, medium or long term?</li> <li>• Highlighted irreversible effects?</li> </ul>
Cumulation of the effects with the effects of other existing and/or approved projects	<ul style="list-style-type: none"> <li>• Described cumulative effects?</li> <li>• Considered cumulative effects due to cumulation of effects with those of other projects that are existing, or area approved but not yet built or operational?</li> </ul>
Possibility of effectively reducing the effects	<ul style="list-style-type: none"> <li>• Indicated whether the effects can be mitigated?</li> <li>• Stated whether compensation is available, possible or acceptable?</li> </ul>

## Appendix C – Chapter 11 Receptor Views for LVIA assessing lands located within the townland of Huntstown, Swords, Co. Dublin

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## Receptor View Locations 1-18



## Receptor View Locations 1-8



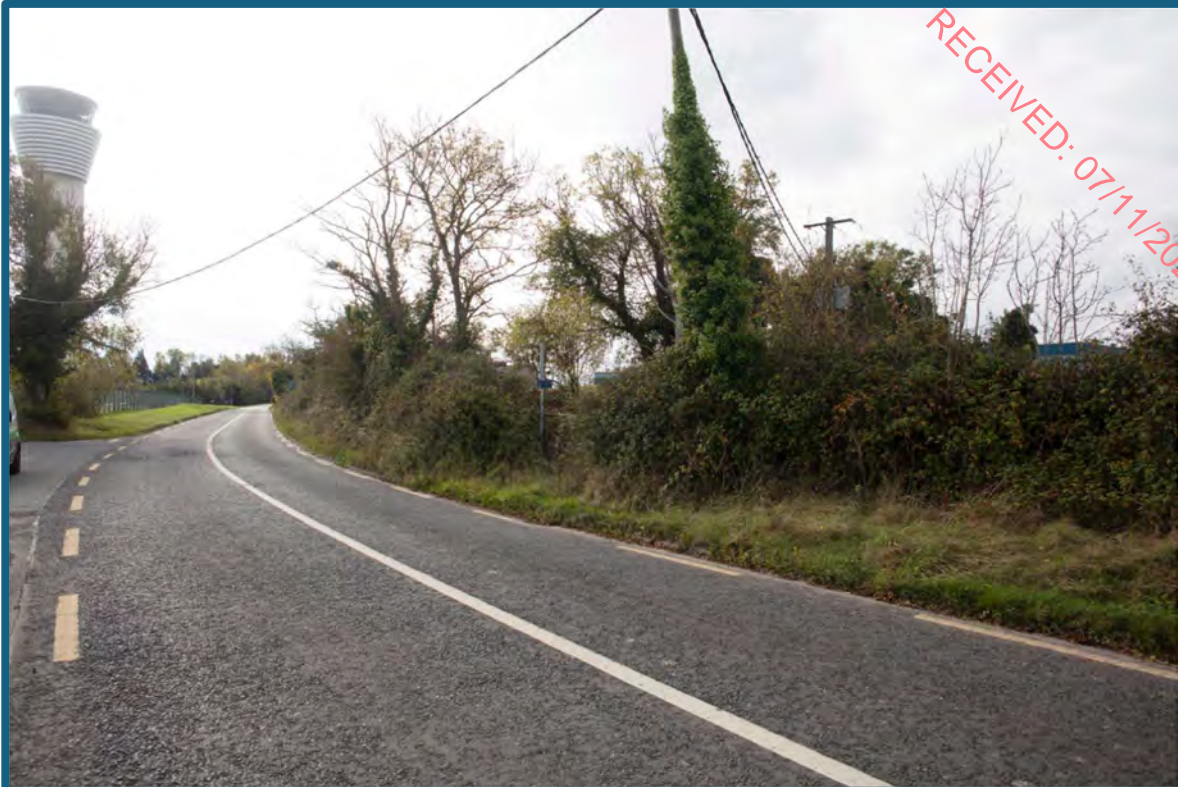


View 1	
Existing View	West of site – R108 - Looking East at site
Proposed View	Removal of existing hedgerows/trees and the replanting of native hedgerows/trees.
Impact Significance	Moderate-Significant
Quality of Visual Impact	Negative
Mitigation	Planting new trees and hedges – earth mounding to be added (visible)
Duration of Impact	Short Term
Landscape/Townscape Sensitivity	Low-Medium
Magnitude of Change	Medium
Visual Receptor Sensitivity	Low

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View 2	
Existing View	South-West from site - R108 - Looking North-East at site
Proposed	Retain the existing hedgerow
Impact Significance	Imperceptible
Quality of Visual Impact	Neutral
Mitigation	Existing hedgerows retained and use of earth mounding (not visible).
Duration of Impact	Brief
Landscape/Townscape Sensitivity	Low
Magnitude of Change	Low
Visual Receptor Sensitivity	Low



### View 3

Existing View	North-East of site - R108 - Looking South-West
Proposed View	Removal of existing hedgerows/trees and the replanting of native hedgerows/trees
Impact Significance	Moderate-Significant
Quality of Visual Impact	Negative
Mitigation	Planting new trees and hedges – earth mounding to be added (visible)
Duration of Impact	Short term
Landscape/Townscape Sensitivity	Low-Medium
Magnitude of Change	Medium
Visual Receptor Sensitivity	Low



View 4

Existing View	South East of site - R132 - Looking North West
Proposed View	Retain existing hedgerow.
Impact Significance	Imperceptible
Quality of Visual Impact	Neutral
Mitigation	Existing hedgerows retained and use of earth mounding (not visible)
Duration of Impact	Brief
Landscape/Townscape Sensitivity	Low
Magnitude of Change	Low
Visual Receptor Sensitivity	Low



View 5

Existing View	North-East of site - R132 - Looking South-West
Proposed	Retain existing hedgerow.
Impact Significance	Imperceptible
Quality of Visual Impact	Neutral
Mitigation	Existing hedgerow retained and use of earth mounding (not visible)
Duration of Impact	Brief
Landscape/Townscape Sensitivities	Low
Magnitude of Change	Low
Visual Receptor Sensitivity	Low

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View 6	
Existing View	South-West of site - Looking North-East
Proposed	Removal of existing hedgerows/trees and the replanting of native hedgerows and trees
Impact Significance	Moderate-Significant
Quality of Visual Impact	Negative
Mitigation	Planting new trees and hedges – Earth mounding to be added (visible)
Duration of Impact	Short Term
Landscape/Townscape Sensitivities	Low-Medium
Magnitude of Change	Medium
Visual Receptor Sensitivity	Low



View 7	
Existing View	West of site - Looking East
Proposed	Retain existing hedgerow.
Impact Significance	Imperceptible
Quality of Visual Impact	Neutral
Mitigation	Existing hedgerows retained and use of earth mounding (not visible)
Duration of Impact	Brief
Landscape/Townscape Sensitivities	Low
Magnitude of Change	Low
Visual Receptor Sensitivity	Low

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View 8	
Existing View	North-East of site - Looking South-west
Proposed	Retain existing hedgerow.
Impact Significance	Imperceptible
Quality of Visual Impact	Neutral
Mitigation	Existing hedgerow retained and use of earth mounding (not visible).
Duration of Impact	Brief
Landscape/Townscape Sensitivities	Low
Magnitude of Change	Low
Visual Receptor Sensitivity	Low

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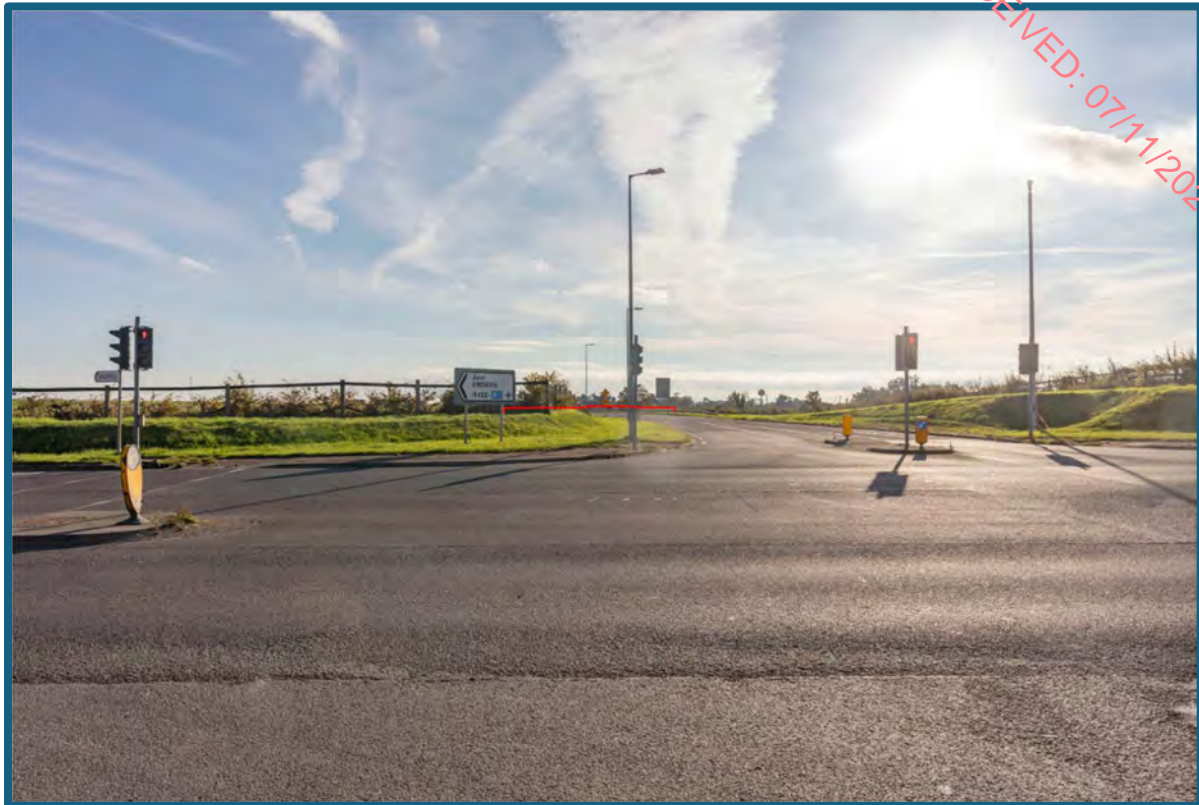
View 9	
Existing View	North-East from site - Looking South- West
Proposed	N/A – existing hedgerow screening site.
Impact Significance	No Impact
Quality of Visual Impact	Neutral
Mitigation	N/A – existing hedgerow screening site.
Duration of Impacts	Momentary
Landscape/Townscape Sensitivities	Low
Magnitude of Change	Negligible
Visual Receptor Sensitivity	Low

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View 10	
Existing View	South-West of site - R108 - Looking North-East
Proposed	N/A – existing hedgerow screening site.
Impact Significance	No Impact
Quality of Visual Impact	Neutral
Mitigation	N/A – existing hedgerow screening site.
Duration of Impact	Momentary
Landscape/Townscape Sensitivities	Low
Magnitude of Change	Negligible
Visual Receptor Sensitivity	Low

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View 11	
Existing View	North-West from site - R108 - Looking South-East
Proposed	N/A – existing hedgerow screening site.
Impact Significance	No Impact
Quality of Visual Impact	Neutral
Mitigation	N/A – existing hedgerow screening site.
Duration of Impact	Momentary
Landscape/Townscape Sensitivities	Low
Magnitude of Change	Negligible
Visual Receptor Sensitivity	Low

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View 12	
Existing View	South-East of site - Old Airport Rd. - Looking North-west
Proposed	N/A – existing hedgerow screening site.
Impact Significance	No Impact.
Quality of Visual Impact	Neutral
Mitigation	N/A – existing hedgerow screening site.
Duration of Impact	Momentary
Landscape/Townscape Sensitivities	Low
Magnitude of Change	Negligible
Visual Receptor Sensitivity	Low

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View 13	
Existing View	South-West of site - L31251 Harristown Lane - Looking North-East
Proposed	N/A – existing hedgerow screening site.
Impact Significance	No Impact.
Quality of Visual Impact	Neutral
Mitigation	N/A – existing hedgerow screening site.
Duration of Impact	Momentary
Landscape/Townscape Sensitivities	Low
Magnitude of Change	Negligible
Visual Receptor Sensitivity	Medium

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View 14	
Existing View	South of site - R108 - Looking North
Proposed	N/A – existing hedgerow screening site.
Impact Significance	No Impact.
Quality of Visual Impact	Neutral
Mitigation	N/A – existing hedgerow screening site.
Duration of Impact	Momentary
Landscape/Townscape Sensitivities	Low
Magnitude of Change	Negligible
Visual Receptor Sensitivity	Low

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View 15

View 15	
Existing View	North-West of site - Food Central - Looking South-East
Proposed	N/A – existing hedgerow screening site.
Impact Significance	No Impact.
Quality of Visual Impact	Neutral
Mitigation	N/A – existing hedgerow screening site.
Duration of Impact	Momentary
Landscape/Townscape Sensitivities	Low
Magnitude of Change	Negligible
Visual Receptor Sensitivity	Low

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View 16	
Existing View	North-East of site - Looking South-West
Proposed	N/A – existing hedgerow screening site.
Impact Significance	No Impact
Quality of Visual Impact	Neutral
Mitigation	N/A – existing hedgerow screening site.
Duration of Impact	Momentary
Landscape/Townscape Sensitivities	Low
Magnitude of Change	Negligible
Visual Receptor Sensitivity	Low

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View 17	
Existing View	North-East of site - Looking South-west
Proposed	N/A – existing hedgerow screening site.
Impact Significance	No Impact
Quality of Visual Impact	Neutral
Mitigation	N/A – existing hedgerow screening site.
Duration of Impact	Momentary
Landscape/Townscape Sensitivities	Low
Magnitude of Change	Negligible
Visual Receptor Sensitivity	Low



View 18

Existing View	South-West of site - Looking North-East
Proposed	N/A – existing hedgerow screening site.
Impact Significance	No Impact.
Quality of Visual Impact	Neutral
Mitigation	N/A – existing hedgerow screening site.
Duration of Impact	Momentary - None
Landscape/Townscape Sensitivities	Medium
Magnitude of Change	Medium
Visual Receptor Sensitivity	Medium

## 12.0 Material Assets

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### 12.1 Introduction

This chapter evaluates the potential impacts of the Proposed Development on Material Assets, which refers to physical, human-made resources and infrastructure within the environment. Specifically, the assessment considers the following built services and utilities:

- Electricity supply
- Gas infrastructure
- Information and communications technology (ICT)
- Surface water drainage
- Potable water supply and demand
- Foul wastewater management
- Solid waste management

Natural environmental resources such as land, water bodies, biodiversity, and air quality are addressed separately in dedicated chapters of this EIAR.

According to the Environmental Protection Agency (EPA, 2002), material assets are defined as *“resources that are valued and that are intrinsic to specific places; they may be of human or natural origin and the value may arise for either economic or cultural reasons.”*

This understanding was further clarified in the EPA’s 2022 Guidelines on the Information to be Contained in Environmental Impact Assessment Reports, which acknowledge that the term *“material assets”* has historically been ambiguous. Under Directive 2011/92/EU, the term encompassed both architectural and archaeological heritage, while Directive 2014/52/EU reclassified these elements under cultural heritage. Today, material assets are generally interpreted to refer to built infrastructure and public utilities. Roads and traffic infrastructure are included, as vehicular movement inherently affects these assets. Land taken for development (such as sealing of agricultural soils) or the sterilisation of mineral resources is addressed under land and soils rather than material assets.

### 12.1.2 Statement of Competency

This chapter was prepared by Martijn Leenheer and Ian Worrell, with additional input from Rachel Kenny and Gordon Mitchell. Ian Worrell, BScEng, DipEng, CEng, MIEI, DipPhyPlg. Ian has over 28 years' experience of civil engineering design, leading civil engineering teams responsible for civil and infrastructure planning and design for development projects. Ian is a Chartered Civil Engineer with a degree in engineering from Dublin Institute of Technology and a Diploma in Physical Planning from TCD. He works on a wide range of projects, including industrial and commercial development and has been responsible for planning and design of infrastructure. Ian has particular expertise in the design of efficient foul and stormwater drainage systems, and he has been responsible for the development of successful SuDS strategies for many schemes, generally using a combination of solutions to provide the site strategy. His expertise in drainage encompasses the assessment of flooding risk.

Martijn holds a 1st Class BSc (Hons) degree in Environmental Science from Atlantic Technological University (previously IT Sligo) and has 11 years' experience in Ireland in soil remediation, invasive species commercial Wastewater Treatment, Discharge Licences, Waste Permits and Licences has been involved in Risk Assessments, NIS and EIAR reports for various commercial projects. Before moving to Ireland Martijn worked in the Netherlands as an Environmental Field Technician in soil research. He has been an Operations Director of Environmental Services Consultancy for 11 Years and a Founding Director of ESC Environmental LTD since 2021.

This chapter was reviewed by Rachel Kenny, BE, MRUP, FIPI. Rachel Kenny is a senior planning consultant with CWPA, Planning & Architecture consultancy, and has 30 years' experience as a planner in public and private sector organisations, including Fingal, Meath and Louth County Council and An Bord Pleanála (as Director of Planning). She holds a degree in Civil Engineering (BE (Civil) (Hons) and Masters in Regional and Urban Planning (MRUP), both from University College Dublin. She is a fellow and corporate member of the Irish Planning Institute. She has experience in both forward planning and development management, and specialises in, inter alia, Strategic Infrastructure Development, and large scale EIAR projects.

Design Input for the Subject Site Wastewater Treatment Plant was provided by Gordon Mitchell B.Eng MIEI. Gordon holds a Diploma in Civil Engineering from DIT Bolton Street and a B.Eng in Structural Engineering from Cork Institute of Technology (CIT). With over 25 years of experience in civil and structural engineering, he has played a lead role in the design and delivery of wastewater treatment infrastructure across multiple developments. His contributions to EIARs include technical design input, infrastructure integration, and

construction-phase mitigation planning, in full compliance with EPA guidelines and the EIA Directive (2014/52/EU).

## 12.2 Subject Development

The proposed development, subject of this EIAR is as follows –

Permission is sought for –

1. Construction of four aviation-related cargo handling units with ancillary office space:

- i. Unit 1: c.10,869.7 m<sup>2</sup> (including 940.9 m<sup>2</sup> office space)
- ii. Unit 2: c.9,151.3 m<sup>2</sup> (including 751.3 m<sup>2</sup> office space)
- iii. Unit 3: c.6,024.9 m<sup>2</sup> (including 497.7 m<sup>2</sup> office space)
- iv. Unit 4: c.8,577.7 m<sup>2</sup> (including 751.3 m<sup>2</sup> office space)

The proposed units will have an overall combined total gross floor area (GFA) of c. 34, 623.6 sq.m (alongside ancillary ESB substations, 4 no. security huts with a combined GFA of 30 sqm and pumphouses). The warehouses are c. 12m in height, with the office element being c. 3.3 m in height and located within a landscaped campus on a site of c. 10.7 Ha.

2. Provision of 390 car parking spaces, including 39 EV charging points, 19 accessible spaces, and 39 motorcycle bays.
3. Provision of 230 secure bicycle parking spaces, of which 100 are short stay spaces and 130 are sheltered long stay spaces.
4. Provision of approx. 77 truck parking spaces and 5 van spaces.
5. Hard and soft landscaping, new boundary treatments, including a c. 2m high System Wire Fence to site boundary.
6. Construction of new site entrance onto the R108.
7. Wastewater treatment plant and infiltration area for 250 PE.
8. All necessary site development and engineering and ancillary site works, including provision of ESB substations and switchrooms, sprinkler tanks and pumphouses, bin store and recycle store, lighting,

signage, underground services, photovoltaic panel zones at roof level and sustainable drainage systems (SuDS).

## 12.3 Study Methodology

The study involved a comprehensive desk-based review focusing on built infrastructure, utilities, and waste management systems within the surrounding area. This included the collation and analysis of published data, mapping resources, and technical inputs provided by the Applicant and the Design Team.

Additionally, professional experts as part of the Design Team have been included in this chapter based on their experience, notably the design of the Wastewater Treatment Plant by Mitchell Environmental.

### 12.3.1 Sources of Information

The assessment of material assets for the Proposed Development was carried out in accordance with relevant environmental guidelines, notably:

- Environmental Protection Agency (EPA) *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (2022)*
- EPA (2021) *Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction and Demolition Projects*

Information pertaining to existing services and infrastructure near the Proposed Development site was obtained through review of the following:

- ESB Networks Utility Maps
- Uisce Éireann (Irish Water) Utility Plans
- Gas Networks Ireland Service Records
- EIR E-Maps (telecommunications infrastructure)
- [mywaste.ie](https://epawebapp.epa.ie/terminalfour/waste/index.jsp) EPA Waste Licensing and Environmental Information Portal:  
<https://epawebapp.epa.ie/terminalfour/waste/index.jsp>
- National Waste Collection Permit Office (NWCPO) Waste Search:  
<http://www.nwcpo.ie/permitsearch.aspx>

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All stages of the Proposed Development have been considered in the impact assessment, with a focus on interactions with utilities and infrastructure networks in the surrounding area. The methodology followed recognised industry standards, technical guidance, and statutory requirements, including but not limited to:

- ESB Networks: *National Code of Practice for the Customer Interface*, Version 5 (2021)
- ESB Networks: *Construction Standards for MV Substation Buildings* (2019)
- Uisce Éireann: *Code of Practice for Water Infrastructure Connections* (2020, Rev. 2)
- IS EN 752: *Drain and Sewer Systems Outside Buildings*
- Water Services Acts 2007–2017
- *Greater Dublin Regional Code of Practice for Drainage Works*
- *Greater Dublin Sustainable Drainage Systems (SuDS) Guidance* (2005)
- CIRIA Report C753: *The SuDS Manual* (2015)
- *Waste Framework Directive* (Directive 2008/98/EC), as amended by Directive (EU) 2018/851
- *European Union (Waste Directive) Regulations 2011–2020*, S.I. No. 323/2020
- *Waste Management Acts 1996–2011*
- *National Waste Management Plan for a Circular Economy 2024–2030*

### 12.3.2 Prediction and Assessment of Impacts

Impact prediction and assessment were carried out in accordance with the methodology outlined by the EPA, as described in **Chapter 1** of this EIAR.

## 12.4 The Receiving Environment

### 12.4.1 Site Location

The subject site is a greenfield site between the western sections of the north and south runways, within the 'road box' formed by the R122 (west) and R108 (north/east/south). The site is located c.1km west of Dublin Airport, within lands zoned 'DA – Dublin Airport' under the Fingal County Development Plan 2023–2029. This zoning supports aviation-related uses, including logistics and warehousing, which are compatible with the surrounding airport operations and national transport infrastructure.

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The surrounding area is characterised by a mix of airport facilities, light industrial and logistics development, major road corridors, and residual agricultural lands. The site itself has remained undeveloped to date and does not currently benefit from connections to built utilities or services, with no electricity, potable water, foul drainage, gas, or telecommunications infrastructure in place.

#### 12.4.2 Local Settlement and Land Use

The subject site at Huntstown, Swords, Co. Dublin lies approximately 1km west of Dublin Airport, in a transitional area between aviation infrastructure, rural fringe, and emerging industrial and logistics development. The surrounding context is characterised by a mix of land uses including airport-related operations, light industry, logistics, energy infrastructure, and open agricultural lands. To the east lies the Dublin Airport complex, including the main terminal areas, aprons, and associated operations. To the south and west are lands historically underutilised but increasingly identified for strategic employment and logistics development due to their proximity to the national road and air transport network.

The location benefits from excellent transport connectivity, being situated near the M50, M1, and N2 corridors, as well as existing internal airport logistics routes. This infrastructure facilitates efficient goods movement and underpins the suitability of the area for aviation-linked industrial uses.

While the subject site itself has remained undeveloped to date, its scale and location are consistent with other logistics-focused developments in the wider Huntstown and Collinstown areas. The lands have no construction history, and aerial imagery and historical mapping confirm a longstanding use as open greenfield.

Under the Fingal County Development Plan 2023–2029, the site is zoned 'DA' – Dublin Airport, which aims to:

*"Ensure the efficient and effective development of the airport in accordance with an approved Local Area Plan, to support aviation-related uses and to provide for uses which enhance and complement the airport including logistics and warehousing."*

In addition, nearby lands to the west and southwest are zoned 'GE' – General Employment, which supports a broad range of compatible industrial, and logistics uses. Although the application site itself falls under the 'DA' zoning, the proposed development of a cargo handling facility is fully consistent with the stated objective of accommodating aviation-related employment uses.

