Appendix E - Resource & Waste Management Plan

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RESOURCE WASTE MANAGEMENT PLAN FOR A PROPOSED DATA REPOSITORY FACILITY, UNIT 1 M50 BUSINESS PARK, BALLYMOUNT, DUBLIN 12

Report Prepared For

Creighton Properties LLC

Report Prepared By

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1.0 INTRODUCTION

AWN Consulting Ltd. (AWN) has prepared this Resource Waste Management Plan (RWMP) on behalf of Creighton Properties LLC . The proposed development includes the change of use from warehouse to data repository facility, alterations to external facades, reclad roof, internal alterations, refurbishment of the existing office space, solar panels at roof level, external plant and equipment to include 12 no. condenser modules, an emergency back-up generator and associated fuel storage tank, transformer, extension to the existing sub-station (c. 13 m^2), 2 no. sprinkler tanks and pumphouse and all associated site works on a site at Unit 1, M50 Business Park, Ballymount Avenue, Dublin 12.

This plan will provide information necessary to ensure that the management of Construction & Demolition (C&D) waste at the site is undertaken in accordance with the current legal and industry standards including the *Waste Management Act 1996* as amended and associated Regulations [1], *Environmental Protection Agency Act 1992* as amended [2], *Litter Pollution Act 1997* as amended [3] and the *Eastern-Midlands Region Waste Management Plan 2015 – 2021* [4]. In particular, this plan aims to ensure maximum recycling, reuse and recovery of waste with diversion from landfill, wherever possible. It also seeks to provide guidance on the appropriate collection and transport of waste from the site to prevent issues associated with litter or more serious environmental pollution (e.g. contamination of soil and/or water).

This RWMP includes information on the legal and policy framework for C&D waste management in Ireland, estimates of the type and quantity of waste to be generated by the Proposed Development and makes recommendations for management of different waste streams. The RWMP should be viewed as a live document and will be regularly revisited throughout a project's lifecycle so that opportunities to maximise waste reduction / efficiencies are exploited throughout, and that data is collected on an ongoing basis so that it is as accurate as possible

2.0 CONSTRUCTION AND DEMOLTION RESOURCE & WASTE MANAGEMENT IN IRELAND

2.1 National Level

The Irish Government issued a policy statement in September 1998, *Changing Our Ways* [5], which identified objectives for the prevention, minimisation, reuse, recycling, recovery and disposal of waste in Ireland. The target for C&D waste in this report was to recycle at least 50% of C&D waste within a five year period (by 2003), with a progressive increase to at least 85% over fifteen years (i.e. 2013).

In response to the *Changing Our Ways* report, a task force (Task Force B4) representing the waste sector of the already established Forum for the Construction Industry, released a report entitled '*Recycling of Construction and Demolition Waste'* [6] concerning the development and implementation of a voluntary construction industry programme to meet the Government's objectives for the recovery of C&D waste.

In September 2020, the Irish Government published a policy document outlining a new action plan for Ireland to cover the period of 2020-2025. This plan, *'A Waste Action Plan for a Circular Economy'* [7] (WAPCE), replaces the previous national waste management plan, *"A Resource Opportunity"* (2012), and was prepared in response to the 'European Green Deal' which sets a roadmap for a transition to an altered economical model, where climate and environmental challenges are turned into opportunities.

The WAPCE sets the direction for waste planning and management in Ireland up to 2025. This reorientates policy from a focus on managing waste to a much greater focus on creating circular patterns of production and consumption. Other policy statements of a number of public bodies already acknowledge the circular economy as a national policy priority.

The policy document contains over 200 measures across various waste areas including circular economy, municipal waste, consumer protection and citizen engagement, plastics and packaging, construction and demolition, textiles, green public procurement and waste enforcement.

One of the first actions to be taken was the development of the Whole of Government Circular Economy Strategy 2022-2023 'Living More, Using Less' (2021) [8] to set a course for Ireland to transition across all sectors and at all levels of Government toward circularity and was issued in December 2021. It is anticipated that the Strategy will be updated in full every 18 months to 2 years.

The Environmental Protection Agency (EPA) of Ireland issued *'Best Practice Guidelines for the Preparation of Resource & Waste Management Plans for Construction & Demolition Projects' in November 2021* [9]. These guidelines replace the previous 2006 guidelines issued by The National Construction and Demolition Waste Council (NCDWC) and the Department of the Environment, Heritage and Local Government (DoEHLG) in 2006 [10]. The guidelines provide a practical approach which is informed by best practice in the prevention and management of C&D wastes and resources from design to construction of a project, including consideration of the deconstruction of a project. These guidelines have been followed in the preparation of this document and include the following elements:

- Predicted C&D wastes and procedures to prevent, minimise, recycle and reuse wastes;
- Design teams roles and approach;
- Relevant EU, national and local waste policy, legislation and guidelines;
- Waste disposal/recycling of C&D wastes at the site;
- Provision of training for Resource Waste Manager (RM) and site crew;
- Details of proposed record keeping system;
- Details of waste audit procedures and plan; and
- Details of consultation with relevant bodies i.e. waste recycling companies, Local Authority, etc.

Section 3 of the Guidelines identifies thresholds above which there is a requirement for the preparation of a RWMP for developments. The new guidance classifies developments on a two-tiered system. Developments which do not exceed any of the following thresholds may be classed as Tier 1 development:

- New residential development of less than 10 dwellings.
- Retrofit of 20 dwellings or less.
- New commercial, industrial, infrastructural, institutional, educational, health and other developments with an aggregate floor area less than 1,250m^2.
- Retrofit of commercial, industrial, infrastructural, institutional, educational, health and other developments with an aggregate floor area less than 2,000m^2; and
- Demolition projects generating in total less than 100m^3 in volume of C&D waste.

A development which exceeds one or more of these thresholds is classed as a Tier-2 project. This development is a Tier 2 development as it is above the following threshold:

- Retrofit of commercial, industrial, infrastructural, institutional, educational, health and other developments with an aggregate floor area less than 2,000m^2; and
- Demolition projects generating in total less than 100m^3 in volume of C&D waste.

Other guidelines followed in the preparation of this report include *'Construction and Demolition Waste Management – a handbook for Contractors and Site Managers'* [11], published by FÁS and the Construction Industry Federation in 2002 and the previous guildines, 'Best Practice Guidelines for the Preparation of Waste Management Plans for Construction and Demolition Projects' (2006).

These guidance documents are considered to define best practice for C&D projects in Ireland and describe how C&D projects are to be undertaken such that environmental impacts and risks are minimised and maximum levels of waste recycling are achieved.

2.2 Regional Level

The proposed development is located in the Local Authority area of South Dublin County Council (SDCC).

The *EMR Waste Management Plan 2015 – 2021* is the regional waste management plan for the SDCC area published in May 2015. Currently the EMR and other regional waste management plans are under review and the Regional Waste Management Planning Offices expect to publish a draft plan in December 2022 and the final plan in 2023.

The regional plan sets out the following strategic targets for waste management in the region:

- A 1% reduction per annum in the quantity of household waste generated per capita over the period of the plan;
- Achieve a recycling rate of 50% of managed municipal waste by 2020; and
- Reduce to 0% the direct disposal of unprocessed residual municipal waste to landfill (from 2016 onwards) in favour of higher value pre-treatment processes and indigenous recovery practices.

Municipal landfill charges in Ireland are based on the weight of waste disposed. In the Leinster Region, charges are approximately €130 - €150 per tonne of waste which includes a €75 per tonne landfill levy specified in the *Waste Management (Landfill Levy) Regulations 2015.*

The *South Dublin County Council Development Plan 2022 – 2028* [13] sets out a number of objectives and actions for the South Dublin area in line with the objectives of the waste management plan.

Waste objectives and actions with a particular relevance to the proposed development are as follows:

Policy and Objectives

Policy IE7: Waste Management

Implement European Union, National and Regional waste and related environmental policy, legislation, guidance and codes of practice to improve management of material resources and wastes.

- **IE7 Objective 1**
  To encourage a just transition from a waste management economy to a green circular economy to enhance employment and increase the value, recovery and

recirculation of resources through compliance with the provisions of the Waste Action Plan for a Circular Economy 2020 – 2025 and to promote the use of, but not limited to, reverse vending machines and deposit return schemes or similar to ensure a wider and varying ways of recycling.

- **IE7 Objective 2**
  To support the implementation of the Eastern Midlands Region Waste Management Plan 2015-2021 or as amended by adhering to overarching performance targets, policies and policy actions.
- **IE7 Objective 4**
  To provide for and maintain the network of bring infrastructure (e.g. civic amenity facilities, bring banks) in the County to facilitate the recycling and recovery of hazardous and non-hazardous municipal wastes.
- **IE7 Objective 7**
  To require the appropriate provision for the sustainable management of waste within all developments, ensuring it is suitably designed into the development, including the provision of facilities for the storage, separation and collection of such waste.
- **IE7 Objective 8**
  To adhere to the recommendations of the National Hazardous Waste Management Plan 2014-2020 and any subsequent plan, and to co-operate with other agencies including the EPA in the planning, organisation and supervision of the disposal of hazardous waste streams, including hazardous waste identified during construction and demolition projects.

2.3 Legislative Requirements

The primary legislative instruments that govern waste management in Ireland and applicable to the project are:

- Waste Management Act 1996 as amended.
- Environmental Protection Agency Act 1992 as amended.
- Litter Pollution Act 1997 as amended.
- Planning and Development Act 2000 as amended [14].

One of the guiding principles of European waste legislation, which has in turn been incorporated into the *Waste Management Act 1996* as amended and subsequent Irish legislation, is the principle of *"Duty of Care"*. This implies that the waste producer is responsible for waste from the time it is generated through until its legal recycling, recovery or disposal (including its method of disposal). As it is not practical in most cases for the waste producer to physically transfer all waste from where it is produced to the final destination, waste contractors will be employed to physically transport waste to the final destination. Following on from this is the concept of *"Polluter Pays"* whereby the waste producer is liable to be prosecuted for pollution incidents, which may arise from the incorrect management of waste produced, including the actions of any contractors engaged (e.g. for transportation and disposal/recovery/recycling of waste).

It is therefore imperative that the developer/client ensures that the waste contractors engaged by construction contractors are legally compliant with respect to waste transportation, recycling, recovery and disposal. This includes the requirement that a contractor handle, transport and recycle/recover/dispose of waste in a manner that ensures that no adverse environmental impacts occur as a result of any of these activities.

A collection permit to transport waste must be held by each waste contractor which is issued by the National Waste Collection Permit Office (NWCPO). Waste receiving facilities must also be appropriately permitted or licensed. Operators of such facilities cannot receive any waste, unless in possession of a Certificate of Registration (COR)

or waste permit granted by the relevant Local Authority under the *Waste Management (Facility Permit & Registration) Regulations 2007 and Amendments* or a waste or IE licence granted by the EPA. The COR/permit/licence held will specify the type and quantity of waste able to be received, stored, sorted, recycled, recovered and/or disposed of at the specified site.

3.0 DESIGN APPROACH

The client and the design team have integrated the *'Best Practice Guidelines for the Preparation of Resource & Waste Management Plans for Construction & Demolition Projects'* into the design workshops, to help review processes, identify and evaluate resource reduction measures and investigate the impact on cost, time, quality, buildability, second life and management post demolition and construction. Further details on these design principals can be found within the aforementioned guidance document.

The design team have undertaken the design process in line with the international best practice principles to firstly prevent wastes, reuse where possible and thereafter sustainably reduce and recover materials. The below sections have been the focal point of the design process and material selections and will continued to be analysed and investigated throughout the design process and when selecting material.

The approaches presented are based on international principles of optimising resources and reducing waste on construction projects through:

- Prevention;
- Reuse;
- Recycling;
- Green Procurement Principles;
- Off-Site Construction;
- Materials Optimisation; and
- Flexibility and Deconstruction.

3.1 Designing For Prevention, Reuse and Recycling

Undertaken at the outset and during project feasibility and evaluation, the Client and Design Team considered:

- Establishing the potential for any reusable site assets (buildings; structures, equipment, materials, soils, etc.);
- The potential for refurbishment and refit of any existing structures or buildings rather than demolition and new build;
- Assessing any existing buildings on the site that can be refurbished either in part or wholly to meet the Client requirements; and
- Enabling the optimum recovery of assets on site.

3.2 Designing for Green Procurement

Waste prevention and minimisation pre-procurement have been discussed and will be further discussed in this section. The Design Team will discuss proposed design solutions, encourage innovation in tenders and incentivise competitions to recognise sustainable approaches. They should also discuss options for packaging reduction with the main Contractor and subcontractors/suppliers using measures such as 'Just-in-Time' delivery and use ordering procedures that avoid excessive waste. The Green procurement extends from the planning stage into the detailed design and tender stage and will be an ongoing part of the long-term design and selection process for this development.

3.3 Designing for Off-Site Construction

Use of off-site manufacturing has been shown to reduce residual wastes by up to 90% (volumetric building versus traditional). The decision to use offsite construction is typically cost led but there are significant benefits for resource management. Some further considerations for procurement which are being investigated as part of the planning stage design process are listed as follows:

- Modular buildings as these can displace the use of concrete and the resource losses associated with concrete blocks such as broken blocks, mortars, etc.;
  - Modular buildings are typically pre-fitted with fixed plasterboard and installed insulation, eliminating these residual streams from site.
- Use of pre-cast structural concrete panels which can reduce the residual volumes of concrete blocks, mortars, plasters, etc.;
- The use of prefabricated composite panels for walls and roofing to reduce residual volumes of insulation and plasterboards;
- Using pre-cast hollow-core flooring instead of in-situ ready mix flooring or timber flooring to reduce the residual volumes of concrete/formwork and wood/packaging, respectively; and
- Designing for the preferential use of offsite modular units.

3.4 Designing for Materials Optimisation During Construction

To ensure manufacturers and construction companies adopt lean production models, including maximising the reuse of materials onsite as outlined in section 2.1. This helps to reduce the environmental impacts associated with transportation of materials and from waste management activities. This includes investigating the use of standardised sizes for certain materials to help reduce the amount of offcuts produced on site, focusing on promotion and development of off-site manufacture.

3.5 Designing for Flexibility and Deconstruction

Design flexibility has and will be investigated throughout the design process to ensure that where possible products (including buildings) only contain materials that can be recycled and are designed to be easily disassembled. Material efficiency is being considered for the duration and end of life of a building project to produce; flexible, adaptable spaces that enable a resource-efficient, low-waste future change of use; durability of materials and how they can be recovered effectively when maintenance and refurbishment are undertaken and during disassembly/deconstruction.

4.0 DESCRIPTION OF THE PROJECT

4.1 Location, Size and Scale of the Development

Development Description:

The proposed development will consist of:

the change of use from warehouse to data repository facility, alterations to external facades, provision of a new 1100 mm parapet, reclad roof, internal alterations, refurbishment of the existing office space, solar panels at roof level, external plant at ground and roof levels and equipment to include 12 no. condenser modules, an emergency back-up generator and associated fuel storage tank, transformer, extension to the existing sub-station (c. 13 m2), 2 no. sprinkler tanks and pumphouse, bin store, 22 parking spaces including 2 electrical vehicle charging points, bicycle parking shelter, landscaping, planting, new security fence, external lighting, CCTV, altered vehicular gates, permeable hard surfaces, alterations to internal foul sewerage

and water supply networks, provision of SuDS compliant surface water drainage system and all associated site works.

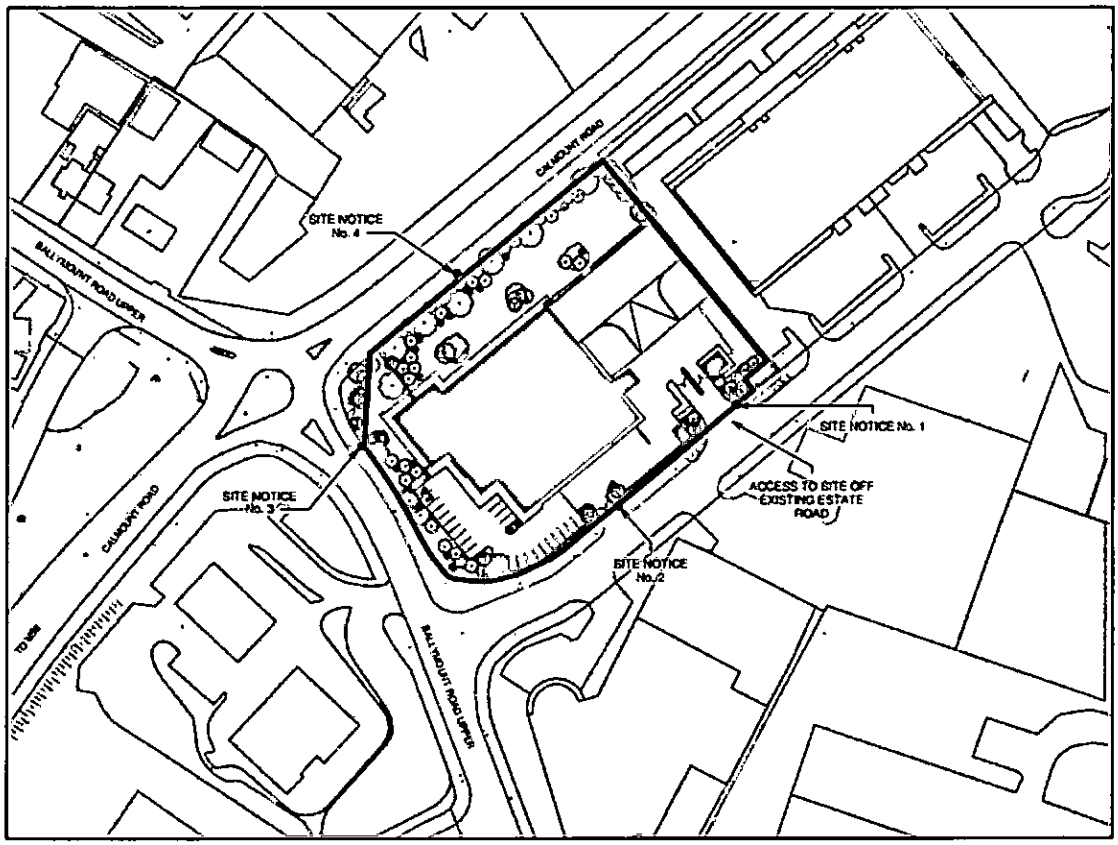


Figure 3.1 Proposed site location (illustrated by redline boundary)

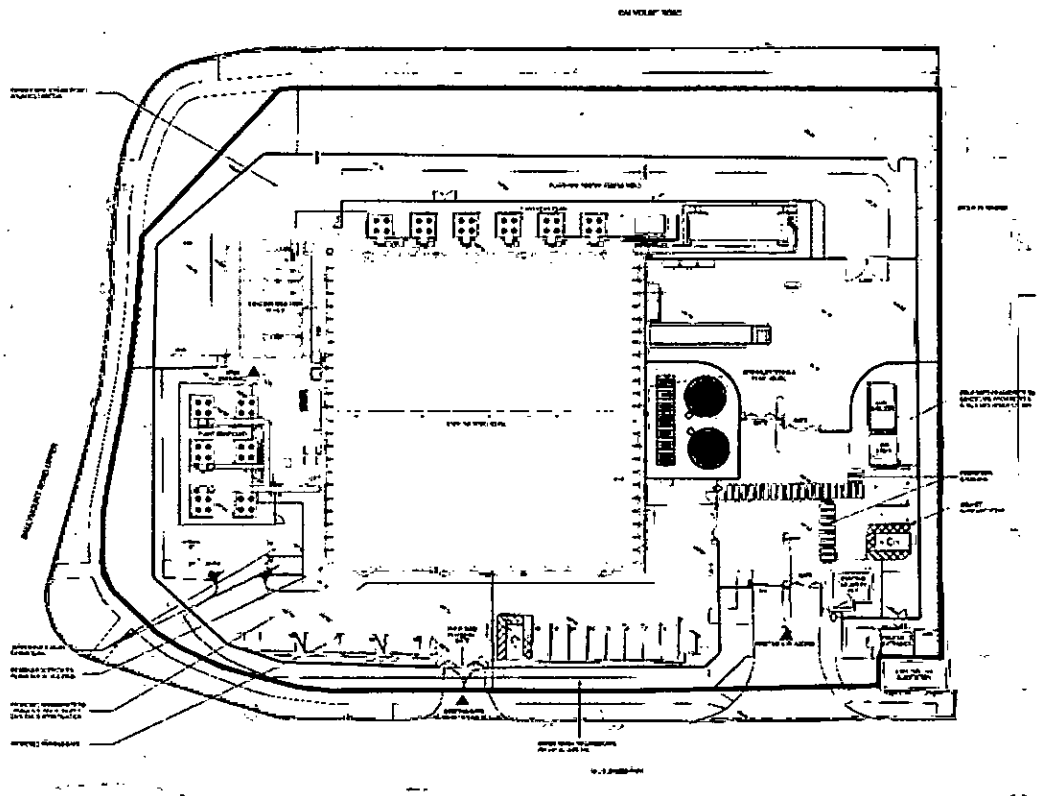


Figure 3.2 Proposed site plan (Source: KTA sheet 2003)

4.2 Details of the Non-Hazardous Wastes to be produced

There will be waste materials generated from the internal alterations of the existing warehouse, and the alterations to the external facades, reclad roof and associated site works.

There will be minor quantities of topsoil, soil and stone excavated to facilitate construction. The project engineers have estimated that c. 1,000m^3 of material will need to be excavated to do so. It is envisaged that all excavated material will be removed offsite for appropriate reuse, recovery, recycling and / or disposal.

During the construction phase there may be a surplus of building materials, such as timber off-cuts, broken concrete blocks, cladding, plastics, metals and tiles generated. There may also be excess concrete during construction which will need to be disposed of. Plastic and cardboard waste from packaging and supply of materials will also be generated. The contractor will be required to ensure that oversupply of materials is kept to a minimum and opportunities for reuse of suitable materials is maximised.

Waste will also be generated from construction workers e.g. organic / food waste, dry mixed recyclables (waste paper, newspaper, plastic bottles, packaging, aluminium cans, tins and Tetra Pak cartons), mixed non-recyclables and potentially sewage sludge from temporary welfare facilities provided on site during the construction phase. Waste printer / toner cartridges, waste electrical and electronic equipment (WEEE) and waste batteries may also be generated infrequently from site offices.

4.3 Potentially Hazardous Wastes to be produced

4.3.1 Contaminated Soil

Environmental testing and waste classification will be undertaken prior to any excavated material being removed from site. Results will be sent to SDCC upon request. It is envisaged that all excavated material will be reinstated.

In the event that any potentially contaminated material is encountered, it will need to be segregated from clean / inert material, tested and classified as either non-hazardous or hazardous in accordance with the EPA publication entitled 'Waste Classification: List of Waste & Determining if Waste is Hazardous or Non-Hazardous' [14] using the HazWasteOnline™ application (or similar approved classification method). The material will then need to be classified as clean, inert, non-hazardous or hazardous in accordance with the EC Council Decision 2003/33/EC [15], which establishes the criteria for the acceptance of waste at landfills.

In the event that Asbestos Containing Materials (ACMs) are found within the excavated material, the removal will only be carried out by a suitably permitted waste contractor, in accordance with S.I. No. 386 of 2006 Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations 2006-2010. All asbestos will be taken to a suitably licensed or permitted facility.