The proposed development has been designed specifically to support and expand the cargo-handling capacity of Dublin Airport in a manner that integrates with both current and future airport operations. The scale and nature of the use are therefore compatible with the strategic function of the area as a national transport and logistics hub, while preserving flexibility for future airport expansion, including safeguarding of land for a potential third terminal if required.

### 12.3.2 Power Supply

#### Electrical Supply

The electricity network on the island of Ireland is owned and maintained by ESB Networks, while the transmission grid (lines above 110 kV) is operated by EirGrid. The system consists of transmission infrastructure, which transports electricity from power generation sites to local substations, and local distribution networks, which deliver power to end users.

A notable local power source, Energia's Huntstown Power Station, is located roughly 3 km east of the proposed cargo handling facility site.

The area surrounding the site is mainly served by a combination of overhead lines and underground cables connected to the Finglas 220 kV Transmission Station. While there are several overhead lines in the immediate vicinity, no lines traverse the site itself.

The site is currently undeveloped greenfield land with no existing electrical demand. However, it is well positioned for future grid connection to support the anticipated energy needs of the proposed development.

Photovoltaic solar panels are also being proposed to assist in meeting some of the sites energy needs.

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### 12.3.3 Gas Supply

Gas Networks Ireland (GNI) owns and operates the national gas distribution system, which includes a network of pipelines and subsea interconnectors supplying gas to customers throughout the country. There is no existing gas pipeline infrastructure in the immediate vicinity of the proposed development site. Furthermore, the subject site is not intended to be served by gas, and no connections are planned as part of the Proposed Development. As such, gas supply is not relevant to either the construction or operational phases of the project, and no liaison with GNI has been required during the design or planning process.

### 12.3.4 Information and Communications Technology (ICT)

Eircom provides telecommunications infrastructure through underground ducts and overhead poles, with other operators able to use this infrastructure to deliver broadband services to local customers.

National Broadband Ireland (NBI) was established by the Irish Government to deliver high-speed fibre broadband to areas not served by commercial providers. The Department of Climate, Energy and the Environment maintains an interactive High-Speed Broadband Map which designates areas as Amber (target areas for State intervention) or Blue (areas with commercial high-speed broadband).

The subject site is located within an **Amber area**, meaning it currently relies on the National Broadband Plan for the rollout of fibre broadband services. As such, there is no guaranteed immediate availability of high-speed fibre broadband from commercial operators. The project design, as confirmed by Waterman Moylan, will therefore include any necessary on-site ICT infrastructure to enable future connection once fibre rollout reaches the area. Temporary or alternative solutions, such as wireless broadband or mobile data services, may be used to meet the development's operational needs in the interim.

In terms of mobile telecommunications, the site is well supported, with several masts and base stations in the surrounding area. The nearest mast is located approximately 1km south of the site, at the junction of the Old Airport Road and the R108, providing coverage for Vodafone, Three, and Meteor networks.

While the site is currently undeveloped and has no ICT demand at present, the availability of reliable mobile coverage will support basic connectivity during construction a

d early operation. Any reliance on wireless data in the absence of immediate high-speed fibre may also marginally increase the site's electricity supply demand, as additional on-site equipment (e.g. routers, repeaters) may be required to ensure reliable ICT services until the area is fully serviced under the National Broadband Plan.

### 12.3.5 Water Supply

The site will be serviced via a new connection to the existing  $\varnothing$  100 mm public watermain located under the R108 along the eastern boundary. A  $\varnothing$  100 mm HDPE main will extend approximately 220 m to the site boundary and continue internally, forming a looped network around each cargo handling unit.

The network will be laid with a minimum cover of  $\varnothing$  900 mm to the crown of the pipe, increasing to  $\varnothing$  1.2 m where higher traffic loading is anticipated. Isolation valves will allow each cargo unit to be independently controlled, and hydrants will be positioned to ensure all building points are within 46 m of a hydrant.

The total daily water demand for the development, based on an employment of 350 staff and 50 visitors, is 15.25 m<sup>3</sup>/day (equivalent to an average flow of 0.177 l/s). The average peak demand is 0.221 l/s, with a maximum peak water demand of 1.10 l/s. This demand will be comfortably accommodated by the proposed 100 mm connection.

All infrastructure will be constructed in compliance with the Irish Water Code of Practice for Water Infrastructure, and Waterman Moylan drawings HT3-WAT-ZZ-XX-DR-P-03001 – 03003 outline the proposed network configuration.

### 12.3.6 Surface Water Drainage

The site is greenfield and does not benefit from any existing drainage network. A dedicated surface water management system will be developed as part of the proposed works to ensure sustainable drainage in line with best practice and relevant standards. This system will include measures such as on-site attenuation and controlled discharge to local receiving waters, ensuring that runoff does not adversely affect the surrounding environment or place additional pressure on existing infrastructure. The design will be

informed by detailed site investigations and will align with local and national surface water management guidelines.

As described in the Engineering Assessment Report and outlined in Waterman Moylan's drawings HT3-WAT-ZZ-XX-DR-P-02001 - 02003, the surface water drainage system will be designed in line with CIRIA SuDS Manual (C753) principles. It will incorporate attenuation measures sized to limit runoff to greenfield rates, with appropriately sized pipes, manholes, and flow controls. Monitoring and maintenance will follow the site's long-term environmental management plan, as set out in the CEMP.

### 12.3.7 Foul Water Management

There is no existing public foul sewer available at the site. To address this, a dedicated private foul sewer network and associated pumping station will be designed by Waterman Moylan to collect all foul effluent generated by the Proposed Development. This private network will outfall to a proprietary on-site Wastewater Treatment Plant (WWTP), which will be fully designed by Mitchell Environmental Ltd.

Mitchell Environmental have confirmed that a complete design for a new packaged Wastewater Treatment System and Tertiary Sand Polishing Filter will be provided, with capacity sized to accommodate current and future loading demands. The proposed WWTP will be designed for a maximum hydraulic loading of 15,250 litres/day, equating to a Population Equivalent (PE) of 250, based on BOD loading rates. The breakdown informing this design includes:

- 150 staff/day with canteen facilities: 9,000 litres/day
- 200 staff/day without canteen: 6,000 litres/day
- 50 visitors/day: 250 litres/day

Total estimated hydraulic loading: 15,250 litres/day with an organic loading of 9 kg BOD/day.

These figures have also determined the design and size of the bespoke percolation area, which includes a 305 sqm Tertiary Sand Polishing Filter underlain by a 750 sqm gravel infiltration base to ensure effective tertiary treatment and final discharge in line with relevant standards. A new discharge licence application under Section 4 of the Water Pollution Act 1977 (as amended) will be submitted following any grant of planning permission.

All foul water infrastructure, including the sewer network, pumping station, WWTP, and polishing filter, will be constructed and operated in accordance with the detailed Construction Environmental Management Plan (CEMP) prepared by Waterman Moylan. This ensures that all mitigation measures are fully aligned with the final EIAR and reflect best practice.

As this is a fully private system, no input from Uisce Éireann or Confirmation of Feasibility (CoF) is required for foul drainage. The design and long-term operation of the foul water system will comply with all applicable environmental and licensing requirements and will be monitored under the site's compliance framework.

Further detail on loadings and design specifications can be found in the Wastewater Characterisation Form and associated drawings prepared by Mitchell Environmental Ltd.

### 12.3.8 Resource and Waste Management

The site is located within the administrative area of Fingal County Council and, as such, the Proposed Development will comply fully with relevant local authority waste management policies, in addition to national legislation and the Eastern–Midlands Region Waste Management Plan.

An Operational Waste Management Plan (OWMP) has been prepared for the development by CWPA, in consultation with Waterman Moylan as project engineers, to ensure that all waste generated during the operational phase is handled, stored, segregated, and disposed of in accordance with best practice and statutory requirements.

During the Construction Phase, the volume of soil and subsoil to be excavated is estimated based on preliminary site design and earthworks calculations provided by the Design Team and Waterman Moylan. This estimate will be confirmed through the contractor's detailed cut-and-fill design prior to works commencing.

Where feasible, excavated material will be reused on site — for example, as landscaping fill — with any surplus soil that is suitable managed under Article 27 by-product procedures. Material that cannot be reused will be removed to an appropriately licensed facility with full traceability, in line with the Construction Environmental Management Plan (CEMP) prepared by Waterman Moylan. The CEMP outlines robust

measures for the segregation, storage, transport, and disposal of all construction phase waste, including excavated soils, in compliance with best practice and statutory requirements

These measures ensure that the Proposed Development will minimise waste generation and promote resource efficiency, in line with the National Waste Management Plan for a Circular Economy 2024–2030 and relevant Fingal County Council waste objectives.

## 12.4 Potential Impact

### 12.4.1 Construction Phase

#### 12.4.1.1 Local Settlement and Land Use

The proposed development is located on DA-zoned lands. While the site itself is not zoned for General Employment (GE), it is located adjacent to or near other GE-zoned lands and existing industrial and logistics uses, which define the wider local character.

Given the surrounding established commercial and logistics context, the development is in keeping with the intended land use pattern for this area. The site is currently greenfield and undeveloped, and no residential properties are located immediately adjacent. It is therefore anticipated that the proposed development will have a **neutral, long-term, and imperceptible effect** on local property values and settlement patterns.

During the Construction Phase, there may be some temporary nuisance impacts for nearby businesses or road users, including construction-related noise and potential short-term interruptions to utilities or access. These will be managed through standard construction management measures.

The construction works will generate direct employment, which is expected to have a **short-term positive effect** on the local economy. Local suppliers of construction materials, equipment, fuel stations, and service providers in the surrounding area may benefit from increased demand during the works period.

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#### 12.4.1.2 Power Supply

##### Electrical Supply

Construction activities will require a temporary power connection to operate site compounds and construction equipment. The main contractor will arrange this supply through ESB Networks, ensuring the capacity meets the site's operational requirements during the Construction Phase.

There may be short, planned interruptions to the local electricity network to facilitate connection and commissioning works. Any such interruptions will be coordinated and controlled by ESB Networks as the statutory provider, in line with standard procedures and health and safety requirements.

The potential impact from the Construction Phase of the Proposed Development on the local electrical supply network is likely to be **slight, temporary** and **negative to neutral**, depending on the length of temporary network suspensions.

#### 12.4.1.3 Gas Supply

Based on the infrastructure design prepared by Waterman Moylan, no gas supply will be required to support the Construction Phase of the proposed development. No connections to the local or national gas network are planned during construction. As a result, the works will have **no impact** on existing local or national gas infrastructure.

#### 12.4.1.4 Information and Communications Technology (ICT)

Temporary ICT connections may be required to facilitate site management and communications during the Construction Phase. Any connections to the existing telecoms network will be arranged in coordination with the relevant service providers and delivered in accordance with standard industry procedures.

Given the limited scale and duration of these connections, **no significant impact** on the local ICT network is anticipated. The effect will be **neutral, imperceptible, and short-term**.

#### 12.4.1.5 Water Supply

##### The Construction Phase

As per the CEMP and EAR, water will be required for activities such as dust suppression and concrete mixing and welfare facilities for construction personnel.

While short-term localised supply interruptions may occur when the temporary connection is installed or modified, any such works will be managed in consultation with Uisce Éireann (Irish Water) and carried out under standard protocols to minimise disruption. The effect is predicted to be **slight, negative, and temporary** in nature.

#### 12.4.1.6 Surface Water Drainage

The surface water drainage arrangements during the Construction Phase will be managed to ensure that no discharges occur to local watercourses or groundwater. No temporary diversions of watercourses will be required.

Appropriate temporary drainage controls and mitigation measures will be put in place to prevent any pollution or run-off from the site. Consequently, the effect on the local surface water regime is expected to be **neutral, imperceptible, and short-term**.

#### 12.4.1.7 Foul Water Management

Based on the infrastructure requirements defined by Waterman Moylan, the Construction Phase foul water generated on site will be managed in compliance with best practice standards.

Temporary welfare facilities and foul drainage arrangements will be provided to serve site offices and workforce amenities. Any connections or discharge points will be designed and implemented in accordance with the Uisce Éireann Code of Practice for Wastewater Infrastructure, ensuring compliance with the relevant design and construction requirements for developer-led works.

Given the scale of the development and the temporary nature of construction activities, the effect on foul water infrastructure will be **neutral, long-term, and imperceptible**.

#### 12.4.1.8 Resource and Waste Management

##### Construction Phase

The Construction Phase of the proposed development will generate a range of waste materials, including excavated soil and subsoil, construction and demolition waste, packaging, and general site waste. If these materials are not properly handled and stored, they could pose a risk of contamination to land, water, or air through uncontrolled releases to the surrounding environment. In addition, any unmanaged litter or food waste could attract pests and vermin to the site and nearby areas.

Waterman Moylan, as project engineers, have determined the likely waste streams and have prepared a comprehensive Construction Environmental Management Plan (CEMP) for the project. The CEMP sets out in detail how all waste arising during construction will be appropriately managed, including procedures for

waste segregation, secure storage, collection, and disposal. It also specifies the mitigation measures to be implemented to ensure good housekeeping and to minimise potential nuisance impacts.

A dedicated, secure compound will be established on site to house bins, skips, and designated storage areas for all construction waste. Where practical, waste will be segregated at source to maximise reuse and recycling. For materials that cannot be effectively segregated on site, this will be done off-site by the appointed, licensed waste contractor. All skips and containers will be enclosed or covered to prevent windblown litter or accidental spillage.

Site operatives will receive clear instructions and training on waste handling requirements, supported by appropriate signage. Appointed staff will be responsible for maintaining good site practices in line with the CEMP.

Where suitable, excavated material will be reused on site, for example as landscaping topsoil. Any surplus material will be managed in line with the project's Resource Waste Management Plan and in full compliance with statutory requirements, either through reuse under an Article 27 by-product notification or disposal at an authorised recovery facility. Receiving sites will be appropriately licensed to accept these materials, ensuring that all potential impacts are adequately mitigated.

Should any hazardous waste arise, it will be managed in line with the project's health and safety procedures and disposed of through appropriately licensed channels.

Taking into account the measures outlined in the CEMP prepared by Waterman Moylan, the likely impact of the Construction Phase on resource and waste management is assessed as **neutral, long-term, and imperceptible**.

#### **12.4.1.9 Information and Communications Technology (ICT)**

During the Operational Phase, the proposed cargo handling facility will place a marginal additional demand on the local telecommunications network. Waterman Moylan, as the appointed engineers, have confirmed that the site is located within an area well served by high-speed broadband and mobile coverage. A nearby mobile mast providing services for Vodafone, Three, and Meteor is situated at the junction of the Old Airport Road and the R108, which will help ensure reliable mobile connectivity for staff and site operations.

Given the robustness of existing ICT infrastructure and the scale of the proposed development, the likely impact on local telecoms services is predicted to be **neutral, imperceptible, and long-term**.

#### 12.4.1.10 Water Supply

Waterman Moylan, as civil engineers, have determined the water supply requirements for the Operational Phase. The facility will be connected to an appropriate water source to meet potable and fire-fighting needs, in line with Uisce Éireann's standards and relevant consents.

During the operational phase, water supply demand will arise primarily from associated site staff usage domestic usage. The development will be serviced via a 100 mm Ø connection to the existing public watermain under the R108, extended by 220 m to the site boundary. An internal 100 mm Ø HDPE watermain will supply each Cargo Unit, with a dedicated looped main around each unit to support firefighting.

Based on an estimated occupancy of 350 persons and a daily average usage of 43 litres per person, the total water demand is estimated at 15,250 litres per day. This demand is not expected to place undue pressure on the public water network and is within typical operational capacity parameters as set out in Irish Water's design guidance.

Given the scale and nature of the development, and the provision of dedicated infrastructure, the potential operational impact on the public water supply is considered **neutral, slight, and long-term**.

Each operational unit will be served by dedicated service connections sized to meet office and welfare needs, with metering and control valves provided where required. Fire protection will be facilitated by a new fire main loop and appropriately located hydrants, which will be installed in accordance with Part B of the Building Regulations and agreed with the appointed fire safety consultant and local fire authorities.

The overall effect of the Operational Phase on the local potable water supply is therefore predicted to be **neutral, slight, and long-term**.

#### 12.4.1.11 Surface Water Drainage

Surface water runoff during the Operational Phase will be managed through the site's dedicated drainage system designed by Waterman Moylan, as detailed in the Engineering Planning Report and Chapter 8 Hydrology and Hydrogeology of this EIAR. The system will control discharge rates and quality in line with

sustainable urban drainage principles, ensuring that the effect on local hydrology is neutral, imperceptible, and long-term.

#### 12.4.1.12 Foul Water Management

Foul effluent generated during the Operational Phase will be collected through a private foul sewer network and pumped via an on-site pumping station — both designed by Waterman Moylan — to a proprietary on-site Wastewater Treatment Plant (WWTP) designed by Mitchell Environmental.

As this system is entirely private and self-contained, there is no requirement for Uisce Éireann input or a Confirmation of Feasibility (CoF).

The foul water infrastructure will be managed and maintained in line with the Construction Environmental Management Plan (CEMP) and Operational Waste Management Plan (OWMP) to ensure best practice and full regulatory compliance.

With these design and management measures in place, the likely impact of the Operational Phase on foul water infrastructure is predicted to be **neutral, slight, and long-term**.

#### 12.4.1.13 Resource and Waste Management

The proposed development will generate municipal waste during its day-to-day operations, primarily made up of residual waste, recyclables, and other commercial waste streams typical of logistics activities.

An Operational Waste Management Plan (OWMP) has been prepared for the facility by CWPA, in consultation with Waterman Moylan as project engineers. The OWMP sets out clear measures for the storage, segregation, collection, and disposal of all waste generated, ensuring compliance with all relevant legislation, including the Waste Management Act 1996 (as amended), the National Waste Management Plan for a Circular Economy 2024–2030, and applicable local by-laws.

Designated storage areas will be provided on site for residual and recyclable waste. Waste collections will be arranged through appropriately licensed contractors, with the site likely to be added to existing local collection routes. With these measures in place, the impact of the Operational Phase on resource and waste management is expected to be **neutral, slight, and long-term**.

## 12.5 Mitigation Measures

### 12.5.1 Construction Phase

Specific measures to avoid, minimise, and mitigate potential impacts during the Construction Phase — particularly for water supply, surface water drainage, and foul water management — are described in Chapter 8 (Hydrology and Hydrogeology) of this EIAR. All works will be carried out in accordance with the Construction Environmental Management Plan (CEMP) prepared by Waterman Moylan, and in compliance with the Uisce Éireann Code of Practice for Water Infrastructure (July 2020) and the Uisce Éireann Code of Practice for Wastewater Infrastructure (July 2020). Installation and testing of pipelines and associated infrastructure will follow Uisce Éireann standard details.

New connections for electricity and telecommunications will be coordinated with the relevant utility providers and undertaken by approved contractors in accordance with standard industry protocols.

Construction waste will be managed in line with the Resource Waste Management Plan, as detailed in the CEMP, ensuring that segregation, storage, and off-site removal are undertaken in accordance with best practice and statutory requirements.

### 12.5.2 Operational Phase

As with the Construction Phase, site-specific avoidance and mitigation measures for water supply, surface water drainage, and foul water management during operation are set out in Chapter 8 (Hydrology and Hydrogeology). All operational infrastructure will comply with the Uisce Éireann Code of Practice for Wastewater Infrastructure (July 2020), with watermain and foul sewer connections installed and tested to the relevant standard details.

Connections for electricity and ICT services will be coordinated with utility providers and carried out by competent, approved contractors, in line with agreed procedures.

CWPA has prepared an Operational Waste Management Plan (OWMP) for the proposed development, with requirements and infrastructure coordinated by Waterman Moylan. The OWMP outlines clear measures to prevent waste generation where possible, maximise reuse and recycling, and reduce the volume of waste sent to landfill. Unit operators and/or the Estate Management Company will be responsible for ensuring proper segregation, storage, and presentation of all waste streams generated during the Operational Phase, and for maintaining adequate pest control measures as required.

Designated waste storage areas will provide sufficient capacity for all waste and recyclable materials, in line with the OWMP. The management company will ensure tenants are informed of proper waste handling practices through information leaflets and pictorial guides, with lease or service agreements supporting compliance where appropriate. Only suitably permitted or licensed waste contractors will be engaged for off-site management and disposal, ensuring compliance with all legal obligations and minimising any risk of environmental harm.

## 12.6 Worst-Case Scenario

In the unlikely event of a worst-case scenario during construction, there is potential for unforeseen delays that could cause extended disruptions to local electricity, telecommunications, water supply, or foul water services for neighbouring properties. Similarly, the discovery of an unidentified hazardous waste stream during excavation could result in contamination of other non-hazardous waste streams (such as clean soil and stones), creating a requirement for specialist removal, treatment, and replacement with imported material.

However, with the robust mitigation measures detailed in the CEMP, the OWMP, and supporting plans, the likelihood of such scenarios occurring is low.

## 12.7 Residual Impacts

Residual impacts are the effects predicted to remain after all recommended mitigation and best practice measures have been applied. With full implementation of the measures outlined in this EIAR, including those specified by Waterman Moylan and CWPA, any residual impacts on material assets and services are predicted to be **neutral, imperceptible, and long-term**.

## 12.8 Monitoring

### 12.8.1 Construction Phase

Monitoring of construction and demolition waste will be undertaken to ensure compliance with the Resource Waste Management Plan and to confirm that no unintended impacts extend beyond the site boundary. The appointed Resource and Waste Manager, as set out in the CEMP prepared by Waterman Moylan, will maintain accurate records for all waste removed from site.

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### 12.8.2 Operational Phase

During operation, the Estate Management Company and tenants will maintain designated bins and storage areas in good condition, in line with the waste strategy in the OWMP prepared by CWPA. Sufficient capacity for segregated waste will be provided and regularly reviewed to ensure compliance with legal and local bye-law requirements.

### 12.8.3 Population and Human Health

Without appropriate mitigation measures in place, poor practices relating to the removal, handling, or storage of waste during construction could pose a risk to the health and safety of site workers. Likewise, any extended interruption to electricity, telecommunications, water supply, or foul drainage serving nearby properties could temporarily affect the wellbeing of the surrounding community.

However, as detailed in Chapter 5 (Population and Human Health) of this EIAR, with all proposed safeguards and management measures fully implemented, no long-term adverse effects on local population health are anticipated as a result of the proposed development.

### 12.8.4 Biodiversity

Inadequate management or containment of waste during either the Construction or Operational Phases could have the potential to adversely affect local biodiversity. These risks, and the relevant mitigation measures, are assessed in Chapter 6 (Biodiversity) of this EIAR.

### 12.8.5 Land and Soil

Incorrect handling or segregation of hazardous or contaminated materials could result in the contamination of soil or subsoil excavated from the site. The potential implications of such risks for land and soils, along with proposed controls, are set out in Chapter 7 (Land, Soils and Geology).

## 12.8.6 Hydrology and Hydrogeology

All connections to public water supply and foul sewer networks, as well as any required abstractions or discharges, will be undertaken under consent from Uisce Éireann and in line with relevant standards. A detailed assessment of how the development could affect local surface water and groundwater conditions is provided in Chapter 8 (Hydrology and Hydrogeology) of this EIA.

## 12.9 Difficulties Encountered

No particular difficulties were encountered in compiling this chapter of the EIA.

## 12.10 References

- Eastern-Midlands Region (EMR) Waste Management Plan 2015-2021
- Environmental Protection Agency (EPA) (2024) <https://gis.epa.ie/EPAMaps/Water>
- EPA (2021) Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction and Demolition Projects
- EPA (2015) *Waste Classification List of Waste and Determining if Waste is Hazardous or Non-hazardous*
- EPA (2003) *Advice Notes on Current Practice in the preparation of Environmental Impact Statements.*
- EPA (2002) *Guidelines on the information to be contained in Environmental Impact Statements.*
- *European Communities (Waste Directive) Regulations 2011- S.I. No. 126/2011*
- February 25 12-15 Environmental Impact Assessment Report Enviroguide HPREF Dublin Office DevCo 1 Limited
- Fingal County Development Plan 2023-2029
- Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions (European Communities 1999)
- <https://myplan.ie/> (DHLGH, 2021) Zoning and National Planning Applications Map Viewer.
- <https://www.gasnetworks.ie/corporate/company/our-network/pipeline-map/> (Gas Networks Ireland, 2024). Gas Networks Ireland Pipeline Viewer.
- <https://www.gov.ie/en/publication/5634d-national-broadband-plan-map/>
- <https://www.townlands.ie/dublin/finglas3/>
- National Standards Authority of Ireland (NSAI), 2017. IS EN752, "Drain and Sewer Systems

- Outside Buildings – Sewer system Management. NSAI, 1 Swift Square, Northwood, Santry, Dublin 9
- National Waste Management Plan for a Circular Economy 2024-2030
- Ordnance Survey Ireland, 2020 (OSI, 2021). Ordnance Survey Ireland webmapping
- <https://geohive.maps.arcgis.com/apps/webappviewer/index.html?id=9def898f708b47f19a8d8b7088a100c4>

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## 13.0 Traffic and Transport

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### 13.1 Introduction

This chapter of the Environmental Impact Assessment Report (EIAR) provides an assessment of the impact that the proposed would have on the traffic and transportation infrastructure and network in the surrounding area.

This chapter sets out the existing receiving environment in terms of roads conditions, traffic activity and transportation accessibility. It also describes the existing and proposed development in terms of operational traffic impact on the receiving environment.

This chapter was completed by Brian McCann, BE, MSc (Eng), DIC, CEng, FIEI, MIStructE, MConsEI. Brian has in excess of 30 years' experience of transportation planning and assessment.

A full description of the development can be found in Chapter 3: *Description of Development* of this EIAR.

A Traffic & Transport Assessment (TTA) was prepared by Waterman Moylan in July 2025. The TTA presents survey data for the existing traffic conditions together with the ongoing transport demand that was generated by the development. The traffic generated during both the morning and evening peak times was also assessed. An assessment of the percentage impact of traffic on local junctions, and accessibility of the site by sustainable modes including walking, cycling and public transport is included.

#### 13.1.1 Statement of Competency

This chapter was completed by Brian McCann, BE, MSc (Eng), DIC, CEng, FIEI, MIStructE, MConsEI. Brian has in excess of 30 years' experience of transportation planning and assessment. Brian McCann, BE, MSc (Eng), DIC, CEng, FIEI, MIStructE, MConsEI. Brian has in excess of 40 years' experience of transportation planning and assessment. Brian joined Waterman Moylan in 2005, where he has headed up the firm's traffic and transportation division and has played a leading role in the provision of traffic and transportation consultancy services for the firm. He works on a wide range of projects, including industrial and commercial development and has been responsible for all of the necessary engineering assessments and reports to

secure planning permission, including Traffic Statements, Travel Plans and other technical reports required to accompany the planning applications.

### 13.1.2 Methodology

The methodology for the preparation of this chapter included: -

- a) Desktop review of the documentation provided by the project design team.
- b) Visits to the site and surrounding area including survey of existing transportation facilities and observation of traffic movements.
- c) Review of public transport services, routes, and timetables.
- d) Review of proposals for transportation improvements by Transport Infrastructure Ireland (TII), National Transport Authority (NTA) and Fingal County Council (FCC).
- e) Review of trips to and from the development.
- f) Review of public transport, both existing and proposed.
- g) Assessment of the transportation impacts of the development.
- h) Assessment of the mitigation and monitoring measures in place.

### 13.1.3 Standards

The Traffic & Transport Assessment (TTA) has been prepared in accordance with Section 14.17.4 *Traffic and Transport Assessment* of the Fingal County Development Plan 2023 - 2029.

It has also been prepared in compliance with the requirements of the TII *Traffic and Transport Assessment Guidelines* and the UK's Institution of Highways and Transportation Guidelines.

### 13.1.4 Thresholds

Thresholds for transport assessments are set out in Table 2.1 of the TII *Traffic and Transport Assessment Guidelines (2014)*.

Where traffic to and from a development does not exceed 10% of the traffic flow on the adjoining road, a transport assessment is not required.

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This threshold reduces to 5% of the traffic flow on the adjoining road where congestion exists or the location is sensitive.

### 13.1.5 Project Timescale

In compliance with the requirements of the *Transport Assessment Guidelines* (2014), the TTA included junction impact assessment at base year, year of opening, year of opening plus 5 years, and year of opening plus 15 years.

The following timetable has been adopted for the transportation assessment of the subject development:

- 2025 Survey Year
- 2030 Opening Year
- 2035 Design Year (Opening Year + 5)
- 2045 Future Year (Opening Year + 15)

The project timetable has been used in the assessment of the impact that the proposed development would have, if permitted at its current intensity, on the traffic and transportation infrastructure and network in the surrounding area.

## 13.2 Receiving Environment

### 13.2.1 Site Location

The site for the proposed development is located in north Co. Dublin to the west of Dublin Airport between the western sections of the north and south runways. The site is located within the road box comprising R122 St Margarets Road to the west and the R108 to the north, east and south. The subject site fronts onto the R108 to the east. The site, block and surrounding road network are shown in Figure 13.1. At the time of writing in October 2025, the site for the proposed development is undeveloped greenfield primarily in agricultural use.

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**Figure 13.1** Location Map

**Source:** Google Maps

At the time of writing in July 2025, the site for the proposed development is undeveloped greenfield primarily in agricultural use.

### 13.2.2 Local Road Network

The receiving environment in the area of the subject site is dominated by the runways, taxiways and aprons of Dublin Airport to the north, east and south.

The primary road in the area of the subject site is the R122 St Margarets Road which links Finglas to Balbriggan. This road forms the western boundary of the block in which the site is located. See Figure 13.1.

The northern, eastern and southern boundaries of the block are formed by the R108 which with the R122 forms a road box around the block.

Both the R122 and the R108 are two-way two lane roads with a single carriageway width of c.7.0m.

Junction 1, the northern junction between the R122 St Margarets Road and the R018 Dunbro Lane is a signalised crossroads. Junction 2, the southern junction between the R122 St Margarets Road and

the R108 North Parallel Road is a four arm roundabout with an Inscribed Circle Diameter (ICD) of 40.0 metres.

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Junction 3 between the R122 St Margarets Road and the R108 South Parallel Road is a priority T-junction. There is no public lighting or footpaths on the R108 and only a single footpath on the eastern side of the R122. The posted speed limit in the area is 80 kph.



**Figure 13.2:** R122 St Margarets Road approaching Junction 3 from the north

**Source:** Site Visit

### 13.2.3 Traffic Conditions

A classified traffic survey at three junctions listed below was carried out by Transport Data Collection and Analytics (TRACIS) over a period of 7 days between Tuesday 25<sup>th</sup> and Monday 31<sup>st</sup> March 2025.

- Junction 1: Kilreesk Road / R122 St Margarets Road / R108 Dunbro Lane. Signalised Crossroads.
- Junction 2: L3125 Kilshane Road / R122 St Margarets Rd / R108 North Parallel Road. Four Arm Roundabout.
- Junction 3: R122 St Margarets Road / R108 South Parallel Road. Priority T-junction.

The survey covered the 24-hour period between 00.00 and 00.00. The survey confirmed the AM and PM Peak Hours to be 08:00 – 09:00 and 17:00 – 18:00 Monday - Friday.

The locations of the junctions are shown on Figure 13.3 and the results of the survey are described below.

The maximum daily two-way flow recorded on the R122 St Margarets Road varied as follows

- 17,066 vehicles per day north of Junction 1.
- 15,906 vehicles per day south of Junction 1.
- 17,504 vehicles per day north of Junction 2.
- 14,773 vehicles per day south of Junction 2.
- 14,808 vehicles per day north of Junction 3.
- 11,418 vehicles per day south of Junction 3 .

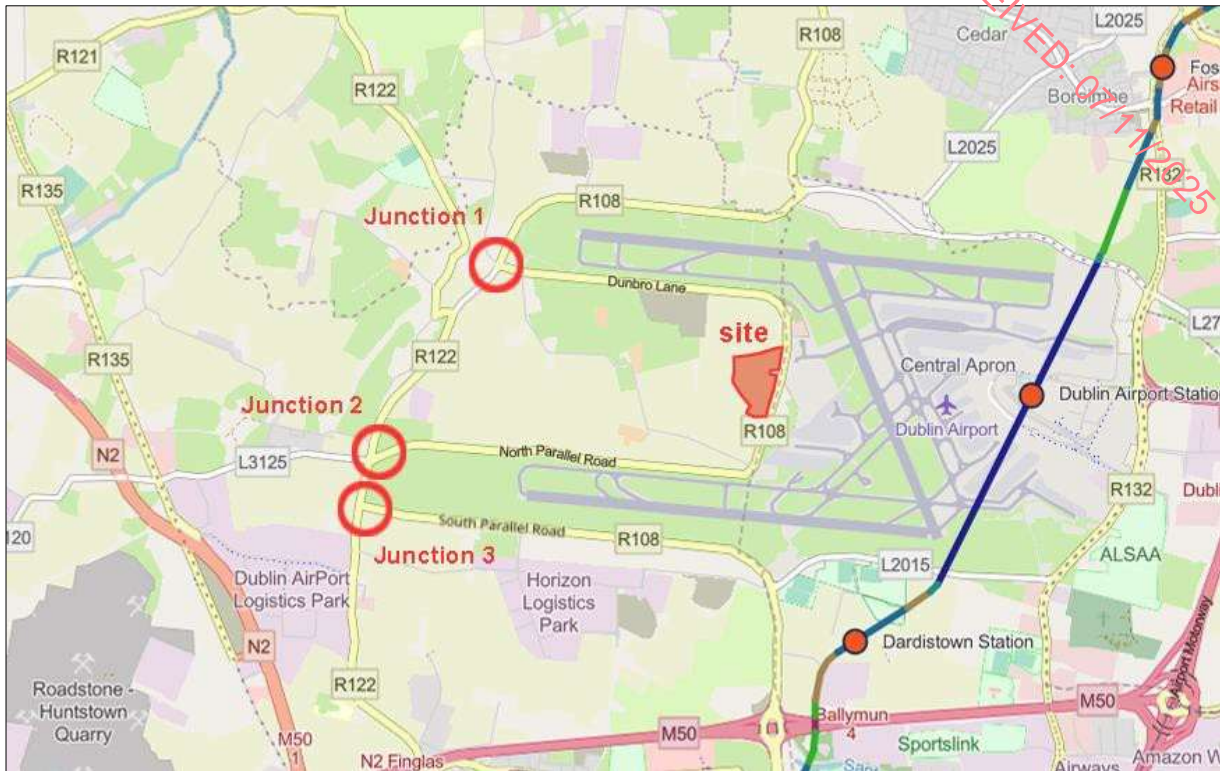
On the R108 Dunbro Lane, the daily traffic flow peaked at 1,175 vpd.

Similarly, on the R108 North Parallel Road the daily traffic flow peaked at 1,110 vpd.

Finally, the daily traffic flow on the R108 South Parallel Road east of Junction 3 peaked at 7,588 vpd.

Following a review of the survey results, Thursday 27th was selected as representative of the overall peak hour on the network. The corresponding peak hours were AM 08h00 – 09h00 and PM 17h00 – 18h00.

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**Figure 13.3:** Locations of Junctions Surveyed

**Source:** Google Maps

### 13.2.4 Site Access

The existing access to the subject site is from the R108 along the eastern boundary of the site. Access to the development is proposed on the eastern frontage of the site from the R108 North Parallel Road through a new priority t-junction.

### 13.2.5 Public Transport Facilities

Bus services in the area of the subject site operate along the R122 St Margarets Road to the west of the subject site and comprise a combination of existing services operated by TFI Local Link and new services sponsored by Bus Connects and operated by Dublin Bus.

#### Bus Connects (St Margarets Road)

Phase 7 of the Bus Connects project was launched in September 2025. At the same time, Dublin Bus routes 40b and 83 were withdrawn.

The new services launched comprised the following routes shown in Figure 13.4:-

- City Bound Route 24: Dublin Airport – Merrion Square Lane operates at 2 minute intervals in both directions

via the R108 South Parallel Road and the southern section of the R122 St Margarets Road.

- Local Route L89: Finglas – Swords operating at 60 minute intervals via R122 St Margarets Road.

### TFI Local Link (St Margarets Village)

Route 196 operated by TFI Local Link links Swords Pavilion to St Margarets Village at 60 minute intervals in both directions. The present terminus of Local Link Route 196 is in St Margarets Village.

### Bus Connects

At the time of writing in October 2025, the authors were not aware of any BusConnects services which have been introduced in the area of the subject site.



**Figure 13.4:** Extract from Bus Connects Map for Finglas Area

**Source:** Bus Connect

### 13.2.6 Pedestrians and Cyclists

Walking is difficult in the area of the subject site due to the current lack of footpaths on the R108, whilst cyclists are required to share the roadway with vehicles given the lack of cycle lanes on the R108 currently.

## 13.3 The Subject Development

### 13.3.1 Description of Proposed Development

The proposed development, subject of this EIAR is as follows –  
Permission is sought for –

1. Construction of four aviation-related cargo handling units with ancillary office space:

- i. Unit 1: c.10,869.7 m<sup>2</sup> (including 940.9 m<sup>2</sup> office space)
- ii. Unit 2: c.9,151.3 m<sup>2</sup> (including 751.3 m<sup>2</sup> office space)
- iii. Unit 3: c.6,024.9 m<sup>2</sup> (including 497.7 m<sup>2</sup> office space)
- iv. Unit 4: c.8,577.7 m<sup>2</sup> (including 751.3 m<sup>2</sup> office space)

The proposed units will have an overall combined total gross floor area (GFA) of c. 34, 623.6 sq.m (alongside ancillary ESB substations, 4 no. security huts with a combined GFA of 30 sqm and pumphouses). The warehouses are c. 12m in height, with the office element being c. 3.3 m in height and located within a landscaped campus on a site of c. 10.7 Ha.

2. Provision of 390 car parking spaces, including 39 EV charging points, 19 accessible spaces, and 39 motorcycle bays.
3. Provision of 230 secure bicycle parking spaces, of which 100 are short stay spaces and 130 are sheltered long stay spaces.
4. Provision of approx. 77 truck parking spaces and 5 van spaces.
5. Hard and soft landscaping, new boundary treatments, including a c. 2m high System Wire Fence to site boundary.
6. Construction of new site entrance onto the R108.
7. Wastewater treatment plant and infiltration area for 250 PE.
8. All necessary site development and engineering and ancillary site works, including provision of ESB substations and switchrooms, sprinkler tanks and pumphouses, bin store and recycle store, lighting, signage, underground services, photovoltaic panel zones at roof level and sustainable drainage systems (SuDS).

Details of the proposed development are set out in Table 13.1 and illustrated in Figure 13.5.

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**Table 13.1:** Schedule of Proposed Development

Location	Offices sqm	Warehouse sqm	Car Parking spaces	Truck / Van Parking spaces	Cycle Parking spaces
<b>Unit 1</b>	940.9	9,928.8	123	28	80
<b>Unit 2</b>	731.3	8,400.0	103	20	50
<b>Unit 3</b>	497.7	5,527.2	67	17	40
<b>Unit 4</b>	751.3	7,826.4	97	17	60
<b>Total</b>	2,941.2 sqm	31,682.4 sqm	382 spaces	82 spaces	230 spaces

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**Figure 13.5:** Proposed Site Layout

**Source:** CWPA

### Site Access

Access to the development is proposed from the R108 North Parallel Road through a new at-grade priority t-junction on the eastern frontage of the site.

### Car Parking

Based on the standards in the County Development Plan, on-site car parking will comprise 390 spaces with 74 spaces for the office staff and 316 spaces for warehouse staff.

Car parking will include 19 accessible spaces and 39 spaces for EV charging.

The car parking provision of 390 spaces as shown in Figure 13.5 and on the drawings accompanying the planning application.

### Truck and Van Parking

The proposed truck and van provision is 82 spaces with 77 truck spaces and 5 van spaces.

The proposed truck and van provision of 82 spaces is shown in Figure 13.5 and on the drawings accompanying the planning application.

### Cycle Parking

Based on the standards in the County Development Plan, the cycle parking for the subject site is a total of 230 spaces comprising 100 short stay spaces for visitors and 130 long stay spaces for staff.

### Staff Numbers

Total staff numbers are predicted to be up to 464 persons with 148 staff in the offices and 316 persons in the warehouses. A maximum of 350 persons will be on site at any one time.

## 13.4 Existing and Predicted Impacts

### 13.4.1 Construction Phase

The primary impact during the construction phase will be the operation of trucks removing unwanted materials and delivering materials for incorporation in the works.

These operations will be controlled by the Construction Management Plan and the Construction Traffic Management Plan.

The predicted traffic impact on the surrounding roads during the Construction Phase is likely to be short term moderate.

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## 13.4.2 Operational Phase

### Surveyed Traffic Flows 2025

The maximum daily two-way flow recorded on the road network in the area of the subject site are

- 17,504 vehicles per day on the R122 St Margarets Road
- 1,175 vehicles per day on R108 Dunbro Lane.
- 1,110 vehicles per day on the R108 North Parallel Road
- 7,588 vehicles per day on the R108 South Parallel Road.

### Trip Generation and Assignment

The predicted traffic movements to be generated by the proposed development are 220 arrivals and 56 departures during the AM Peak Hour 08.00 – 09.00. The corresponding movements during the PM Peak Hour 17.00 – 18.00 are 56 arrivals and 220 departures.

### Increase in Traffic

The proposed development is predicted to increase AM and PM traffic at Junction 2, the intersection of the R108 North Parallel Road and R122 St Margarets Road, by 10.6% in the Opening Year 2025, 10.0% in the Design Year 2035 and 9.4% in the Future Year 2045.

### Modelling Background

During the preparation of the TTA, Junctions 1 – 4 were assessed using ARCADY, TRANSYT and PICADY to analyse roundabouts, signalised and priority junctions, respectively.

Junctions 1 – 3 were modelled in their existing configuration with Junction 4 as a proposed new at-grade t-junction.

## Scenarios Assessed

The scenarios assessed in this TTA for the AM Peak and PM Peak were Do-Nothing without development and Do-Something with development for Junctions 1 – 4 in the Opening Year 2020, Design Year 2035 and Future Year 2045.

## Transportation Impact Roads

The extent of traffic impact from the development was determined by checking whether the traffic generated by the subject development exceed 10% of the traffic flow on the adjoining road during the same period.

The proposed development is predicted to increase AM and PM traffic at Junction 2, the intersection of the R108 North Parallel Road and R122 St Margarets Road, by 10.6% in the Opening Year 2025, 10.0% in the Design Year 2035 and 9.4% in the Future Year 2045.

## Road Junctions

The results of the junction assessment predicted that Junctions 1 and 3 would operate within capacity post development in 2030, 2035 and 2045.

Junctions 2 and 3 were predicted to operate within capacity post development in 2030 and 2035. For the post development scenario in 2045, Junctions 2 and 3 were predicted to operate above capacity in both the AM and PM peaks.

### 13.4.3 Summary

The conclusions of the Traffic and Transport Assessment were that Junctions 1 and 4 would operate within capacity post development in 2030, 2035 and 2045.

Junctions 2 and 3 were predicted to operate within capacity post development in 2030 and 2035. For the post development scenario in 2045, Junctions 2 and 3 were predicted to operate above capacity in both the AM and PM peaks.

The predicted traffic impact on the surrounding roads and junctions during the Operational Phase is likely to be to be long term moderate.

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## 13.5 Mitigation and Monitoring Measures

### 13.5.1 Construction Phase

The primary mitigation measure during the construction phase will be the implementation of the *Construction Traffic Management Plan* and the *Construction Traffic Management Plan*.

### 13.5.2 Operational Phase

The primary mitigation measure during the operational phase will be the implementation of the *Mobility Management & Workplace Travel Plan* and in particular the mobility management measure set out in the Plan.

Should the actual traffic at Junctions 2 and 3 approach the level predicted in this TTA for Future Year 2045, the capacity of both junctions can readily be increased by the introduction of signalisation.

Mitigation measures for the improvement of pedestrian facilities, cycle facilities and the provision of enhanced public transport services are outside the control of the applicants.

## 13.6 Residual Impacts

### 13.6.1 Construction Phase

The applicants are not aware of any residual impacts on traffic and transportation likely to arise from the construction phase.

### 13.6.3 Operational Phase

During the Operational Phase, there will be an increase in the use of the surrounding road network by vehicles accessing the development.

The residual impact for Operational Traffic on the surrounding roads is likely to be long-term moderate.

## 13.7 Cumulative Impact

For the purpose of cumulative impact, the Traffic and Transport Assessment Guidelines, issued by TII in May 2014 require that

*"Traffic and Transport Assessment should consider all committed developments within the vicinity of the site. This includes sites which have previously been granted planning permission but which are yet to become operational as well as any planning applications that have been submitted but have yet to be determined."*

No other significant construction projects have been identified in the area of the subject site which has or could result in a significant cumulative impact on Traffic and Transportation either during the construction or operational phases.

However, measures currently being considered by NTA, TII and Fingal County Council for the intensification of public transport services and cycle facilities in the surrounding area are likely to have a cumulative long term significant impact.

## 13.8 Monitoring and Reinstatement

### 13.8.1 Construction Phase

During the Construction Phase, the applicants will monitor the operation of the road network around Junction 4 on an ongoing basis and with a view to advising Fingal County Council in relation to any operational or safety issues noted.

Post construction reinstatement of the roads in the area of Junction 4 will take place during this phase.

### 13.8.2 Operational Phase

During the Operational Phase, the applicants will monitor the operation of the of the road network around Junction 4 on an ongoing basis and with a view to advising Fingal County Council in relation to any operational or safety issues noted.

No reinstatement is proposed during the Operational Phase other than the ongoing maintenance of roads, footpaths, buildings, and services.

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## 13.9 References

The following documents were reviewed by Waterman Moylan during the preparation of this chapter of the EIAR:-

- Traffic and Transport Assessment, Waterman Moylan, July 2024.
- Fingal Development Plan 2023 – 2029.
- Dublin Airport Local Area Plan (LAP), January 2020.
- Design Manual for Urban Roads and Streets (DMURS).
- Traffic and Transport Assessment Guidelines, TII, May 2014.

The extent to which these various documents have been consulted is set out in the Traffic and Transport Assessment and in earlier sections of this chapter.

# 14.0 Archaeological, Architectural and Cultural Heritage

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## 14.1 Introduction

Chapter 14 of this Environmental Impact Assessment Report will identify, describe and assess the archaeological, architectural and cultural impact of the subject development during the construction and operational phases of the scheme.

This chapter has been prepared by Eoin Halpin, Operations Manager with Archaeology and Heritage Consultancy Ltd and reviewed by Roisin Corr.

The aim of the study is to identify any remains of archaeological or historical significance on or near the proposed development, in order to assess impacts on the Cultural Heritage resource. Archaeological Assessment is defined in Framework and Principles (DAHGI 1999a) as an investigation aimed at any of the following:

- i. gaining a better understanding of a known or suspected archaeological site or monument with particular reference to considering the implications of proposed development for such a site or monument,
- ii. locating previously unidentified archaeological sites or monuments (or possible ones) prior to the commencement of development works with particular reference to considering the implications of proposed development for such sites or monuments,
- iii. considering the potential that proposed development works or longer-term effects of a development may have on elements of the archaeological heritage not identified prior to the commencement of development works.