In the event that hazardous soil, or historically deposited waste is encountered during the construction phase, the contractor will notify SDCC and provide a Hazardous / Contaminated Soil Management Plan, to include estimated tonnages, description of location, any relevant mitigation, destination for disposal / treatment, in addition to information on the authorised waste collector(s).

4.3.2 Fuel/Oils

As fuels and oils are classed as hazardous materials, any on-site storage of fuel/oil, all storage tanks and all draw-off points will be bunded (or stored in double-skinned tanks) and located in a dedicated, secure area of the site. Provided that these requirements

are adhered to and site crew are trained in the appropriate refuelling techniques, it is not expected that there will be any fuel/oil wastage at the site.

4.3.3 Invasive Plant Species

A site survey was undertaken by the Moore Group in July and August 2022. No invasive species were recorded on site.

If an invasive species, such as Japanese Knotweed *Fallopia japonica,* which is listed on the Third Schedule of the Bird and Habitats Regulations, is recorded on site, a species-specific management plan will be created and the necessary remediation measures will be undertaken.

4.3.4 Asbestos

The existing mezzanine floor, which will be removed, is c. 24 years old, and as such the use of asbestos or ACMs during the construction of these buildings should not have occurred, in line with the European Communities (Dangerous Substances and Preparations) (Marketing and Use) Regulations 2003. Therefore, it is not envisaged that a demolition refurbishment survey will be undertaken.

If any asbestos or asbestos containing material (ACMs) are located, their removal will be carried out by a suitably qualified contractor. The ACM's will only be removed from site by a suitably permitted waste contractor. in accordance with *S.I. No. 386 of 2006 Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations 2006-2010.* All asbestos/ACMs will be taken to a suitably licensed or permitted facility.

4.3.5 Other known Hazardous Substances

Paints, glues, adhesives and other known hazardous substances will be stored in designated areas. They will generally be present in small volumes only and associated waste volumes generated will be kept to a minimum. Wastes will be stored in appropriate receptacles pending collection by an authorised waste contractor.

In addition, WEEE (containing hazardous components), printer toner/cartridges, batteries (Lead, Ni-Cd or Mercury) and/or light bulbs and other mercury containing waste may be generated from during C&D activities or temporary site offices. These wastes (if encountered) will be stored in appropriate receptacles in designated areas of the site pending collection by an authorised waste contractor.

5.0 ROLES AND RESPONSIBILITIES

The *Best Practice Guidelines on the Preparation of Resource Waste Management Plans for Construction and Demolition Projects* promotes that a RM will be appointed. The RM may be performed by number of different individuals over the life-cycle of the Project, however it is intended to be a reliable person chosen from within the Planning/Design/Contracting Team, who is technically competent and appropriately trained, who takes the responsibility to ensure that the objectives and measures within the Project RWMP are complied with. The RM is assigned the requisite authority to meet the objective and obligations of the RWMP. The role will include the important activities of conducting waste checks/audits and adopting construction and demolition methodology that is designed to facilitate maximum reuse and/or recycling of waste.

5.1 Role of the Client

The Client and the body establishing the aims and the performance targets for the project.

- The Client has commissioned the preparation and submission of a preliminary RWMP as part of the design and planning submission;
- The Client is to commission the preparation and submission of an updated RWMP as part of the construction and demolition tendering process;
- The Client will ensure that the RWMP is agreed on and submitted to the local authority prior to commencement of works on site;
- The Client is to request the end-of-project RWMP from the Contractor.

5.2 Role of the Client Advisory Team

The Client Advisory Team or Design Team is responsible for:

- Drafting and maintaining the RWMP through the design, planning and procurement phases of the project;
- Appointing a Resource Manager (RM) to track and document the design process, inform the Design Team and prepare the RWMP.
- Including details and estimated quantities of all projected waste streams with the support of environmental consultants/scientists. This will also include data on waste types (e.g. waste characterisation data, contaminated land assessments, site investigation information) and prevention mechanisms (such as by-products) to illustrate the positive circular economy principles applied by the Design Team;
- Handing over of the RWMP to the selected Contractor upon commencement of construction of the development, in a similar fashion to how the safety file is handed over to the Contractor;
- Working with the Contractor as required to meet the performance targets for the project.

5.3 Future Role of the Contractor

The construction Contractors have not yet been decided upon for this RWMP. However, once select they will have major roles to fulfil. They will be responsible for:

- Preparing, implementing and reviewing the RWMP during the construction phase (including the management of all suppliers and sub-contractors) as per the requirements of these guidelines;
- Identifying a designated and suitably qualified RM who will be responsible for implementing the RWMP;
- Identifying all hauliers to be engaged to transport each of the resources / wastes off-site;
- Implementing waste management policies whereby waste materials generated on site are to be segregated as far as practicable;
- Identifying all destinations for resources taken off-site. As above, any resource that is legally classified as a 'waste' must only be transported to an authorised waste facility;
- End-of-waste and by-product notifications addressed with the EPA where required;
- Clarification of any other statutory waste management obligations, which could include on-site processing;
- Full records of all resources (both wastes and other resources) will be maintained for the duration of the project; and
- Preparing a RWMP Implementation Review Report at project handover.

6.0 KEY MATERIALS & QUANTITIES

6.1 Project Resource Targets

Project specific resource and waste management targets for the site have not yet been set and this information will be updated for these targets once these targets have been confirmed by the client. However, it is expected for projects of this nature that a minimum of 70% of waste is fully re-used, recycled or recovered where possible. Target setting will inform the setting of project-specific benchmarks to track target progress. Typical Key Performance Indicators (KPIs) that may be used to set targets include (as per guidelines):

- Weight (tonnes) or Volume (m^3) of waste generated per construction value;
- Weight (tonnes) or Volume (m^3) of waste generated per construction floor area (m^2);
- Fraction of resource reused on site;
- Fraction of resource notified as by-product;
- Fraction of waste segregated at source before being sent off-site for recycling/recovery; and
- Fraction of waste recovered, fraction of waste recycled, or fraction of waste disposed.

6.2 Main C&D Waste Categories

The main non-hazardous and hazardous waste streams that could be generated by the construction activities at a typical site are shown in Table 6.1. The List of Waste (LoW) code (as effected from 1 June 2015) (also referred to as the European Waste Code or EWC) for each waste stream is also shown.

Table 6.1 Typical waste types generated and LoW codes (*individual waste types may contain hazardous substances)

Waste Material	LoW/EWC Code
Concrete, bricks, tiles, ceramics	17 01 01-03 & 07
Wood, glass and plastic	17 02 01-03
Bituminous mixtures, coal tar and tarred products	17 03 01*, 02 & 03*
Metals (including their alloys) and cable	17 04 01-11
Soil and stones	17 05 03* & 04
Paper and cardboard	20 01 01
Mixed C&D waste	17 09 04
Green waste	20 02 01
Electrical and electronic components	20 01 35 & 36
Batteries and accumulators	20 01 33 & 34
Liquid fuels	13 07 01-10
Chemicals (solvents, pesticides, paints, adhesives, detergents etc.)	20 01 13, 19, 27-30
Organic (food) waste	20 01 08
Mixed Municipal Waste	20 03 01

6.3 Demolition Waste Generation

During the demolition phase, waste materials will be generated from the demolition of the existing mezzanine floor, works to the existing cladding and roof and internal alterations to facilitate the change of use. Demolition figures published by the EPA in the *'National Waste Reports'* [14] and data from previous projects have been used to

estimate the approximate break-down for indicative reuse (offsite), recycling and disposal targets of demolition waste. This breakdown is shown in Table 6.2.

Table 6.2 *Predicted on and off-site reuse, recycle and disposal rates for demolition waste*

Waste Type	Tonnes	Reuse/Recovery		Recycling		Disposal	
		%	Tonnes	%	Tonnes	%	Tonnes
Glass	57.0	0	0.0	85	48.4	15	8.5
Concrete, Bricks, Tiles, Ceramics	322.8	30	96.8	65	209.8	5	16.1
Plasterboard	25.3	30	7.6	80	15.2	20	2.5
Asphalts	6.3	0	0.0	25	1.6	75	4.7
Metals	95.0	5	4.7	80	76.0	15	14.2
Slate	50.6	0	0.0	85	43.0	15	7.6
Timber	76.0	10	7.6	40	45.6	50	22.8
Asbestos	0	0	0	0	0	100	0
Total	**633.0**		**116.7**		**439.6**		**76.4**

6.4 Construction Waste Generation

Table 6.3 shows the breakdown of C&D waste types produced on a typical site based on data from the EPA *National Waste Reports* [14] *and the joint EPA & GMIT study* [15], along with other research reports.

Table 6.3 *Waste materials generated on a typical Irish construction site*

Waste Types	%
Mixed C&D	33
Timber	28
Plasterboard	10
Metals	8
Concrete	6
Other	15
Total	**100**

Table 6.4, below, shows the estimated construction waste generation for the development based on the gross floor area of construction and other information available to date, along with indicative targets for management of the waste streams. The estimated waste amounts for the main waste types (with the exception of soils and made ground) are based on an average development of this type for waste generation rate per m^2, using the waste breakdown rates shown in Table 6.3. These have been calculated from the schedule of development areas provided by the architect.

Table 6.4 *Predicted on and off-site reuse, recycle and disposal rates for construction waste*

Waste Type	Tonnes	Reuse/Recovery		Recycling		Disposal	
		%	Tonnes	%	Tonnes	%	Tonnes
Mixed C&D	8.0	10	0.8	80	6.4	10	0.8
Timber	6.8	40	2.7	55	3.7	5	0.3
Plasterboard	2.4	30	0.7	60	1.5	10	0.2
Metals	1.9	5	0.1	90	1.7	5	0.1
Concrete	1.5	30	0.4	65	0.9	5	0.1
Other	3.6	20	0.7	60	2.2	20	0.7
Total	**24.2**		**5.5**		**16.5**		**2.3**

In addition to the information in Table 6.4, the quantity of excavated material that will be generated has been estimated to be c. 1,000m^3. It is envisaged that all excavated material will be removed offsite for appropriate reuse, recovery, recycling and / or disposal.

It should be noted that until final materials and detailed construction methodologies have been confirmed, it is difficult to predict with a high level of accuracy the construction waste that will be generated from the proposed works as the exact materials and quantities may be subject to some degree of change and variation during the construction process.

6.5 Proposed Resource and Waste Management Options

Waste materials generated will be segregated on site, where it is practical. Where the on-site segregation of certain wastes types is not practical, off-site segregation will be carried out. There will be skips and receptacles provided to facilitate segregation at source where feasible. All waste receptacles leaving site will be covered or enclosed. The appointed waste contractor will collect and transfer the wastes as receptacles are filled. There are numerous waste contractors in the SDCC Region that provide this service.

All waste arisings will be handled by an approved waste contractor holding a current waste collection permit. All waste arising's requiring disposal off-site will be reused, recycled, recovered or disposed of at a facility holding the appropriate registration, permit or licence, as required.

Written records will be maintained by the contractor(s) detailing the waste arising throughout the C&D phases, the classification of each waste type, waste collection permits for all waste contactors who collect waste from the site and COR/permit or licence for the receiving waste facility for all waste removed off site for appropriate reuse, recycling, recovery and/or disposal

Dedicated bunded storage containers will be provided for hazardous wastes which may arise such as batteries, paints, oils, chemicals etc, if required.

The management of the main waste streams is outlined as follows:

Topsoil, Soil and Stone

The waste hierarchy states that the preferred option for waste management is prevention and minimisation of waste, followed by preparing for reuse and recycling / recovery, energy recovery (i.e. incineration) and, least favoured of all, disposal. The excavations are required to facilitate construction works so the preferred option (prevention and minimisation) cannot be accommodated for the excavation phase. It is envisaged that all excavated material will be removed offsite for appropriate reuse, recovery, recycling and / or disposal.

Material removed offsite could be reused as a by-product (and not as a waste). If this is done, it will be done in accordance with Regulation 15 (By-products) (Previously Article 27 and referred to as Article 27 in this report) of S.I. No. 323/2020 - European Union (Waste Directive) Regulations 2020, which requires that certain conditions are met and that by-product notifications are made to the EPA via their online notification form. Excavated material should not be removed from site until approval from the EPA has been received. The potential to reuse material as a by-product will be confirmed during the course of the excavation works, with the objective of eliminating any unnecessary disposal of material.

The next option (beneficial reuse) may be appropriate for the excavated material. Clean inert material may be used as fill material in other construction projects or

engineering fill for waste licensed sites. Beneficial reuse of surplus excavation material as engineering fill may be subject to further testing to determine if materials meet the specific engineering standards for their proposed end use.

Any nearby sites requiring clean fill/capping material will be contacted to investigate reuse opportunities for clean and inert material. If any of the material is to be reused on another site as a by-product (and not as a waste), this will be done in accordance with Regulation 15 (Article 27).

If the material is deemed to be a waste, then removal and reuse / recovery / disposal of the material will be carried out in accordance with the *Waste Management Act 1996* as amended, the *Waste Management (Collection Permit) Regulations 2007* as amended and the *Waste Management (Facility Permit & Registration) Regulations 2007* as amended. Once all available beneficial reuse options have been exhausted, the options of recycling and recovery at waste permitted and licensed sites will be considered.

In the unlikely event that contaminated material is encountered and subsequently classified as hazardous, this material will be stored separately to any non-hazardous material. It will require off-site treatment at a suitable facility or disposal abroad via Transfrontier Shipment of Wastes (TFS).

Bedrock
While it is not envisaged that bedrock will be encountered, if bedrock is encountered, it is anticipated that it will not be crushed on site. Any excavated rock is expected to be removed off- site for appropriate reuse, recovery and / or disposal.

Silt & Sludge
Silt and petrochemical interception will be carried out on runoff and pumped water from site works, where required. Sludge and silt will then be collected by a suitably licensed contractor and removed offsite.

Concrete Blocks, Bricks, Tiles & Ceramics
The majority of concrete generated as part of the construction works are expected to be clean, inert material and will be recycled, where possible.

Hard Plastic
As hard plastic is a highly recyclable material, much of the plastic generated will be primarily from material off-cuts. All recyclable plastic will be segregated and recycled, where possible.

Timber
Timber that is uncontaminated, i.e. free from paints, preservatives, glues etc., will be disposed of in a separate skip and recycled off-site.

Metal
Metals will be segregated where practical and stored in skips. Metal is highly recyclable and there are numerous companies that will accept these materials.

Waste Electrical and Electronic Equipment (WEEE)
Any WEEE will be stored in dedicated covered cages/receptacles/pallets pending collection for recycling.

Other Recyclables
Where any other recyclable wastes such as cardboard and soft plastic are generated, these will be segregated at source into dedicated skips and removed off-site.

Non-Recyclable Waste

C&D waste which is not suitable for reuse or recovery, such as polystyrene, some plastics and some cardboards, will be placed in separate skips or other receptacles. Prior to removal from site, the non-recyclable waste skip/receptacle will be examined by a member of the waste team (see Section 10.0) to determine if recyclable materials have been placed in there by mistake. If this is the case, efforts will be made to determine the cause of the waste not being segregated correctly and recyclable waste will be removed and placed into the appropriate receptacle.

Other Hazardous Wastes

On-site storage of any hazardous wastes produced (i.e. contaminated soil if encountered and/or waste fuels) will be kept to a minimum, with removal off-site organised on a regular basis. Storage of all hazardous wastes on-site will be undertaken so as to minimise exposure to on-site personnel and the public and to also minimise potential for environmental impacts. Hazardous wastes will be recovered, wherever possible, and failing this, disposed of appropriately.

6.6 Tracking and Documentation Procedures for Off-Site Waste

All waste will be documented prior to leaving the site. Waste will be weighed by the contractor, either by weighing mechanism on the truck or at the receiving facility. These waste records will be maintained on site by the nominated project RM (see Section 10.0).

All movement of waste and the use of waste contractors will be undertaken in accordance with the *Waste Management Acts 1996 - 2011*, *Waste Management (Collection Permit) Regulations 2007* as amended and *Waste Management (Facility Permit & Registration) Regulations 2007* and amended. This includes the requirement for all waste contractors to have a waste collection permit issued by the NWCPO. The nominated project waste manager (see Section 10.0) will maintain a copy of all waste collection permits on-site.

If the waste is being transported to another site, a copy of the Local Authority waste COR/permit or EPA Waste/IE Licence for that site will be provided to the nominated project waste manager (see Section 10.0). If the waste is being shipped abroad, a copy of the Transfrontier Shipping (TFS) notification document will be obtained from DCC (as the relevant authority on behalf of all local authorities in Ireland) and kept on-site along with details of the final destination (COR, permits, licences etc.). A receipt from the final destination of the material will be kept as part of the on-site waste management records.

All information will be entered in a waste management recording system to be maintained on site.

7.0 ESTIMATED COST OF WASTE MANAGEMENT

An outline of the costs associated with different aspects of waste management is provided below.

The total cost of C&D waste management will be measured and will take into account handling costs, storage costs, transportation costs, revenue from rebates and disposal costs.

7.1 Reuse

By reusing materials on site, there will be a reduction in the transport and recycle/recovery/disposal costs associated with the requirement for a waste contractor to take the material off-site.

Clean and inert soils, gravel, stones etc. which cannot be reused on site may be used as access roads or capping material for landfill sites etc. This material is often taken free of charge or a reduced fee for such purposes, reducing final waste disposal costs.

7.2 Recycling

Salvageable metals will earn a rebate which can be offset against the costs of collection and transportation of the skips.

Clean uncontaminated cardboard and certain hard plastics can also be recycled. Waste contractors will charge considerably less to take segregated wastes, such as recyclable waste, from a site than mixed waste.

Timber can be recycled as chipboard. Again, waste contractors will charge considerably less to take segregated wastes such as timber from a site than mixed waste.

7.3 Disposal

Landfill charges are currently at around €130 - €150 per tonne which includes a €75 per tonne landfill levy specified in the *Waste Management (Landfill Levy) Regulations 2015.* In addition to disposal costs, waste contractors will also charge a collection fee for skips.

Collection of segregated C&D waste usually costs less than municipal waste. Specific C&D waste contractors take the waste off-site to a licensed or permitted facility and, where possible, remove salvageable items from the waste stream before disposing of the remainder to landfill. Clean soil, rubble, etc. is also used as fill/capping material, wherever possible.

8.0 DEMOLITION PROCEDURES

The demolition stage will involve minor amendments to the internal layout and from alterations to the existing façade. The demolition areas are identified in the planning drawings submitted as part of this application. The following sequence of works will be followed during the demolition stage.

Check for Hazards

Prior to commencing works, buildings and structures to be demolished will be checked for any likely hazards including asbestos, ACMs, electrical power lines or cables, gas reticulation systems, telecommunications, unsafe structures and fire / explosion hazards, e.g. combustible dust, chemical hazards, oil, fuels and contamination.

Removal of Components

All hazardous materials will be removed first. All components from within the buildings that can be salvaged will be removed next. This will primarily be comprised of metal; however, may also include timbers, doors, windows, wiring and metal ducting, etc.

Demolition of Walls and Concrete

The breakdown of walls will be carried out once all salvageable or reusable materials have been taken from the buildings.

9.0 TRAINING PROVISIONS

A member of the construction team will be appointed as the RM to ensure commitment, operational efficiency and accountability in relation to waste management during the C&D phases of the development.

9.1 Resource Waste Manager Training and Responsibilities

The nominated RM will be given responsibility and authority to select a waste team if required, i.e. members of the site crew that will aid them in the organisation, operation and recording of the waste management system implemented on site.

The RM will have overall responsibility to oversee, record and provide feedback to the client on everyday waste management at the site. Authority will be given to the Waste Manager to delegate responsibility to sub-contractors, where necessary, and to coordinate with suppliers, service providers and sub-contractors to prioritise waste prevention and material salvage.

The RM will be trained in how to set up and maintain a record keeping system, how to perform an audit and how to establish targets for waste management on site. The RM will also be trained in the best methods for segregation and storage of recyclable materials, have information on the materials that can be reused on site and be knowledgeable in how to implement this RWMP.

9.2 Site Crew Training

Training of site crew in relation to waste is the responsibility of the Waste Manager and, as such, a waste training program will be organised. A basic awareness course will be held for all site crew to outline the RWMP and to detail the segregation of waste materials at source. This may be incorporated with other site training needs such as general site induction, health and safety awareness and manual handling.

This basic course will describe the materials to be segregated, the storage methods and the location of the Waste Storage Area (WSA). A sub-section on hazardous wastes will be incorporated into the training program and the particular dangers of each hazardous waste will be explained.

10.0 TRACKING AND TRACING / RECORD KEEPING

Records will be kept for all waste material which leaves the site, either for reuse on another site, recycling or disposal. A recording system will be put in place to record the waste arisings on Site.

A waste tracking log will be used to track each waste movement from the site. On exit from the site, the waste collection vehicle driver will stop at the site office and sign out as a visitor and provide the security personnel or RM with a waste docket (or Waste Transfer Form (WTF) for hazardous waste) for the waste load collected. At this time, the security personnel will complete and sign the Waste Tracking Register with the following information:

- Date
- Time
- Waste Contractor
- Company waste contractor appointed by, e.g. Contractor or subcontractor name
- Collection Permit No.
- Vehicle Reg.
- Driver Name
- Docket No.

- Waste Type
- EWC / LoW

The waste vehicle will be checked by security personal or the RM to ensure it has the waste collection permit no. displayed and a copy of the waste collection permit in the vehicle before they are allowed to remove the waste from the site.

The waste transfer dockets will be transferred to the RM on a weekly basis and can be placed in the Waste Tracking Log file. This information will be forwarded onto the SDCC Waste Regulation Unit when requested.

Each subcontractor that has engaged their own waste contractor will be required to maintain a similar waste tracking log with the waste dockets / WTF maintained on file and available for inspection on site by the main contractor as required. These subcontractor logs will be merged with the main waste log.

Waste receipts from the receiving waste facility will also be obtained by the site contractor(s) and retained. A copy of the Waste Collection Permits, CORs, Waste Facility Permits and Waste Licences will be maintained on site at all times and will be periodically checked by the RM. Subcontractors who have engaged their own waste contractors, will provide the main contractor with a copy of the waste collection permits and COR / permit / licence for the receiving waste facilities and maintain a copy on file, available for inspection on site as required.

11.0 OUTLINE WASTE AUDIT PROCEDURE

11.1 Responsibility for Waste Audit

The appointed RM will be responsible for conducting a waste audit at the site during the C&D phase of the proposed Project. Contact details for the nominated RM will be provided to the SDCC Waste Regulation Unit after the main contractor is appointed and prior to any material being removed from site.

11.2 Review of Records and Identification of Corrective Actions

A review of all waste management costs and the records for the waste generated and transported off-site should be undertaken mid-way through the construction phase of the proposed Project.

If waste movements are not accounted for, the reasons for this will be established in order to see if and why the record keeping system has not been maintained. The waste records will be compared with the established recovery / reuse / recycling targets for the site. Each material type will be examined, in order to see where the largest percentage waste generation is occurring. The waste management methods for each material type will be reviewed in order to highlight how the targets can be achieved.

Upon completion of the C&D phase, a final report will be prepared, summarising the outcomes of waste management processes adopted and the total recycling / reuse / recovery figures for the development.

12.0 CONSULTATION WITH RELEVANT BODIES

12.1 Local Authority

Once the construction contractor has been appointed and they have appointed waste contractors, and prior to removal of any C&D waste materials off-site, details of the proposed destination of each waste stream will be provided to the SDCC Waste Regulation Unit.

SDCC will also be consulted, as required, throughout the excavation and construction phases in order to ensure that all available waste reduction, reuse and recycling opportunities are identified and utilised and that compliant waste management practices are carried out.

12.2 Recycling / Salvage Companies

The appointed waste contractor for the main waste streams managed by the construction contractors will be audited in order to ensure that relevant and up-to-date waste collection permits and facility registrations / permits / licences are held. In addition, information will be obtained regarding the feasibility of recycling each material, the costs of recycling / reclamation, the means by which the wastes will be collected and transported off-site, and the recycling / reclamation process each material will undergo off-site.

13.0 REFERENCES

1. Waste Management Act 1996 (No. 10 of 1996) as amended.
2. Environmental Protection Agency Act 1992 as amended.
3. Litter Pollution Act 1997 (S.I. No. 12 of 1997) as amended
4. Eastern-Midlands Region Waste Management Plan 2015 – 2021 (2015).
5. Department of Environment and Local Government (DoELG) *Waste Management – Changing Our Ways, A Policy Statement* (1998).
6. Forum for the Construction Industry – *Recycling of Construction and Demolition Waste.*
7. Department of Communications, Climate Action and Environment (DCCAE), *Waste Action Plan for the Circular Economy - Ireland's National Waste Policy 2020-2025* (Sept 2020).
8. DCCAE, *Whole of Government Circular Economy Strategy 2022-2023 'Living More, Using Less'* (2021)
9. Environmental Protection Agency (EPA) *'Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction & Demolition Projects' (2021)*
10. Department of Environment, Heritage and Local Government, *Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects* (2006).
11. FÁS and the Construction Industry Federation (CIF), *Construction and Demolition Waste Management – a handbook for Contractors and* site *Managers* (2002).
12. SDCC, *South Dublin County Council Development Plan 2022 – 2028 (2021).*
13. Planning and Development Act 2000 (S.I. No. 30 of 2000) as amended
14. Council Decision 2003/33/EC, establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 of and Annex II to Directive 1999/31/EC.
15. EPA, *Waste Classification – List of Waste & Determining if Waste is Hazardous or Non-Hazardous* (2015)
16. Environmental Protection Agency (EPA), *National Waste Database Reports 1998 – 2012.*
17. EPA and Galway-Mayo Institute of Technology (GMIT), *EPA Research Report 146 – A Review of Design and Construction Waste Management Practices in Selected Case Studies – Lessons Learned* (2015).

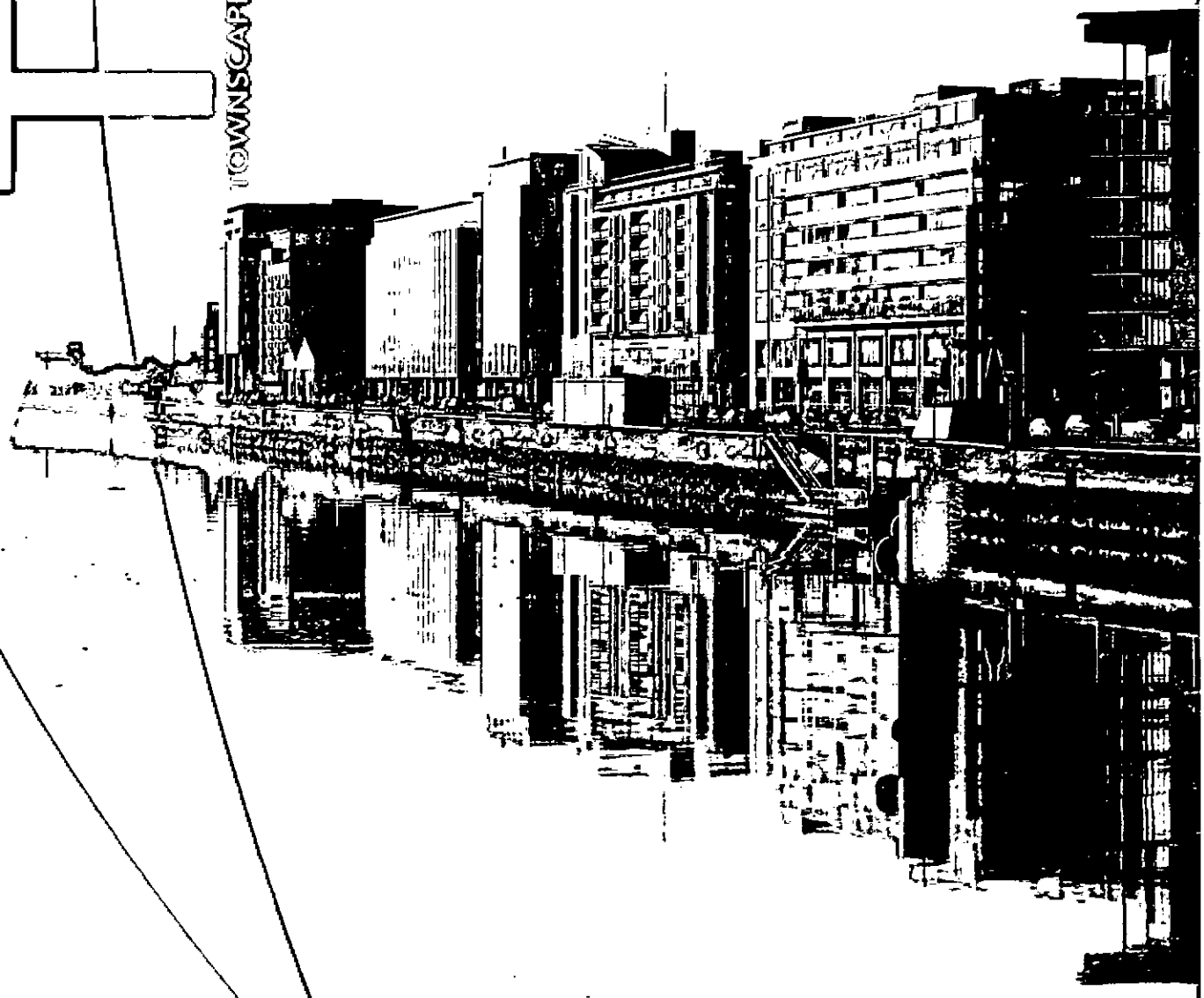
Appendix F (i)- Landscape and Visual Impact Assessment

TVIA

TOWNSCAPE AND VISUAL IMPACT ASSESSMENT

macro works

Unit 1
M50 Business Park,
Ballymount,
Dublin 12



Registered Landscape Architect

November 2022

1 LANDSCAPE/TOWNSCAPE AND VISUAL IMPACT ASSESSMENT

1.1 INTRODUCTION

This Landscape/Townscape and Visual Assessment (LVIA) has been prepared in respect of a planning application at Unit 1, M50 Business Park, Ballymount Avenue, Dublin 12.

Landscape/Townscape Impact Assessment (LIA) relates to assessing effects of a development on the Landscape/Townscape as a resource in its own right and is concerned with how the proposal will affect the elements that make up the Landscape/Townscape, the aesthetic and perceptual aspects of the Landscape/Townscape and its distinctive character.

Visual Impact Assessment (VIA) relates to assessing effects of a development on specific views and on the general visual amenity experienced by people. This deals with how the surroundings of individuals or groups of people may be specifically affected by changes in the content and character of views as a result of the change or loss of existing elements of the Landscape/Townscape and/or introduction of new elements. Visual impacts may occur from; Visual Obstruction (blocking of a view, be it full, partial or intermittent) or; Visual Intrusion (interruption of a view without blocking).

This LVIA uses methodology as prescribed in the following guidance documents:

- Environmental Protection Agency (EPA) publication '*Guidelines on the Information to be contained in Environmental Impact Statements* (2022) and the accompanying *Advice Notes on Current Practice in the Preparation of Environmental Impact Statements* (Draft 2015);
- Landscape/Townscape Institute and the Institute of Environmental Management and Assessment publication entitled Guidelines for Landscape/Townscape and Visual Impact Assessment (2013).

1.1.1 Statement of Authority

This Landscape/Townscape and Visual Impact Assessment report was prepared by Macro Works Ltd; a Landscape/Townscape consultancy firm specialising in LVIA along with associated visibility mapping and photomontage graphics. Relevant experience includes LVIA work for a vast range of infrastructural, industrial and commercial projects since 1999, including more than 80 solar farms.

1.1.2 Description of the Proposed Development

The proposed development will comprise the change of use from warehouse to data repository facility, alterations to external facades, provision of a new 1100 mm parapet, reclad roof, internal alterations, refurbishment of the existing office space, solar panels at roof level, external plant at ground and roof levels and equipment to include 12 no. condenser modules, an emergency back-up generator and associated fuel storage tank, transformer, extension to the existing sub-station (c. 13 m2), 2 no. sprinkler tanks and pumphouse, bin store, 22 parking spaces including 2 electrical vehicle charging points, bicycle parking shelter, landscaping, planting, new security fence, external lighting, CCTV, altered vehicular gates, permeable hard surfaces, alterations to internal foul sewerage and water supply networks, provision of SuDS compliant surface water drainage system and all associated site works.. For more information on this, see Section 1.4.

1.2 ASSESSMENT METHODOLOGY

Production of this Landscape/Townscape and Visual Impact Assessment involved:

- A desktop study to establish an appropriate study area, relevant Landscape/Townscape and visual designations in the South Dublin County

Development Plan as well as other sensitive visual receptors. This stage culminates in the selection of a set of potential viewpoints from which to study the effects of the proposal;

- Fieldwork to establish the Landscape/Townscape character of the receiving environment and to confirm and refine the set of viewpoints to be used for the visual assessment stage;
- Assessment of the significance of the Landscape/Townscape impact of the development as a function of Landscape/Townscape sensitivity weighed against the magnitude of the Landscape/Townscape impact; and
- Assessment of the significance of the visual impact of the development as a function of visual receptor sensitivity weighed against the magnitude of the visual impact. This aspect of the assessment is supported by photomontages prepared in respect of the selected viewpoints.
- Incorporation of mitigation measures to reduce potential impacts and estimation of residual impacts once mitigation has become established.

1.2.1 Landscape/Townscape Impact Assessment Criteria

When assessing the potential impacts on the Landscape/Townscape resulting from a proposed development, the following criteria are considered:

- Landscape/Townscape character, value and sensitivity;
- Magnitude of likely impacts; and
- Significance of Landscape/Townscape effects

The sensitivity of the Landscape/Townscape to change is the degree to which a particular Landscape/Townscape receptor (Landscape/Townscape Character Area (LCA) or feature) can accommodate changes or new elements without unacceptable detrimental effects to its essential characteristics. Landscape/Townscape Value and Sensitivity is classified using the following criteria set out in **Table 1.1.**

Table 1.1 Landscape/Townscape Value and Sensitivity

Sensitivity	Description
Very High	Areas where the Landscape/Townscape character exhibits a very low capacity for change in the form of development. Examples of which are high value Landscape/Townscapes, protected at an international or national level (World Heritage Site/National Park), where the principal management objectives are likely to be protection of the existing character.
High	Areas where the Landscape/Townscape character exhibits a low capacity for change in the form of development. Examples of which are high value Landscape/Townscapes, protected at a national or regional level (Area of Outstanding Natural Beauty), where the principal management objectives are likely to be considered conservation of the existing character.
Medium	Areas where the Landscape/Townscape character exhibits some capacity and scope for development. Examples of which are Landscape/Townscapes, which have a designation of protection at a county level or at non-designated local level where there is evidence of local value and use.
Low	Areas where the Landscape/Townscape character exhibits a higher capacity for change from development. Typically, this would include lower value, non-designated Landscape/Townscapes that may also have some elements or features of recognisable quality, where Landscape/Townscape management objectives include, enhancement, repair and restoration.
Negligible	Areas of Landscape/Townscape character that include derelict, mining, industrial land or are part of the urban fringe where there would be a reasonable capacity to embrace change or the capacity to include the development proposals. Management objectives in such areas could be focused on change, creation of Landscape/Townscape improvements and/or restoration to realise a higher Landscape/Townscape value.

The magnitude of a predicted Landscape/Townscape impact is a product of the scale, extent or degree of change that is likely to be experienced as a result of the proposed development.

The magnitude takes into account whether there is a direct physical impact resulting from the loss of Landscape/Townscape components and/or a change that extends beyond the Site boundary that may have an effect on the Landscape/Townscape character of the area. **Table 1.2** refers.

Table 1.2 Magnitude of Landscape/Townscape Impacts

Magnitude of Impact	Description
Very High	Change that would be large in extent and scale with the loss of critically important Landscape/Townscape elements and features, that may also involve the introduction of new uncharacteristic elements or features that contribute to an overall change of the Landscape/Townscape in terms of character, value and quality.
High	Change that would be more limited in extent and scale with the loss of important Landscape/Townscape elements and features, that may also involve the introduction of new uncharacteristic elements or features that contribute to an overall change of the Landscape/Townscape in terms of character, value and quality.
Medium	Changes that are modest in extent and scale involving the loss of Landscape/Townscape characteristics or elements that may also involve the introduction of new uncharacteristic elements or features that would lead to changes in Landscape/Townscape character, and quality.
Low	Changes affecting small areas of Landscape/Townscape character and quality, together with the loss of some less characteristic Landscape/Townscape elements or the addition of new features or elements.
Negligible	Changes affecting small or very restricted areas of Landscape/Townscape character. This may include the limited loss of some elements or the addition of some new features or elements that are characteristic of the existing Landscape/Townscape or are hardly perceivable.

The significance of a Landscape/Townscape impact is based on a balance between the sensitivity of the Landscape/Townscape receptor and the magnitude of the impact. The significance of Landscape/Townscape impacts is arrived at using the following matrix set out in **Table 1.3**.

Table 1.3 Impact Significance Matrix

	Sensitivity of Receptor				
Scale/Magnitude	*Very High*	*High*	*Medium*	*Low*	*Negligible*
Very High	Profound	Profound-substantial	Substantial	Moderate	Minor
High	Profound-substantial	Substantial	Substantial-moderate	Moderate-slight	Slight-imperceptible
Medium	Substantial	Substantial-moderate	Moderate	Slight	Imperceptible
Low	Moderate	Moderate-slight	Slight	Slight-imperceptible	Imperceptible
Negligible	Slight	Slight-imperceptible	Imperceptible	Imperceptible	Imperceptible

Note: The significance matrix provides an indicative framework from which the significance of impact is derived. The significance judgement is ultimately determined by the assessor using professional judgement. Due to nuances within the constituent sensitivity and magnitude judgements, this may be up to one category higher or lower than indicated by the matrix. Judgements indicated in orange are considered to be 'significant impacts' in EIA terms.

1.2.1.1 Visual Impact Assessment Criteria

As with the Landscape/Townscape impact, the visual impact of the proposed development will be assessed as a function of sensitivity versus magnitude. In this instance, the sensitivity of the visual receptor, weighed against the magnitude of the visual effect.

1.2.1.2 Sensitivity of Visual Receptors

Unlike Landscape/Townscape sensitivity, the sensitivity of visual receptors has an anthropocentric basis. It considers factors such as the perceived quality and values associated with the view, the Landscape/Townscape context of the viewer, the likely activity they are engaged in and whether this heightens their awareness of the surrounding Landscape/Townscape. A list of the factors considered by the assessor in estimating the level of sensitivity for a particular visual receptor is outlined below and used in **Table 1.4** below to establish visual receptor sensitivity at each VRP:

1.2.1.2.1 Susceptibility of Receptors

In accordance with the Institute of Environmental Management and Assessment ("IEMA") Guidelines for Landscape/Townscape and Visual Assessment (3rd edition 2013) visual receptors most susceptible to changes in views and visual amenity are:

- "*Residents at home;*
- *People, whether residents or visitors, who are engaged in outdoor recreation, including use of public rights of way, whose attention or interest is likely to be focussed on the Landscape/Townscape and on particular views;*
- *Visitors to heritage assets, or to other attractions, where views of the surroundings are an important contributor to the experience;*
- *Communities where views contribute to the Landscape/Townscape setting enjoyed by residents in the area; and*
- *Travellers on road, rail or other transport routes where such travel involves recognised scenic routes and awareness of views is likely to be heightened*".

Visual receptors that are less susceptible to changes in views and visual amenity include;

- "*People engaged in outdoor sport or recreation, which does not involve or depend upon appreciation of views of the Landscape/Townscape; and*
- *People at their place of work whose attention may be focussed on their work or activity, not their surroundings and where the setting is not important to the quality of working life*".

1.2.1.2.2 Value Associated with the View

1. **Recognised scenic value of the view** (County Development Plan designations, guidebooks, touring maps, postcards etc). These represent a consensus in terms of which scenic views and routes within an area are strongly valued by the population because in the case of County Developments Plans, for example, a public consultation process is required;

2. **Views from within highly sensitive Landscape/Townscape areas.** Again, highly sensitive Landscape/Townscape designations are usually part of a county's Landscape/Townscape Character Assessment, which is then incorporated within the County Development Plan and is therefore subject to the public consultation process. Viewers within such areas are likely to be highly attuned to the Landscape/Townscape around them;

3. **Primary views from dwellings**. A proposed development might be seen from anywhere within a particular residential property with varying degrees of sensitivity. Therefore, this category is reserved for those instances in which the design of dwellings or housing estates, has been influenced by the desire to take in a particular view. This might involve the use of a slope or the specific orientation of a house and/or its internal social rooms and exterior spaces;

4. **Intensity of use, popularity**. This relates to the number of viewers likely to experience a view on a regular basis and whether this is significant at county or regional scale;

5. **Connection with the Landscape/Townscape**. This considers whether or not receptors are likely to be highly attuned to views of the Landscape/Townscape i.e. commuters hurriedly driving on busy national route versus hill walkers directly engaged with the Landscape/Townscape enjoying changing sequential views over it;

6. **Provision of elevated panoramic views**. This relates to the extent of the view on offer and the tendency for receptors to become more attuned to the surrounding Landscape/Townscape at locations that afford broad vistas;

7. **Sense of remoteness and/or tranquillity.** Receptors taking in a remote and tranquil scene, which is likely to be fairly static, are likely to be more receptive to changes in the view than those taking in the view of a busy street scene, for example;

8. **Degree of perceived naturalness**. Where a view is valued for the sense of naturalness of the surrounding Landscape/Townscape it is likely to be highly sensitive to visual intrusion by distinctly manmade features;
9. **Presence of striking or noteworthy features.** A view might be strongly valued because it contains a distinctive and memorable Landscape/Townscape feature such as a promontory headland, lough or castle;

10. **Historical, cultural and / or spiritual significance.** Such attributes may be evident or sensed by receptors at certain viewing locations, which may attract visitors for the purposes of contemplation or reflection heightening the sense of their surroundings;

11. **Rarity or uniqueness of the view**. This might include the noteworthy representativeness of a certain Landscape/Townscape type and considers whether the receptor could take in similar views anywhere in the broader region or the country;

12. **Integrity of the Landscape/Townscape character**. This looks at the condition and intactness of the Landscape/Townscape in view and whether the Landscape/Townscape pattern is a regular one of few strongly related components or an irregular one containing a variety of disparate components;

13. **Sense of place**. This considers whether there is special sense of wholeness and harmony at the viewing location; and

14. **Sense of awe**. This considers whether the view inspires an overwhelming sense of scale or the power of nature.

Those locations which are deemed to satisfy many of the above criteria are likely to be of higher sensitivity. No relative importance is inferred by the order of listing in the **Table 1.5**. Overall sensitivity may be a result of a number of these factors or, alternatively, a strong association with one or two in particular.

1.2.1.3 Visual Impact Magnitude

The magnitude of visual effects is determined on the basis of two factors; the visual presence (relative visual dominance) of the proposal and its effect on visual amenity.

Visual presence is a somewhat quantitative measure relating to how noticeable or visually dominant the proposal is within a particular view. This is based on a number of aspects, aside from scale in relation to distance. Some of these aspects include the extent and complexity of the view, as well as the degree of existing contextual movement experienced. The backdrop against which the development is presented and its relationship with other focal points or prominent features within the view is also considered. Visual presence is essentially a measure of the relative visual dominance of the proposal within the available vista and is often, though not always, expressed as one of the following terms:

- Minimal;
- Sub-dominant;
- Co-dominant;
- Dominant;
- Highly dominant.

The magnitude of visual impacts is classified in **Table 1.4**.

Table 1.4 Magnitude of Visual Impact

Criteria	Description
Very High	The proposal intrudes into a large proportion or critical part of the available vista and is without question the most noticeable element. A high degree of visual clutter or disharmony is also generated, strongly reducing the visual amenity of the scene
High	The proposal intrudes into a significant proportion or important part of the available vista and is one of the most noticeable elements. A considerable degree of visual clutter or disharmony is also likely to be generated, appreciably reducing the visual amenity of the scene
Medium	The proposal represents a moderate intrusion into the available vista, is a readily noticeable element and/or it may generate a degree of visual clutter or disharmony, thereby reducing the visual amenity of the scene. Alternatively, it may represent a balance of higher and lower order estimates in relation to visual presence and visual amenity
Low	The proposal intrudes to a minor extent into the available vista and may not be noticed by a casual observer and/or the proposal would not have a marked effect on the visual amenity of the scene
Negligible	The proposal would be barely discernible within the available vista and/or it would not detract from, and may even enhance, the visual amenity of the scene

1.2.1.4 Visual Impact Significance

As stated above, the significance of visual impacts is a function of visual receptor sensitivity and visual impact magnitude. This relationship is expressed in the same significance matrix

and applies the same EPA definitions of significance as used earlier in respect of Landscape/Townscape impacts (**Table 1.3** refers).

1.2.1.5 Quality and Duration of Impacts

In addition to assessing the significance of Landscape/Townscape effects and visual effects, EPA Guidance for EIAs requires that the quality of the effects is also determined. This could be negative/adverse, neutral, or positive/beneficial.

Whereas, the introduction of new built elements into countryside areas more often results in negative Landscape/Townscape and visual effects, in urban and peri-urban settings, development proposals are often replacing one built feature with another or developing 'brownfield' sites with specific zoning objectives. The consequence for the townscape character and visual amenity is often beneficial, or may be a combination of positive effects and negative effects for different receptors. In the context of this assessment, the judgment of the quality of the effects is made in combination with the significance judgement for both Landscape/Townscape impacts and visual impacts e.g., Moderate/Positive or Moderate/Negative. A description of the quality of Landscape/Townscape effects is outlined below:

- **Positive:** A positive effect would add to the Landscape/Townscape quality and character of the site and its wider surrounds.
- **Neutral:** A neutral effect would have a low or negligible impact on the Landscape/Townscape quality and considered part of normal Landscape/Townscape quality.
- **Negative:** A negative effect would involve the loss of Landscape/Townscape elements resulting in a reduction to the existing Landscape/Townscape quality.

Landscape/Townscape and Visual effects are also categorised in this report according to their duration, in line with EPA Guidance for EIAs:

- Temporary – Lasting for one year or less;
- Short Term – Lasting one to seven years;
- Medium Term – Lasting seven to fifteen years;
- Long Term – Lasting fifteen years to sixty years; and
- Permanent – Lasting over sixty years.

1.2.2 Extent of Study Area

It is anticipated that the Proposed Development will be difficult to discern and not likely to give rise to significant Landscape/Townscape or visual impacts beyond 2km. As a result, a 2km study area is to be used in this instance with a focus on those receptors within 1km of the site (see Figure 1.1, below).