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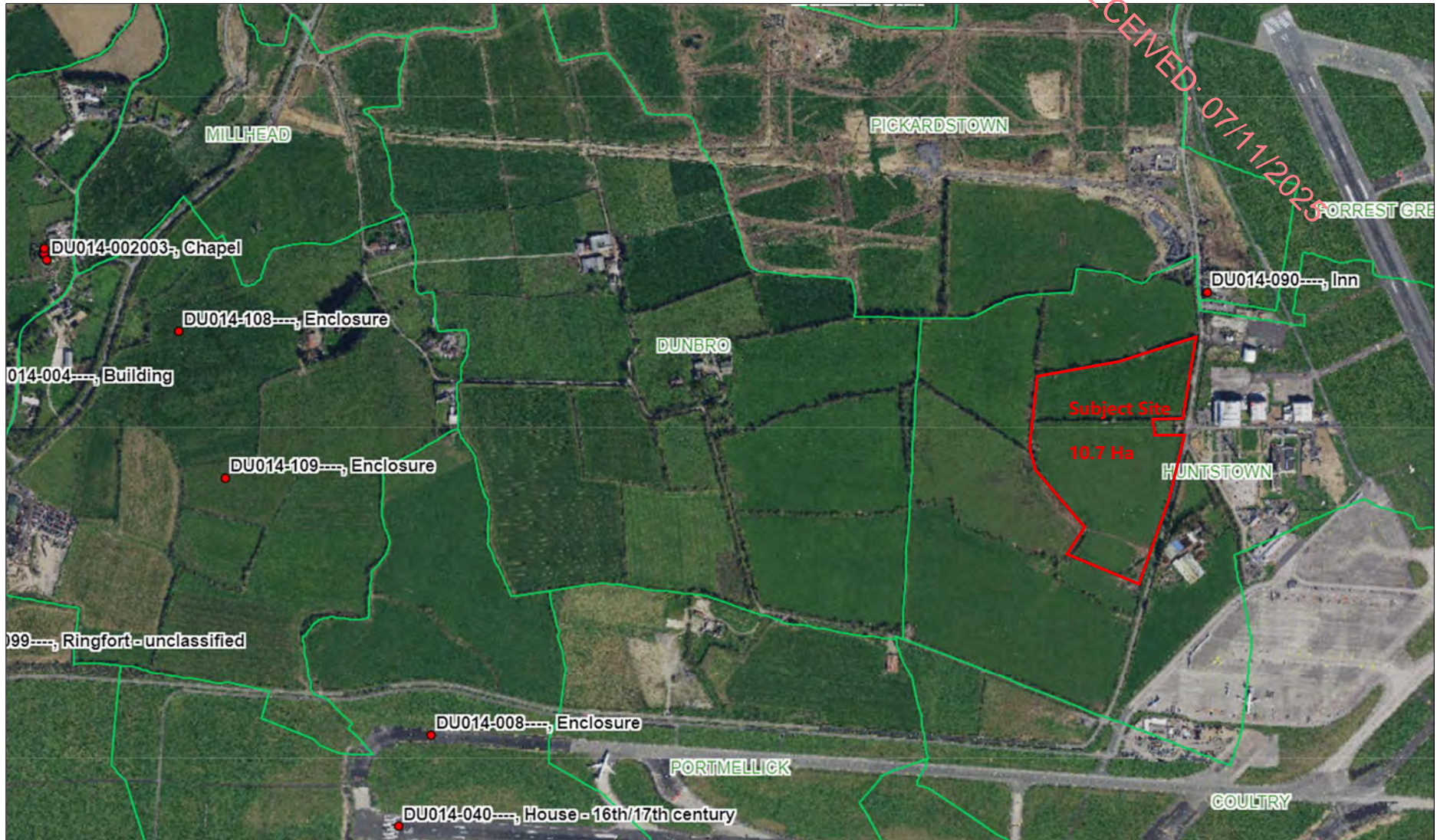


Figure 14.1 Site location and location of sites of Cultural Heritage interest.

### 14.1.1 Competency Statement

Mr Halpin graduated from University College Dublin (UCD) with an Honours Degree in Archaeology in 1982, He is a member of the Chartered Institute for Field Archaeologists and a member of the Institute of Archaeologist of Ireland, for which he has acted as chairperson. He has over 30 years of experience, working on all aspects of development led archaeological projects including large scale infrastructural projects, such as various TII road schemes and gas pipeline projects.

## 14.2 Research Methodology

This desk-based assessment in relation to the townland of Huntstown (centred ITM 715170, 743529), Figure 14.1) and its environs. The assessment determines, as far as reasonably possible from existing records, the nature of the Cultural Heritage resource within the footprint and a defined vicinity of the proposed development using appropriate methods of study and leads to the following:

- Determining the presence of known archaeological and built heritage sites that may be affected by the proposed development;
- Assessment of the likelihood of finding previously unrecorded archaeological remains during the construction programme;
- Determining the impact (direct/indirect) upon the known Cultural Heritage sites in the surrounding area (receiving environment)
- Identifying mitigation measures based upon the results of the above research; and
- Describing the residual impact on the archaeological, architectural and Cultural Heritage resource.

This assessment has been undertaken having regard to general EIA guidance and the following legislation and guidelines were also consulted as part of the assessment.

- National Monuments Act 1930 to 2014;
- The Planning and Development Acts 2000 to 2018;
- Planning & Development Regulations 2001–2018;
- Heritage Act, 1995, as amended;
- Heritage Act 2018;
- Frameworks and Principles for the Protection of the Archaeological Heritage, 1999, (formerly) Department of Arts, Heritage, Gaeltacht and Islands;
- Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions)

Act, 1999 and the Local Government (Planning and Development) Acts 2000–2018.

The archaeological, architectural and Cultural Heritage receiving environment is defined as an area measuring out from the edge of the area of the subject site. The study area to be appropriate to the nature of the development and required background understanding of the site.

### 14.2.1 Impact Assessment Terminology

In order to assess, distil and present the findings of this study, the following definitions apply:

‘Cultural Heritage’ where used generically, is an over-arching term applied to describe any combination of archaeological, architectural and Cultural Heritage features, where;

The term ‘archaeological heritage’ is applied to objects, monuments, buildings or landscapes of an (assumed) age typically older than AD 1700 (and recorded as archaeological sites within the Record of Monuments and Places);

The term ‘architectural heritage’ is applied to structures, buildings, their contents and settings of an (assumed) age typically younger than AD 1700;

The term ‘Cultural Heritage’, where used specifically, is applied to other (often less tangible) aspects of the landscape such as historical events, folklore memories and cultural associations. This designation can also accompany an archaeological or architectural designation or describe features that have a more recent origin but retain Cultural Heritage significance.

For the purposes of this report the terms ‘architectural heritage’ and ‘built heritage’ have the same intended meaning and are used interchangeably.

The Impact Definitions identified in Section 3.7 of the draft ‘Guidelines on the Information to be Contained in Environmental Impact Assessment Reports’ (2017) are used.

## 14.3 The Subject Development

The proposed development, subject of this EIAR is as follows –

Permission is sought for –

1. Construction of four aviation-related cargo handling units with ancillary office space:

- i. Unit 1: c.10,869.7 m<sup>2</sup> (including 940.9 m<sup>2</sup> office space)
- ii. Unit 2: c.9,151.3 m<sup>2</sup> (including 751.3 m<sup>2</sup> office space)
- iii. Unit 3: c.6,024.9 m<sup>2</sup> (including 497.7 m<sup>2</sup> office space)
- iv. Unit 4: c.8,577.7 m<sup>2</sup> (including 751.3 m<sup>2</sup> office space)

The proposed units will have an overall combined total gross floor area (GFA) of c. 34, 623.6 sq.m (alongside ancillary ESB substations, 4 no. security huts with a combined GFA of 30 sqm and pumphouses). The warehouses are c. 12m in height, with the office element being c. 3.3 m in height and located within a landscaped campus on a site of c. 10.7 Ha.

2. Provision of 390 car parking spaces, including 39 EV charging points, 19 accessible spaces, and 39 motorcycle bays.
3. Provision of 230 secure bicycle parking spaces, of which 100 are short stay spaces and 130 are sheltered long stay spaces.
4. Provision of approx. 77 truck parking spaces and 5 van spaces.
5. Hard and soft landscaping, new boundary treatments, including a c. 2m high System Wire Fence to site boundary.
6. Construction of new site entrance onto the R108.
7. Wastewater treatment plant and infiltration area for 250 PE.
8. All necessary site development and engineering and ancillary site works, including provision of ESB substations and switchrooms, sprinkler tanks and pumphouses, bin store and recycle store, lighting, signage, underground services, photovoltaic panel zones at roof level and sustainable drainage systems (SuDS).

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## 14.4 The Receiving Environment

A paper survey is a document search undertaken as part of the desktop study of the baseline data. The following sources were examined and a list of areas of archaeological, architectural and Cultural Heritage potential was compiled:

- Record of Monuments and Places for County Dublin;
- Sites and Monuments Record for County Dublin;
- National Monuments in State Care Database;
- Preservation Orders List;
- Topographical files of the National Museum of Ireland;
- Cartographic and written sources relating to the study area;
- Fingal County Development Plan 2023–2029;
- Aerial photographs;
- Excavations Bulletin / Excavations.ie and
- National Inventory for Architectural Heritage.

### 14.4.1 Study Area

The landscape located within the study area has been subject to human development and settlement since prehistoric times. The monuments listed in the Record of Monuments Places (RMP) and the nature of previously identified archaeological sites clearly demonstrate that the surrounding landscape is made up of different periods of both historic and prehistoric activity and the features within the modern landscape serve as reminders and indicators of past land use practices and cultural changes.

Each period of history creates and adapts the landscape to suit and reflect its own cultural significances and the landscape within this study area is no exception. The topography of the landscape would suggest that it was a more than suitable location for settlement in prehistoric times through to the early medieval period. This area on north County Dublin has a rich and well-documented archaeological record and the area is known to have been extensively settled since the prehistoric period. There is evidence within the wider environs of the proposals of archaeological remains dating from prehistoric times to the post medieval period.

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#### 14.4.2 Wider environment

There are numerous sites classified as 'ring ditches' from the wider environs, which, when well preserved, consist of circular burial monuments of the Bronze Age or later Iron Age (c 500 BC – AD 500), with a central area defined by a ditch and an external bank. Most of these ring ditches have been recognized by an examination of aerial photography (AP) and have no upstanding visible remains, however they would have formed part of a much wider Bronze Age landscape which could have included field systems and settlements.

The most numerous sites in the area consist of ringforts or 'enclosures'. Once again while the majority of these sites were noted from APs, they are all the likely remains of Early Medieval farmsteads, with the surrounding areas potentially divided into associated field systems.

The later Anglo Norman period is also well represented in the 'Archaeological Complex' of Dunsoghly Castle (DU014-005----). The term castle covers a number of types of field monuments that can date from the late 12th to the 16th century AD (O'Connor 1998). Prior to the stone-built castles the majority of castles in Ireland in the 12th and 13th century were made of earth and timber, these are classed as earthwork castles. Two types of these can be distinguished – a motte and ringworks. Mottes consist of a mound of earth with a flat summit where a wooden building and defences were located, sometimes with a bailey, a defended enclosure at the base, with defences of timber or clay and timber; it is suggested that c. 476 mottes were constructed in Ireland.

Some 160 m to the southwest of the castle the motte and bailey DU014-005003-, which is protected structure RPS No. 865. It dates from early years of the Anglo-Norman invasion in the 12th century. Interestingly, the moat at Dunsoghly is one of two within the parish of Saint Margaret's, only two more such examples can be noted in County Dublin (Walsh et al 2011). The location of mottes were sometimes chosen where ringforts or other defensive structures once stood. While the townland name contains 'Dun' indicative of fort in the townland, no such remains were noted in historical sources. The monument is labelled as *Connaberry Moat* on 1837 map. The name Connaberry derives from *coney* meaning rabbit and *bury* that translates to stronghold/fort. Rabbits were brought by the Normans and were an important food source at that time.

Dunsoghly Castle itself is more a Tower House, which is another type of castle, these are tall rectangular or

square masonry towers with three to five storeys in height. An early 15th-century date was suggested by McNeill (1997), and these were built as late as c.1650s (Cairns 1987). While earlier examples were built by people of Anglo-Norman descent, the Gaelic-built ones came shortly after. Some had a stone-walled enclosure, called a bawn; references suggest bawns were defended by wooden palisades, sod walls or even thick hedges and had angle towers, and gun-loops for defence, however most were not seriously defensive in nature. It was suggested by Barry (1996) that up to 7000 tower houses were built in Ireland between the 14th and 17th centuries. Dunsoghly Castle's history can be dated back to the early 15<sup>th</sup> century, when in 1422 Henry Stanyhurst was given possession of all the property of John Finglas of Dunsoghly to hold until John came of age (Tully 1979). The first specific mention of a castle appears in 1446 when Sir Rowland Plunkett is mentioned as being in residence and he is considered to have built the castle on the site of a dwelling house belonging to the Finglas family. For over 500 years the castle was to be a Plunkett stronghold and the family have been closely associated with the history of north Dublin over that period.

In the late 15th century, the castle was recorded as being in the ownership of Thomas Plunkett, who was Chief Justice of the Common Pleas, but 'for his divers seditions and transgressions' associated with his support for the claims of Perkin Warbeck and Lambert Simnel, he was heavily fined and relieved of his post. However by 1547 the Plunketts were back in favour, with Sir John Plunkett coming into possession of Dunsoghly, who was entrusted with the job of provisioning the houses of the Lord Deputy, Sir Edward Bellingham. John married three times, his last wife being Jenet Sarsfield. John had the small chapel built adjoining the castle which consists of a plain oblong building with an inscribed stone over the doorway, containing the carved instruments of the Passion with the initial letters J.P.M.D.D.S. and the date 1573; these stand for John Plunkett, Miles de Dunsoghley, with the final S representing his wife's surname Sarsfield.

Sir Christopher Plunkett, an eminent lawyer is recorded in 1620 and again in 1623 journeying to London to put the case of the catholic gentry before the king. After Christopher, the next occupant of the castle was James who married a young Cornish lady, co-heir of Francis Tregon a Catholic squire of great wealth. She was defrauded of her inheritance and John mortgaged his property and squandered his patrimony in fruitless law suits. He was imprisoned for debt and died, in 1641.

Sir Henry Tichborne subsequently appears as resident of Dunsoghly, acting as ward to the two succeeding Plunketts until Nicholas came of age in 1666. However, he, Nicholas, could not afford to live at the castle and lived at Harristown where he died in 1718.

The last of the Plunketts of Dunsoghly, Henry, made the castle a sanctuary for the hunted catholic clergy in the 18th century. Dying in 1760 he brought the male line to an end; three daughters of his brother became

co-heirs to Dunsoghly Castle. The last descendant of the Plunketts to live in the Castle according to John Dalton in his 'History of the County of Dublin' was a Mrs. Kavanagh who lived there in the 1830's.

The other archaeological complex in the wider area is that associated with St Margaret's Church (DU014-002---- and NIAH 11348001 RPS. 6026) consisting of the remains of a medieval church, DU014-002001-, surrounded by a graveyard, a holy well and a 16<sup>th</sup> century chapel. The remains of the medieval parish church lie in the west end of the graveyard. This site has been described as the 'old church' in the Civil survey (1654-6) and was originally called Donaghmore. It probably fell into ruin between 1630 and 1650. Only the western portion survives, built of rough masonry with some evidence for re-building. The north jamb of the west window is present, with traces of a doorway in the northwall. The southwest angle has been robbed of its quoins with a possible buttress against the northwest angle.

The surrounding graveyard, DU014-002002-, is surrounded by a stone wall, sub-rectangular in plan. The ground slopes steeply down from south to north. An 18<sup>th</sup> century mausoleum which is dedicated to the Morgan family is located at the southern boundary of the graveyard.

A chantry chapel, DU014-003-, apparently built by the Plunkett family of Dunsoghly in the sixteenth century lies southeast of the medieval parish church. It is rectangular in plan and is entered through an elaborately decorated, pointed arched doorway which incorporates roll and hood moulding that terminates in a carved head. All the windows are blocked. There is a widely splayed window with chamfered, limestone jambs, and a square-headed window in the south wall. There is an aumbry on the same side. An L-shaped section of wall extends from the northeast angle of the chapel. An early 19<sup>th</sup>-century mausoleum is attached to the southeast corner.

The other significant site in the environs of St Margaret's, is the site of St Margaret's well (DU014-004----). Local folklore records that St. Margaret was looking for water to wash her cap but when she could get no water she went and washed her cap in this well. It is said that ever since there was boiling water bubbling out of the well. This is an enclosed spring well with the 'bath' area delineated by stone wall, iron railings and a gate. To south are steps down to a stone lined base. Lower course of bath red brick. According to a 1975 plaque attached to the west end of the tank, the well was enclosed by Sir. John Plunkett of Dunsoghly (d. 1582) although the present structure looks much later. The well was frequented for its medicinal qualities, however the well started drying up in the later years of the 20<sup>th</sup> century and the base is now grassed over.

### 14.4.3 Archaeological Investigations in the Vicinity

There are no known sites of cultural heritage interest known from within the red line boundary of the subject site shown in Figure 14.1.

The closest site lies some 30m to the northeast and consists of The Boot Inn, DU014-090----. Pickardstown. This structure, formerly an inn, is no longer operational, and the proposed development will have no direct or indirect impact on the building or its setting.

A second recorded monument is DU011-043---- (Ringfort – unclassified), located c. 950m north of the subject site in the townland of Forrest Great. The site occupies level grassland and was formerly identified as a platform-type ringfort, 50m in diameter, with a waterlogged external fosse (Healy 1975, 23). Although its southeastern quadrant has been truncated by works associated with the expansion of Dublin Airport, the majority of the monument remains discernible as a cropmark visible on aerial imagery.

Closely, recorded monument, DU011-044---- (House – 16th/17th century), lies c. 1.1km north of the subject site, also within the townland of Forrest Great. The Civil Survey (1654–6) refers to a “fair stone house at the Great Forrest” held by Lord Ranelagh (Simington 1945, 113), likely corresponding to the structure depicted on the 1840 Ordnance Survey map as “Forrest House (in ruins).” Although foundations were reportedly visible in the early 1990s, the site now forms part of a modern farmyard with no surviving above-ground remains.

Further afield, several recorded enclosures are situated to the south and west of the site. The southern example, DU014-008----, located some 1.4km from the subject site, was situated in low-lying pasture and consisted of a roughly circular 35 m diameter single ditched enclosure which appeared as a cropmark on an aerial photograph taken in 1971 (FSI 462/1). However, this site, which may have been a levelled ringfort, is presently under the Dublin Airport runway, with no visible remains at ground level.

A review of archaeological investigations in the surrounding area identified eight licensed excavations, primarily associated with major infrastructural projects such as the Dublin Airport Logistics Park and the North Runway Project. These investigations revealed evidence of ringforts, kilns, enclosures, ditches, and isolated pits, confirming the archaeological richness of the area and its long-term settlement history.

While the subject site itself contains no recorded monuments or known archaeological features, the findings from nearby investigations, particularly those at Forrest Great, indicate a landscape of high archaeological

potential spanning from the Early Medieval to post-medieval periods. Any future development proposals should therefore ensure that appropriate archaeological assessment and mitigation measures are implemented to preserve the integrity of the area's cultural heritage resource.

The other two enclosures to the west consist of DU014-109----, some approx. 1km distant, is a sub-circular enclosure visible as a crop mark on an aerial photograph (SMR file; pers. comm. T. Condit). It is located within relatively flat open field; however no remains are visible. The other, DU014-108----, some 1.2 km distant, is a circular enclosure visible as a crop mark on an aerial photograph (SMR file; pers. comm. T. Condit). It is located at low point within an arable field with quite stark undulations. There are no visible remains.

There were 8 archaeological investigations within the environs of the development area, of these two produced nothing of archaeological significance, shown in Figure 14.2 of this chapter. The remainder of the archaeological works can be divided into two main groupings, the first associated with the development of the Dublin Airport Logistic Park (DALP). Here a series of both testing and open area investigations produced evidence for a ringfort and associated features as well as kilns and isolated pits.

The second group, centred on developments associated with North Runway Project at Dublin Airport. Here, seven investigations across the development area produced evidence for Medieval enclosures, ditches and other isolated features.

Although located some 1 km to the north of the subject site, these investigations support the view that the general area of the proposed development is rich in a range of archaeological sites from a variety of archaeological periods.

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14.4.5 Excavation summaries.

Table 14.1

Excavation Site. No.	Site Ref. No	Location	Findings
1	05E0236	Coldwinters/ Newtown	No archaeology found.
2	16E0335	Barberstown	Rectangle ditched enclosure, date unknown
1	17E0053	Pickardstown	Medieval enclosures and associated features
4	17E0055	Barbertown	Monitoring
5	17E0090	Barberstown	Medieval ditch and kiln
6	17E0091	Barberstown	No Archaeological Significance

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7	17E0092	Barberstown	Medieval enclosure
8	17E0282	Barberstown	Multiphase occupation

Please refer to Appendix 14.1 for a detailed summary of the excavation findings.

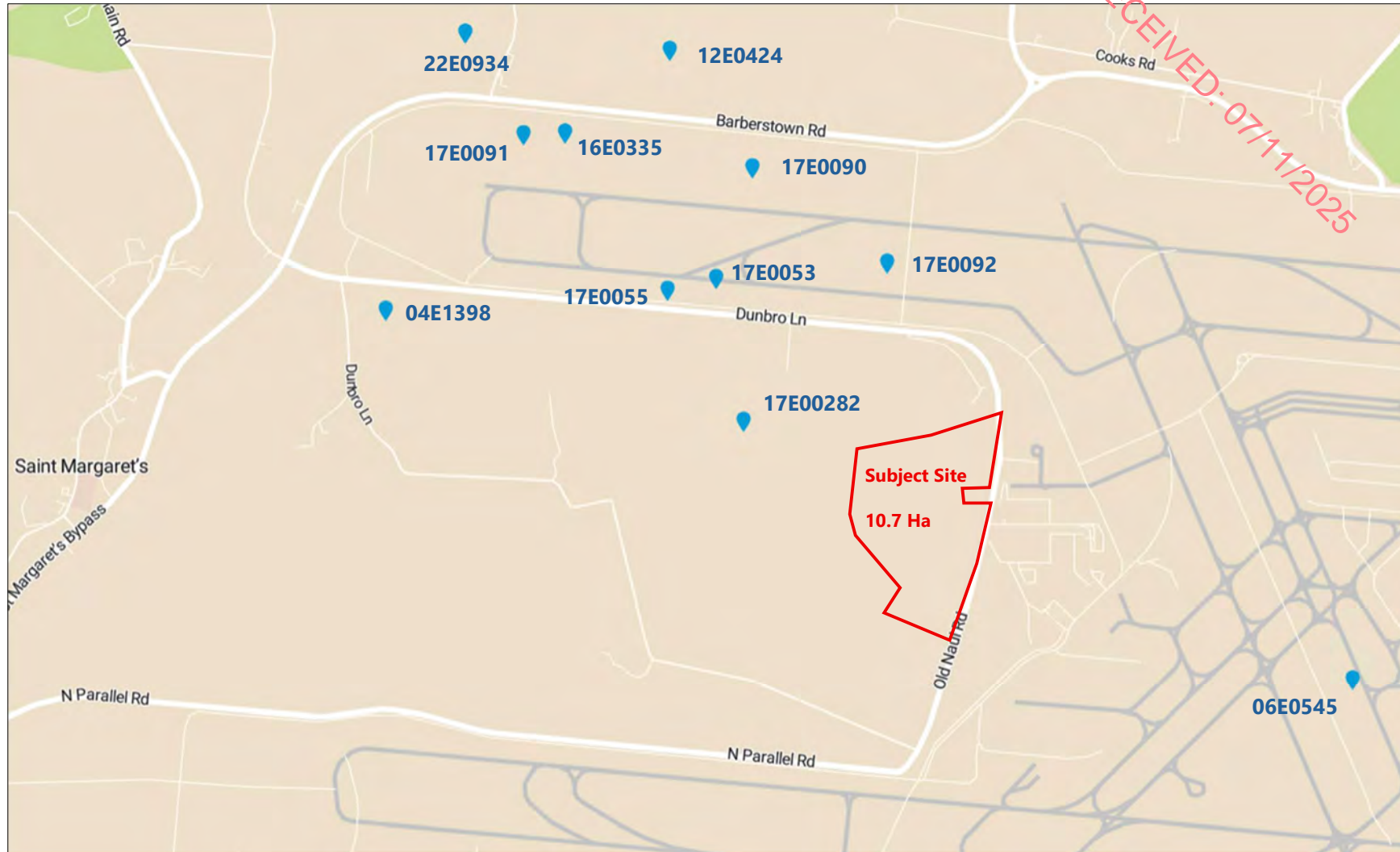


Fig. 14.2 Approximate location of subject site map of recorded excavations

Source: Excavations.ie

### 14.4.6 Cartographic Evidence

One of the earliest, usefully detailed maps of the area is Rocque's maps of 1760 (Fig. 14.3). It records many of the roads and larger settlements, with the lands between sub divided up into agricultural fields. Dunsoghly is recorded as 'Plunket castle' with the area surrounding the castle recorded as formal gardens. Although not named, the motte to the southwest is recorded as a shaded mound. Other large houses are also recorded, Dunbro to the east and Barberstown to the north. The graveyard in St Margaret's is recorded with the old church annotated with a black rectangle. There is an unnamed mound, in the form of a shaded circle, recorded to the northwest of St Margaret's. An examination of modern maps and the Sites and Monuments Record, suggest that this is DU021-170----, the site of an enclosure, recorded as a cropmark site from an examination of aerial photographs of the area. The area of the subject site consists of open agricultural fields, bounded to the east, south and west by roads, with a road, passing Dunbro House, also recorded.



**Fig. 14.3** Approximate location of subject site on Rocque's map of 1760

There is remarkably little substantial change between Rocque's map and the Ordnance Survey map of 1837 (Fig. 14.4), apart from significantly more detail. The road layout is similar, the major difference is the detailed surveying of the individual fields. Dunbro House remains the major feature, but is not named. The house is accessed by a tree lined road from the south. Huntstown House is named, located along the eastern boundary of the subject site.