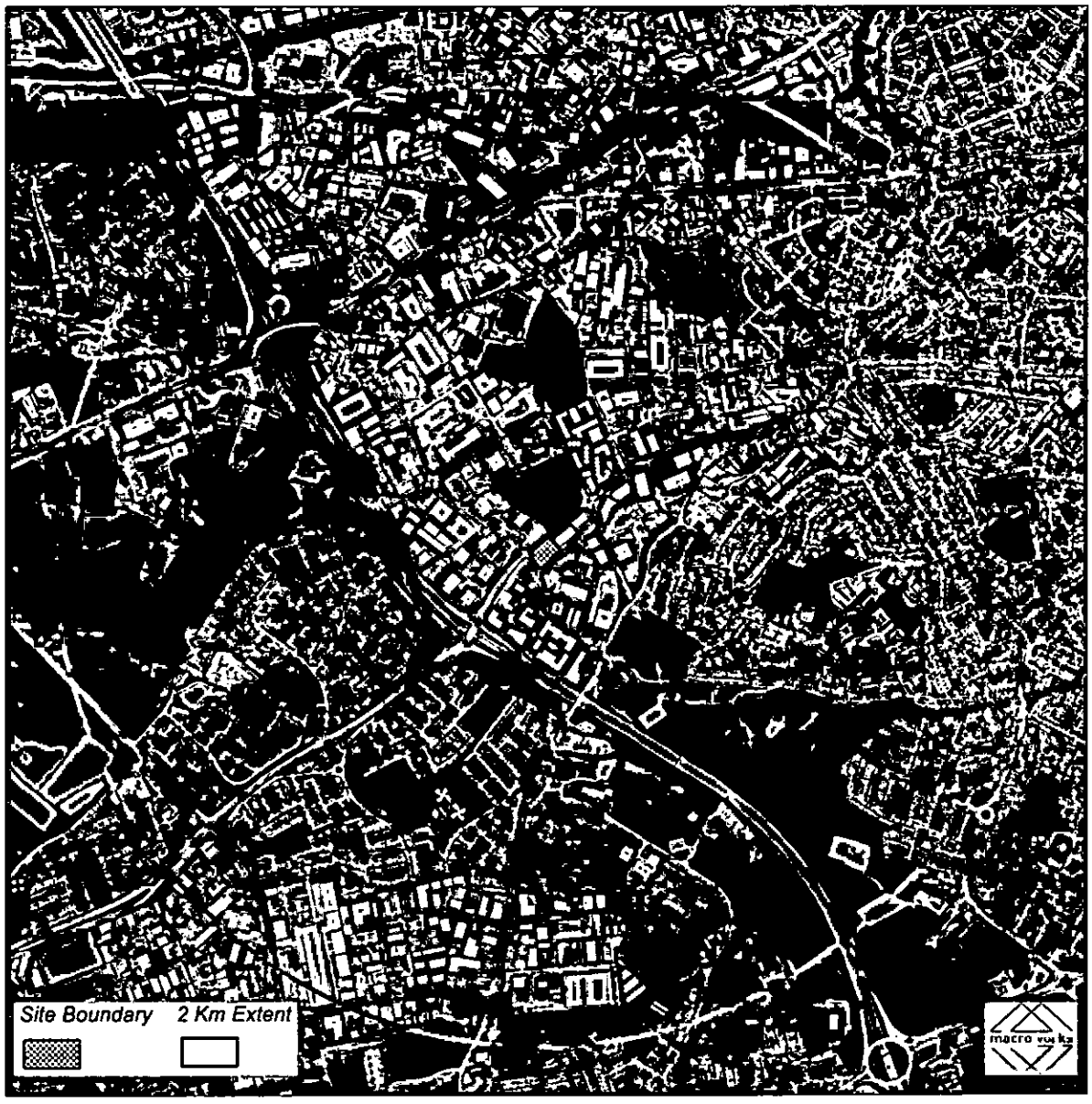


Figure 1.1 **Extent of the study area.**

1.3 RECEIVING ENVIRONMENT

1.3.1 Landscape/Townscape and Visual Policy Context and Designations

1.3.1.1 South County Dublin Development Plan (CDP) 2022-2028

The South Dublin County Development Plan 2022-2028 came into effect on 3rd August 2022, and "sets out the framework to guide future development with the focus placed on the places we live, the places we work, and how we interact and move between these places while protecting our environment."

The application site is situated within land designated as "EE - Employment and Enterprise" by the CDP's Land Use Zoning Map (see Figure 1.2 below).

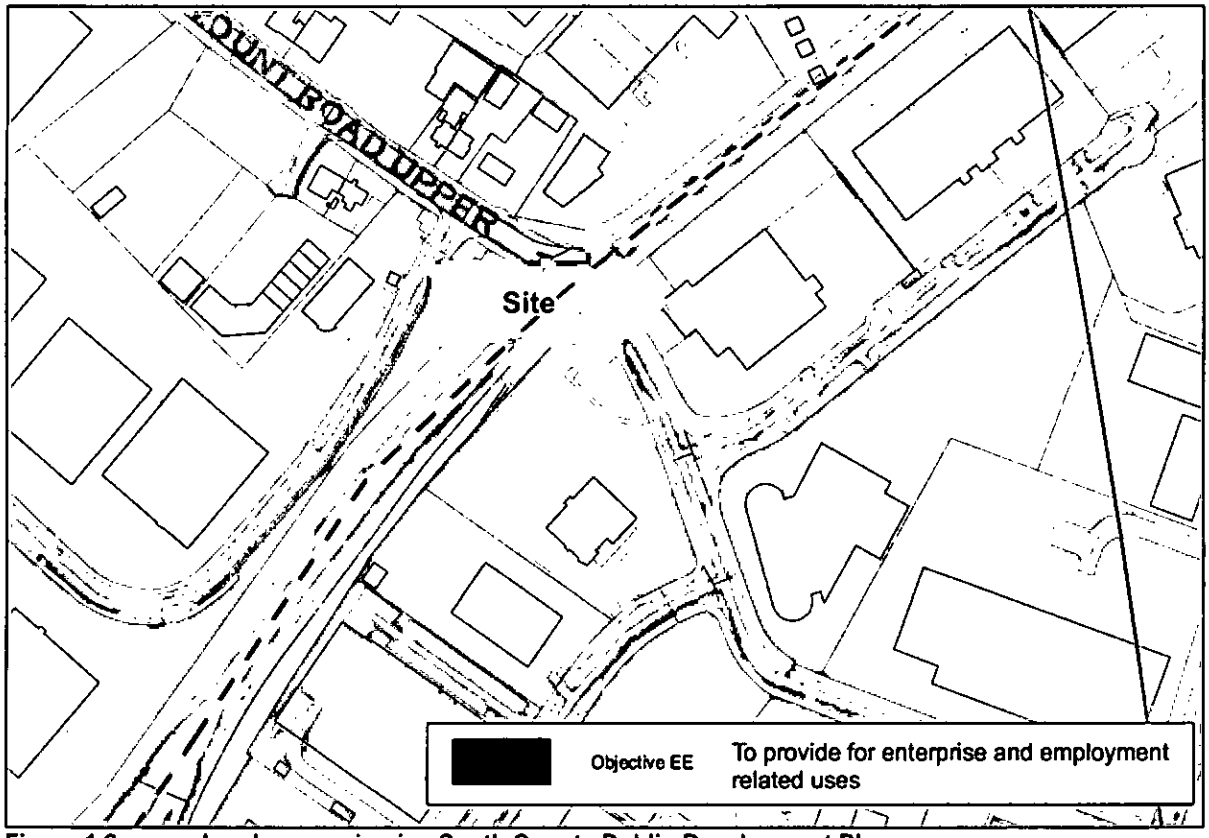


Figure 1.2 Land use zoning ins South County Dublin Development Plan

The site is located within Landscape Character Area 5 Suburban South Dublin, according to the Landscape Character Assessment that forms part of the current CDP.

Page 77 of Landscape Character Assessment states:

> *"Please note, the urbanised areas of South Dublin County was not assessed in detail as this would require a finer scale assessment, normally undertaken as a townscape character assessment."*

Consequently, unlike the other four Landscape Character Areas within the SDCC jurisdiction, no landscape/ visual/overall sensitivity, landscape value or landscape capacity has been designated for Area 5 Suburban South Dublin. However, this LCA's key characteristics that pertain to the study area entail:

- *"Built – up urban area with extensive housing estates and industrial /commercial parks. Variety of house styles and layouts dating from the late 19th century to late 20th century*
- *Major traffic corridors with M50 traversing north- south through the area, and LUAS line travelling north from Tallaght, parallel to the M50 to city centre*
- *Grass open spaces in gardens, industrial parks, golf courses, school playing fields, and miscellaneous spaces in housing areas*
- *Street trees planting*
- *Recreational facilities – public parks and golf courses - provide amenities and ecological resources"*

It also notes (Page 78) that this:

> *"LCA retains little of historical significance and the setting of its primary settlements have been radically altered by built developments, notably through the 20th Century."*

Relevant 'forces for change' entail:

> *"New infill or other built developments can be insensitive to remnant historical or vernacular features."*

Relevant 'mitigation measures' entail:

> *"Proposed developments should be audited for their impact on views particularly those to the rural hinterland of the county."*

Section 3.0 of the CDP pertains to 'Natural, Cultural and Built Heritage'. It is the Policy NCBH14: Landscapes (Page 107) to:

> *"Preserve and enhance the character of the County's landscapes, particularly areas that have been deemed to have a medium to high Landscape Value or medium to high Landscape Sensitivity and to ensure that landscape considerations are an important factor in the management of development."*

However, it is worth noting that the site and study area are within an 'Urban' Landscape Character Type, whose sensitivity is deemed 'not applicable.'

HCBH14 Objective 1:

> *"To protect and enhance the landscape character of the County by ensuring that development retains, protects and, where necessary, enhances the appearance and character of the landscape, taking full cognisance of the Landscape Character Assessment of South Dublin County (2015)."*

HCBH14 Objective 2:

> *"To ensure that development is assessed against Landscape Character, Landscape Values and Landscape Sensitivity as identified in the Landscape Character Assessment for South Dublin County (2021) in accordance with Government guidance on Landscape Character Assessment and the National Landscape Strategy 2015-2025."*

NCBH14 Objective 3:

> *"To ensure that development respects and reinforces the distinctiveness and uniqueness of the Landscape Character Types and retains important characteristics such as habitats, landform, vernacular heritage and settlement patterns."*

NCBH14 Objective 4:

> *"To require a Landscape/Visual Impact Assessment to accompany all planning applications for significant proposals, located within or adjacent to sensitive landscapes and to provide mitigation measures to address any likely negative impacts."*

NCBH14 Objective 5:

> *"To protect skylines and ridgelines from development."*

Please note that there are no designated Special Amenity Areas (SAAO) within the study area.

1.3.1.2 Views of Recognised Scenic Value

Views of recognised scenic value are primarily indicated within Development Plans in the context of scenic views/routes designations, but they might also be indicated on touring maps, guide books, websites, road side rest stops or on post cards that represent the area. The CDP contains designated scenic views and prospects. However, none of these are of relevance to the site.

1.3.2 Landscape/Townscape Baseline

The Landscape/Townscape baseline represents the existing Landscape/Townscape context and is the scenario against which any changes to the Landscape/Townscape brought about by the proposed development will be assessed. A description of the Landscape/Townscape context of the proposed application site and wider study area is provided below under the headings of landform and drainage, vegetation and land use, centres of population and houses, transport routes and public amenities and facilities. Although this description forms part of the Landscape/Townscape baseline, many of the Landscape/Townscape elements identified also relate to visual receptors i.e., places and transport routes from which viewers can potentially see the proposed development.

1.3.2.1 Landscape/Townscape Context

The terrain of the study area is generally slightly undulating, with a modest lift in landform in the southeast, near Greenhills Park. However, most of the study area is located between 60 and 85m AOD. In terms of drainage patterns, there are a few small streams in the study area. The most notable is the large stream that is the Poddle River, located in the southeast of the study area, which supports two large artificial ponds/small lakes in Greenhills Park. Within Tymon Park, on the western side of the M50, there are also similar sized ponds fed by the Poddle.

Figure 1.3 Context of site within M50 Business Park

While the study area was predominantly rural up until 35-40 years ago, it is now typical of peri-urban contexts across much of western Dublin; a highly developed realm with very limited aesthetic or naturalistic qualities.

Due to its peri-urban setting, the land use of the study area is highly modified and utilitarian, typically comprising of anthropogenic land uses entailing extensive residential developments, as well as industrial and commercial developments, major route corridors and overhead electrical cable infrastructure. This is also reflective of the site and its immediate vicinity, which is located in the M50 Business Park (see Figure 1.3 and 1.4, above and below, respectively). It is also located on the junction of Calmount Road and Ballymount Road Upper, with a large and busy Applegreen (petrol) station across from it.

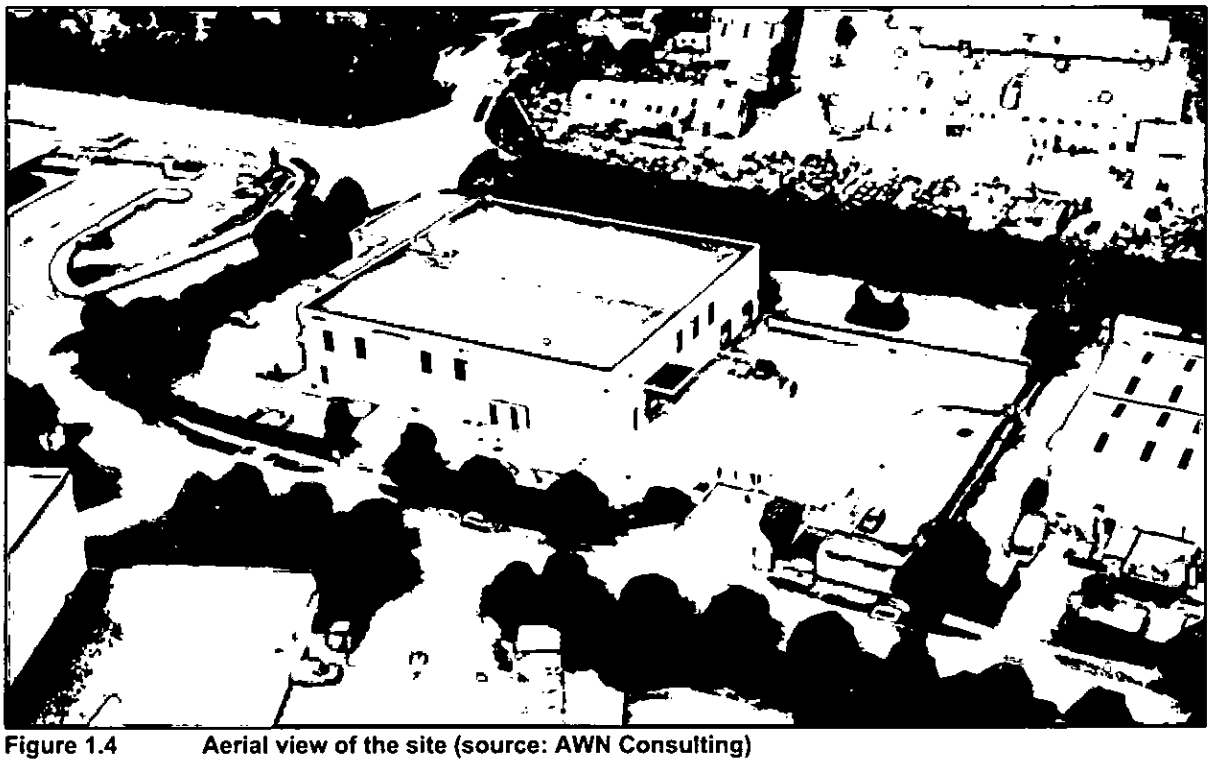


Figure 1.4 Aerial view of the site (source: AWN Consulting)

Within the site, there is a single, two-storied, flat-roofed commercial-industrial building, with cladding and windows about its façade, which appears to have been constructed between 1995 and 1999. A large concrete courtyard/loading bay occupies most of the northeast end of the site, with a car park in the southwest corner. Along the north-western edge, there is considerable near-mature deciduous tree growth that appear to have been planted within the last c. 20 years, as well as other mature trees and shrubs along the southwestern and south-eastern boundaries. Along the roadside grass verge outside the north-western and south-eastern site boundaries, there are similar sized (i.e., near-mature, deciduous) street trees. The main entrance is located along the south-eastern site boundary, into the M50 Business Park and is marked by a large security gate, inside which is a security kiosk/booth. The site boundary is demarcated by a dark green palisade fence, which is hard to discern in many places, owing to the density of vegetation behind it and, in some cases, before it. Thus, views into the site are not openly or easily available (see Figure 1.5, below).

In accordance with its zoning, land within at least 500m of the site tends to be occupied by large commercial-industrial development, with a minimal degree of greenfield sites. The exception to this is an undeveloped, fenced-off/secured (i.e., privately-owned) field to the immediate north of Calmount Road. However, in general, the only biodiversity or green spaces – public or private – within 500m of the site tend to be grass verges sporting multiple street trees planted within the last 25 years.

Figure 1.5 The site is set within the M50 Business Park

In accordance with its zoning, land within at least 500m of the site tends to be occupied by large commercial-industrial development, with a minimal degree of greenfield sites. The exception to this is an undeveloped, fenced-off/secured field to the immediate north of Calmount Road. However, in general, the only biodiversity or green spaces – public or private – within 500m of the site tend to be grass verges sporting multiple near-mature street trees.

Figure 1.6 Calmount Road between the site and the M50 intersection

Strong and busy arterial routes help characterise the study area, with the muscular, tree-lined M50 corridor located within 400m southwest of the site, while the N7 is located in the northwest of the study area. However, in the southern half of the study area there are two sizeable public parks to either side of the M50: Tymon Park and Greenhills Park (home to Limekiln Rounders GAA Club). Please refer to Figure 1.7, below. In addition, Ballymount Park is located in the northwest of the study area. However, all such parks/public open spaces are located more than 400m from the site, and separated from it by a considerable degree of commercial-industrial development, meaning there is no intervisibility between them.

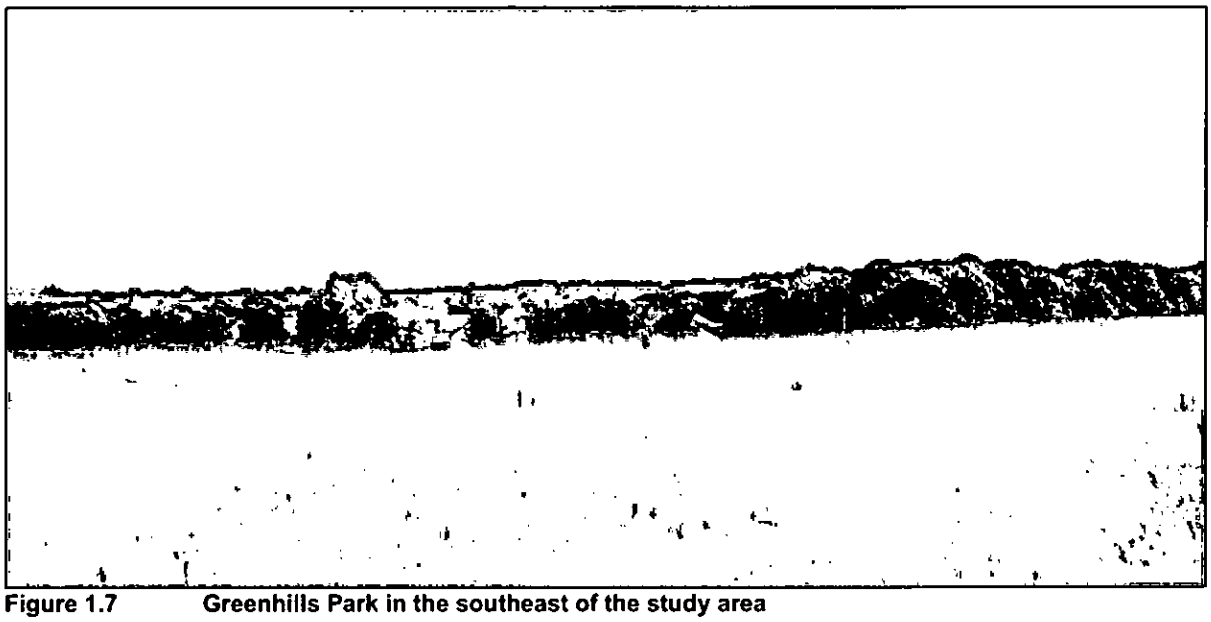


Figure 1.7 **Greenhills Park in the southeast of the study area**

1.3.3 Visual Baseline

Only those parts of the receiving environment that potentially afford views of the proposed development are of concern to this section of the assessment. A computer-generated Zone of Theoretical Visibility (ZTV) map has been prepared to illustrate where the proposed development is potentially visible from within the study area. The ZTV map is based solely on terrain data (bare ground visibility), and ignores features such as trees, hedges or buildings, which may screen views.

Given the scale of built development within this Landscape/Townscape, the main value of this form of ZTV mapping is to determine those parts of the Landscape/Townscape from which the proposed development will definitely not be visible, due to terrain screening within the study area.

Figure 1.8 **Standard (bare-ground) ZTV map showing potential site visibility within the study area.**

The following key points are illustrated by the 'bare-ground' ZTV map (refer to Figure 1.8 above):

- Theoretic visibility extends throughout a large proportion of the study area due to the terrain's relatively low-lying and topographically homogenous nature.
- The most notable area of no theoretical visibility will occur in the east of the study area, as land lifts over a low 'brow' approx. 500m east and southeast of the site. This mostly entails extensive residential development, as well as large swathes of Greenhills Park.

1.3.3.1 Identification of Viewshed Reference Points as a Basis for Assessment

Viewshed Reference Points (VRP's) are the locations used to study the visual impacts of a proposal in detail. It is not warranted to include each and every location that provides a view of a development as this would result in an unwieldy report and make it extremely difficult to draw out the key impacts arising from the proposed development. Instead, the selected viewpoints are intended to reflect a range of different receptor types, distances and angles. The visual impact of a proposed development is assessed by Macro Works using up to 6 no. categories of receptor type as listed below:

- Key Views (from features of national or international importance);
- Designated Scenic Routes and Views;
- Local Community views;
- Centres of Population;
- Major Routes;
- Amenity and heritage features.

VRP's might be relevant to more than one category and this makes them even more valid for inclusion in the assessment. The receptors that are intended to be represented by a particular VRP are listed at the beginning of each viewpoint appraisal. The Viewshed Reference Points selected in this instance are set out in the **Table 1.5** and **Figure 1.9** below.

Table 1.5 Outline Description of Selected Viewshed Reference Points (VRPs)

VRP No.	*Location*	*Representative of*	*Direction of view*
VP1	Site entrance at M50 Business Park	Local Community Views	N/NW
VP2	Ballymount Road Upper by Applegreen Station	Local Community Views	N
VP3	Claremont Road by Junction 10 of M50	Major Route	NE
VP4	Ballymount Road Upper	Local Community Views	SE
VP5	Ballymount Avenue	Local Community Views	SW
VP6	Greenhills Park	Amenity & Heritage feature	NW

Figure 1.9 Viewpoint location map

1.4 CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

The proposed development will comprise of a change of use from warehouse to data repository facility, alterations to external facades, reclad roof, internal alterations, external plant and equipment to include condensers and back-up electrical generator and transformer, 18 parking spaces including 2 electrical vehicle charging points, bicycle parking, landscaping, planting, new security fence, altered vehicular gates and all associated site works.

In relation to potential Landscape/Townscape and Visual Impact issues, the proposed development chiefly entails a change of use from warehouse to data repository facility, alterations to external facades, reclad roof, internal alterations, external plant and equipment to include 12 no. condenser modules, back-up electrical generator and associated oil tank, transformer, 2 no. sprinkler tanks and pumphouse, bin store, 18 car parking spaces including 2 electrical vehicle charging points, bicycle parking shelter, landscaping, planting, new security fence, external lighting, CCTV and altered vehicular gates.

1.5 POTENTIAL IMPACTS OF THE DEVELOPMENT

1.5.1 Landscape/Townscape Impact Assessment

1.5.1.1 Landscape/Townscape Value and Sensitivity

In accordance with Section 5.5 of the GLVIA-2013, a townscape character assessment requires a particular understanding of, among other criteria, *"the context or setting of the urban area and its relationship to the wider landscape."* In a city that has evolved over millennia, the built infrastructure of the study area is a relatively recent addition. Having been primarily farmland up until at least the 1980s, most of the study is reflective of the peri-urban setting of west Dublin; a setting that has evolved rapidly and radically over the last quarter century.

While markers such as the diminutive Ballymount Castle (on the western side of the M50; more than 900m away from the site) represent the spare remnants of the once-rich built legacy from distant centuries, the study area has transformed unrecognisably over the last half century. Consistent with such peri-urbanism, this overt, muscular industrial-commercial imprint is dominant within the study area, and has consequently devalued the hitherto landscape sensitivity of this locale. However, there is also room for extensive residential developments as well as recreational outlets (e.g. public parks) about the study area. In addition, the arterial infrastructure associated with the wide and busy M50 corridor dissects the study area.

Nonetheless, this industrial / commercial sense of place also supports the urban economy of the local area and further afield. Thus, there is something of a productive value that is likely to be almost as important to local residents as the residential areas in which they live. But this is not a study area containing architectural conservation zones, or high-end/cutting-edge architectural developments. It is more a diverse urban neighbourhood, in which places of residence and places of work co-exist. Thus, townscape values are likely to be, overall, more utilitarian than scenic or amenity based.

As previously covered in Section 1.3.2.1, the site and the study area are a highly modified, utilitarian and anthropomorphic landscape whose integrity and landscape condition has been considerably degraded this century; factors that are particularly discernible within 500m of the site. This is reflective of the fact that the area within at least 500m of the site is zoned for 'Employment & Enterprise", whose principal zoning objective is, "To provide for enterprise and employment related uses," as previously covered in Section 1.3.1.1. More broadly across the study area, the landscape values and sensitivity are reflective of those related in the aforementioned Landscape Character Assessment of South County Dublin.

In summary, the site and its environs (i.e., up to approx. 500m distance) are considered to have a **Low** landscape/townscape sensitivity. However, the presence of recreational spaces/parks in the wider study area indicate a **Medium-low** landscape/townscape sensitivity in the wider study area.

1.5.1.2 Do-nothing scenario

The '*do-nothing*' impact refers to the non-implementation of the proposed development. The primary effect of this would be that the potential impacts of the proposed development would not occur, while the site is likely to persist in the longer term due to its current 'EE – Employment and Enterprise' zoning. Thus, a neutral impact will persist on the existing Landscape/Townscape.

1.5.1.3 Magnitude of Landscape/Townscape Effects - Construction Stage

During the construction phase there will be a far higher intensity of activity at the site than during the operational phase. This will consist of heavy vehicle movements to and from the site as well as construction machinery within the site. Nonetheless, the movement of HGVs along the surrounding road network is a regular occurrence in this part of the study area,

owing to a business/base for a large refuse/bin lorry company (i.e., refuse trucks driving to and from this business all day) also being located within the M50 Business Park.

In order to facilitate the proposed development, it is estimated that 400 m3 of topsoil will be stripped; 200 m3 of bulk excavation will occur in the northeast corner of the site, which will be subsequently replaced with 300 m3 of imported fill; further excavation will be required for striping of bituminous pavement and underground services. Construction stage impacts will also be generated by the introduction of temporary site lighting and the temporary storage of construction materials and excavated ground. In terms of landscape within the site, it is proposed to remove of up to 20 existing trees. However, the woodland belt on the north-western boundary of the site will be retained and bolstered with additional native planting, while the majority of the existing shrub and hedge planting along the perimeter of the site will also be retained and managed. Construction phase impacts on the Landscape/Townscape are considered to be 'Temporary', according to the aforementioned EPA's guidelines on the duration of events, as the construction stage is likely to take less than 12 months to complete.

In summary, the construction stage impacts reflect the fact that the proposed development is essentially that of a change of use from one commercial-industrial function to another, set within a brownfield site in a business park, which are relatively modest in relation to a 'new build' of such premises.

For these reasons, the magnitude of Landscape/Townscape impacts during the construction stage is deemed to be **Low** within the immediate surrounds of the site. However, this quickly reduces to **Low-negligible** and then **Negligible** beyond 500m from the site.

In combination with the Low Landscape/Townscape sensitivity designation outlined above for the site and its environs (i.e., up to approx. 500m distance), the significance of construction stage impacts is deemed to be **Slight** within the immediate surrounds of the site. However, this will quickly reduce to **Imperceptible** beyond 500m, where construction activities will be barely discernible. The quality of the construction stage effects will be **Negative** and **Temporary** in duration.

1.5.1.4 Magnitude of Landscape/Townscape Effects - Operational Stage

Post-construction, the operational stage impacts of the proposed development pertain mostly to the potential impacts it is likely to have on the inherent Landscape/Townscape character of the receiving environment.

However, in this instance, the proposed development pertains to a change of use from warehouse to data repository facility, within a site zoned for precisely such activities, set within a large and busy peri-urban business park.

The proposed refurbishment and retrofitting of the existing two-storey commercial-industrial building on site is likely to have a negligible impact upon the residual Landscape/Townscape character of the receiving environment. However, the proposed/added flue stack 2.6m above roof level, as well as the proposed generator, new vehicular gates, pedestrian gates, turnstiles and perimeter security fence is likely to have only a low impact upon the residual Landscape/Townscape character of the receiving environment. Meanwhile, the proposed landscape measures will have a negligible impact upon the residual Landscape/Townscape effects, as proposed planting reaches maturity. Overall, the proposed development will not represent any notable increase in the intensity of built development within the site's immediate surroundings; and will not appear as an inappropriate or incongruous form of development in the context of the site or setting.

On balance of the factors discussed above, it is considered that the magnitude of Landscape/Townscape impact within the immediate context will be **Low-negligible** and of a **Neutral** quality.

With reference to the significance graph (Table 1.3 refers) above, the **Low** Landscape/Townscape sensitivity judgement attributed to the site and its environs (i.e., up to approx. 500m distance), coupled with a **Low-negligible** magnitude of operational stage Landscape/Townscape impacts is considered to result in an overall significance of no greater than **Slight-imperceptible.** The quality of the operational stage effects will be **Neutral** and **Permanent** in duration.

1.5.2 Visual Impact Assessment

1.5.2.1 Sensitivity of Visual Receptors

In this instance all of the viewpoints are located within relatively close proximity to each other and the site. Consequently, the receptors being represented and their associated viewing scenarios are similar for most of them. However, these receptors fall into two broader categories: that of the wider M50 Business Park and its immediate hinterland, and that of the visual context beyond this Business Park.

In the first instance (i.e., that of the M50 Business Park and its immediate hinterland), these account for VP1-VP5 inclusively, which are overwhelmingly industrial-commercial in setting and character, with a negligible degree of scenic amenity. Thus, their visual receptor sensitivity is deemed to be **Low**. However, VP6 is set within Greenhills Park, c. 500m from the site. The park is bound to three sides by dense residential and/or commercial-industrial development, and on its eastern side by the M50. Thus, while it's broader setting is also peri-urban, receptors (i.e., park users) in this context will be experience a higher degree of visual sensitivity. Thus, their visual receptor sensitivity is deemed to be **Medium.**

1.5.2.2 Magnitude of Visual Effects

The assessment of visual impacts at each of the selected viewpoints is aided by photomontages of the proposed development. Photomontages are a 'photo-real' depiction of the scheme within the view utilising a rendered three-dimensional model of the development, which has been geo-referenced to allow accurate placement and scale. For each viewpoint, the following images have been produced:

1. Existing view
2. Outline view (yellow outline showing the extent of the development overlaid on the photograph)
3. Montage view

VP NO.	EXISTING VIEW	VIEWPOINT SENSITIVITY	VISUAL IMPACT MAGNITUDE	SIGNIFICANCE / QUALITY / DURATION OF IMPACT
VP1	**Site entrance at M50 Business Park** This location is along a short, dead-end industrial road in the M50 Business Park and shows the site entrance. In the foreground, the site's blue boundary railings, vehicle gates and pedestrian gate are evident. Behind these is the security kiosk and loading bay for the adjacent building. A modern, modest-sized, two-storey commercial-industrial building is located within the site, which is partially obscured by boundary shrub planting and foreground street trees. The building is similar to many within the Business Park. At the far side of the site, along the north-western site boundary is a rich thicket of vegetation, precluding more distant views.	**Low**	As part of the proposed refurbishment of the two-storey commercial-industrial building there will be a three-tone symmetric matrix cladding pattern across its façade, including the infilling of three windows, but no increase in scale or bulk or change of form. However, a sizeable sprinkler tank will be located to the immediate north of the building, alongside the loading area. Deep within the site, separating the loading area and sallyport to the gate lock area will be an internal gate system for approaching/ exiting trucks. While the large sprinkler tank will represent a more 20th century, hard-edged industrial element into the scene, it will not obscure any source of visual amenity, and will remain well below the existing building's roofscape. The proposed cladding pattern upon the building is likely to draw the eye, yet will create a marginally more aesthetic and contemporary commercial-industrial patchwork to this view than is currently the case. Furthermore, the pattern will help dimmish the perceived overall height and massing of the building. However, the viewing context is key: the visual receptor is that of those working in or accessing premises within a strictly utilitarian, peri-urban business park. On balance of the reasons outlined above, the visual impact is deemed **Low-negligible** and with a **Positive** quality of effect.	**Slight-imperceptible / Positive / Permanent**
VP2	**Ballymount Road Upper by Applegreen Station** This view is representative of not just road users and pedestrians along Ballymount Road Upper, but of those frequenting the particularly large and busy Applegreen station to the west of this viewpoint.	**Low**	The proposed development will be partially visible between mature intervening vegetation, but will not represent an increase or change in form or scale. At the southwestern end of the building, upon the first floor overlooking the foreground road, the building's office area will have a slightly darker cladding than was previously the case. At the eastern end of the building, between intervening mature trees, the commercial-industrial building will have a three-tone symmetric matrix cladding pattern across its façade.	**Slight-imperceptible/ Positive / Permanent**

VP NO.	EXISTING VIEW	VIEWPOINT SENSITIVITY	VISUAL IMPACT MAGNITUDE	SIGNIFICANCE / QUALITY / DURATION OF IMPACT
	Across Ballymount Road Upper, a modest-sized two-storey commercial-industrial building is located, but is only partially visible owing to tall intervening vegetation. Neither the form, scale or tone of this structure is of distinct visual interest in the setting of a busy peri-urban business park.		In terms of aesthetics, the slightly darker office area cladding will lend a greater degree of visual absorption (with the foreground trees) into the scene. Along the partially visible eastern end of the building, the proposed cladding tones and symmetrical pattern will help instil a marginally more aesthetic and contemporary commercial-industrial architectural tenor to this view, or at least in the context of a busy peri-urban business park, which will not detrimentally impact the already low visual amenity of this roadside setting. Thus, the magnitude of visual impact is deemed **Low-negligible** and with a **Positive** quality of effect.	
VP3	**Claremont Road by Junction 10 of M50** This location is approx. equidistant between the site and Junction 10 of the M50. This section of the road is a busy, four-lane regional road, through a distinctively commercial-industrial zone. In this scene, above and between the aforementioned Applegreen station structure, the existing two-storey cladded building on site is partially visible almost 200m away. However, between it and this location, an intensely busy and cluttered foreground (e.g., sizeable signage, street lighting, roadside barriers and traffic) reduces the noticeability of other, more distant elements in the scene.	**Low**	Viewed from this angle and location, across the façade of the two-storey commercial-industrial building within the site there will mostly be a three-tone symmetric matrix cladding pattern. This more creative cladding mix is likely to draw the eye more than the pre-existing cladding, but there will be no increase in scale or bulk or change of form to the refurbished building. Less discernible, the building's office area will have a slightly darker cladding than was previously the case. Aesthetically, the slightly darker cladding will lend a greater degree of visual absorption (with the foreground petrol station and roadside trees). Meanwhile, the proposed three-tone symmetric matrix cladding will help infuse a fractionally more contemporary commercial-industrial architectural imprint from this highly arterial and utilitarian viewing context. On balance, the magnitude of visual impact is deemed **Low-negligible** and with a **Positive** quality of effect.	**Slight-imperceptible / Positive / Permanent**
VP4	**Ballymount Road Upper** At this location, as road users and pedestrians' approach Ballymount Road Upper's busy intersection with Claremont	**Low**	In terms of visual presence, the proposed development is not likely to draw the eye, or be more noticeable, from this location any more than the pre-refurbished building.	**Slight-imperceptible / Neutral / Permanent**

VP NO.	EXISTING VIEW	VIEWPOINT SENSITIVITY	VISUAL IMPACT MAGNITUDE	SIGNIFICANCE / QUALITY / DURATION OF IMPACT
	Road, the site of the proposed development is in the direct line of sight. A modest-sized two-storey commercial-industrial building is located overlooking the intersection, but is partially visible between intervening mature treelines. This primarily takes the form of a 1st/ upper storey office area, with light grey cladding and multiple rows of windows. Otherwise, little else can be discerned of the site, owing to the scale of intervening vegetation.		In terms of aesthetics, the slightly darker office area cladding will lend a stronger degree of gravitas and visual absorption (with the intervening trees), without generating any noticeable change of scale or form to the building. From this location, the proposed development will represent a *de facto* 'facelift' to this two-storey commercial-industrial building. On balance, the magnitude of visual impact is deemed **Low-negligible** and with a **Neutral** quality of effect.	
VP5	**Ballymount Avenue** Set within a highly industrialised zone, this location reveals a fenced-off, private undeveloped site in the foreground. More than 300m to the southwest, the site is set behind a tall, mature roadside treeline.	**Low**	The proposed development will not be visible from here due to the aforementioned intervening vegetation. Thus, the magnitude of visual impact is **Negligible** by default.	**Imperceptible / Neutral / Permanent**
VP6	**Greenhills Park** Set approx. 500m southeast of the site, Greenhills Park is located on a slightly higher elevation, and is the main source of outdoor leisure and recreation in the locale. In this scene, a petrol station and other buildings align Greenhills Road, making views in the direction of the site unattainable.	**Medium**	The proposed development will not be visible from here due to the aforementioned intervening buildings. Thus, the magnitude of visual impact is **Negligible** by default.	**Imperceptible / Neutral / Permanent**

1.6 REMEDIAL AND MITIGATION MEASURES

The main mitigation by avoidance measure employed in this instance is the siting of the proposed development in a robust, highly-modified Landscape/Townscape that is already heavily influenced by existing commercial industrial land uses and is accordingly zoned for such activities. In addition, the proposed refurbishment and retrofitting of the existing two-storey commercial-industrial building on site will be comparable with existing buildings materials and finishes currently on site.

There will be a slight disruption to the existing Landscape/Townscape pattern as the proposed development will result in the removal of some vegetation and the planting and maturation of others, as well as a relatively modest alteration to the infrastructure within the site. However, the site layout will remain fundamentally similar, while the proposed development will not disrupt the wider Landscape/Townscape pattern.

In terms of landscape within the site, it is proposed to remove of up to 20 existing trees. However, the woodland belt on the north-western boundary of the site will be retained and bolstered with additional native planting, while the majority of the existing shrub and hedge planting along the perimeter of the site will also be retained. Please refer to the Landscape Plan LD. LD.UNIT1M50, which accompanies this application, for further information.

1.7 RESIDUAL IMPACTS

In terms of residual Landscape/Townscape impacts, the proposed development pertains to a change of use from warehouse to data repository facility, within a site zoned for precisely such activities, set within a large and busy peri-urban business park. Thus, the proposed development will not represent any notable increase in the scale or intensity of built development within the site's immediate surroundings; and will not appear as an inappropriate or incongruous form of development in the context of the site or setting. In summary, as previously set out in Section 1.5.1.4, the overall significance of residual Landscape/Townscape impacts will be no greater than **Slight-imperceptible,** while the quality of the operational stage effects will be **Neutral** and **Permanent** in duration.

Visual impacts were assessed at 6 no. viewpoint locations throughout the 2km study area, representing a range of viewing angles, distances, and contexts. The sensitivity of visual receptors ranged from 'Medium' to 'Low,' with 5 out of the 6 viewpoints categorised as 'Low,' further highlighting the robust and highly developed nature of this Landscape/Townscape context. The highest residual impact significance of 'Slight-imperceptible' occurs at Viewpoints 1, 2, 3 & 4, where a view of the proposed development will be afforded within 200m of the site, between and behind intervening vegetation. This low visual impact reflects the fact the proposed development is primarily one of a refurbishment of an existing modest-sized, two-storey building within a peri-urban business park. In addition, VP5 and VP6 were deemed to have an 'Imperceptible' visual impact significance. Notably, owing to the high architectural quality of the proposal, the quality of visual effect for VP 1, 2, 3 & 4, was deemed to be 'Positive'; a welcome judgement in all spheres, but even more so within a highly industrial locale as this. Lastly, VP 5 & 6 was deemed to have a neutral quality of visual effect.

Based on the Landscape/Townscape and Visual impact judgements provided throughout this LVIA, the Proposed Development is not considered to give rise to any significant Landscape/Townscape or Visual impacts.

1.8 CUMULATIVE IMPACT

As the proposed development pertains to a change of use from warehouse to data repository facility in a site set within a large and busy peri-urban business park, there is a negligible likelihood of cumulative impacts arising from such a change of use. In addition, the proposed

retrofitting/refurbishment will not represent any notable increase in the intensity of scale or built development within the site's immediate surroundings. The site and the main two-storey building within it, is generally well screened by near-mature trees when viewed from outside the site, resulting in a limited degree of intervisibility between it and surrounding receptors. Similarly, the proposed/added flue stack 2.6m above roof level, as well as the proposed generator, new vehicular gates, pedestrian gates, turnstiles and perimeter security fence are not likely to generate any palpable cumulative impacts.

In summary, it is not considered that there will be any significant cumulative impacts arising from the proposed development in conjunction with other existing and/or consented developments.

1.9 MONITORING

1.9.1 Construction Phase

Landscape tender drawings and specifications will be produced to ensure that the landscape work is implemented in accordance with best practice. This document will include tree work procedures, soil handling, planting and maintenance. The contract works will be supervised by a suitably qualified Landscape Architect.

The planting works will be undertaken in the next available planting season after completion of the main civil engineering and building work. All tree protection requirements will be installed on commencement of the development and removed on a phased basis as stages of the development are completed.

1.9.2 Operation Phase

Following the completion of planting and landscape works (as per the aforementioned landscape tender drawings and specifications), operation phase monitoring will consist of weed control, replacement planting, pruning etc. All landscape works will be in an establishment phase for the initial three years from planting. All works will be monitored on an ongoing basis to ensure the quality of the development is maintained.

1.10 REFERENCES

Environmental Protection Agency (EPA) publication 'Guidelines on the Information to be contained in Environmental Impact Assessment Reports (EPA, 2022) and the Draft Advice Notes on Current Practice in the Preparation of Environmental Impact Statements (EPA, 2015)

Landscape/Townscape Institute and the Institute of Environmental Management and Assessment publication entitled Guidelines for Landscape/Townscape and Visual Impact Assessment (2013).

Appendix F (ii)- LVIA Photomontages

APPENDIX A – LIST OF PERMITTED DEVELOPMENT

Application details	Description	Decision & Date
Applicant: Starrus Eco Holdings Ltd. **Reference**: SD17A/0382 **Location**: Dublin Regional Materials Recovery Facility, Merrywell Industrial Estate, Ballymount Road Lower, Dublin 22	Works to existing waste management building including the installation of roof mounted solar panels and all ancillary works and services.	**Decision**: Grant Permission **Date**: 30/01/2018
Applicant: Gavin Property Limited **Reference**: SD17A/0428 **Location**: Former DHL Facility, Ballymount Road Lower, Dublin 12	The change of use of 2.33 ha site from the existing warehousing, distribution and storage use to transport depot, including the existing warehouse building (incorporating internal ancillary offices and related areas over part three levels) (3,812sq.m). The development will include on-site provision for the storage, maintenance and parking of 125 buses; ancillary surface staff car parking (including electrical charging bays); ancillary offices and staff facilities (including toilets and canteen); bus workshop; external fuel storage tank, refuel area and bus wash; landscaping and boundary treatments. The development will also include the removal of existing oil storage tanks; the provision of plant, signage and bicycle parking; external lighting; connections to services and utilities; pipe work and all ancillary site excavation and development works above and below ground. Access to the site is as existing. No elevational changes are proposed as part of this application.	**Decision**: Grant Permission **Date**: 23/03/2018
Applicant: Petrogas Group Limited **Reference**: SD18A/0002 **Location**: M50 Business Park, Ballymount Avenue, Dublin 12	A petrol filling station including forecourt with 6 pump islands and overhead canopy, HGV filling island and an ancillary retail and food sales building with a total GFA of 672.39sq.m, including drive-through restaurant, cafe/deli, seating area of 197sq.m. convenience shop (100sq.m. net), restrooms and ancillary staff and storage space. Associated signage, including 2 internally illuminated totem signs, canopy and building-mounted signage: associated site works, including 76 car parking spaces, 3 HGV parking spaces, 2 coach parking spaces, 40 bicycle spaces, underground fuel tanks, SUDS drainage, site lighting and landscaping: and vehicular access is proposed from Ballymount Avenue and vehicular egress is proposed to the access road to the south east, which serves Fashion City on a site located to the south of Ballymount Avenue and Ballymount Road Upper and to the east of Calmount Road. The Proposed Development amends the extant permission for a petrol filling station including ancillary retail and cafe unit and drive-through restaurant on the subject site as permitted under Reg. Ref. SD16A/0212.	**Decision**: Grant Permission **Date**: 06/04/2018
Applicant: Camgill Property A Do Limited **Reference**: SD18A/0034 **Location**: Ground Floor Unit 3b & Unit 4, Block C, Ballymount Retail Centre, Ballymount Cross, Dublin 24	Expansion of existing business premises located in Unit 3b into the adjoining Unit 4, together with all ancillary existing site works and services.	**Decision**: Grant Permission **Date**: 04/05/2018
Applicant: Linde Material Handling (Irl) Ltd. **Reference**: SD18A/0088	Construction of a mezzanine floor for use as storage area at first floor level, within the existing warehouse; erection of 1 totem pole style sign to front of site, with associated site works; erection of 3 advertisement signs fixed to southern and western elevations of existing building.	**Decision**: Grant Permission **Date**: 18/06/2018