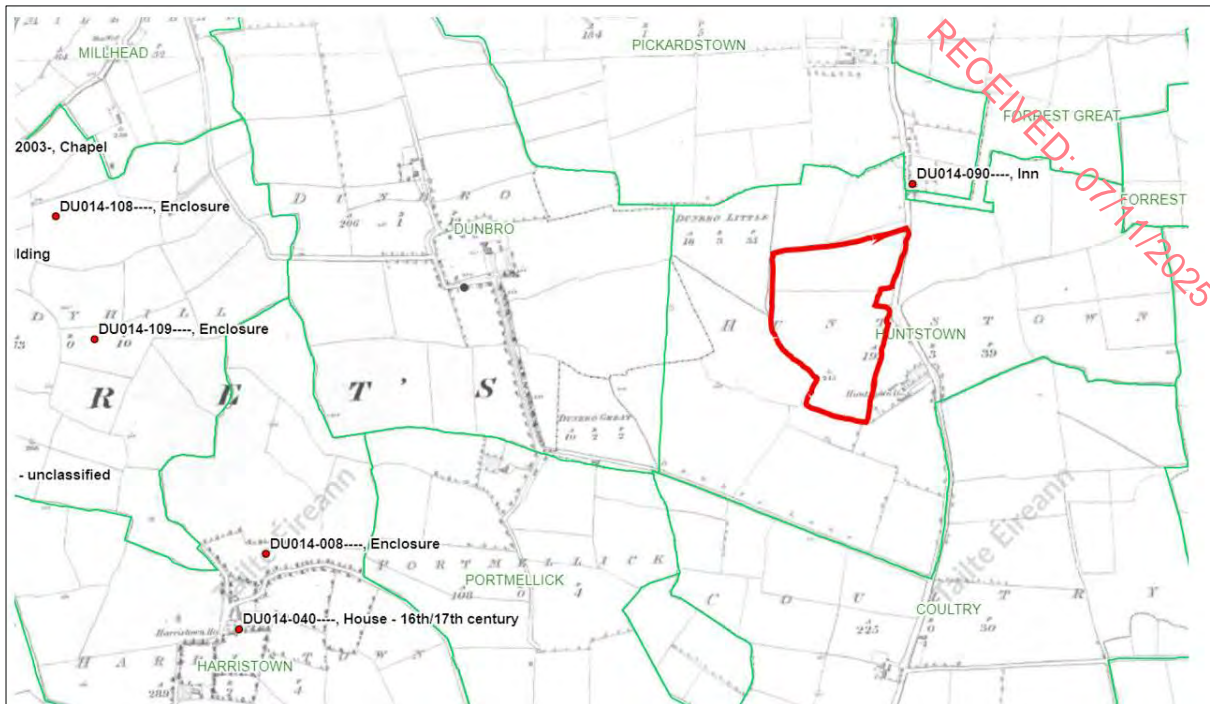
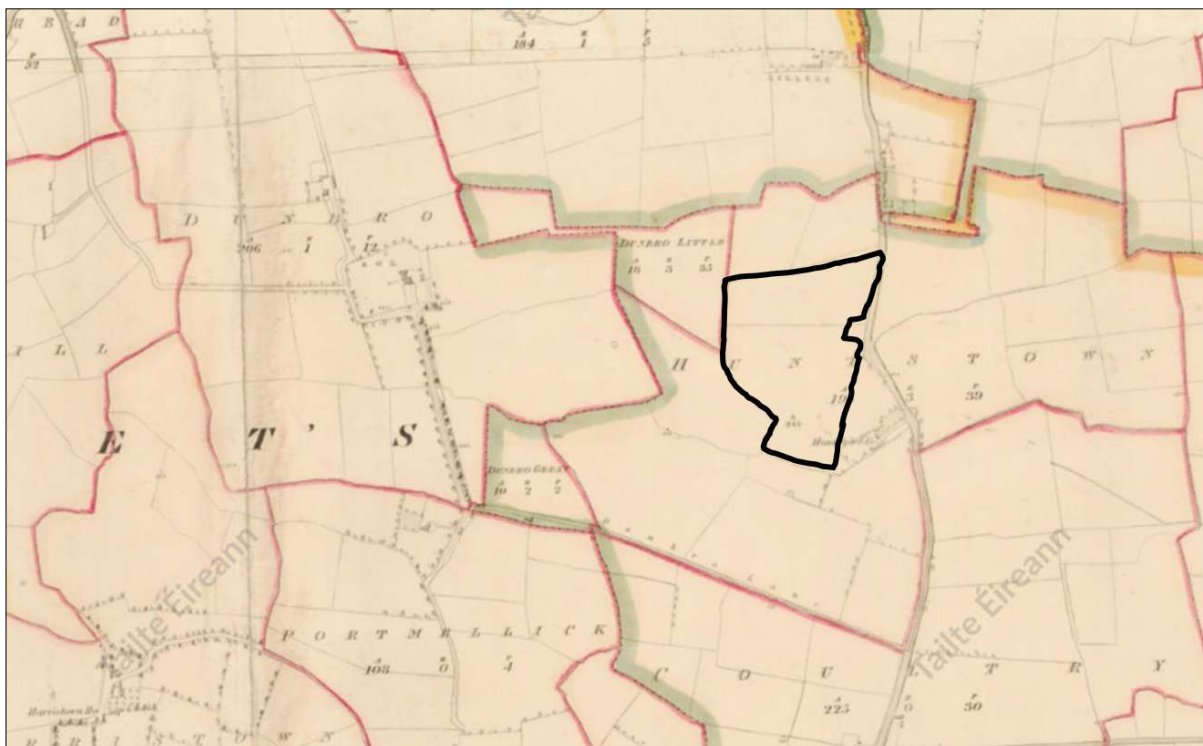


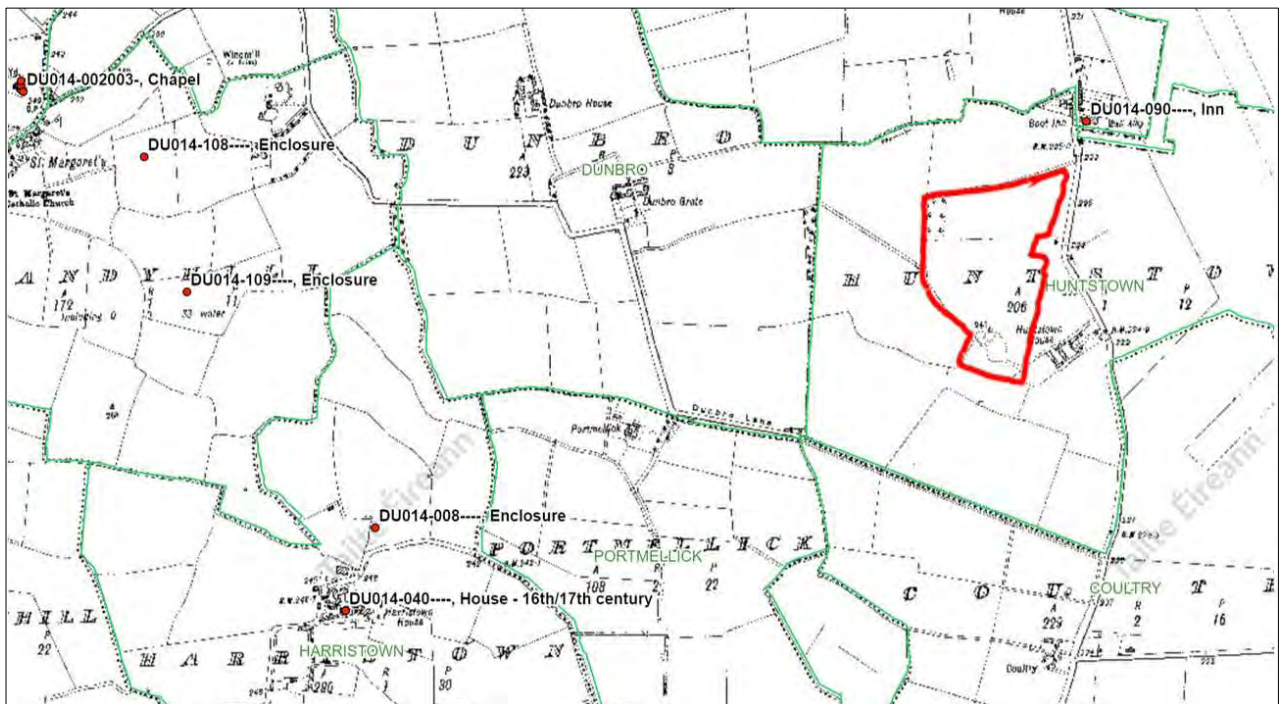
Figure. 14.4 Subject site of OS map of 1837

The OS map of 1910 (Fig. 14.5) is largely unchanged, Dunbro House is now named as is Huntstown House. Boot Inn, DU014-090----, is now recorded as such, with a number of the fields within the subject site now combined into larger open agricultural fields.



**Figure. 14.5** Subject site OS map of 1910

There is little change recorded on the OS map of 1930 (Fig. 14.6), with the exception of addition buildings built in the general area in the intervening period. Many of the agricultural fields have become larger, with a number of the smaller fields being further combined. Dunbro House is now recorded as being located in a cluster of buildings to the north west and Dunbro Grate, the more substantial cluster to the south of it. Huntstown House is also recorded along the eastern boundary.



**Figure. 14.6** Subject site on OS map of 1930

### 14.4.7 Topographical Record

The topographic files in the in the National Museum were consulted for the following townlands; Broghan, Dunbro, Dunsoghly, Huntstown, Kilnacree, Kilreesk, Milhead, Portmellik, Sandyhill and St Margaret's. The only returns were from the excavation archives associated with two investigations carried out in Dunbro, in advance of the Dublin Airport North Runway Project, 16E0335 and 17E0055, where a large quantity of medieval pottery, both local and imported wares were recovered along with a number of flint objects. The only other find catalogued came from the townland of Dunsoghly were a 'wood object' (RIA1918:362:2) was recorded.

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## 14.5 Predicted impacts

### 14.5.1 Direct impacts

There will be no direct physical impacts on any known recorded sites of Cultural Heritage significance within the subject site.

### 14.5.2 Indirect Impacts

The indirect impacts on the setting of the various sites of cultural heritage interest have also been considered. Three of the archaeological monuments listed on the Sites and Monuments record for the environs of the subject site consist of cropmarks, with no visible surface remains, one, DU014-008---, is most probably destroyed, as it is located under the line of a runway. Whilst it is not possible to determine the 'value' of a crop mark site, they are generally, by their nature severely plough truncated, with only subsoil cut features surviving. It is therefore considered that their value is medium/low. In addition, as the proposed development is located at a minimum of 700 m from the site of these cropmarks, the impact on the setting of the sites must be seen as negligible, with the resultant change neutral.

**Table 14. 2 Indirect Impacts**

Asset	Ref No	Value	Impact	Change
Pickardstown	DU014-090----	Medium	Negligible	Neutral
Harristown	DU014-008----	Low	Negligible	Neutral
Sandyhill	DU014-108----	Medium/Low	Negligible	Neutral
Sandyhill	DU014-109----	Medium/Low	Negligible	Neutral

The impacts of the development some 30m to the west of the Boot Inn (DU014-090----), an asset of medium value, is considered to have a negligible impact on its setting with a resulting neutral change.

Potential Predicted impact insignificant, long-term and neutral.

## 14.6 Mitigation

Standard mitigation treatment for adverse effects to significant cultural resources has historically been a combination of data recovery excavation along with artifact analysis, reporting, and curation, whose purpose is to move the undertaking forward.

With regard to the subject site, while there is a possibility of finding archaeological artifacts on site, the significance of these finds is not predicted to be of such significance as to prevent development. However, where the potential impact of a proposed development on the archaeological heritage is considered significant, the National Monuments Service may similarly recommend that an Archaeological Impact Assessment (AIA) and/or Underwater Archaeological Impact Assessment (UAIA) is carried out if such has not been undertaken at pre-planning stage or requested as Further Information.

All considered, it is not necessary to complete the AIA and/or UAIA at this stage.

It is proposed that an AIA/UAIA will be undertaken by a suitably qualified archaeologist in advance of any site preparation and/or construction works and following the approval of any required excavation licence/consent under the National Monuments Acts. A properly prepared AIA/UAIA will address comprehensively the known or potential archaeological impacts of the development and propose mitigation measures to ameliorate such impacts.

The archaeological measures proposed in the AIA/UAIA must (subject to further consultations with statutory and licencing body) be adopted into any grant of planning permission and be implemented by the developer.

Recommend pre-development archaeological testing, be undertaken in advance of any site preparation and/or construction works. Such testing will seek to assess the nature and extent of any surviving archaeological remains and will, in the archaeological testing report, propose an avoidance or mitigation strategy (i.e. either preservation in-situ or preservation by record or a combination of these). Subject to consultation with National Monuments Services (Dept of Housing, Planning & Local Government) (NMS), final decisions on whether and in what form development can proceed will reflect the results of such archaeological testing and proposals for avoidance or mitigation will be set out and be the subject written agreement of amendment to the grant of permission (if not provided for within the parent permission relating to the subject development now proposed).

Archaeological monitoring is also recommended for the supervision of agreed preservation of in-situ features prior to and during the construction phase of the development. This will ensure that the agreed measures for the protection of the specific archaeological sites or monuments are correctly employed and that negative impacts to archaeological heritage are avoided.

Provision in the CEMP for Archaeological Mitigation: The Construction Environment Management Plan (CEMP) and the Archaeological Impact Assessment (AIA) will be developed, as applicable, requiring mitigation measures required to protect archaeology and cultural heritage and these measures will be employed during all phases of development works. This will ensure the integrated management and protection of the archaeological and cultural heritage environment of the development site.

While it is not predicted, in the event that artefacts are found on site and are required to be retained in situ a Conservation Management Plan will be prepared, subject to agreement with NMS. The plan shall provide for the long-term maintenance and management of the specific site or sites in question. This is to ensure that preservation in situ of the site or sites can be achieved and maintained during all phases of the development and that the protection and preservation of the site or sites can be sustained into the future.

## 14.7 Residual Impact

Subject to mitigation, the predicted impact is considered to be insignificant, long term, and neutral.

## 14.8 Discussion and conclusions

It is clear from the archaeological work undertaken on the ground to the north of the subject site, that the general area of the subject site is rich in archaeological sites. Pre-development archaeological works in advance of both the Dublin Airport Logistic Park (DALP) and the North Runway Project at Dublin Airport produced evidence for a ringfort and associated features as well as Medieval enclosures, ditches kilns and isolated pits. It is probable that this wealth of archaeology extends into the subject site.

In order to investigate this possibility, it is proposed that there be a phase of pre-development geophysical survey across the 10.7 ha site, preferably undertaken post-grass cutting or crop removal. The survey should consist of a gradiometer survey and a targeted resistance survey. A gradiometer survey detects subtle variations in the local magnetic field and measurements are recorded in nano-Tesla (nT). Some archaeological features such as ditches, large pits and fired features have an enhanced magnetic signal and can be detected through recorded survey. Where appropriate, the gradiometer survey results is augmented by detailed Resistance Survey. This is used to record variations in electrical resistance by passing an electrical current through the ground. The subsequent earth resistance (measured in ohms) is recorded and

presented in map form for interpretation. Resistance surveys are typically conducted on sites where structural, or stone features are anticipated.

Once the geophysical survey results are to hand, it is proposed to move to Phase 2, which will be archaeological testing. If the geophysical survey results indicate the presence of potential archaeological anomalies, it is proposed that there be a phase of targeted archaeological testing, with the machine dug trenches placed to 'ground truth' the anomalies, the numbers and location of which will be dictated by the aim of arriving at an understanding of the nature, date and extent of the anomalies.

If the geophysical survey results are inconclusive, it is proposed to proceed with archaeological test trenching of the site, the number and location of the trenches designed to ensure that the entirety of the site is archaeologically tested, typically a pattern of machine dug trenches spaced at 10 m intervals across the site.

The results of the geophysical survey and follow up test trenching should be compiled into a detailed archaeological Impact assessment, with a detailed mitigation strategy of how conflicts between archaeology and the proposed developments can be satisfactorily resolved.

It should be noted that all archaeological works must be carried out under license, issued by the Department of Housing, Local Government and Heritage (DHLG&H) and all recommendations made as a result of the archaeological works are subject to discussions the DHLG&H.

## 14.9 References

Highways Agency. Design manual for roads and bridges: Vol. 11: Environmental assessment, Section 3: Environmental assessment techniques The Stationery Office, 2011.

Design Manual for Roads and Bridges (DMRB) LA 106 Cultural heritage assessment

DfC: HED *Guidance on Setting and the Historic Environment* (2018);

*Regional Development Strategy 2035* Department for Regional Development (2010)

The Institute for Archaeologists of Ireland *Code of Conduct for Archaeological Assessment* (2006)

TII (2024) Guidelines for Cultural Heritage Impact Assessment of TII National Road and Greenway Projects 2024.

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## Appendix 14-1

### 1. 05E0236 Coldwinters / Newtown No archaeology found

A levelled site (SMR 14:6) and two further sites (14:16 and 14:53) which were recorded from aerial photography were tested in Coldwinters as part of a planning application for Logistic warehousing units. The site had been used as a golf course in the recent past. Site 14:6 was located and found to exhibit significant subsurface archaeological features. Whilst the monument displays characteristics of an early medieval multivallate ringfort, a feature within the monument complex has yielded a sherd of pottery of probable prehistoric date. Site 14:16 was not located, and testing did not reveal anything of archaeological significance. It is likely, therefore, that landscaping undertaken during construction of the golf course has removed any traces of the monument. Site 14:53 was not located during the testing. The many features such as bunkers and tees in the vicinity of the monument site, and the landscaping required to create the golf course, may have served to remove all traces of the monument.

### 2. 16E0335 Barberstown Rectangular ditched enclosure, date unknown

Archaeological test trenches and monitoring of geotechnical investigations were carried out in relation to the North Runway development at Dublin airport in response to an An Bord Pleanála planning condition. The new runway development is located to the north and parallel to the existing main runway. Testing was carried out in two fields where low-lying features of archaeological potential were noted during the EIA process for the North Runway. These sites were recorded as a sub-circular depression (CHS 2) and small low profile undulations (CHS 6). The testing of these areas was preceded by detailed geophysical survey, which did not reveal any specific responses at the locations of CHS2 and CHS6, however it did reveal features of archaeological potential in the vicinity (Sites C and D) that were unrelated to the surface features. Site C was identified as a rectangular enclosure/field system and Site D represents an isolated linear feature with some faint linear and curvilinear trends in the same field.

The testing programme was carried out from 9–12 August 2016 and 15 trenches were opened across these two fields ranging in length from 8-35m. Trenches were excavated across the features and anomalies identified in the geophysical survey of the fields. Please refer to Appendix 14-2 for the Map Sheet DU014 table in relation to this investigation.

Site C presented as a as a rectangular ditched enclosure in the geophysical survey, measuring c.17m by 28m with a possible entrance to the east. The western portion extends mainly north-east/south-west across

the field and further weak linear features and positive responses of potential interest were also indicated in the same field. Testing did not definitively confirm the presence of the rectangular enclosure, and a large deposit of marly clay encountered over this entire area of the field may have masked what is represented as a strong geophysical survey response.

The linear ditch (1.5m in width x 0.5m depth), associated with and running south from the enclosure contained a single fill with occasional charcoal, shell and burnt bone and is considered to be archaeological in nature. Also of interest was a metalled trackway identified in T7, to the south-east of the enclosure. It measures 1.7m wide and is flanked by parallel drainage ditches on either side measuring 1.25m wide x 0.43m deep. No diagnostic material was identified in any of the trenches opened.

Site D presented as a north-east/south-west linear traversing curving weak trends. Seven test trenches (T9–T15) were excavated in this field and only the linear north-east/south-west orientated ditch was found to be of archaeological interest. It measured 2m in width and 0.54m deep and contained three fills, the middle fill being rich in charcoal with frequent burnt bone, occasional unburnt bone and a piece of flint. The curving trends are likely to be natural geological trends picked up by the geophysical survey and were not of archaeological interest.

### Townland boundaries

The standing remains of the townland boundaries within the North Runway development lands were also investigated and comprised test trenches across five sections of the Barberstown/Pickardstown, Kingstown/Barberstown and Dunbro/Pickardstown townland boundaries. The boundaries were found to be generally uniform in nature, comprising ditches measuring at least 3m wide and almost 2m deep with a natural accumulation of humic fill found in their base. The Kingstown/Barberstown boundary had a roughly coursed rubble stone wall on its eastern side and a corresponding low bank on the western side. The wall measured c. 1.05m in height and appears to run the length of the field to the west. It is likely to be a former property boundary demarcating lands associated with Barberstown House which was located on the northern side of the Naul Road.

### Site Investigations

Site investigations (SI) were undertaken for a variety of engineering purposes across both the Airside and Landside areas. The investigations comprised trial pits (18 Airside and 70 Landside) including plate tests alongside the trial pits, soakaways (3 Airside, 2 Landside) and boreholes. With the exception of the boreholes all the SI works were monitored as they required the opening of areas measuring at least 1.8m x

3.2m and were up to 3m in depth. Monitoring of these works was carried out in July and August 2016 and nothing of archaeological significance was noted.

A second phase of testing targeting potential archaeological sites identified in the geophysical survey were subsequently tested by Claire Cotter in November/December 2016 under an extension to this licence.

### **3. 17E0053 Pickardstown Medieval enclosure and associated features**

Site A is located within the proposed development area of the North Runway Project at Dublin Airport in the townland of Pickardstown. Site A was identified during advance archaeological investigations which included a non-invasive geophysical survey by Target Geophysics (16R0097) and archaeological test-trenching (16E0335) by Courtney Deery Heritage Consultancy (CDHC). The geophysical survey identified a large sub-oval ditched enclosure. Within the enclosure two linear features were noted intersecting around the mid-point, as well as six pits.

Excavation of Site A was undertaken between 1 February and 28 July 2017. Topsoil stripping exposed a large sub-oval shaped enclosure (F4) and numerous internal features including the remains of a possible structure, defined by four foundation trenches, a kiln, ten pits and five linear ditches/gullies. External features identified included a field drain in the north-west corner of the site and a linear feature, kilns/flue and a field drain in the south-east corner of the site. A metaled surface was also identified immediately north of the enclosure ditch (F4) and extended into the area defined by the enclosure ditch and may have functioned as an entranceway.

The enclosure ditch F4 was sub-oval in shape and had internal dimensions north-south of 57m by 42m, external dimensions north-south of 62m by 49m. It varied in width from 2.5m to 4.4m and varied in depth from 0.8m to 1.4m. It contained numerous fills. Small fragments of timber, a small quantity of cereal grains, charcoal, a small quantity of animal bone and one fragment of burnt bone were recovered from the fills contained within the enclosure ditch F4.

The kilns F57 & F141 and the flue F85 were identified in the south-east corner of the site outside the enclosure ditch F4. F57 was a keyhole-shaped drying kiln. Charcoal, oxidized clay and cereal grains were contained within the fill. A number of stones lined the flue between the drying chamber (located to the north-west) and the stoke-hole. The kiln F141 was figure-of-eight in shape and located immediately south-east of F57. Charcoal and moderate quantities of cereal grains were recovered from this feature. A radiocarbon date was also obtained and returned a date of 6th-7th century AD.

Site A represented the remains of an early medieval enclosure which was located within a landscape dominated by early medieval/medieval settlement and associated agricultural activities. Evidence of occupation and habitation were identified at Site A via pits, kilns, a metalled surface, gullies/linear features and the remnants of a possible internal structure. Two enclosures were identified within this scheme - Site A and Site B, and both enclosures were located within the same townland and represented successive phases of enclosure activity. Two features at Site A were radiocarbon dated from the 6th-7th century AD. Dateable artefacts from the site were few. A bone pin was recovered from the possible structure located within the enclosure and was tentatively dated from 10th-mid 11th century AD.

#### **4. 17E0055 Barberstown Monitoring**

Monitoring was as part of the proposed North Runway development which is located to the north and parallel to the existing main runway 10/28 in a development area of 261ha which is wholly owned by the Dublin Airport Authority. The monitoring included supervision of groundworks during the construction of the new Naul Road including Toberburr Road, Dunbro Lane, St. Margaret's Bypass and construction of the new Forrest Little Road including Forrest Road, Forrest Little Road and all associated utility and site works for both roads. The monitoring of the general site clearance works including all hedge rows, tree lines, general site clearance and all associated site works, utility and other service diversions was also completed. One team consisting of three supervisors undertook the monitoring under the supervision of Deirdre Murphy. Topsoil was removed from the proposed road routes by a 360 degree mechanical excavator equipped with a toothless grading bucket working under continuous supervision.