Location: Unit 1, Parkway Business Centre, Lower Ballymount Road, Dublin 12.		
Applicant: Briggs Equipment Ireland Ltd. **Reference**: SD18A/0090 **Location**: Unit 1, Crosslands Industrial Estate, Lower Ballymount Road, Dublin 12	Change of use of part of existing warehouse unit (148 sq.m) to vehicle (forklifts) service area; forming new external vehicle (forklifts) wash area; forming new external vehicle (forklifts) storage areas; new illuminated building signage and new illuminated pylon sign to front boundary.	**Decision**: Grant Permission **Date**: 25/06/2018
Applicant: Panda Power Ltd. **Reference**: SD18A/0130 **Location**: Spanners, Ballymount Avenue, Kilnamanagh, Ballymount, Co. Dublin	Installation of roof mounted solar panels to existing vehicle service facility and all ancillary works and services.	**Decision**: Grant Permission **Date**: 23/07/2018
Applicant: Shred It ROI Ltd. **Reference**: SD18A/0183 **Location**: Unit 6A, Westgate Business Park, Ballymount Road Upper, Dublin 24.	Construction of a single storey sprinkler pump house of 58sq.m, a 7.15m high 173m3 capacity sprinkler water storage tank and associated works, to the rear of an existing light industrial facility. This application relates to a development which comprises or is for the purposes of an activity requiring a Waste Licence.	**Decision**: Grant Permission **Date**: 27/08/2018
Applicant: Dixon's Carphone Warehouse **Reference**: SD19A/0053 **Location**: Ballymount Avenue, Kilnamanagh, Dublin 12	Lightweight demountable loading structure to service area.	**Decision**: Grant Permission **Date**: 22/05/2019
Applicant: Sonoma Valley Ltd. **Reference**: SD19A/0005 **Location**: Unit 4, Westgate Business Park, Ballymount, Dublin 24	Construction of 1,540sq.m approx. of additional hardstanding on northeast and southwest areas of the site for parking of cars and service vehicles; associated works.	**Decision**: Grant Permission **Date**: 26/07/2019
Applicant: Comark Investments Ltd. **Reference**: SD19A/0141 **Location**: Unit 4, Fashion City, M50 Business Park, Ballymount Road Upper, Dublin 24	2 windows to the front elevation at ground floor and Level 2; 1 window to the rear elevation at Level 1.	**Decision**: Grant Permission **Date**: 26/07/2019
Applicant: Management Company Ltd. **Reference**: SD19A/0281 **Location**: Merrywell Industrial Estate, Ballymount, Dublin 12	Installation of new paving; removal of existing timber post and rail fence; installation of textured block walls incorporating new signage; erection of two textured block columns topped with new signage; all associated site development works.	**Decision**: Grant Permission **Date**: 09/12/2019
Applicant: Exertis Ireland Ltd. **Reference**: SD19A/0222	Construction of new 1269sq.m warehouse extension with ancillary trading area; offices; staff site entrance; reconfiguration of existing car park and other associated minor site works to existing 4569sq.m warehouse with existing ancillary showrooms and offices (including limited telemarketing use).	**Decision**: Grant Permission **Date**: 28/01/2020

Location: M50 Business Park, Ballymount Road Upper, Ballymount, Dublin 12		
Applicant: Galco Steel Ltd. **Reference**: SD19A/0384 **Location**: Galco House, Ballymount Road, Walkinstown, Dublin 12	(i) Alterations to existing roofs to include increasing roof height of one bay to match adjoining bay; (ii) new wall & roof cladding including louvred ventilation panels and translucent panels over existing cladding and to altered areas of buildings and extensions; (iii) provision of new roller-shutter doors to three existing opes and three new opes; (iv) demolition of three ancillary structures attached to the north side of the building and provision of four new single storey pitched roof structures attached to the north side of the building; (v) demolition of some existing wall and roof structures to the eastern end of the building, and the provision of new walls & roofs to form new areas of the high-bay plant/fabricating area with raised roof on parapet levels; (vi) demolition of a detached single storey plant building on the north-west of the site and storage buildings on the east of the site and construction of 3 new single storey detached plant and storage buildings; (vii) provision of new signage to the west facing elevation of the building at high level; (viii) all other associated siteworks & services to facilitate the development.	**Decision**: Grant Permission **Date**: 20/03/2020
Applicant: GC Auto Properties Limited **Reference**: SD19A/0404 **Location**: Ballymount Road Upper, M50 Business Park, Dublin 12	Construction of a two storey motorcar retail showroom (c. 904sq.m); 2 floors of ancillary offices and associated uses; access to be provided from existing entrance the internal circulation road to the west; provision of 19 visitor and staff surface car parking (1 disabled access space, 2 electric vehicle charging spaces and 4 bicycle parking spaces); 89 spaces for the display and valet of vehicles, including display area; signage comprising 3 totem signs (2 x 6m and 1 x 7.5m in height) and 5 elevational signs (c. 20.19sq.m of signage in total); single storey substation and bin store as well as all associated infrastructure, landscaping and associated site development works including plant and PV panels at roof level all on a site of c. 0.59ha.	**Decision**: Grant Permission **Date**: 30/06/2020
Applicant: Starrus Eco Holdings Ltd. **Reference**: SD20A/0076 **Location**: Panda Waste Management, Ballymount Road Upper, Dublin 24	Installation of roof mounted solar panels over an existing Waste Transfer/Recycling building and all associated site works and services; the Proposed Development relates to an activity covered by an existing Waste Licence issued by the Environmental Protection Agency.	**Decision**: Grant Permission **Date**: 13/08/2020
Applicant: WeCanSaveYouMoney **Reference**: SD20A/0135 **Location**: Unit 82, Block 5, Western Parkway Business Park, Ballymount Drive, Dublin 12	Alterations to existing northern elevation comprising of four additional windows on northern elevation, two on ground floor and two on first floor.	**Decision**: Grant Permission **Date**: 03/09/2020
Applicant: Virgin Media Ireland **Reference**: SD20A/0160 **Location**: Unit 5, Westgate Business Park, Ballymount, Dublin 24	Erect 1,063.05sq.m of photovoltaic panels on the roof of existing building with all associated site works.	**Decision**: Grant Permission **Date**: 13/10/2020
Applicant: Virgin Media Ireland **Reference**: SD20A/0159 **Location**: Unit 7, Westgate Business Park, Ballymount, Dublin 24	Erect 728.41sq.m of photovoltaic panels on the roof of existing building with all associated site works.	**Decision**: Grant Permission **Date**: 13/10/2020
Applicant: Cleargate Ltd. **Reference**: SD20A/0249	The installation of a new external door to the rear facade & internal alterations at ground floor.	**Decision**: Grant Permission

Location: Unit 23, Fashion City, Upper Ballymount Road, Dublin 24		**Date**: 11/01/2021
Applicant: Gas Networks Ireland **Reference**: SD20A/0291 **Location**: Spanners Ltd. M50 Business Park, Ballymount Avenue, D12 HD35	Single storey CNG (compressed natural gas) compressor installation with a floor area of 19sq.m; covered shelter with a floor area of 30sq.m and a 2.6m high boundary wall around the site with all ancillary services and associated site works.	**Decision**: Grant Permission **Date**: 22/02/2021
Applicant: Amazon Data Services Ire. Ltd. **Reference**: SD21A/0008 **Location**: Unit 1, M50 Business Park, Ballymount Avenue, Dublin 12	Change of use of c.12.25sq.m of floorspace within the existing warehouse building on site, from warehouse use to use for the temporary storage of shredded electrical & electronic equipment and components.	**Decision**: Grant Permission **Date**: 26/04/2021
Applicant: HPC Sales Limited **Reference**: SD21A/0080 **Location**: Unit 2, Building A, Ballymount Retail Park, Dublin 24	Erect 1050sq.m of photovoltaic panels on the roof of existing warehouse unit with all associated site works.	**Decision**: Grant Permission **Date**: 25/06/2021
Applicant: Graine O'Rourke Models Limited **Reference**: SD21A/0153 **Location**: Fashion House 4, Fashion City, Ballymount Road Upper, Dublin 24	Erect 525sq.m. of photovoltaic panels on the roof of existing unit with all associated site works.	**Decision**: Grant Permission **Date**: 13/09/2021
Applicant: Swan Plant Hire (Dublin) Ltd t/a Loxam Swan **Reference**: SD21A/0262 **Location**: Unit 4, Crossbeg industrial Estate, Ballymount Road Upper, Dublin 24	Demolition of industrial shed attached to existing industrial building.	**Decision**: Grant Permission **Date**: 05/01/2022
Applicant: HSIL Properties **Reference**: SD21A/0214 **Location**: M50 Business Park, Ballymount, Dublin 12	Retention for as constructed extended floor areas to ground floor level reception area (approx. 38sq.m) and first floor level office areas (approx. 49sq.m). Permission to construct a new extension to the north-eastern corner of a permitted storage warehouse building together with associated external signage, site development works; provide additional storage space at second floor level only (approx. 2,198sq.m) and form an undercroft to the permitted access/entrance areas.	**Decision**: Grant Permission & Grant Retention **Date**: 11/03/2022
Applicant: Go Ahead Ireland **Reference**: SD21A/0213 **Location**: 12, Ballymount Road Lower, Dublin 12	Extension of the existing depot to provide additional bus parking facilities comprising a total of 221 bus spaces (including 45 electric bus parking spaces), 33 car parking spaces (including 15 electric car parking spaces), 5 motorcycle parking spaces and 30 bicycle parking spaces; revisions to the layout and configuration of the existing bus and car parking areas; the installation of electric vehicle charging units and associated infrastructure; new vehicular entrance/egress arrangement (including barrier and ramp) to Ballymount Avenue on the north-eastern site boundary; the provision of 4 pedestrian entrances located on the south-eastern, south-western and north-eastern site boundaries; internal roads and pedestrian pathways; minor elevational amendments to the existing transport depot building (relocation and addition of roller shutter doors and relocation of signage); hard and soft landscaping;	**Decision**: Grant Permission **Date**: 11/03/2022

	boundary treatments; changes in level; lighting; surface water drainage; piped infrastructure and ducting, and all associated site excavation and development works above and below ground. (The development will also include the underground diversion of the existing ESB power line traversing the south-eastern corner of the site.)	
Applicant: Pinewood Healthcare **Reference**: SD22A/0010 **Location**: Unit 1, M50 Business Park, Ballymount Avenue, Dublin 12	Change of existing ground floor office and workshop area to an additional storage area.	**Decision**: Grant Permission **Date**: 25/04/2022
Applicant: Galco Steel Limited **Reference**: SD21A/0347 **Location**: Galco House, Ballymount Road, Walkinstown, Dublin 12	Construction of a single storey extension (980sq.m) to paint workshop with canopy; two access doors with roller shutters and all associated site development works.	**Decision**: Grant Permission **Date**: 05/07/2022
Applicant: Flairline Fashions Ltd. **Reference**: SD22A/0102 **Location**: Unit 27, Fashioncity, Ballymount, Dublin 24	Erection and installation of 124 photovoltaic solar panels with an area of 235.6sq.m (with average size of 1.9sq.m per panel) on the existing roofslope and all associated alterations to existing elevations, site and ancillary works.	**Decision**: Grant Permission **Date**: 19/07/2022
Applicant: HSIL Properties **Reference**: SD22A/0104 **Location**: M50 Business Park, Ballymount, Dublin 12	Construct additional floors at third and fourth floor levels internally as modifications to a recently permitted development under SD21A/0214 - extension of an existing storage warehouse building.	**Decision**: Grant Permission **Date**: 19/07/2022
Applicant: Sonoma Valley Limited **Reference**: SD22A/0274 **Location**: Unit 4, Westgate Business Park, Ballymount, Dublin 24	Permission for the proposed green energy initiative development consisting of the installation of Photovoltaic Panels on the existing roof structures together with all associated site works	**Decision**: Grant Permission **Date**: 10/08/2022
Applicant: Cleargate Ltd **Reference**: SD22A/0277 **Location**: Unit 26C, Fashion City, Ballymount Road Upper, Dublin 24, D24 KP97	Installation of a new external door in the Northwest Elevation to access a new ESB meter enclosure at ground floor of Unit 26C Fashion City, Ballymount Road Upper, Dublin 24	**Decision**: Grant Permission **Date**: 11/08/2022

Appendix B (i)- Appropriate Assessment (AA) Screening Report

Report for the purposes of Appropriate Assessment Screening

Unit 1 M50 Business Park, Ballymount, Dublin 12 Change of Use

Prepared by: Moore Group – Environmental Services

13 December 2022

On behalf of

Creighton Properties LLC

Project Proponent	Creighton Properties LLC
Project	Unit 1 M50 Business Park, Ballymount, Dublin 12 Change of Use
Title	Report for the purposes of Appropriate Assessment Screening Unit 1 M50 Business Park, Ballymount, Dublin 12 Change of Use

Project Number	22154	**Document Ref**	22154 Ski Lodge AAS1_Rev8 221213	
Revision	**Description**	**Author**		**Date**
Rev8	Updated Site Layout	G. O'Donohoe		13 December 2022
Moore Archaeological and Environmental Services Limited				

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Abbreviations

AA	Appropriate Assessment
EEC	European Economic Community
EPA	Environmental Protection Agency
EU	European Union
GIS	Geographical Information System
NHA	Natural Heritage Area
NIS	Natura Impact Statement
NPWS	National Parks and Wildlife Service
OSI	Ordnance Survey Ireland
pNHA	proposed Natural Heritage Area
SAC	Special Area of Conservation
SPA	Special Protection Area

1. Introduction

1.1. General Introduction

The report contains information required for the competent authority to undertake screening for Appropriate Assessment (AA) for proposed change of use of a warehouse at Unit 1 M50 Business Park, Ballymount Avenue, Dublin 12 (hereafter referred to as the Proposed Development) to significantly affect European sites.

Having regard to the provisions of the Planning and Development Act 2000 – 2021 (the "Planning Acts") (section 177U), the purpose of a screening exercise under section 177U of the PDA 2000 is to assess, in view of best scientific knowledge, if the proposed development, individually or in combination with another plan or project is likely to have a significant effect on a European site.

If it cannot be *excluded* on the basis of objective information that the Proposed Development, individually or in combination with other plans or projects, will have a significant effect on a European site then it is necessary to carry out a Stage 2 appropriate assessment under section 177V of the Planning Acts.

When screening the project, there are two possible outcomes:

- the project poses no potential for a likely significant effect and as such requires no further assessment; and
- the project has potential to have likely significant effect (or this is uncertain) unless mitigation measures are applied, and therefore an AA of the project is necessary.

This report has been prepared by Moore Group - Environmental Services to enable the competent authority to carry out AA screening in relation to the Proposed Development. The report was compiled by Ger O'Donohoe (B.Sc. Applied Aquatic Sciences (ATU Galway, 1993) & M.Sc. Environmental Sciences (TCD, 1999)) who has over 27 years' experience in environmental impact assessment and has completed numerous Appropriate Assessment Screening Reports and Natura Impact Statements on terrestrial and aquatic habitats for various development types.

1.2. Legislative Background - The Habitats and Birds Directives

Article 6 of the Habitats Directive is transposed into Irish Law inter alia by the Part XAB of the Planning Acts (section 177U and 177V) govern the requirement to carry out appropriate assessment screening and appropriate assessment, where required, per Section 1.1 above.

The Habitats Directive (Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora) is the main legislative instrument for the protection and conservation of biodiversity in the European Union (EU). Under the Habitats Directive, Member States are obliged to designate Special Areas

of Conservation (SACs) which contain habitats or species considered important for protection and conservation in a EU context.

The Birds Directive (Council Directive 2009/147/EC on the conservation of wild birds), transposed into Irish law by the Bird and Natural Habitats Regulations 2011, as amended, is concerned with the long-term protection and management of all wild bird species and their habitats in the EU. Among other things, the Birds Directive requires that Special Protection Areas (SPAs) be established to protect migratory species and species which are rare, vulnerable, in danger of extinction, or otherwise require special attention.

SACs designated under the Habitats Directive and SPAs, designated under the Birds Directive, form a pan-European network of protected sites known as Natura 2000. The Habitats Directive sets out a unified system for the protection and management of SACs and SPAs. These sites are also referred to as European sites.

Articles 6(3) and 6(4) of the Habitats Directive set out the requirement for an assessment of proposed plans and projects likely to have a significant effect on Natura 2000 sites.

Article 6(3) establishes the requirement to screen all plans and projects and to carry out an appropriate assessment if required (Appropriate Assessment (AA)). Article 6(4) establishes requirements in cases of imperative reasons of overriding public interest:

> ***Article 6(3):*** *"Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to an appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public."*

2. Methodology

The Commission's methodological guidance (EC, 2002, 2018, 2021 see Section 2.1 below) promotes a four-stage process to complete the AA and outlines the issues and tests at each stage. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required.

Stages 1 and 2 deal with the main requirements for assessment under Article 6(3). Stage 3 may be part of Article 6(3) or may be a necessary precursor to Stage 4. Stage 4 is the main derogation step of Article 6(4).

Stage 1 Screening: This stage examines the likely effects of a project either alone or in combination with other projects upon a Natura 2000 site and considers whether it can be objectively concluded that these effects will not be significant. In order to screen out a project, it must be excluded, on the basis of objective information,

that the Proposed Development, individually or in combination with other plans or projects, will have a significant effect on a European site.

Stage 2 Appropriate Assessment: In this stage, there is a consideration of the impact of the project with a view to ascertain whether there will be any adverse effect on the integrity of the Natura 2000 site either alone or in combination with other projects or plans, with respect to the site's structure and function and its conservation objectives. Additionally, where there are predicted impacts, an assessment of the potential mitigation of those impacts is considered.

Stage 3 Assessment of Alternative Solutions: This stage examines alternative ways of implementing the project that, where possible, avoid any adverse impacts on the integrity of the Natura 2000 site.

Stage 4 Assessment where no alternative solutions exist and where adverse impacts remain: Where imperative reasons of overriding public interest (IROPI) exist, an assessment to consider whether compensatory measures will or will not effectively offset the damage to the sites will be necessary.

To ensure that the Proposed Development complies fully with the requirements of Article 6 of the Habitats Directive and all relevant Irish transposing legislation, Moore Group compiled this report to enable the competent authority to carry out AA screening in relation to the Proposed Development to determine whether the Proposed Development, individually or in combination with another plan or project will have a significant effect on a Natura 2000 site.

2.1. Guidance

This report has been compiled in accordance with guidance contained in the following documents:

- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities. (Department of Environment, Heritage and Local Government, 2010 rev.).
- Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular NPWS 1/10 & PSSP 2/10.
- Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (European Commission Environment Directorate-General, 2001); hereafter referred to as the EC Article 6 Guidance Document.
- Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC (EC Environment Directorate-General, 2000); hereafter referred to as MN2000.
- Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC (EC, 2018).
- Guidance document on the strict protection of animal species of Community interest under the Habitats Directive (EC, 2021).
- Assessment of plans and projects in relation to Natura 2000 sites - Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC (EC, 2021).

- Office of the Planning Regulator (OPR) Practice Note PN01 Appropriate Assessment Screening for Development Management (OPR, 2021).

2.2. Data Sources

Sources of information that were used to collect data on the Natura 2000 network of sites, and the environment within which they are located, are listed below:

- The following mapping and Geographical Information Systems (GIS) data sources, as required:
    - National Parks & Wildlife (NPWS) protected site boundary data;
    - Ordnance Survey of Ireland (OSI) mapping and aerial photography;
    - OSI/Environmental Protection Agency (EPA) rivers and streams, and catchments;
    - Open Street Maps;
    - Digital Elevation Model over Europe (EU-DEM);
    - Google Earth and Bing aerial photography 1995-2022;
- Online data available on Natura 2000 sites as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie including:
    - Natura 2000 - Standard Data Form;
    - Conservation Objectives;
    - Site Synopses;
- National Biodiversity Data Centre records;
    - Online database of rare, threatened and protected species;
    - Publicly accessible biodiversity datasets.
- Status of EU Protected Habitats in Ireland. (National Parks & Wildlife Service, 2019); and
- Relevant Development Plans:
    - South Dublin County Development Plan 2016-2022
    - Draft South Dublin County Development Plan 2022-2028

3. Description of the Proposed Development

The proposed development will consist of: the change of use from warehouse to data repository facility, alterations to external facades, provision of a new 1100 mm parapet, reclad roof, internal alterations, refurbishment of the existing office space, solar panels at roof level, external plant at ground and roof levels and equipment to include 12 no. condenser modules, an emergency back-up generator and associated fuel storage tank, transformer, extension to the existing sub-station (c. 13 m^2), 2 no. sprinkler tanks and pumphouse, bin store, 22 parking spaces including 2 electrical vehicle charging points, bicycle parking shelter, landscaping,

planting, new security fence, external lighting, CCTV, altered vehicular gates, permeable hard surfaces, alterations to internal foul sewerage and water supply networks, provision of SuDS compliant surface water drainage system and all associated site works.

Figure 1 shows the Proposed Development location and Figure 2 shows a detailed view of the existing warehouse on recent aerial photography. The site layout is presented in Figure 3.

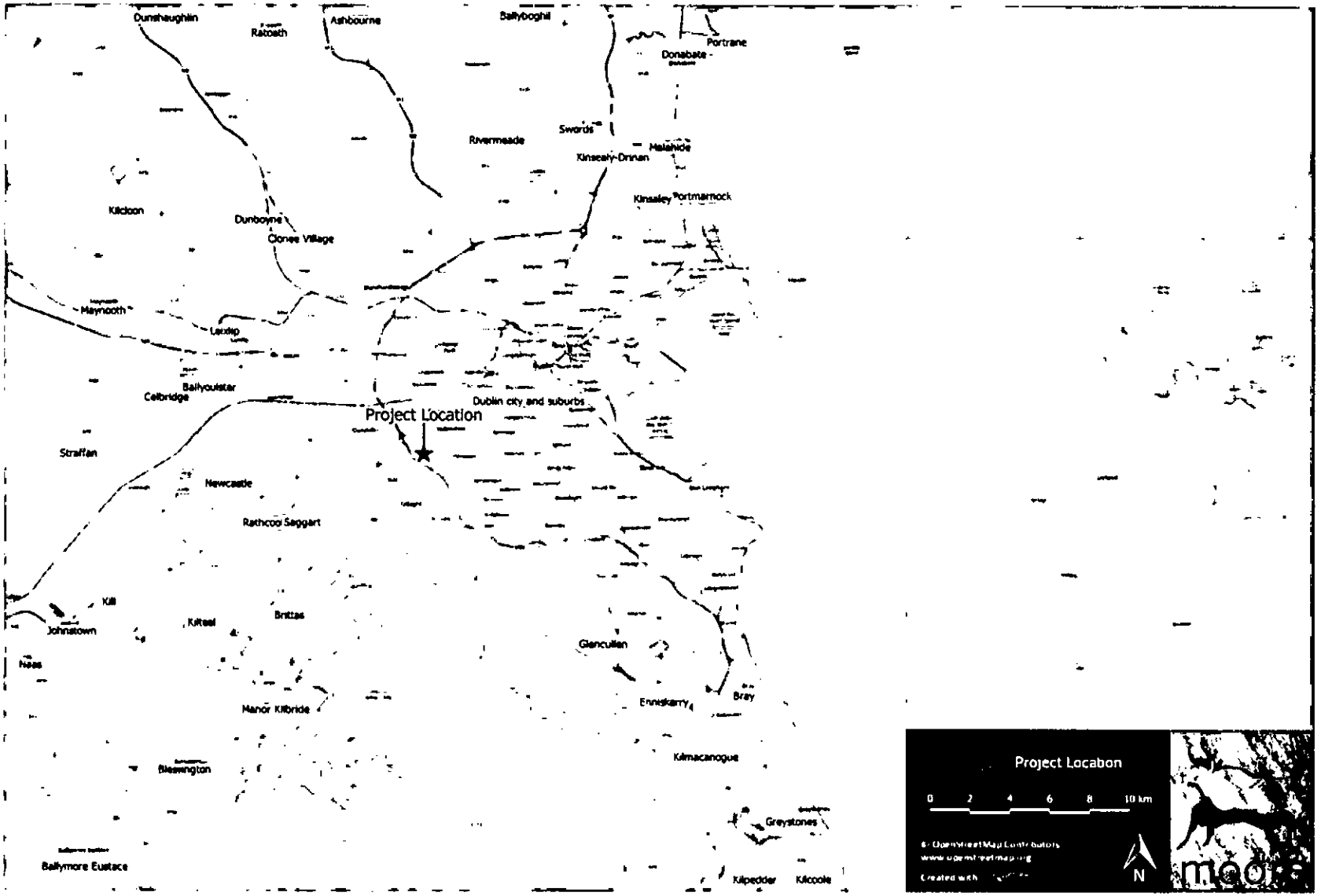


Figure 1. Showing the Proposed Development location in southwest Dublin.