The same team monitored the general site clearance works which involved the removal of trees and shrubbery within boundary ditches and hedge rows. This was completed using a harvester and a tracked excavator and mulcher. No ground disturbance was caused during the hedge and tree clearance works.

The Dublin Airport North Runway Project has been subjected to a series of intensive archaeological investigations in recent times. A non-invasive geophysical survey by Target Geophysics (16R0097), archaeological test-trenching (16E0335) by Courtney Deery and monitoring of geotechnical works took place across the development lands prior to this current phase of assessment works. In addition to the general monitoring works, full excavation of a number of sites identified during advance works was also carried out under separate licenses. These include excavations at Sites A, B, C, D, I and J and additional sites 1-11.

**5. 17E0090 Barberstown Medieval ditch and kiln**

Site D is proposed development area of the North Runway Project at Dublin Airport in the townland of Barberstown. The site was identified during advance archaeological investigations which included non-invasive geophysical survey by Target Geophysics (16R0097) and archaeological test-trenching (16E0335) by Courtney Deery Heritage Consultancy.

Excavation of this site comprising a linear ditch and kiln identified during the earlier test-trenching was undertaken between 18 May and 2 June 2017. The ditch was exposed in two sections and was aligned north-east/south-west and measured some 70m in overall length but with a small gap approximately mid-way along its length. Charcoal recovered from a lower fill (F5) of this ditch (F4) dated this feature from the 7th-9th century AD. Finds from the fill of the ditch included three iron knife fragments and eight sherds of 12th/13th-century Dublin-type fabrics. The pottery recovered was significantly later in date than the radiocarbon date. The pottery was recovered from the main fill (F3) of the ditch (F4). This sealed the fill (F5) from which the radiocarbon date was obtained and would suggest that the ditch feature was recut and re-utilized at a later stage in the early medieval/medieval period. The kiln was identified and excavated near the northern extent of the site, where it had been cut by the aforementioned ditch. It therefore pre-dated the ditch. The kiln would be typical, however, of simple earth-cut early medieval kilns.

**6. 17E0091 Barberstown No archaeological significance**

Site C is located within the proposed development area of the North Runway Project at Dublin Airport in the townland of Barberstown. The site was identified during advance archaeological investigations which included a non-invasive geophysical survey by Target Geophysics (16R0097) and archaeological test-trenching (16E0335) by Courtney Deery Heritage Consultancy. The geophysical survey identified a rectangular ditched enclosure and numerous weak linear features of potential archaeological interest.

Excavation of this site was undertaken between 6 and 13 March 2017. Two separate areas were excavated, Area 1 around the potential sub-rectangular enclosure and ditch identified on the geophysical survey, and Area 2 across the potential trackway identified in Trench 7 of the earlier testing.

Despite extensive stripping and cleaning in Area 1, no trace of any archaeological or other cut features were identified in the area of the potential enclosure. To the south however, two distinct and relatively narrow parallel ditches were identified. Both of these features produced sherds of 19th-century white delftware and are obviously of relatively modern origin.

Area 2 to the east had been interpreted as a possible metallated trackway during the earlier test-trenching flanked on either side by a drainage ditch. An area measuring 20m east-west by 6m was excavated along the line of the previously excavated Trench 7. The two drainage ditches were re-exposed and found to contain frequent sherds of 19th/20th-century pottery. They measured on average 1m in width at the top and 0.5m in maximum depth and both extended north and south beyond the cutting. What was interpreted as a possible metallated trackway between the two ditches during earlier testing proved to be a natural stone and gravel subsoil below a thin layer of orange boulder clay.

**7. 17E0092 Barberstown Medieval enclosure**

Site B was identified during advance archaeological investigations which included a non-invasive geophysical survey by Target Geophysics (16R0097) and test-trenching (16E0335) by Courtney Deery Heritage Consultancy (CDHC). This enclosure measured 55m north-south by 40m internally and 59m by 45m externally. Excavation was undertaken between 1 February and July 28 2017 and involved the preservation by record of a large sub-oval shaped early medieval enclosure. The work was carried out under the supervision of Donald Murphy of Archaeological Consultancy Services Unit (ACSU).

The enclosure was defined by the ditches F3 and F13. The ditch F13 represented the earliest phase of activity and defined the north-west, north, north-east, east and south-eastern portion of the enclosure. The ditch F13 was significantly narrower than F3. The ditch F3 defined the north-western, western, southern and a portion of the south-eastern extent of the enclosure. This ditch was excavated along the line of/cutaway ditch F13. A significant quantity of medieval pottery (Leinster Cooking ware, Dublin-type wares, Dublin fineware, Dublin type cooking ware, Dublin-type coarse ware) was recovered from F3 and F13. A radiocarbon date obtained from the lower fill in F13 dated this feature from the 7th-10th century AD and a radiocarbon date obtained from the ditch F3 dated this feature from the 10th-12th century AD. The pottery recovered from both ditches dates from the 12th-15th century AD. Animal bone, tiny fragments of burnt bone, flint debitage and possible nails were also recovered from F13 and animal bone, carbonized cereal grains, flint, possible blade fragments/nails were also recovered from F3.

A variety of features were identified within this site, the majority of which were consistent with early medieval settlement sites and typical of the features identified on all other sites excavated within this development. Evidence of later activity within the site was also present in the form of occasional finds of brick, clay pipes and earthenware. Other features identified at Site B include nine ditches/linear features, a well, a possible kiln, ten pits, one post-hole and three metallated surface.

A possible structure was also identified within the area defined by the enclosure ditches F3 and F13. This structure consisted of a metallised surface, the remains of a mud wall, sixteen stake-holes and three post-holes. The metallised stone surface was contained within a brown clay (F110) and a sub-rectangular shaped cut. The area around the metallised surface was defined by the line of a mud wall. Together these features would appear to represent the remains of some sort of building.

The enclosure at Site B was located in close proximity to and north-east of the enclosure at Site A. Site A was dated from the 6th-7th century. Site B was located within a landscape that was dominated by an early medieval population and it is likely that it represented a successive phase of enclosure activity and replaced Site A as a stronghold within the community.

A large sub-oval shaped enclosure occupied Site B and various phases of activity could be identified. The earliest phase of enclosure activity was dated from 7th-10th century AD and the next phase of activity was dated from the 10th-12th century AD. Both of these ditches contained a significant amount of pottery dating from the 12th-15th century AD which would suggest they were being utilized over an extended period. The majority of the remaining features exposed within this site were typical of features you would find on any early medieval settlement and indicative of agricultural activities and practices.

## **8. 17E0282 Barberstown Multi-phase occupation**

Intensive testing and subsequent excavation took place in June and July 2017 on the Greenfield areas within the development area of the proposed North Runway Project at Dublin Airport in the townland of Barberstown.

A total of 38,419.6 linear metres of test trench was excavated in the greenfield areas of the scheme which made up a total of 31 fields. Eleven possible sites (Sites 1-11) were identified during the assessment phases of works consisting of isolated possible pits, post-holes and ditches. The excavation of these sites was undertaken under an extension to Licence No: 17E0282 beginning on 22 July 2017 until 2 November 2017. Of the eleven sites that were identified during the testing phase seven proved to be of archaeological significance upon further investigation. The relevant sites are listed below:

- Site 1 exposed five ditches, ten field drains, six pits, a possible kiln, five post-holes and two spreads. It is likely that the ditches and drains represented the remains of a series of features associated with agricultural activity during the early medieval/medieval period.

- Site 3 exposed a large trough and 3 small pits. The trough (F3004) contained large amounts of charcoal and some burnt stone and was likely associated with burnt mound activity (fulacht fiadh). Although fulachtaí fiadh are typically dated to the Bronze Age exceptions do occur and this included the trough at Site 3 which was dated to the Neolithic period (Cal 3330-3230 BC/Cal 3180-3160 BC/ Cal 3120-2900 BC). It was initially assumed that the three pits were associated with the trough. However, a radiocarbon date obtained from the fill of one of the pits proved it was significantly later in date and dated to the Late Neolithic period (Cal 2840-2810 BC/Cal 2680-2480 BC). This may suggest that this site was continually reused and revisited over an extended period but utilized for the same purpose.
- Site 6 exposed a single pit which was filled with a grey silty clay. It appeared to be an isolated feature and its function remains unclear.
- Site 7 identified three ditches, seven pits, six agricultural furrows, three field drains and one spread. These were typical of the features exposed on many of the sites identified as a result of this scheme (ditches, drains, pits). They were indicative of successive phases of early medieval activity and were largely associated with agricultural activity.
- Site 8 identified seven ditches, two kilns, four pits, a possible well and four field drains. The ditches were all associated with drainage or field boundaries and represented successive phase of use (three of the ditch features had a recut). Radiocarbon dates recovered from Site 8 gave dates in the 6th/7th century AD and the 9th-11th century AD. It is likely that occupation of this site was, however, continuous from the at least the 6th to the 11th century AD, as a continued presence during this period can be identified on neighbouring sites.
- Two features were identified at Site 9, a field drain and a single pit.
- Site 11 exposed two pits, a spread, and a field drain.

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Appendix 14.2

Map Sheet DU014

SMR No	Site type	Townland	Description
DU014-002001-	Church	ST. MARGARET'S	<p>The remains of the medieval parish church lie in the W end of a graveyard N of St. Margaret's village. This site has been described as the 'old church' in the Civil survey (1654-6) see Anon 1897, 450-51; Simington 1945, 209; Tutty 1979, 155-157). The church was originally called Donaghmore and probably fell into ruin between 1630 and 1650 (Walsh 1888, 155). Only the western portion survives. It is built of rough masonry with some evidence for re-building. The N jamb of the W window is present. There are traces of a doorway in the N wall. The SW angle has been robbed of its quoins (Dims. H of wall c. 1.80-3m, thickness of wall 0.82m). There is a possible buttress against the NW angle. It is extremely overgrown and has been subject to mortar wash-out</p> <p>References: Tutty, M.J. 1979 Dunsogley Castle and St. Margarets Well. Dublin Historical Record 32, 155-7. Simington, R.C. (ed.) 1945 The Civil survey, AD 1654-1656. Vol. VII: county of Dublin. Dublin. Irish Manuscripts Commission. Anon. 1897b Proceedings. Journal of the Royal Society of Antiquaries of Ireland 27, 446-60</p>
DU014-002002-	Graveyard	ST. MARGARET'S	<p>The remains of the medieval parish church (DU014-002001-) lies in the west end of a graveyard north of St. Margaret's village. The graveyard surrounded by a stone wall is sub-rectangular in plan. The ground slopes steeply down from south to north. An 18th century mausoleum which is dedicated to the Morgan family is located at the southern boundary of the graveyard (Anon 1835, 92; Healy 1975, 26; Tutty 1979, 155-157).</p>

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			<p>References: Healy, P. 1975a Second report on monuments and sites of archaeological interest in county Dublin. An Foras Forbartha Teoranta. Healy, P. 1975b Third report on monuments and sites of archaeological interest in county Dublin. An Foras Forbartha, Dublin. Tutty, M.J. 1979 Dunsogley Castle and St. Margarets Well. Dublin Historical Record 32, 155-7. Anon 1835 Ballymoon Castle. Dublin Penny Journal, 3, no. 136, 249-50</p>
DU014-002003-	Chapel	ST. MARGARET'S	<p>A chantry chapel, apparently built by the Plunkett family (Tutty 1979, 155-157) in the sixteenth century lies southeast of the St. Margaret's medieval parish church (DU014-002002-). It is rectangular in plan (L 9m, WNW-ESE, Wth 4.9m, wall T 0.9m) and is entered through an elaborately decorated, pointed arched doorway which incorporates roll and hood moulding that terminates in a carved head. All the windows are blocked. There is a widely splayed window with chamfered, limestone jambs, and a square-headed window in the south wall. There is an aumbry on the same side. An L-shaped section of wall extends from the northeast angle of the chapel. An early 19th-century mausoleum is attached to the southeast corner. There are burials and big tree internally and there has been some rebuilding of the wall</p> <p>References: Tutty, M.J. 1979 Dunsogley Castle and St. Margarets Well. Dublin Historical Record 32, 155-7.</p>
DU014-003----	Ritual site - holy well	ST. MARGARET'S	<p>Annotated St. Margaret's Well on the 1837 ed. OSi 6-inch map. On the revised 1863 edition of the OSi map the dedication has been changed to St. Brigid. Access is via laneway from rear of the Parochial Hall. St Margaret's church (DU014-002001-) and graveyard (DU014-002002-) lies 300m to NE. Fair Green and R.C. Chapel immediately to the E. Folklore collected from Killossery School recorded the following tradition about this well; 'There is a well in St. Margaret's called St. Margaret's Well. There is an old story attached to that well. It is said that St. Margaret was looking for water to wash her cap but when she could get no water</p>

she went and washed her cap in this well. It is said that ever since there was boiling water bubbling out of the well' (The Schools' Collection, Volume 0789, Page 257; <https://www.duchas.ie/en/cbes/4498542/4384982/4511555>). This is an enclosed spring well. The well 'bath' area delineated by stone wall, iron railings and a gate. To south are steps down to a stone lined base. Lower course of bath red brick. According to a plaque attached to the west end of the tank, the well was enclosed by Sir. John Plunkett of Dunsoghly (d. 1582) although the present structure looks much later. The plaque was erected by Farrell & Son 1975. The well was frequented for its medicinal qualities. According to D'Alton (1838, 389) it contained lime, muriate of soda, nitrate of kali and sulphur which led to constantly tepid water bubbling up. The well started drying up about twenty years ago and the base is now grassed over. The well was described in 1897 as; 'Behind the Roman Catholic chapel is a tepid spring, dedicated to St. Brigid, which never freezes. Sir John Plunkett enclosed it with a wall, still remaining, to make a bath, and it was, in former days, much frequented for its medicinal qualities; and the local people still use it for that purpose. According to Dalton, it contains lime, muriate of soda, nitrate of kali, and sulphur. The water may be seen bubbling up from the bottom every minute' (Stubbs 1897, 448).

References: Tutty, M.J. 1979 Dunsogley Castle and St. Margarets Well. Dublin Historical Record 32, 155-7.  
Stubbs, W.C. 1897b St Margaret's tepid spring. Journal of the Royal Society of Antiquaries of Ireland 27, 451.  
Ó Danachair, C. 1958 The holy wells of county Dublin. Reportorium Novum 2, 68-87; 2, No. 2 The holy wells of County Dublin: A supplementary list, 233-5. Daly, M. 1957 Curative wells in old Dublin. Dublin Historical Record 17, 13-24. Cromwell, T.K. 1820 Excursions through Ireland, vol. II, fascicle 7 (Louth), 89-90. London.  
Dalton, J. 1838 The History of County Dublin. Dublin.

DU014-004----	Building	ST. MARGARET'S	The southeast corner of the Parochial Hall at St. Margaret's contains a rectangular stone tablet with carvings in high relief of two rings side by side, one is plain interlace, the second is formed from interlocking animal heads. This may have been a date stone. Date is uncertain
DU014-008----	Enclosure	HARRISTOWN	Situated in low-lying pasture. A roughly circular single ditched enclosure (diam. c. 35m) appears as a cropmark on an aerial photograph taken in 1971 (FSI 462/1). This may be a levelled ringfort. It is under the Dublin Airport runway. Not visible at ground level
DU014-040--	House 16 <sup>th</sup> - 17 <sup>th</sup> century	HARRISTOWN	The Down Survey (1655-6) map shows a dwelling near where Harristown House was located. Described in the Civil survey (1654-6) as the 'ruins of old walls of stone' (Simington 1945, 210). Harristown House probably occupied the site. Now the site is part of the runway at Dublin Airport. Not visible at ground level
DU014-090---	Inn	PICKARDSTOWN	The Boot Inn is a two-storey, four bay building of post-1700 date (pers.comm. Marcus Nolan, Finglas Environmental Heritage Project 1989).
DU014-099----	Ringfort - unclassified	SHANGANHILL	Aerial photograph (GB89. AF.01) shows cropmark of a curvilinear enclosure defined by a fosse. This is probably a ploughed out ringfort. Within rough pasture. No visible remains
DU014-108----	Enclosure	SANDYHILL	A circular enclosure visible as a crop mark on an aerial photograph (SMR file; pers. comm. T. Condit). Located at low point within field with quite stark undulations. Arable. No visible remains
DU014-109----	Enclosure	SANDYHILL	A sub-circular enclosure visible as a crop mark on an aerial photograph (SMR file; pers. comm. T. Condit). Located within relatively flat open field, No visible remains.

**Table 10.1** Sites on map sheet DU014

### Architectural heritage

ST. MARGARET'S, Saint Margaret's, DUBLIN

Reg No: 11348001

Rating Regional

Categories of Special Interest: Architectural, Artistic

Original Use: Graveyard/cemetery

In Use As: Graveyard/cemetery

Date: 1700 - 1740

Description: Graveyard with various cut-stone markers. Mausoleum with Serliana doorway having ornate marble frieze; date plaque, c.1746, and Latin inscription above architrave.

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## 15.0 Accident and Disaster Risk

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### 15.1 Introduction

This Chapter of the Environmental Impact Assessment Report (EIAR) assesses the potential significant impacts of the Aviation-Related Cargo Facility (hereafter referred to as the Proposed Development) on the environment, deriving from its vulnerability to risks of major accidents and disasters during the Construction Phase and Operational Phase. It evaluates the potential impacts of the development on such risks and outlines the methodology employed in the assessment. The principal attributes (and impacts) to be assessed include the following:

- Potential hazard arising from risk of major accident.
- Localised flooding (potential increase or reduction) and floodplains including benefitting lands and drainage districts (if any)
- Loss of containment of fuel/chemical materials

#### 15.1.1 Statement of Competency

This chapter was prepared by Martijn Leenheer with engineering input provided by Ian Worrell.

Martijn holds a 1st Class BSc (Hons) degree in Environmental Science from Atlantic Technological University (previously IT Sligo) and has 11 years' experience in Ireland in soil remediation, invasive species commercial Wastewater Treatment, Discharge Licences, Waste Permits and Licences has been involved in Risk Assessments, NIS and EIAR reports for various commercial projects. Before moving to Ireland Martijn worked in the Netherlands as an Environmental Field Technician in soil research. He has been an Operations Director of Environmental Services Consultancy for 11 Years and a Founding Director of ESC Environmental LTD since 2021.ian

### 15.1.2 Sources of Information

The development of the risk assessment methodology has been informed by the following guidelines:

- S.I. No. 291 of 2013 - Safety, Health and Welfare at Work (Construction) Regulations 2013 (as amended) (hereafter referred to as the Safety, Health and Welfare (Construction) Regulations)
- Number 10 of 2005 - Safety, Health and Welfare at Work Act 2005
- S.I. No. 138/2012 - Building Regulations (Part A Amendment) Regulations 2012 (as amended);
- S.I. No. 299/2007 - Safety, Health and Welfare at Work (General Application) Regulations 2007 (hereafter referred to as the Safety, Health and Welfare at Work (General Application) Regulations)
- EPA Guidelines (EPA 2022); Environmental Impact Assessment of Projects – Guidance on the Preparation of the Environmental Impact Assessment Report (European Commission 2017);
- IEMA Primer (IEMA 2020); A National Risk Assessment for Ireland 2020 (Government of Ireland 2020);
- Strategic Emergency Management National Structures and Framework (Department of Defence 2017)
- Guidance on Assessing and Costing Environmental Liabilities (EPA 2014)
- A Framework for Major Emergency Management. Guidance Document 10 (DECLG 2015)

The Department of Environment, Heritage and Local Government (DEHLG) A Framework for Major Emergency Management. A Guide to Risk Assessment in Major Emergency Management (Department of Environment, Heritage and Local Government (DEHLG 2010).

The following external plans and scheme-specific documents have also informed the assessment:

- Fingal County Council (FCC) Major Emergency Plan (FCC 2023)
- Construction and Environmental Management Plan including topics addressed as follows:
  - Construction and Demolition Resource
  - Waste Management
  - Construction Traffic Management

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Site specific data was derived from the following sources:

- Various design site plans and drawings
- Consultation with site engineers.

### 15.1.3 Guidelines and Legislation

#### Directive 2014/52/EU

Article 3 of Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (hereafter referred to as the Environmental Impact Assessment (EIA) Directive) requires for the assessment of expected effects of major accidents and disasters within environmental impact assessment (EIA).

Article 3(2) of the Directive states that the:

*'effects referred to in paragraph 1 on the factors set out therein shall include the expected effects deriving from the vulnerability of the project to risks of major accidents and/or disasters that are relevant to the project concerned.'*

#### Annex IV of the EIA Directive

In addition, Annex IV of the EIA Directive states that the EIAR shall contain:

*'A description of the expected significant adverse effects of the project on the environment deriving from the vulnerability of the project to risks of major accidents and/or disasters which are relevant to the project concerned. Relevant information available and obtained through risk assessments pursuant to Union legislation such as Directive 2012/18/EU of the European Parliament and of the Council or Council Directive 2009/71/Euratom or relevant assessments carried out pursuant to national legislation may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.'*

## 15.1.4 Regulatory and Technical Reference Framework

### EPA Guidelines (2022)

This assessment has been informed by the *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports* (EPA, 2022), which align with the requirements set out in Directive 2014/52/EU.

The EPA Guidelines elaborate on risk assessment under Section 3.7.3:

*"To address unforeseen or unplanned effects the Directive further requires that the EIAR takes account of the vulnerability of the project to risk of major accidents and /or disasters relevant to the project concerned and that the EIAR therefore explicitly addresses this issue. The extent to which the effects of major accidents and / or disasters are examined in the EIAR should be guided by an assessment of the likelihood of their occurrence (risk)... The potential for a project to cause risks to human health, cultural heritage or the environment due to its vulnerability to external accidents or disasters is considered where such risks are significant, e.g., the potential effects of floods on sites with sensitive plants. Where such risks are significant then the specific assessment of those risks in the form of a Seveso Assessment (where relevant) or Flood Risk Assessment may be required. The EIAR should refer to those separate assessments while avoiding duplication of their contents."*

Additional reference materials include the Department of the Environment, Heritage and Local Government (DoEHLG) publication *Guide to Risk Assessment in Major Emergency Management* (2010) and the Office of Emergency Planning, Department of Defence (DOD) publication *A National Risk Assessment for Ireland* (2020). A consolidated list of national hazards can be found in Department of Defence (DOD) publication *A National Risk Assessment for Ireland* (2020).

Directive 2012/18/EU of the European Parliament and of the Council of 4 July 2012 on the control of major accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EU (hereafter referred to as the Seveso III Directive) is also considered in this assessment. S.I. No. 209/2015 – Chemical Act (Control of Major Accident Hazards Involving Dangerous Substances) Regulations 2015 (COMAH Regulations) transposed the Seveso III Directive into Irish law.

### The Seveso III Directive and the COMAH regulations

The Seveso III Directive and the COMAH Regulations outline the legal obligations for operators of industrial establishments where dangerous substances are stored. These establishments are referred to as Seveso

sites and are classified as Upper Tier or Lower Tier establishments. As per Regulation 25 of the COMAH Regulations, Upper Tier establishments are required to submit information regarding their operations to the Health and Safety Authority (HSA). Each Seveso site has a consultation zone which is the 'area liable to be affected by a major accident' at the site (Department of the Environment, Community and Local Government (DECLG 2015)).

Therefore, if a development falls within the specified consultation zone of a Seveso site, the HSA must be consulted. The Proposed Development does not fall within the consultation zone for any Seveso sites. However, a review of the potential for impacts on emergency response accesses to Seveso sites from their respective nearest hospital and fire stations was also undertaken.

## 15.1.5 Definitions

At the time of undertaking this assessment, no clear definition of the term 'major accident and / or disaster' has been outlined in the context of the EIA Directive. For the purpose of this assessment, the following definitions from the Institute of Environmental Management and Assessment (IEMA) Major Accidents and Disasters in EIA: A Primer (hereafter referred to as the IEMA Primer) (IEMA 2020) have been adopted:

Accident and Disaster Definitions	
Accident	Something that happens by chance or without expectation
Disaster	A natural hazard (e.g. earthquake) or a man-made/external hazard (e.g. act of terrorism) with the potential to cause an event or situation that meets the definition of a major accident
Major Accident	Events that threaten the immediate or delayed serious environmental effects to human health, welfare and/or require the use of resources beyond those of the client or its appointed representatives to manage. Whilst malicious intent is not accidental, the outcome (e.g. train derailment) may be the same and therefore many mitigation measures will apply to both deliberate and accidental events.
Risk	The likelihood of an impact occurring, combined with the effect or consequence(s) of the impact on a receptor if it does occur
Risk Event	An identified, unplanned event which is considered relevant to the Proposed Development and has the potential to result in a major accident

	and/or disaster, subject to assessment of its potential to result in a significant adverse effect on an environmental receptor
Vulnerability	Describes the potential for harm as a result of an event, for example due to sensitivity or value of receptors. In the context of the EIA Directive, the term refers to 'exposure and resilience' of the Proposed Scheme to the risk of a major accident and / or disaster. Vulnerability is influenced by sensitivity, adaptive capacity and magnitude of impact
Significant environmental Effect	Significant environmental effect (in relation to a major accident and / or disaster assessment) – includes the loss of life, permanent injury and temporary or permanent destruction of an environmental receptor which cannot be restored through minor clean-up and restoration.