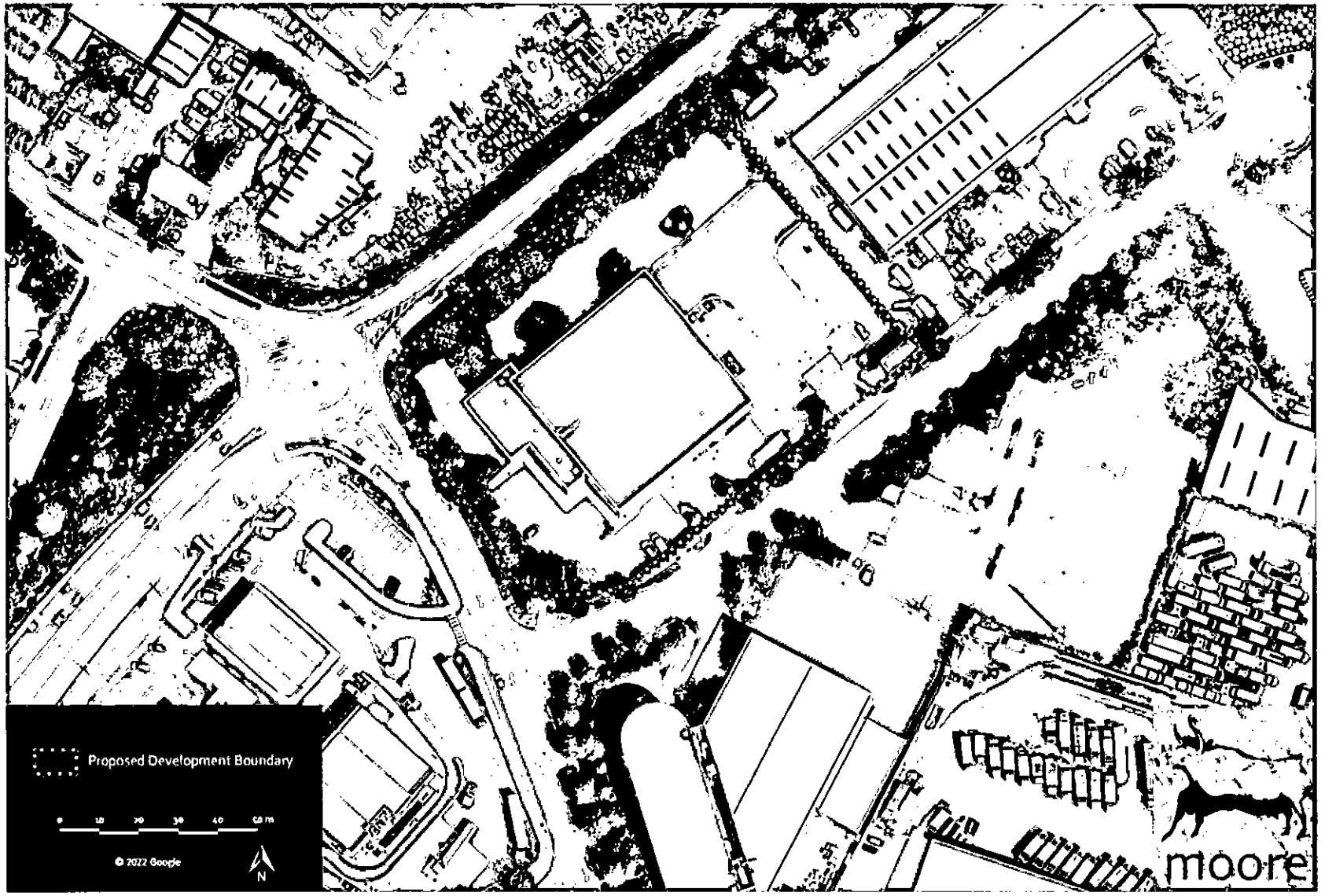


Figure 2. Showing the Proposed Development location on aerial photography with the existing warehouse curtilage outlined.

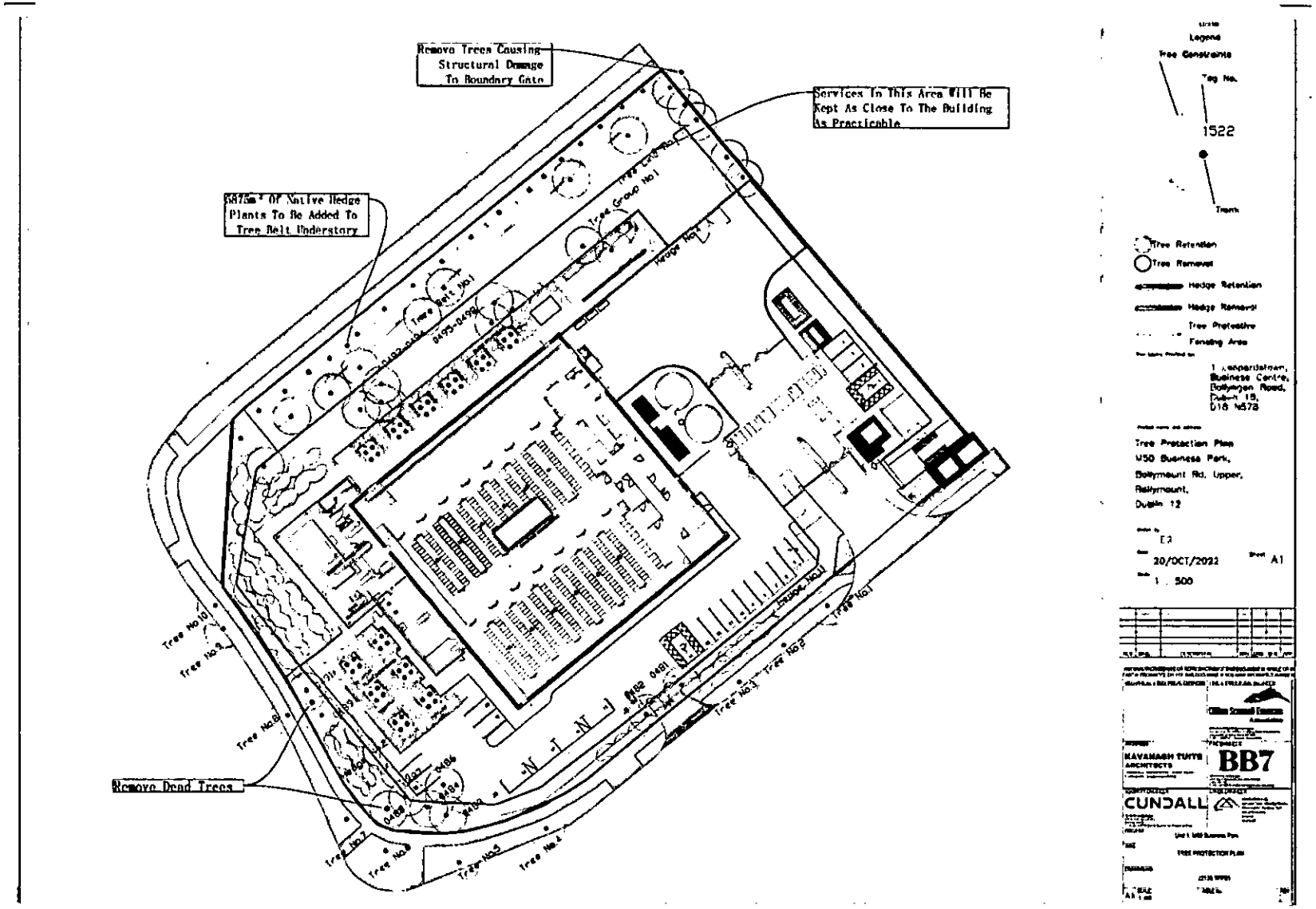


Figure 3. Showing the Proposed Development layout.

4. Identification of Natura 2000 Sites

4.1. Description of Natura Sites Potentially Affected

A Zone of Influence (ZoI) of a proposed development is the geographical area over which it could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a European site. In accordance with the OPR Practice Note, PN01, the ZoI should be established on a case-by-case basis using the Source- Pathway-Receptor framework.

The European Commission's "*Assessment of plans and projects in relation to Natura 2000 sites guidance on Article 6(3) and (4) of the Methodological Habitats Directive 92/43/EEC*" published 28 September 2021 states at section 3.1.3:

Identifying the Natura 2000 sites that may be affected should be done by taking into consideration all aspects of the plan or project that could have potential effects on any Natura 2000 sites located within the zone of influence of the plan or project. This should take into account all of the designating features (species, habitat types) that are significantly present on the sites and their conservation objectives. In particular, it should identify:

- *any Natura 2000 sites geographically overlapping with any of the actions or aspects of the plan or project in any of its phases, or adjacent to them;*
- *any Natura 2000 sites within the likely zone of influence of the plan or project Natura 2000 sites located in the surroundings of the plan or project (or at some distance) that could still be indirectly affected by aspects of the project, including as regards the use of natural resources (e.g. water) and various types of waste, discharge or emissions of substances or energy;*
- *Natura 2000 sites in the surroundings of the plan or project (or at some distance) which host fauna that can move to the project area and then suffer mortality or other impacts (e.g. loss of feeding areas, reduction of home range);*
- *Natura 2000 sites whose connectivity or ecological continuity can be affected by the plan or project.*

The range of Natura 2000 sites to be assessed, i.e. the zone in which impacts from the plan or project may arise, will depend on the nature of the plan or project and the distance at which effects may occur. For Natura 2000 sites located downstream along rivers or wetlands fed by aquifers, it may be that a plan or project can affect water flows, fish migration and so forth, even at a great distance. Emissions of pollutants may also have effects over a long distance. Some projects or plans that do not directly affect Natura 2000 sites may still have a significant impact on them if they cause a barrier effect or prevent ecological linkages. This may happen, for example, when plans affect features of the landscape that connect Natura 2000 sites or that may obstruct the movements of species or disrupt the continuity of a fluvial or woodland ecosystem. To determine the possible

effects of the plan or project on Natura 2000 sites, it is necessary to identify not only the relevant sites but also the habitats and species that are significantly present within them, as well as the site objectives.

The Zone of Influence may be determined by considering the Proposed Development's potential connectivity with European sites, in terms of:

- Nature, scale, timing and duration of all aspects of the proposed works and possible impacts, including the nature and size of excavations, storage of materials, flat/sloping sites;
- Distance and nature of potential pathways (dilution and dispersion; intervening 'buffer' lands, roads etc.); and
- Location of ecological features and their sensitivity to the possible impacts.

The potential for source pathway receptor connectivity is firstly identified through GIS interrogation and detailed information is then provided on sites with connectivity. European sites that are located within a potential Zone of Influence of the Proposed Development are listed in Table 1 and presented in Figure 4 below. Spatial boundary data on the Natura 2000 network was extracted from the NPWS website (www.npws.ie) on 13 December 2022. This data was interrogated using GIS analysis to provide mapping, distances, locations and pathways to all sites of conservation concern including pNHAs, NHA and European sites.

The Proposed Development is to take place within the existing M50 Business Park in west Dublin City. The proposed development entails use of a warehouse as a Data Repository and associated internal alterations. Therefore there are no predicted discharges to the environment and no pathways to any European sites.

The Proposed Development will not result in any changes to the amount of surface water run-off from the site during operation nor will it result in any contamination of surface waters during operation and will not result in any changes in foul water arising on the site.

Table 1 European Sites located within the potential Zone of Influence[1] of the Proposed Development.

Site Code	Site name	Distance (km)[2]
000206	North Dublin Bay SAC	12.56
000210	South Dublin Bay SAC	9.54
002122	Wicklow Mountains SAC	8.20
004006	North Bull Island SPA	12.55
004024	South Dublin Bay and River Tolka Estuary SPA	9.57
004040	Wicklow Mountains SPA	8.67

[1] All European sites potentially connected irrespective of the nature or scale of the Proposed Development.
[2] Distances indicated are the closest geographical distance between the Proposed Development site and the European site boundary, as made available by the NPWS.

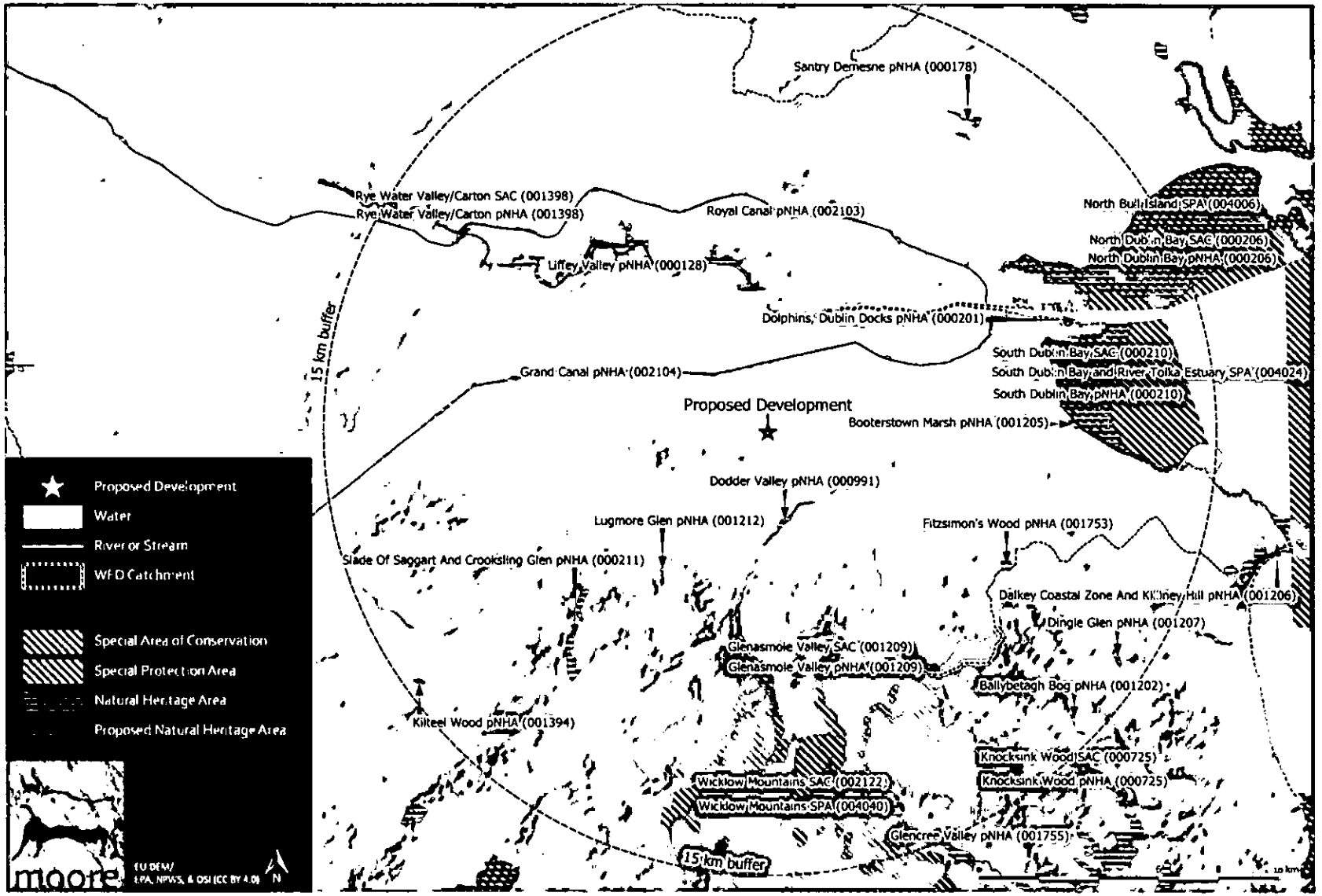


Figure 4. Showing European sites and NHAs/pNHAs within the wider Potential Zone of Influence of the Proposed Development.

4.2. Ecological Network Supporting Natura 2000 Sites

An analysis of the proposed Natural Heritage Areas (pNHA) and designated Natural Heritage Areas (NHA) in terms of their role in supporting the species using Natura 2000 sites was undertaken. It was assumed that these supporting roles mainly related to mobile fauna such as mammals and birds which may use pNHAs and NHAs as "stepping stones" between Natura 2000 sites.

Article 10 of the Habitats Directive and the Habitats Regulations 2011 place a high degree of importance on such non-Natura 2000 areas as features that connect the Natura 2000 network. Features such as ponds, woodlands and important hedgerows were taken into account during the preparation of this AA Screening report.

There are no other areas of conservation concern that would be affected by the Proposed Development.

The NHAs and pNHAs identified in Figure 4 are located outside the potential Zone of Influence of the Proposed Development. There are no predicted discharges to the environment. Therefore, there are no areas of supporting habitat that will be affected by the Proposed Development.

5. Identification of Potential Impacts & Assessment of Significance

The Proposed Development is not directly connected with or necessary to the management of the sites considered in the assessment and therefore potential impacts must be identified and considered.

5.1. Potential Impacts

The Proposed Development is located within the existing M50 Business Park in west Dublin City. The Proposed Development entails use of a warehouse as a Data Repository and associated internal alterations. Therefore there are no predicted discharges to the environment and no pathways to any European sites.

The Proposed Development will not result in any changes to the amount of surface water run-off from the site during operation nor will it result in any contamination of surface waters during operation and will not result in any changes in foul water arising on the site.

Having considered the above, significant effects on any European sites as a result of the Proposed Development have been ruled out and, therefore, potential significant effects on European sites have been excluded at this preliminary screening stage.

5.2. Assessment of Potential In-Combination Effects

In-combination effects are changes in the environment that result from numerous human-induced, small-scale alterations. In-combination effects can be thought of as occurring through two main pathways: first, through persistent additions or losses of the same materials or resource, and second, through the compounding effects as a result of the coming together of two or more effects.

As part of the Screening for an Appropriate Assessment, in addition to the Proposed Development, other relevant plans and projects in the area must also be considered at this stage. This step aims to identify at this early stage any possible significant in-combination effects of the Proposed Development with other such plans and projects on European sites.

A review of the National Planning Application Database was undertaken. The first stage of this review confirmed that there were no data gaps in the area where the Proposed Development is located. The database was then queried for developments granted planning permission within 250m of the Proposed Development within the last three years, these are presented in Table 2.

Table 2.Planning applications granted permission in the vicinity of the Proposed Development.

Planning Ref.	Description of development	Comments
SD19A/0005	Construction of 1,540sq.m approx. of additional hardstanding on northeast and southwest areas of the site for parking of cars and service vehicles; associated works.	No potential for in-combination effects given the scale and location of the project and that the Proposed Development will have no emissions to the environment.
SD19A/0141	2 windows to the front elevation at ground floor and Level 2; 1 window to the rear elevation at Level 1.	No potential for in-combination effects given the scale and location of the project and that the Proposed Development will have no emissions to the environment.
SD19A/0281	Installation of new paving; removal of existing timber post and rail fence; installation of textured block walls incorporating new signage; erection of two textured block columns topped with new signage; all associated site development works.	No potential for in-combination effects given the scale and location of the project and that the Proposed Development will have no emissions to the environment.
SD19A/0222	Construction of new 1269sq.m warehouse extension with ancillary trading area; offices; staff site entrance; reconfiguration of existing car park and other associated minor site works to existing 4569sq.m warehouse with existing ancillary showrooms and offices (including limited telemarketing use).	No potential for in-combination effects given the scale and location of the project and that the Proposed Development will have no emissions to the environment.
SD19A/0290	Increase in height from 5.6 metres (as required under Condition 5 of Reg ref:SD18A/0002) to 7 metres for two internally illuminated totem signs at the Applegreen Petrol filling station located to the south of Ballymount Avenue and Ballymount Road Upper and to the east of Calmount Road.	No potential for in-combination effects given the scale and location of the project and that the Proposed Development will have no emissions to the environment.
SD19A/0384	(i) Alterations to existing roofs to include increasing roof height of one bay to match adjoining bay; (ii) new wall & roof cladding including louvred ventilation	No potential for in-combination effects given the scale and location of the project and that the

Planning Ref.	Description of development	Comments
	panels and translucent panels over existing cladding and to altered areas of buildings and extensions; (iii) provision of new roller-shutter doors to three existing opes and three new opes; (iv) demolition of three ancillary structures attached to the north side of the building and provision of four new single storey pitched roof structures attached to the north side of the building; (v) demolition of some existing wall and roof structures to the eastern end of the building, and the provision of new walls & roofs to form new areas of the high-bay plant/fabricating area with raised roof on parapet levels; (vi) demolition of a detached single storey plant building on the north-west of the site and storage buildings on the east of the site and construction of 3 new single storey detached plant and storage buildings; (vii) provision of new signage to the west facing elevation of the building at high level; (viii) all other associated siteworks & services to facilitate the development.	Proposed Development will have no emissions to the environment.
SD19A/0404	Construction of a two storey motorcar retail showroom (c. 904sq.m); 2 floors of ancillary offices and associated uses; access to be provided from existing entrance the internal circulation road to the west; provision of 19 visitor and staff surface car parking (1 disabled access space, 2 electric vehicle charging spaces and 4 bicycle parking spaces); 89 spaces for the display and valet of vehicles, including display area; signage comprising 3 totem signs (2 x 6m and 1 x 7.5m in height) and 5 elevational signs (c. 20.19sq.m of signage in total); single storey substation and bin store as well as all associated infrastructure, landscaping and associated site development works including plant and PV panels at roof level all on a site of c. 0.59ha.	No potential for in-combination effects given the scale and location of the project and that the Proposed Development will have no emissions to the environment.
SD20A/0076	Installation of roof mounted solar panels over an existing Waste Transfer/Recycling building and all associated site works and services; the proposed development relates to an activity covered by an existing Waste Licence issued by the Environmental Protection Agency.	No potential for in-combination effects given the scale and location of the project and that the Proposed Development will have no emissions to the environment.
SD20A/0159	Erect 728.41sq.m of photovoltaic panels on the roof of existing building with all associated site works.	No potential for in-combination effects given the scale and location of the project and that the Proposed Development will have no emissions to the environment.
SD20A/0135	Alterations to existing northern elevation comprising of four additional windows on northern elevation, two on ground floor and two on first floor.	No potential for in-combination effects given the scale and location of the project and that the Proposed Development will have no emissions to the environment.
SD20A/0160	Erect 1,063.05sq.m of photovoltaic panels on the roof of existing building with all associated site works.	No potential for in-combination effects given the scale and location of the project and that the Proposed Development will have no emissions to the environment.
SD20A/0291	Single storey CNG (compressed natural gas) compressor installation with a floor area of 19sq.m; covered shelter with a floor area of 30sq.m and a	No potential for in-combination effects given the scale and location of the project and that the

Planning Ref.	Description of development	Comments
	2.6m high boundary wall around the site with all ancillary services and associated site works.	Proposed Development will have no emissions to the environment.
SD20A/0249	The installation of a new external door to the rear facade & internal alterations at ground floor.	No potential for in-combination effects given the scale and location of the project and that the Proposed Development will have no emissions to the environment.
SD20B/0264	Retention of an existing 5.175m wide vehicular entrance to the driveway and proposed new dishing of front footpath.	No potential for in-combination effects given the scale and location of the project and that the Proposed Development will have no emissions to the environment.
SD21A/0008	Change of use of c.12.25sq.m of floorspace within the existing warehouse building on site, from warehouse use to use for the temporary storage of shredded electrical & electronic equipment and components.	No potential for in-combination effects given the scale and location of the project and that the Proposed Development will have no emissions to the environment.
SD21A/0080	Erect 1050sq.m of photovoltaic panels on the roof of existing warehouse unit with all associated site works.	No potential for in-combination effects given the scale and location of the project and that the Proposed Development will have no emissions to the environment.
SD21A/0153	Erect 525sq.m. of photovoltaic panels on the roof of existing unit with all associated site works.	No potential for in-combination effects given the scale and location of the project and that the Proposed Development will have no emissions to the environment.
SD21A/0214	Retention for as constructed extended floor areas to ground floor level reception area (approx. 38sq.m) and first floor level office areas (approx. 49sq.m). Permission to construct a new extension to the north-eastern corner of a permitted storage warehouse building together with associated external signage, site development works; provide additional storage space at second floor level only (approx. 2,198sq.m) and form an undercroft to the permitted access/entrance areas.	No potential for in-combination effects given the scale and location of the project and that the Proposed Development will have no emissions to the environment.
SD21A/0213	Extension of the existing depot to provide additional bus parking facilities comprising a total of 221 bus spaces (including 45 electric bus parking spaces), 33 car parking spaces (including 15 electric car parking spaces), 5 motorcycle parking spaces and 30 bicycle parking spaces; revisions to the layout and configuration of the existing bus and car parking areas; the installation of electric vehicle charging units and associated infrastructure; new vehicular entrance/egress arrangement (including barrier and ramp) to Ballymount Avenue on the north-eastern site boundary; the provision of 4 pedestrian entrances located on the south-eastern, south-western and north-eastern site boundaries; internal roads and pedestrian pathways; minor elevational amendments to the existing transport depot building (relocation and addition of roller shutter doors and relocation of signage); hard and soft landscaping; boundary treatments; changes in level; lighting; surface water drainage; piped infrastructure and ducting, and all	No potential for in-combination effects given the scale and location of the project and that the Proposed Development will have no emissions to the environment.