In addition, a 'Significant' impact resulting from major accidents and / or disasters is identified if it meets the criteria for 'Significant', 'Very Significant' or 'Profound' under the EPA Guidelines (EPA 2022). The assessment of major accidents and disasters in this Chapter of the EIAR considers the occurrence of extreme and highly unlikely incidences. As such, it considers accident scenarios that would not reasonably be covered by the other topic assessments.

## 15.2 Methodology

The methodology for assessing potential risk associated with the Proposed Development is set out in three stages:

1. Identification and Screening
2. Risk Classification
3. Risk Evaluation

### 15.2.1 Identification and Screening

The first stage of the assessment is to identify potential unplanned risks that the Proposed Development may be vulnerable to. An initial list of relevant hazards which may make the Proposed Development vulnerable to major accidents and /or disasters was sourced through consultation with ESC Environmental and Mitchell Environmental (environmental specialists), Waterman Moylan engineering team and by consulting the guidelines and reference documentation and grouped into 'risk events'.

The list of potential risk events that could lead to major accidents and / or disasters was subjected to an initial screening assessment to identify those that meet the scoping criteria. Where appropriate, risk events were screened out of the assessment according to the following scoping criteria:

- Major accidents and / or disasters associated with Construction Phase and Operational Phase activities that fall within the scope of health and safety legislation and associated obligations
- Major accidents and / or disasters as a result of Seveso sites, for which the Proposed Development does not fall within the specified consultation distance for that Seveso site and for which the Proposed Scheme has no significant interaction with access to the designated hospital(s) and fire stations identified on a Seveso site's emergency plans
- Risk events where no 'source-pathway-receptor' linkage exists to result in a major accident and / or disaster (i.e. an oil spill occurring at an oil depot that is not located near to a watercourse and for which there is no pathway from source to receptor)
- Major accidents and / or disasters where risk events are not applicable to that geographic location (e.g. volcanic or seismic activity and risk of nuclear accidents in Ireland)
- Risk events in relation to users of the Proposed Development infrastructure (office and warehouse staff, visitors) during the Operational Phase, as the scope of this assessment for the Operational Phase relates to the provision of infrastructure only and not to the use of that infrastructure
- Risk events that possess low likelihood / low consequence, as they do not meet the criteria to be brought forward for further consideration (i.e. they do not meet the definition of a major accident and / or disaster), for example the risk of traffic accidents on the wider road network causing delays to Construction or Operational Phase vehicles
- Risk events that possess high likelihood / high consequence, as these would be considered high risk and unacceptable for the development of the Proposed Development
- Risk events in relation to existing emergency access arrangements and response plans for facilities along the route of the Proposed Development. Emergency accesses along the route of the Proposed Scheme will be retained insofar as is possible throughout the Construction Phase. Where construction works for the Proposed Scheme will interface with emergency access arrangements, the appointed contractor will consult with the affected landowners / site operators and the emergency services to agree, where required, alternative emergency access arrangements and changes to response plans for the duration of the works

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## 15.3 The Subject Development

The proposed development, subject of this EIAR is as follows –

Permission is sought for –

1. Construction of four aviation-related cargo handling units with ancillary office space:

- i. Unit 1: c.10,869.7 m<sup>2</sup> (including 940.9 m<sup>2</sup> office space)
- ii. Unit 2: c.9,151.3 m<sup>2</sup> (including 751.3 m<sup>2</sup> office space)
- iii. Unit 3: c.6,024.9 m<sup>2</sup> (including 497.7 m<sup>2</sup> office space)
- iv. Unit 4: c.8,577.7 m<sup>2</sup> (including 751.3 m<sup>2</sup> office space)

The proposed units will have an overall combined total gross floor area (GFA) of c. 34, 623.6 sq.m (alongside ancillary ESB substations, 4 no. security huts with a combined GFA of 30 sqm and pumphouses). The warehouses are c. 12m in height, with the office element being c. 3.3 m in height and located within a landscaped campus on a site of c. 10.7 Ha.

2. Provision of 390 car parking spaces, including 39 EV charging points, 19 accessible spaces, and 39 motorcycle bays.
3. Provision of 230 secure bicycle parking spaces, of which 100 are short stay spaces and 130 are sheltered long stay spaces.
4. Provision of approx. 77 truck parking spaces and 5 van spaces.
5. Hard and soft landscaping, new boundary treatments, including a c. 2m high System Wire Fence to site boundary.
6. Construction of new site entrance onto the R108.
7. Wastewater treatment plant and infiltration area for 250 PE.
8. All necessary site development and engineering and ancillary site works, including provision of ESB substations and switchrooms, sprinkler tanks and pumphouses, bin store and recycle store, lighting, signage, underground services, photovoltaic panel zones at roof level and sustainable drainage systems (SuDS).

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## 15.4 The Receiving Environment

The lands subject to this application are under the control of D.A. Terminal 3 Ltd within the overall Western Campus encompassing approx. 50 hectares. The subject site (as indicated in the site location map) targets approximately 10.7 hectares of that total.

Located west of the existing terminal complex and the active runway system, the site lies within 6 km of Swords and 9 km of Dublin City Centre. It is bounded by agricultural land to the south and west and the R108 and Dublin Airport infrastructure to the east. The site is generally level with no significant watercourses or flood risk, making it ideally suited for development. Its separation from densely populated residential areas limits the potential for significant human impact.

The layout and parcel boundaries have been mapped in detail in the architectural drawings, and have been verified for suitability against zoning, aviation safeguarding, and infrastructural feasibility criteria.

## 15.5 Predicted Impacts

Safety was the key consideration in the design of the proposed development. IAA SRD is the Irish Aviation safety regulator and is mandated to review and approve any proposed changes to the airfield infrastructure to ensure operational safety during both construction and on completion. It will ensure compliance with European Aviation Safety Authority (EASA) Regulations.

### Vulnerability of the Proposed Development to Natural Disasters

The Proposed Development is assessed as being at risk of minor impact from a variety of natural disasters during construction. The likelihood of such disasters occurring is assessed as unlikely (once in 10-100 years).

The operational Proposed Development is assessed as being at risk of minor impact from natural disasters, principally flooding and high winds. The likelihood of such disasters occurring is assessed as likely (once in 1-10 years).

### Vulnerability of the Proposed Development to Onsite Hazards

The Proposed Development is assessed as being at risk of minor impact from on-site risks, principally the risks of fire, explosion or other accidents, during construction. The likelihood of such disasters occurring is assessed as likely (once in 1-10 years). Once operational, the Proposed Development is assessed as being

at risk of minor impact from onsite hazards, road traffic accidents being considered the main threat. The likelihood of such disasters occurring is assessed as unlikely (once in 10-100 years).

#### Vulnerability of the Proposed Development to Offsite Hazards

The Proposed Development is assessed as being at risk of minor impact from offsite hazards during both construction and operation. The likelihood of such disasters occurring is assessed as unlikely (once in 10-100 years).

#### Vulnerability of the Offsite Receptors to the Proposed Development

Offsite receptors are assessed as being at risk of limited impact from the Proposed Development, in particular road traffic accidents, during construction. The likelihood of such disasters occurring is assessed as unlikely (once in 10-100 years).

Once operational the Proposed Development will improve the safety of offsite receptors. It will have no impacts outside the airport as there will be no change to aircraft operations or operational ground traffic generated as a result of the Proposed Development.

### 15.5.1 Water Bodies and Flood Risk

There is no risk of flooding affecting the site from fluvial or coastal sources, since the site lies within Flood Zone C (i.e. where the probability of flooding from rivers is less than 0.1% or 1 in 1000). This takes full account of historical flood risk data and of standard allowances to take account of climate change effects. The Western Campus has a drainage system on site and improves the surface water drainage on site, minimising the possibilities of flooding on site.

### 15.5.2 Seveso Sites

Seveso Sites are industrial facilities where the quantity and type of hazardous substances stored trigger specific safety regulations under EU legislation. These sites fall under the scope of the Seveso II and Seveso III Directives, including Council Directives 96/82/EC and 2003/105/EC, and more recently, Directive 2012/18/EU, implemented in Ireland via the Chemicals Act (Control of Major Accident Hazards involving Dangerous Substances) Regulations 2015 (COMAH Regulations).

Facilities are classified as Upper Tier or Lower Tier depending on the volume and nature of the hazardous substances present. The proposed development does not fall within the scope of the COMAH Regulations and is not classified as a Seveso site. It also has no operational or locational connection to any existing COMAH-regulated facility.

The application site is located within the Dublin Metropolitan Region (DMR) North Garda Division, which encompasses the Balbriggan, Ballymun, Coolock, and Raheny districts.

The nearest Upper Tier Seveso site is Exolum, situated c. 2.15km to the east of the subject lands. The closest Lower Tier site is the Huntstown Power Station, located c. 4.2km to the southwest.

Based on the separation distance between the Proposed Development and the nearest Seveso-designated sites, the potential for a major emergency arising in connection with such facilities is considered negligible and not relevant to the assessment of this project.

### 15.5.2 Seismic Activity

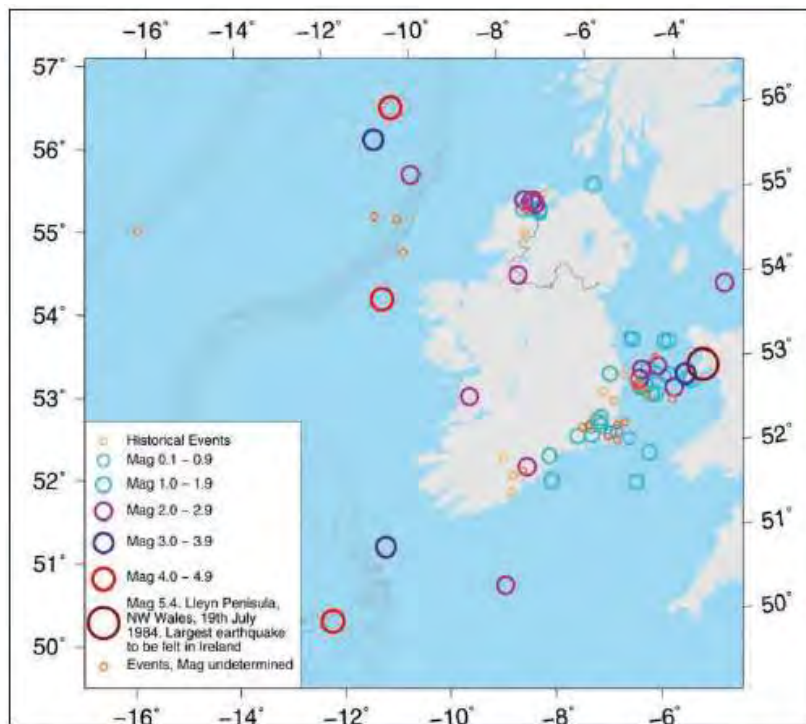
Much of the Earth's surface is covered by unconsolidated sediments which can be especially prone to instability. Water often plays a key role in lubricating the slope failure. Instability is often significantly increased by man's activities in building houses, roads, drainage and agricultural changes. Landslides, mud flows, bog bursts (in Ireland) and debris flows are a result.

In general, Ireland suffers few landslides. Landslides are more common in unconsolidated material than in bedrock, and where the sea constantly erodes the material at the base of a cliff landslides and falls lead to recession of the cliffs. Landslides have also occurred in Ireland in recent years in upland peat areas due to disturbance of peat associated with construction activities.

There are no active volcanoes in Ireland.

In Ireland, seismic activity is recorded by the Irish National Seismic Network. The Geophysics Section of the School of Cosmic Physics, Dublin Institute for Advanced Studies (DIAS) has been recording seismic events in Ireland since 1978. The station configuration has varied over the years. However, currently there are five permanent broadband seismic recording stations in Ireland including IWEX on Carrickbyrne Hill, Co.

Wexford, running from 01/01/2011 and operated by DIAS. The seismic data from the stations comes into DIAS in real-time and are studied for local and regional events.



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**Figure 15.1:** Seismic Activity in and around Ireland **Source:** Irish National Seismic Network

### 15.5.3 Outer Public Safety Zone (PSZ)

Public Safety Zones (PSZs) are designated areas surrounding airport runways, intended to limit the risk to people on the ground in the unlikely event of an aircraft incident during take-off or landing. These zones manage the type, scale, and density of development within defined boundaries to help ensure public safety.

At Dublin Airport, PSZs are set using quantified individual risk thresholds for fatality due to aircraft accidents:

**Inner PSZ:** 1 in 100,000 per year

**Outer PSZ:** 1 in 1,000,000 per year

The subject site for the Proposed Development is located partially within the Outer Public Safety Zone for Dublin Airport. This means that all buildings and operational areas fall within a zone where development must be carefully managed to maintain acceptable risk levels for those working on or visiting the site.

In the absence of formal national guidelines for detailed PSZ management, the Fingal County Development Plan provides relevant policy objectives. **Objective DAO18** seeks to *"promote appropriate land use patterns in the vicinity of the flight paths serving the Airport, having regard to the precautionary principle, based on existing and anticipated environmental and safety impacts of aircraft movements."* The Proposed Development aligns with this objective by providing a low-density, employment-focused use that is compatible with the Outer PSZ designation and avoids placing sensitive or high-density uses directly under flight paths.

In addition, **Objective DAO19** of the Development Plan supports the review of PSZs associated with Dublin Airport and confirms that until such time as formal Government guidance is issued, the Council will continue to rely on advice from the Irish Aviation Authority (IAA) when assessing development proposals within PSZ boundaries.

In line with best practice and the 2005 ERM Report on PSZs, development within the Outer PSZ must be restricted to uses that limit the concentration of people on site. For employment uses, an indicative maximum density of up to 110 persons per half hectare applies.

The proposed cargo handling facility has been purpose-designed as a low-density, aviation-related employment use, which is fully compatible with its location partially within and outside the Outer Public Safety Zone. Waterman Moylan, as the appointed project engineers, have determined that an acceptable employment capacity for the Proposed Development is 350 staff, which aligns with the precautionary approach and the indicative maximum density limits set out in the ERM Report (2005) and **Objective DAO18** of the Fingal County Development Plan.

The total number of employees on site will be actively managed to ensure that occupancy levels remain within this defined limit, thereby maintaining compliance with the relevant PSZ density parameters and any updated guidance or statutory policy that may be adopted in the future.

The applicant confirms their willingness to accept a planning condition requiring that all activities within the Outer PSZ operate within the employment density limits specified in the ERM report or any updated guidance that may replace it.

This approach ensures that the development promotes appropriate land use in the vicinity of airport flight paths, consistent with the precautionary principle set out in **Objective DAO18**, and that it remains compatible with aviation safety, public safety, and the efficient operation of Dublin Airport's airspace.

#### 15.5.4 Fire Risk

The proposed development holds combustible materials on site, and therefore there is a potential risk of fire or explosion occurring, causing health and safety risk to workers, contamination of surface waters and reduction in air quality. A fire on the subject site also has the potential to be detrimental to the wider airport in terms of smoke. The site has a detailed fire strategy and risk assessment report prepared to deal with any potential fire emergencies that can occur on site.

### 15.6 Mitigation and Monitoring Measures

#### 15.6.1 Water Bodies and Flood Risk

As stated in Section 15.4, there is limited potential for an impact on the site from flood risk. The proposed change in operation of the site includes an improvement of the surface water drainage on site and increasing the stormwater attenuation availability which will minimise the flooding potential significantly.

#### 15.6.2 Seismic Activity

There is no risk of seismic activity on site and therefore no mitigation measures or monitoring is necessary.

#### 15.6.3 Emergency procedures

An emergency will normally be detected by the Traffic Control Centre from the CCTV monitors, traffic loops, incident detector alarms or emergency roadside telephones.

The majority of incidents, such as vehicle breakdowns or shunt accidents, will not require more than the attendance of a traffic officer and a breakdown recovery vehicle. Traffic signing to close affected lanes and traffic control to deal with any build-up of traffic congestion downstream will be required.

Typically, immobilised vehicles will be towed out of the tunnel using wheel-lift towing trucks. Lifting of vehicles onto a flatbed may also be possible. On receipt of an incident report, or the observation of what is considered to be a major incident then it is proposed that the following emergency procedures shall be put into action:

Set traffic system to ALL TRAFFIC STOP to prevent traffic entering the tunnel

Telephone all relevant emergency services and inform them of the type and likely severity of the incident.

Advise if Fire and Ambulances services will be required

Telephone to inform the authorities which may need to be involved

#### 15.6.4 Fire risk

The Proposed Development will provide a detailed fire strategy and risk assessment report prepared to ensure the proper measures to prevent any major impacts from a fire subject to the grant of permission.

The primary objectives of the Fire Strategy & Risk Assessment Report will include the following:

- I. To arrange the premises so that the likelihood of a fire occurring is minimised;
- II. To arrange the premises so that the likelihood of a fire spreading is minimised;
- III. To provide the necessary training for employees to enable them to identify the type of fire and to select the appropriate fire-fighting equipment therefor;
- IV. To provide the necessary training for employees to enable them to control a fire utilising the appropriate fire-fighting equipment to hand;
- V. To aim to have any fire extinguished within four hours.

As part of the site-wide drainage strategy, surface water infrastructure has been designed to accommodate both stormwater attenuation and potential firewater containment. The system includes online detention basins, flow control devices (hydro-brakes), and petrol interceptors, providing a dual-function capacity to manage runoff volumes and reduce firewater-related environmental risks.

The attenuation network is divided into three catchments, with a total designed capacity to manage the 1 in 100-year storm event plus 20% climate change allowance. This level of provision supports the temporary

storage of firewater in the event of an incident, reducing the likelihood of uncontrolled discharge to receiving waters.

Fire risk is further mitigated by a dedicated 100 mm Ø looped fire main around each Cargo Unit, with hydrant spacing designed to ensure complete coverage. Sluice valves allow for sectional isolation during maintenance or emergency response.

Ongoing monitoring will include regular inspection of attenuation infrastructure, verification of overland flow routing, and scheduled testing of hydrants and pipework.

There has been no recorded fire event on the subject site however if a fire occurs, all aspects of the incident are the responsibility of the airport Fire and Rescue service under the control of the most senior Fire Officer present. In the event of a fire that requires the attendance of a Fire and Rescue vehicle, domestic fire tenders are to respond and would be adequate to deal with such a fire. In the event of an airfield emergency, all fire tenders would use the apron network fire routes as the fastest way to traverse the airfield (as per current protocols).

Further technical details on stormwater and firewater management are provided in the Engineering Assessment Report (EAR) prepared by Waterman Moylan.

### 15.6.5 Fire Safety and Emergency Response

It is proposed to install a ø100mm loop main around each Cargo Unit for firefighting purposes. Please refer to Waterman Moylan Drawings HT3-WAT-ZZ-XX-DR-P-0301-0303 for details of the watermain to serve the subject site. Dedicated sprinkler tanks are also proposed to support fire suppression measures. Fire hydrants will be strategically located along the fire main throughout the site and constructed in accordance with Part B of the Building Regulations. Installation will be subject to the agreement of both a qualified fire consultant and the local fire authority, as outlined by *Waterman Moylan* in the *Engineering Assessment Report*.

All buildings within the Proposed Development will be designed in compliance with applicable building and fire safety standards. This includes the provision of smoke ventilation systems, fire alarm installations, and emergency lighting. Comprehensive fire evacuation procedures will be developed, and designated fire assembly points will be clearly marked and accessible.

### Operational Energy and Materials Usage

The day-to-day requirement for energy includes for uses such as lighting, operation of drainage sump pumps, variable message signs, loudspeakers, CCTV, ventilation and other similar applications, also for emergency consumption such as pumps and valves for the fire-fighting system, emergency lighting etc.

## 15.7 Residual Impact

Appropriate health, safety, and environmental management measures will be implemented on site in accordance with the conditions of planning approval, applicable legislation, and recognised codes of practice.

Following the application of the mitigation strategies outlined in the relevant chapters of this EIAR, no credible risk scenarios—whether from major accidents or natural hazards—have been identified that would result in significant residual environmental impacts. This conclusion applies both to the Proposed Development in isolation and in the context of potential cumulative effects with other nearby projects.

### 15.7.1 Water Bodies and Flood Risk

Due to the limited potential for flooding on site, the residual impact from the changes in the existing facility are considered to be *long-term, neutral* and *negligible* in both the construction and operational phase.

### 15.7.2 Seismic Activity

As there is no potential for seismic effects, the residual impact on the site from seismic activity is considered to be *long-term, neutral* and *negligible* in both the construction and operational phase.

### 15.7.3 Fire risk

The facility will operate in line with the relevant fire safety plan associated with the proposed development, and therefore due to this, i.e. after the mitigation measures the residual impact from the site is considered to be *long-term, positive* and *moderate*.

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## 15.7 Challenges Encountered During Compilation

No difficulties were encountered in the preparation of this chapter.

## 15.8 References

- Environmental Protection Agency (EPA) Advice notes on current practice in the preparation of Environmental Impact Statement (EPA, 2015)
- Guidelines on the Information to be contained in Environmental Impact Statements (EPA, 2022).
- Environmental Impact Assessment of Projects, Guidance on the preparation of the Environmental Impact Assessment Report (European Commission, 2017)
- Reducing Risks Protecting People (UK HSE, 2001)
- Office of Public Works (OPW) flood mapping data ([www.floodmaps.ie](http://www.floodmaps.ie))
- Major Accident Prevention Policy for Unilin Limited, Navan, Co. Meath
- environmental risk assessment methodology recommended by the Chemical and Downstream Oil Industries Forum (CDOIF, 2017)
- Geophysics Section, Dublin Institute

## 16.0 Interactions & Cumulative Effects

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### 16.1 Introduction

In accordance with the Planning and Development Regulations and the EPA's *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports* (2022), this chapter identifies and evaluates the potential interactions between environmental factors associated with the Proposed Development. While each environmental topic has been assessed separately in the relevant chapters of this EIAR, it is essential to recognise that the Proposed Development could give rise to interactions that may amplify or reduce the overall magnitude of impacts.

This chapter addresses these interrelationships, ensuring that combined or cumulative effects are fully considered. The assessment has been guided by Article 3(1)(e) of the EIA Directive 2014/52/EU, which requires an evaluation of interactions between population and human health, biodiversity, land, soil, water, air, climate, material assets, cultural heritage, and landscape.

#### 16.1.1 Quality Assurance and Competency of Experts

This chapter was prepared by has been prepared by Martijn Leenheer, Environmental Consultant within the EIA Team at CWPA. Martijn Leenheer. Martijn holds a 1st Class BSc (Hons) degree in Environmental Science from Atlantic Technological University (previously IT Sligo) and has 11 years' experience in Ireland in soil remediation, invasive species commercial Wastewater Treatment, Discharge Licences, Waste Permits and Licences has been involved in Risk Assessments, NIS and EIAR reports for various commercial projects. Before moving to Ireland Martijn worked in the Netherlands as an Environmental Field Technician in soil research. He has been an Operations Director of Environmental Services Consultancy for 11 Years and a Founding Director of ESC Environmental LTD since 2021.

This chapter was reviewed by Rachel Kenny, EIA Lead at CWPA, BE, MRUP, FIPI. Rachel Kenny is a senior planning consultant with CWPA, Planning & Architecture consultancy, and has 30 years' experience as a planner in public and private sector organisations, including Fingal, Meath and Louth County Council and An Bord Pleanála (as Director of Planning). She holds a degree in Civil Engineering (be (Civil) (Hons) and Masters in Regional and Urban Planning (MRUP), both from University College Dublin. She is a fellow and corporate member of the Irish Planning Institute. She has experience in both forward planning and

development management, and specialises in, inter alia, Strategic Infrastructure Development, and large scale EIAR projects.

## 16.2 Study Methodology

The identification of interactions was integrated throughout the EIAR process through close collaboration between the design team and specialist consultants. Regular information exchanges and iterative design refinements ensured that potential cross-topic effects were assessed and managed appropriately. A matrix has been developed to illustrate where significant interactions between topics have been addressed and to highlight any key dependencies, especially between the phases of the Proposed Development.

## 16.3 Interactions

**Population and Human Health** may be indirectly affected by interactions with **air quality, noise and vibration, traffic**, and **hydrology**. For example, dust emissions, noise during construction, and potential pollution events could collectively impact residential amenity and workforce health. However, robust mitigation measures including dust control, traffic management, and surface water controls have been proposed to ensure no significant residual impacts arise.

**Biodiversity** could be affected by interactions with **land and soils, hydrology**, and **noise and vibration**, given that changes to soil management, surface water runoff, or excess noise may impact local habitats or protected species. Mitigation measures such as silt control, buffer zones, and noise limits will reduce these risks.

**Land and Soils** are influenced by interactions with **population and health** (e.g., dust), **hydrology** (e.g., sediment-laden runoff), and **traffic** (e.g., HGV movements for surplus soil removal). Excavation, re-use, and disposal are managed under the CEMP and best practice guidelines.

**Hydrology and Hydrogeology** interact with **population, biodiversity, land**, and **material assets**, as surface water quality is critical for protecting local ecosystems, preventing human health risks, and ensuring drainage infrastructure operates effectively.

**Air Quality and Climate** are primarily influenced by construction activities, vehicle emissions, and energy use. Interactions with **population and human health, traffic**, and **biodiversity** are addressed through site-specific measures including emissions control and fleet management.

**Noise and Vibration** interact with **population, traffic,** and **biodiversity,** particularly during the construction phase when heavy machinery and vehicle movements occur. The design and operational management aim to limit noise emissions to acceptable thresholds.

**Material Assets** such as waste and utilities interact with **population, biodiversity, land,** and **hydrology,** where poor waste handling could affect soils, watercourses, or local communities. Mitigation follows the CEMP, the OWMP, and relevant codes of practice.

**Traffic and Transport** interact with **air quality, noise,** and **land and soils,** due to increased vehicle movements during construction and operation. These effects are mitigated through phased logistics planning and infrastructure upgrades.

The following matrix has been produced to show where potential significant interactions between effects on different factors have been addressed, see Table 16.1.

Table 16.1 Interactions

Table 16.1: Interactions between Factors

Interaction	Population and Human Health	Biodiversity	Land and Soils	Hydrology and Hydrogeology	Air Quality and Climate	Noise and Vibration	Landscape and Visual Impact	Material Assets	Traffic and Transport	Archaeology and Cultural Heritage
Population and Human Health	N/A	No Interaction	Potential Interaction	Potential Interaction	Potential Interaction	Potential Interaction	Potential Interaction	Potential Interaction	Potential Interaction	No Interaction
Biodiversity	No Interaction	N/A	Potential Interaction	Potential Interaction	Potential Interaction	Potential Interaction	Potential Interaction	Potential Interaction	Potential Interaction	No Interaction
Land and Soils	No Interaction	Potential Interaction	N/A	Potential Interaction	No Interaction	No Interaction	Potential Interaction	Potential Interaction	No Interaction	No Interaction
Hydrology and Hydrogeology	Potential Interaction	Potential Interaction	Potential Interaction	N/A	No Interaction	No Interaction	No Interaction	Potential Interaction	No Interaction	No Interaction
Air Quality and Climate	Potential Interaction	Potential Interaction	Potential Interaction	No Interaction	N/A	No Interaction	No Interaction	No Interaction	Potential Interaction	No Interaction
Noise and Vibration	Potential Interaction	Potential Interaction	No Interaction	No Interaction	No Interaction	N/A	No Interaction	No Interaction	Potential Interaction	No Interaction
Landscape and Visual Impact	Potential Interaction	No Interaction	Potential Interaction	No Interaction	No Interaction	No Interaction	N/A	No Interaction	No Interaction	No Interaction
Material Assets	Potential Interaction	No Interaction	Potential Interaction	Potential Interaction	No Interaction	No Interaction	No Interaction	N/A	No Interaction	No Interaction
Traffic and Transport	Potential Interaction	Potential Interaction	No Interaction	No Interaction	Potential Interaction	Potential Interaction	No Interaction	No Interaction	N/A	No Interaction
Archaeology and Cultural Heritage	No Interaction	No Interaction	No Interaction	No Interaction	No Interaction	No Interaction	No Interaction	No Interaction	No Interaction	N/A

No Interaction	No Interaction
Potential Interaction	Potential Interaction
N/A	N/A

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Please find below the interaction's summary tables.

Table 16.2 Population and Human Health

Population and Human Health
<b>Summary</b>
Chapter 5 of this EIAR, titled <i>Population and Human Health</i> , outlines the potential direct and indirect impacts of the Proposed Development on the local population and human health, and identifies any necessary mitigation measures, where applicable.
<b>Interactions</b>

<p><b>Hydrology &amp; Hydrogeology</b></p>	<p>Pollution incidents have the potential to affect water quality, which in turn could pose risks to human health in the surrounding area. To mitigate this risk, appropriate surface water management measures will be incorporated into the Proposed Development. No public health concerns related to water quality have been identified for either the construction or operational phases of the development. As there are no likely significant adverse effects in relation to hydrology, no consequential impacts on population and human health are anticipated. A comprehensive assessment of hydrological impacts is provided in Chapter 8 of this EIAR.</p>
<p><b>Air Quality and Climate</b></p>	<p>The relationship between air quality and population and human health has been assessed, particularly in the context of the operational phase, which has the potential to generate air quality impacts from dust nuisance and traffic-related emissions. As outlined in Chapter 9, the Proposed Development is predicted to have a negligible long-term impact on air quality and climate during operation. Traffic-derived pollutants have been classified as having a slight impact and, as such, are not expected to result in any significant adverse effects on population and human health.</p>
<p><b>Noise and Vibration</b></p>	<p>Noise exposure can lead to various human health effects, including annoyance, sleep disturbance, elevated stress levels, and disruptions to work - particularly for commercial receptors and individuals working from home. Construction and operational noise, along with associated traffic movements, have the potential to affect the health and well-being of nearby residents. While such interactions have been identified, no significant adverse effects on population and human health are anticipated. Further detail is provided in Chapter 10.</p>
<p><b>Landscape and Visual Impact</b></p>	<p>Changes to the visual character of the site resulting from the Proposed Development have the potential to affect local visual amenity. However, as assessed in Chapters 5 (<i>Population and Human Health</i>) and 11 (<i>Landscape and Visual Impact</i>), the site is located at a substantial distance from residential receptors and within a landscape context characterised by rural and airport-related uses. As such, no significant visual impacts on population or human health are anticipated.</p>
<p><b>Material Assets</b></p>	<p>The Proposed Development includes connections to public utilities and infrastructure, such as water supply, foul drainage, power, and telecommunications. Disruption or failure of these services during construction could affect the local population. However, as outlined in Chapters 5 (<i>Population and Human Health</i>) and 12 (<i>Material Assets</i>), all utility works will be undertaken in accordance with relevant statutory consents and best practice construction methods, ensuring continuity of service. Therefore, no significant impacts on human health or wellbeing are expected as a result of interactions with material assets.</p>
<p><b>Traffic and Transport</b></p>	<p>Construction and operational phases of the Proposed Development will generate additional traffic movements, with potential implications for population and human health in relation to the capacity and functioning of the surrounding road network. However, the overall impact on local transportation infrastructure is not considered significant, and therefore no</p>

	significant effects on population and human health are anticipated. Refer to Chapter 13 for further details.
<b>Conclusions</b>	The potential impacts on population and human health have been addressed in the relevant chapters referenced above. The implementation of appropriate mitigation measures as part of the Proposed Development will ensure that no significant adverse effects arise.

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Table 16.3 Biodiversity

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Biodiversity	
<b>Summary</b>	
Chapter 6 of this EIA, <i>Biodiversity</i> , outlines the potential direct and indirect impacts of the Proposed Development on local flora and fauna, and identifies any necessary mitigation measures, where appropriate.	
<b>Interactions</b>	
<b>Land and Soil</b>	Chapter 7 of this EIA, <i>Land, Soil and Geology</i> , presents an assessment of the potential impacts of the Proposed Development on the existing land, soils, and geological environment. Particular emphasis is placed on the excavation and reuse of material, as well as the potential for accidental release of contaminants to ground during the operational phase. Appropriate mitigation measures to address these potential impacts are also detailed within Chapter 7.
<b>Hydrology and Hydrogeology</b>	Chapter 8 of this EIA provides an assessment of the potential impacts of the Proposed Development on the hydrological and hydrogeological environment. The chapter outlines procedures for managing surface water run-off containing silt, addressing potential fuel or contaminant spills or leakages, and ensuring the protection of nearby watercourses.
<b>Air Quality and Climate</b>	Dust and traffic-related emissions during the construction phase have the potential to affect nearby habitats and species. However, as assessed in Chapters 6 ( <i>Biodiversity</i> ) and 9 ( <i>Air Quality and Climate</i> ), predicted air quality impacts are minor and short-term, with mitigation measures in place to control dust and emissions. As such, no significant impacts on biodiversity are anticipated as a result of air quality or climate effects from the Proposed Development.
<b>Noise and Vibrations</b>	Chapter 10 of this EIA, <i>Noise and Vibration</i> , sets out the assessment of potential impacts arising from excess noise and vibration associated with the Proposed Development. These impacts are of relevance to the ecological sensitivities identified within and surrounding the Subject Site, as discussed in <i>Biodiversity</i> Chapter 6.
<b>Traffic &amp; Transport</b>	Increased vehicle movements during the construction and operational phases have the potential to disturb local fauna or contribute to habitat fragmentation. However, as assessed in Chapters 6 ( <i>Biodiversity</i> ) and 13 ( <i>Traffic and Transport</i> ), construction traffic will be confined to established routes, and no sensitive ecological receptors are located in areas subject to significant traffic increases. As such, no significant impacts on biodiversity are anticipated as a result of traffic and transport associated with the Proposed Development.
<b>Conclusions</b>	Potential significant impacts have been identified in relation to Land and Soils, Hydrology, and Noise and Vibration. Corresponding mitigation measures are detailed in Chapters 7, 8, and 10 respectively.

Table 16.4 Land and Soils

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Land, Soils and Geology	
<b>Summary</b>	
<b>Chapter 7 of this EIAR, <i>Land, Soils and Geology</i> outlines the direct and indirect effects of the Proposed Development on the local land, soils, and geological environment, and specifies any necessary mitigation measures. Several potential pollutants linked to both the construction and operational phases have been identified as having the potential to impact the environment.</b>	
<b>Interactions</b>	
<b>Population and Human Health</b>	During the Construction Phase, dust generated from excavation and soil stockpiling may pose a potential risk to human health if not properly managed. However, standard avoidance and mitigation measures will be implemented to protect human health. Furthermore, appropriate industry standards and health and safety legislation will be strictly adhered to, ensuring the safety of site workers throughout construction.
<b>Biodiversity</b>	Chapter 6 of this EIAR assesses the potential impacts of the Proposed Development on site biodiversity, focusing on habitats, flora, and fauna that may be affected by excavation and material importation. The chapter also evaluates effects on habitats and species protected under national and international legislation or of significant conservation value and outlines proposed mitigation measures to address these impacts.
<b>Hydrology and Hydrogeology</b>	Chapter 8 of this EIAR provides an assessment of the potential impacts of the Proposed Development on the hydrological and hydrogeological environment. Without appropriate avoidance, remedial, and mitigation measures, excavations during construction could create pathways allowing contaminants in shallow soils to reach underlying groundwater. Procedures to protect the receiving water environment are detailed within Chapter 8.
<b>Air Quality and Climate</b>	Excavation and temporary stockpiling of soils on-site may generate nuisance impacts, such as dust, during the Construction Phase of the Proposed Development. Chapter 9 of this EIAR presents an assessment of the potential impacts on air quality and climate.
<b>Landscape and Visual</b>	Throughout the construction and operational phases, the site landscape will transition from undeveloped land to a light industrial use with associated landscaping. Chapter 11 of this EIAR provides an assessment of the potential impacts of the Proposed Development on the receiving landscape.
<b>Material Assets</b>	Excavation and groundworks required for connections to material assets such as the wastewater treatment network and ESB substations may interact with underlying soils and geological conditions. As assessed in Chapters 7 ( <i>Land, Soils and Geology</i> ) and 12 ( <i>Material Assets</i> ), these works will be carried out following geotechnical best practices and in compliance with utility provider requirements. No significant impacts on soil stability or geological integrity are anticipated as a result of interactions with utility infrastructure.
<b>Conclusions</b>	Potential impacts have been identified in the relevant chapters referenced above. The mitigation measures detailed within the Construction Environmental Management Plan (CEMP) and the respective chapters will ensure that no significant adverse effects occur on the receiving land, soils, and geology during both the construction and operational phases of the Proposed Development.

Table 16.5 Hydrology and Hydrogeology

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Hydrology and Hydrogeology	
<b>Summary</b>	
<b>Chapter 8 of this EIAR, <i>Hydrology and Hydrogeology</i>, provides an assessment of the potential impacts of the Proposed Development on hydrology, water and hydrogeology and sets out any required mitigation measures where appropriate. Consideration is given to habitats and species protected by national and international legislation or considered to be of particular conservation importance.</b>	
Interactions	
Population and Human Health	Chapter 5 of this EIAR includes an assessment of the potential effects of the Proposed Development on human health. Incidents of pollution can affect water quality, which in turn may pose risks to the health of nearby populations. To mitigate this, effective surface water management measures will be implemented as part of the Proposed Development. In addition, all construction activities will adhere to relevant industry standards and health and safety legislation to ensure the protection of all site personnel.
Biodiversity	Chapter 6 of this EIAR presents an assessment of the potential impacts of the Proposed Development on the Site’s biodiversity, with particular focus on habitats, flora, and fauna that may be affected by excavation activities and the importation of materials. The chapter also evaluates the potential effects on habitats and species of national and international conservation importance, including those protected by legislation, and outlines appropriate mitigation measures to minimise these impacts.
Lands, Soil and Geology	Chapter 7 of this EIAR assesses potential impacts on land and soils, including risks from contaminated runoff during heavy rainfall events during construction earthworks. Mitigation measures overlap with those in Chapter 8 ( <i>Hydrology and Hydrogeology</i> ), where surface water runoff is controlled via flow-restricting devices (e.g. Hydro-Brake) and attenuation systems beneath grassed detention basins. Strict separation of surface and foul water systems will be implemented to prevent cross-contamination. Fuel and chemical storage in bunded areas, off-site refuelling, and silt control measures (e.g. fencing, sediment traps, buffer zones) will limit soil and water pollution risks. These integrated measures will ensure no significant adverse interactions between soil management and surface water controls.
Material Assets	Chapter 12 of this EIAR outlines the assessment of potential impacts of the Proposed Development on material assets, including waste, utilities, and existing built services and infrastructure. One identified risk is the accumulation of excess silt from construction runoff in the existing drainage network, which could reduce its capacity. To address this, standard pollution control measures will be implemented to manage contaminated runoff and protect the functionality of drainage systems throughout the construction phase.
Conclusions	The protective, avoidance, and mitigation measures specified in the Construction Environmental Management Plan (CEMP) will ensure that the Proposed Development is not anticipated to result in any likely significant adverse effects.

Table 16.6 Air Quality and Climate

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Air Quality and Climate	
<b>Summary</b>	
<b>Chapter 9 of this EIAR, <i>Air Quality and Climate</i>, assesses the potential impacts of the Proposed Development on ambient air quality and climate, and outlines mitigation measures where required.</b>	
<b>Interactions</b>	
Population and Human Health	Interactions between air quality and population and human health have been considered, given the potential for dust and traffic-related emissions to impact health. However, the implementation of mitigation measures will ensure compliance with ambient air quality standards, preventing any adverse effects on human health. Traffic-derived pollutants have been assessed and deemed to have an overall insignificant impact; therefore, no significant air quality-related effects on population and human health are anticipated.
Biodiversity	During the construction phase, dust emissions have the potential to affect flora and fauna in adjacent habitats and designated sites. However, the mitigation measures implemented as part of the Proposed Development will ensure that any such impacts are not significant.
Traffic and Transport	Interactions between air quality, climate, and traffic can occur due to emissions from traffic-related pollutants. However, the current assessment has determined that these pollutants will not result in significant impacts. Consequently, the interaction between air quality and climate is considered not significant.
Conclusions	The mitigation measures implemented as part of the Proposed Development will ensure that no significant environmental impacts arise.

Table 16.7 Noise and Vibration

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Noise and Vibration	
<b>Summary</b>	
<p><b>Chapter 10 of this EIAR, <i>Noise and Vibration</i>, assesses the likely noise impacts of the Proposed Development and outlines mitigation measures as required. Construction-phase noise is not expected to adversely affect biodiversity, and operational machinery noise will not result in significant off-site impacts. Mitigation and monitoring measures will be implemented to further minimise noise emissions.</b></p>	
<b>Interactions</b>	
<b>Population and Human health</b>	<p>Noise and vibration during the construction phase may cause temporary nuisance at nearby sensitive receptors. However, with the implementation of mitigation measures and best practice noise controls, residual impacts on human health are expected to be negative, short-term, and not significant to moderate. As construction activities are of limited duration, any elevated noise levels are unlikely to pose a risk to human health. In relation to construction workers, the appointed contractor will be required to comply with the Safety, Health and Welfare at Work (General Application) Regulations 2007 (S.I. No. 299 of 2007), which set permissible noise exposure limits and require mitigation where necessary.</p> <p>During the operational phase, appropriate siting and selection of mechanical plant will ensure compliance with noise criteria, resulting in imperceptible impacts at sensitive locations. External noise sources have been assessed, and mitigation measures will ensure that internal noise levels remain within acceptable limits, with residual impacts considered not significant.</p>
<b>Biodiversity</b>	<p>Noise and vibration generated during the construction and operational phases of the Proposed Development have the potential to interact with local fauna. However, as assessed in Chapters 6 (<i>Biodiversity</i>) and 10 (<i>Noise and Vibration</i>), predicted noise levels are not expected to result in disturbance to species or designated ecological sites. Therefore, no significant impacts on biodiversity are anticipated from noise and vibration associated with the Proposed Development.</p>
<b>Traffic and Transport</b>	<p>Noise and vibration impacts associated with the Proposed Development have been fully assessed in Chapter 10 (<i>Noise and Vibration</i>) of this EIAR. Traffic flow projections, as outlined by the transport consultants in Chapter 13 (<i>Traffic and Transportation</i>), have informed both the construction and operational noise modelling. Traffic associated with the development has the potential to contribute to increased noise and vibration levels along local routes; however, predicted impacts are within acceptable thresholds. With the implementation of appropriate traffic management and noise</p>

	control measures, no significant noise or vibration effects related to traffic are anticipated.
<b>Conclusions</b>	Noise from operational plant and machinery is not expected to result in significant adverse impacts beyond the site boundary. Mitigation and monitoring measures will be implemented to further minimise potential noise emissions from the Proposed Development.

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Table 16.8 Landscape and Visual

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Landscape and Visual	
<b>Summary</b>	
<b>Chapter 11 of this EIA, <i>Landscape and Visual Impact</i>, provides a detailed description and assessment of the likely effects of the Proposed Development on the character of the landscape and the visual amenities of the surrounding area.</b>	
<b>Interactions</b>	
<b>Population and Human Health</b>	The Proposed Development, by virtue of its visual character and in the context of the site's designated zoning (DA) and the predominantly rural and airport-related landscape setting, is not anticipated to result in any adverse visual impacts on the local residential population, given the site's considerable separation from existing residential receptors.
<b>Biodiversity</b>	The proposed landscaping strategy will interact with the site's biodiversity and ecological profile through alterations to existing habitats and vegetation. These modifications will involve both the removal and introduction of plant species, thereby influencing the site's ecological character. However, given that the site is currently of low ecological value, the proposed landscaping works are not expected to result in any significant adverse ecological effects.
<b>Land and Soil</b>	The Proposed Development will involve excavation and infilling activities to modify ground levels across the site, which will in turn influence the site's landscape character and visual profile through alterations to existing topography.
<b>Conclusions</b>	No significant interactive effects on the landscape character or visual receptors in the surrounding environment are anticipated as a result of the Proposed Development.

Table 16.9 Material Assets

Material Assets	
<b>Summary</b>	
<p><b>Chapter 12 of this EIAR, <i>Material Assets</i>, provides an assessment of the potential impacts of the Proposed Development on material assets, including existing built services and infrastructure.</b></p>	
<b>Interactions</b>	
Population and Human Health	In the absence of appropriate mitigation, improper removal, handling, or storage of waste during construction could pose a risk to the health and safety of construction personnel. Additionally, any potential for temporary disruption to power, telecommunications, water supply, or wastewater services, may adversely affect the surrounding population and their overall well-being. However, Chapter 5 ( <i>Population and Human Health</i> ) of this EIAR concludes that no long-term adverse effects on population or human health are anticipated as a result of the Proposed Development.
Biodiversity	Improper handling and storage of waste during the Construction and Operational phases have the potential to adversely affect biodiversity. These potential impacts are assessed in Chapter 6 ( <i>Biodiversity</i> ) of this EIAR.
Land, Soils and Geology	Improper handling and segregation of hazardous or contaminated waste may result in contamination of excavated soil and stone materials. Potential impacts on land and soil are assessed in Chapter 7 ( <i>Land and Soils</i> ) of this EIAR.
Hydrology and Hydrogeology	All connections to the public water network—whether for water supply or foul sewer—along with any water abstractions and discharges during the Construction and Operational phases, will be subject to consent from Uisce Éireann. An assessment of the potential impacts of the Proposed Development on water resources is provided in Chapter 8 ( <i>Hydrology and Hydrogeology</i> ) of this EIAR.
Conclusions	Following the implementation of all mitigation measures outlined in the relevant chapters of this EIAR, no significant residual impacts are anticipated on material assets, specifically waste management and utilities infrastructure.

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Table 16.10 Transport and Traffic

Traffic and Transport	
<b>Summary</b>	
<b>Chapter 13 of this EIAR, <i>Traffic and Transport</i>, presents an assessment of the potential impacts of the Proposed Development on the local and regional traffic network.</b>	
<b>Interactions</b>	
<b>Population and Human Health</b>	Increased traffic volumes associated with the Proposed Development during both the construction and operational phases have the potential to impact population and human health through increased noise, air emissions, and temporary disruption to local access and connectivity. Chapter 5 ( <i>Population and Human Health</i> ) confirms that no long-term or adverse health effects are anticipated. The implementation of construction traffic management measures, including controlled HGV routing and scheduling, will minimise disruption to the local population and ensure that residual impacts on human health remain not significant.
<b>Biodiversity</b>	During operational and construction phase, increased vehicle movements may lead to habitat fragmentation. Potential pollutants from vehicle emissions may also impact adjacent habitats. Mitigation measures are described in Chapter 6 of this EIAR.
<b>Air Quality and Climate</b>	Emissions associated with increased traffic volumes generated during both the construction and operational phases of the Proposed Development may result in pollutant release. A detailed assessment of the potential impacts on air quality and climate is provided in Chapter 9 of this EIAR. The contribution of traffic-related emissions to air quality and climate impacts has been assessed and determined to be not significant.
<b>Noise and Vibration</b>	Noise and vibration impacts may result from increased traffic associated with the Proposed Development during both the construction and operational phases. A comprehensive assessment of potential noise and vibration effects is presented in Chapter 10 of this EIAR.

<b>Conclusions</b>	Following the implementation of all mitigation measures outlined in the relevant chapters of this EIAR, no significant residual impacts on traffic and transport are anticipated.
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Table 16.11 Archaeology and Cultural Heritage

<b>Archaeology and Cultural Heritage</b>	
<b>Summary</b>	
<b>Chapter 14 of the EIAR, <i>Archeology and Cultural Heritage</i>, provides information on the known architectural, archaeological, and cultural heritage sites in the study area.</b>	
Interactions – No Interactions.	
<b>Conclusions</b>	<p>No significant interactions with other environmental topics have been identified in relation to <i>Archaeology and Cultural Heritage</i>.</p> <p>Site investigations confirmed that no archaeological features or evidence were present within the subject site at the time of assessment. As such, no interactions with other EIAR chapters are anticipated. However, in the event that archaeological material is uncovered during excavation works, appropriate mitigation measures, such as preservation by record will be implemented in consultation with the relevant authorities.</p>

## 16.4 Conclusions

The Proposed Development is supported by robust mitigation measures across disciplines, ensuring that combined impacts do not result in significant adverse effects. Effective design integration and a comprehensive CEMP will ensure that interactions between topics such as population, biodiversity, soils, hydrology, air quality, and traffic are responsibly managed.

Ongoing monitoring will verify that the proposed measures remain effective throughout the construction and operational phases, safeguarding both environmental quality and public health in line with national and local planning policy.