Planning Ref.	Description of development	Comments
	associated site excavation and development works above and below ground. (The development will also include the underground diversion of the existing ESB power line traversing the south-eastern corner of the site.)	
SD21A/0262	Demolition of industrial shed attached to existing industrial building.	No potential for in-combination effects given the scale and location of the project and that the Proposed Development will have no emissions to the environment.
SD22A/0010	Change of existing ground floor office and workshop area to an additional storage area.	No potential for in-combination effects given the scale and location of the project and that the Proposed Development will have no emissions to the environment.

The South Dublin County Development Plan in complying with the requirements of the Habitats Directive requires that all Projects and Plans that could affect the Natura 2000 sites in the same zone of impact of the Proposed Development site would be initially screened for Appropriate Assessment and if requiring Stage 2 AA, that appropriate employable mitigation measures would be put in place to avoid, reduce or ameliorate negative impacts. In this way any, in-combination impacts with Plans or Projects for the development area and surrounding townlands in which the development site is located, would be avoided.

The listed developments have been granted permission in most cases with conditions relating to sustainable development by the consenting authority in compliance with the relevant Local Authority Development Plan and in compliance with the Local Authority requirement for regard to the Habitats Directive. The development cannot have received planning permission without having met the consenting authority requirement in this regard. There are no predicted in-combination effects given that it is predicted that the Proposed Development will have no effect on any European site.

There are no predicted in-combination effects given that the reasons discussed in the 'Comments' column of Table 2, above, and given that the Proposed Development is unlikely to have any adverse effects on any European sites.

Any new applications for the Proposed Development area will be assessed on a case by case basis *initially* by South Dublin County Council which will determine the requirement for AA Screening as per the requirements of Article 6(3) of the Habitats Directive.

6. Conclusion

The Proposed Development is to take place within the existing M50 Business Park in west Dublin City. The proposed development entails use of a warehouse as a data repository and associated internal alterations. Therefore, there are no predicted discharges to the environment and no pathways to any European sites.

The Proposed Development will not result in any changes to the amount of surface water run-off from the site during operation nor will it result in any contamination of surface waters during operation and will not result in any changes in foul water arising on the site.

Having considered the above, significant effects on any European sites as a result of the Proposed Development have been ruled out and, therefore, potential significant effects on European sites have been excluded at a preliminary screening stage.

It has been objectively concluded by Moore Group Environmental Services that:

1. The Proposed Development is not directly connected with, or necessary to the conservation management of the European sites considered in this assessment.
2. The Proposed Development is unlikely to significantly affect the Qualifying interests or Conservation Objectives of the European sites considered in this assessment.
3. The Proposed Development, alone or in combination with other projects, is not likely to have significant effects on the European sites considered in this assessment in view of their conservation objectives.
4. It is possible to conclude that there would be no significant effects, no potentially significant effects and no uncertain effects if the Proposed Development were to proceed.

It can be *excluded*, on the basis of objective information, that the Proposed Development, individually or in combination with other plans or projects, will have a significant effect on a European site.

An appropriate assessment is not, therefore, required.

A final determination will be made by the competent authority in this regard.

7. References

Department of the Environment, Heritage and Local Government (2010) Guidance on Appropriate Assessment of Plans and Projects in Ireland (as amended February 2010).

European Commission (2000) Managing Natura 2000 sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.

European Commission (2001) Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43EEC. European Commission, Brussels.

European Commission (2018) Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC.

European Commission (2021) Assessment of plans and projects in relation to Natura 2000 sites - Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC, Brussels 28.9.21.

European Commission (2021) Guidance document on the strict protection of animal species of Community interest under the Habitats Directive, Brussels 12.10.21.

NPWS (2019) The Status of EU Protected Habitats and Species in Ireland. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin.

NPWS (2022) National Parks and Wildlife Service Metadata available online at https://www.npws.ie/maps-and-data

Office-of-the-Planning-Regulator (2021) Appropriate Assessment Screening for Development Management OPR Practice Note PN01. March 2021

Appendix B (ii) - Ecological Impact Assessment (EcIA)

Unit 1 M50 Business Park, Ballymount, Dublin 12

Change of Use

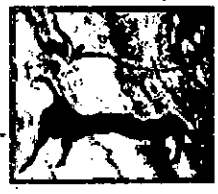
Ecological Impact Assessment

Prepared By:

Moore Group -
Environmental Services

On behalf of:
Creighton Properties LLC

Job Number 22154
December 2022



Project Proponent	Creighton Properties LLC
Project	Unit 1 M50 Business Park, Ballymount, Dublin 12 Change of Use
Title	Unit 1 M50 Business Park, Ballymount, Dublin 12 Change of Use Ecological Impact Assessment

Project Number	22154	**Document Reference**	22154 DUB602 EcIA Rev4
Revision	**Description**	**Author**	**Date**
Rev4	Updated Site Layout	G. O'Donohoe	13 December 2022
Moore Archaeological and Environmental Services Limited			

TABLE OF CONTENTS PAGE

1. INTRODUCTION

Moore Group was commissioned by AWN Consulting on behalf of Creighton Properties LLC to undertake a Habitat Survey and EcIA of the proposed change of use of a warehouse at Unit 1 M50 Business Park, Ballymount Avenue, Dublin 12 (hereafter referred to as the Proposed Development).

This report provides information on ecological features if present within the potential Zone of Influence of the Proposed Development, of particular significance, primarily designated habitats and species, including habitats/species listed in Annex I, II and IV of the EU Habitats Directive, rare flora listed in the Flora Protection Order along with other semi-natural habitats of conservational value.

This report was compiled by Ger O'Donohoe M.Sc. of Moore Group providing information on habitats in the study area. Ger is the principal ecologist with Moore Group and has over 27 years' experience in ecological impact assessment. He graduated from ATU Galway in 1993 with a B.Sc. in Applied Freshwater & Marine Biology and subsequently worked in environmental consultancy while completing an M.Sc. in Environmental Sciences, graduating from Trinity College, Dublin in 1999. (He also has over 15 years' experience of carrying out bat surveys and has completed the Bat Conservation Ireland, Bat Detector Workshop which is the standard training for the carrying out of bat surveys in Ireland and follows the Bat Conservation Ireland 'Bat Survey Guidelines' (Aughney *et al.,* 2008). In addition, Ger is an active member of the Galway Bat Group and Bat Conservation Ireland, which monitors bat populations in Ireland, and facilitates the education of bat communities to the public.)

The following important ecological receptors were considered in planning and designing the project, and in assessing its likely ecological effects:

- Sites with nature conservation designations, including proposed NHAs, the reasons for their designation, and their conservation objectives, where available;
- Annex IV (Habitats Directive) species of fauna and flora, and their breeding sites and resting places, which are strictly protected under the European Communities (Birds and Natural Habitats) Regulations, 2011;
- Other species of fauna and flora which are protected under the Wildlife Acts, 1976-2012;
- *'Protected species and natural habitats'*, as defined in the Environmental Liability Directive (2004/35/EC) and European Communities (Environmental Liability) Regulations, 2008, including:
    - Birds Directive – Annex I species and other regularly occurring migratory species, and their habitats (wherever they occur);
    - Habitats Directive – Annex I habitats, Annex II species and their habitats, and Annex IV species and their breeding sites and resting places (wherever they occur);
- Other habitats of ecological value in a national to local context, including rocky habitats in the general area;
- Stepping stones and ecological corridors encapsulated by Article 10 of the Habitats Directive.

The report has been compiled in compliance with the European Communities Legal requirements and follows EPA Draft Guidelines on Information to be contained in an EIAR (EPA, 2022) and on Transport Infrastructure Ireland TII policy and guidance outlined in Section 2.

The European Habitats Directive 92/43/EEC (Article 6) indicates the need for plans and projects to be subject to Habitats Directive Assessment (also known as Appropriate Assessment) if the plan or project not directly connected with or necessary to the management of a Natura 2000 site (which includes SACs and SPAs) but which has the potential to have implications on a site's conservation objectives. These implications can be significant effects either individually or in combination with other plans or projects.

As such, a report for the purposes of Appropriate Assessment Screening was undertaken by Moore Group for the proposed development in support of the application to An Bord Pleanála. This stand-alone report is presented separately as part of the design package for the Project.

The site location is presented in Figure 1 below.

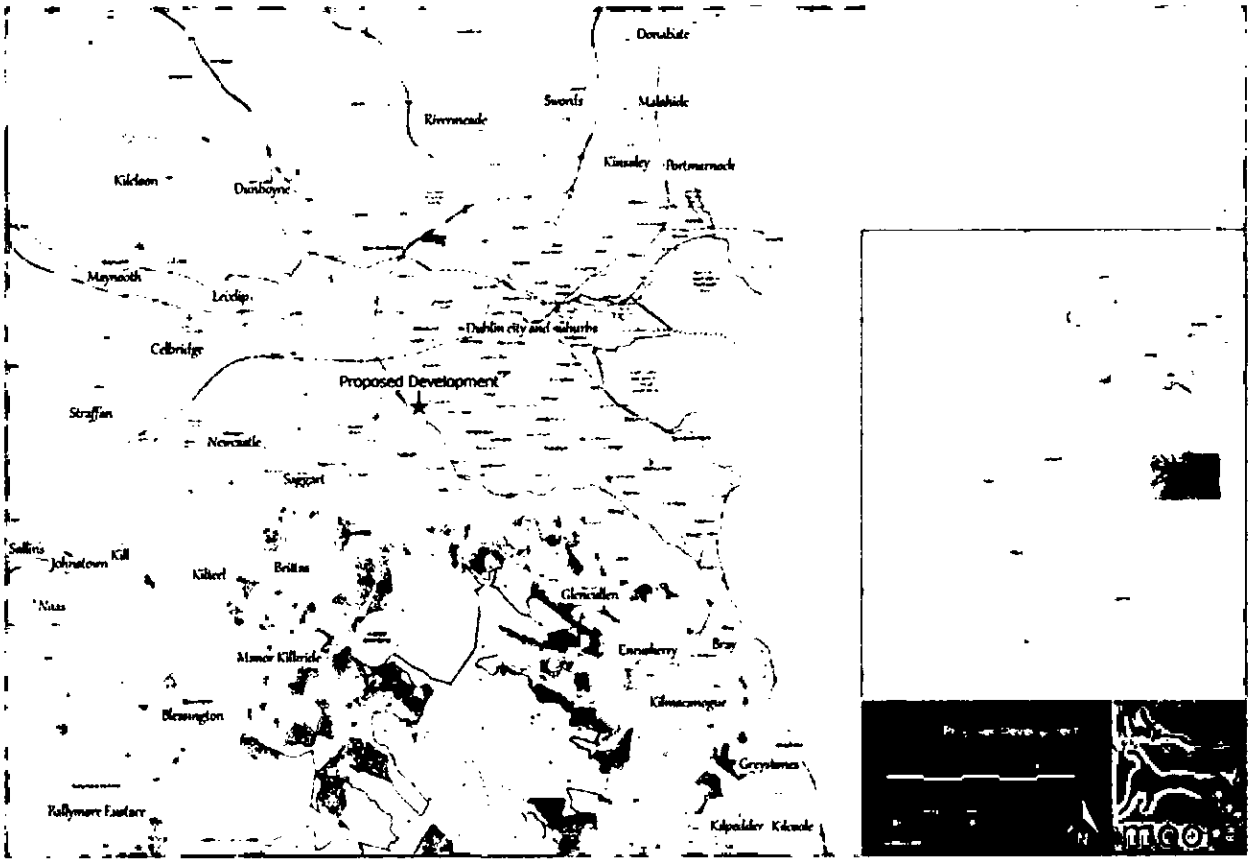


Figure 1. Showing the site location at M50 Business Park, Co. Dublin.

2. ASSESSMENT METHODOLOGY

2.1. POLICY & LEGISLATION

2.1.1. EU Habitats Directive

The "*Habitats Directive*" (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna) is the main legislative instrument for the protection and conservation of biodiversity within the European Union. The Habitats Directive provides for the designation, conservation and protection of sites comprising Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), collectively forming the Natura 2000 network of 'European sites'. Article 3 of the Habitats Directive obliges Member States to designate as SACs sites hosting the natural habitat types listed in Annex I and habitats of the species listed in Annex II of the Habitats Directive. Article 10 of the Habitats Directive requires that Member States endeavour to improve the ecological coherence of the Natura 2000 network to manage and conserve features of the landscape which are of major importance for wild fauna and flora, for example ecological corridors or stepping-stones which are important for the migration, dispersal and genetic exchange of species.

Article 6(2) obliges Member States to take the necessary measures to avoid the deterioration of an SAC, or disturbance of a species for which the site is designated. Article 6(3) sets out the requirement for an "Appropriate Assessment", to ensure that a proposed plan or project will not have an adverse effect on the integrity of a SAC. Article 7 applies the requirements of Article 6(2) and 6(3) of the Habitats Directive to SPAs designated under the Birds Directive.

In addition and separate to the Appropriate Assessment requirements, Article 12 of the Habitats Directive obliges Member States to establish a regime of strict protection for certain species listed in Annex IV of the Directive, wherever they occur within their natural range. The protection for species under Article 12 of the Habitats Directive is not confined to the boundary of SACs. Species listed in Annex IV include the otter and certain species of bat.

2.1.2. EU Birds Directive

The "*Birds Directive*" (European Council (2009) Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds) confers legal protection to all naturally occurring wild birds within the EU territory. Member States are obliged to adopt the necessary measures to maintain the population of bird species, and that includes, in accordance with Article 3, an obligation to create, maintain and manage habitats for birds, and specifically for the species of Bird listed in Annex I of the Directive, Article 4 requires Member States to create SPAs which, by virtue of Article 7 of the Habitats Directive, form part of the Natura 2000 network of European sites and are subject to the Appropriate Assessment requirements under Article 6(3) of the Habitats Directive.

Additionally, Article 5 of the Birds Directive requires that Member States establish a general system of protection for all naturally occurring wild birds within the EU territory, similar to the system of strict protection required for Annex IV species under the Habitats Directive.

2.1.3. Wildlife Acts 1976 - 2021[1]

The primary domestic legislation providing for the protection of wildlife in general, and wild birds in particular, and the control of some activities adversely impacting upon wildlife is the Wildlife Act of 1976, as amended. The aims of the Wildlife Act, according to the National Parks and Wildlife Service (NPWS) are "... to provide for the protection and conservation of wild fauna and flora, to conserve a representative sample of important ecosystems, to provide for the development and protection of game resources and to regulate their exploitation, and to provide the services necessary to accomplish such aims." All wild bird species are protected under the Act. The European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011) made significant amendments to the Wildlife Acts to ensure consistency with the Habitats and Birds Directives.

2.2. SURVEY METHODOLOGY

2.2.1. Desk Study

The assessment was carried out in three stages, firstly through desktop assessment to determine existing records in relation to habitats and species present in the potential Zone of Influence of the Proposed Development. This included research on the NPWS metadata website, the National Biodiversity Data Centre (NBDC) database and a literature review of published information on flora and fauna occurring in the development area.

Sources of information that were used to collate data on biodiversity in the potential Zone of Influence are listed below:

- The following mapping and Geographical Information Systems (GIS) data sources, as required:
    - National Parks & Wildlife (NPWS) protected site boundary data;
    - Ordnance Survey of Ireland (OSI) mapping and aerial photography;
    - OSI/ Environmental Protection Agency (EPA) rivers and streams, and catchments;
    - Open Street Maps;
    - Digital Elevation Model over Europe (EU-DEM);
    - Google Earth and Bing aerial photography 1995-2022;
- Online data available on Natura 2000 sites as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie including:
    - Natura 2000 - Standard Data Form;
    - Conservation Objectives;

[1] Wildlife Act 1976, as amended. Administrative consolidation of the Wildlife Act 1976, Law Reform Commission (2021)

- Site Synopses;

- National Biodiversity Data Centre records;
  - Online database of rare, threatened and protected species;
  - Publicly accessible biodiversity datasets.
- Status of EU Protected Habitats in Ireland. (National Parks & Wildlife Service, 2019); and
- Relevant Development Plans:
  - South Dublin County Development Plan 2016-2022
  - Draft South Dublin County Development Plan 2022-2028

2.2.2. Field Study

The second phase of the assessment involved a site visit to establish the existing environment in the footprint of the proposed development area. Areas which were highlighted during desktop assessment were investigated in closer detail according to the Heritage Council Best Practice Guidance for Habitat Survey and Mapping (Smith *et al.*, 2011). Habitats in the proposed development area were classified according to the Heritage Council publication *"A Guide to Habitats in Ireland"* (Fossitt, 2000). This publication sets out a standard scheme for identifying, describing and classifying wildlife habitats in Ireland. This form of classification uses codes to classify different habitats based on the plant species present. Species recorded in this report are given in both their Latin and English names. Latin names for plant species follow the nomenclature of *"An Irish Flora"* (Parnell & Curtis, 2012).

Habitats were surveyed on the 6 July and 25 August 2022 by conducting a study area walkover covering the main ecological areas identified in the desktop assessment. The survey dates are within the optimal botanical survey period.

Signs of mammals such as badgers and otters were searched for while surveying the study area noting any sights, signs or any activity in the vicinity especially along adjacent boundaries.

A Bat Survey was undertaken by Altemar and this report is presented as a separate report as part of the planning application. The pertinent results of the bat survey are included in this EcIA.

Birds were surveyed using standard transect methodology and signs were recorded where encountered during the field walkover surveys.

2.2.3. Site Evaluation and Impact Assessment

The final part of the assessment involves an evaluation of the study area and determination of the potential impacts on the habitats of the study area. This part of the assessment forms the basis for Impact Assessment and is based on the following guidelines and publications:

- Guidelines for Ecological Impact Assessment in the UK And Ireland Terrestrial, Freshwater, Coastal and Marine September 2018 Version 1.1 - Updated September 2019 (CIEEM, 2019);
- EPA Draft Guidelines on Information to be contained in an EIAR (EPA, 2022);
- Best Practice Guidance for Habitat Survey and Mapping (Heritage Council, 2011);
- Ecological Surveying Techniques for Protected Flora & Fauna (NRA, 2008);
- Guidelines for Assessment of Ecological Impacts of National Road Schemes (NRA, 2009);
- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (DEHLG, December 2009, Rev 2010);
- Assessment of plans and projects significantly affecting Natura 2000 sites (EC, 2002);
- Guidance document on Article 6(4) of the Habitats Directive 92/43/EEC (EC, 2007).

While prepared for linear projects the TII Guidelines for Assessment of Ecological Impacts of National Road Schemes (NRA, 2009) are still relevant and outlines the methodology for evaluating ecological impacts of the project in the present report. According to the TII Guidelines, the Ecological Study should address:

- Designated conservation areas and sites proposed for designation within the zone(s) of influence of any of the Project options,
- All the main inland surface waters (e.g. rivers, streams, canals, lakes and tanks) that are intersected by any of the route corridor options, including their fisheries value and any relevant designations,
- Aquifers and dependent systems and turloughs and their subterranean water systems,
- Any known or potentially important sites for rare or protected flora or fauna that occur along or within the zone(s) of influence of any of the route options,
- Any other sites of ecological value, that are not designated, along or in close proximity to any of the route corridor options,
- Any other relevant conservation designations or programmes (e.g. catchment management schemes, habitat restoration or creation projects, community conservation projects, etc.),
- Any other features of particular ecological or conservation significance along any of the route options.

The TII Guidelines set out a method of evaluating the importance of sites identified and in turn the evaluation of the significance of impacts. The Evaluation Scheme is presented in Appendix 1 for reference.

Impact Assessment is then based on CIEEM Guidelines for Ecological Impact Assessment in the UK and Ireland, 2019.

3. PROJECT DESCRIPTION

The proposed development will consist of: the change of use from warehouse to data repository facility, alterations to external facades, provision of a new 1100 mm parapet, reclad roof, internal alterations, refurbishment of the existing office space, solar panels at roof level, external plant at ground and roof levels

and equipment to include 12 no. condenser modules, an emergency back-up generator and associated fuel storage tank, transformer, extension to the existing sub-station (c. 13 m^2), 2 no. sprinkler tanks and pumphouse, bin store, 22 parking spaces including 2 electrical vehicle charging points, bicycle parking shelter, landscaping, planting, new security fence, external lighting, CCTV, altered vehicular gates, permeable hard surfaces, alterations to internal foul sewerage and water supply networks, provision of SuDS compliant surface water drainage system and all associated site works.

Figure 2 shows a detailed view of the existing site on high resolution aerial photography.

Figure 2. Showing the Proposed Development location on aerial photography with the existing warehouse curtilage outlined.

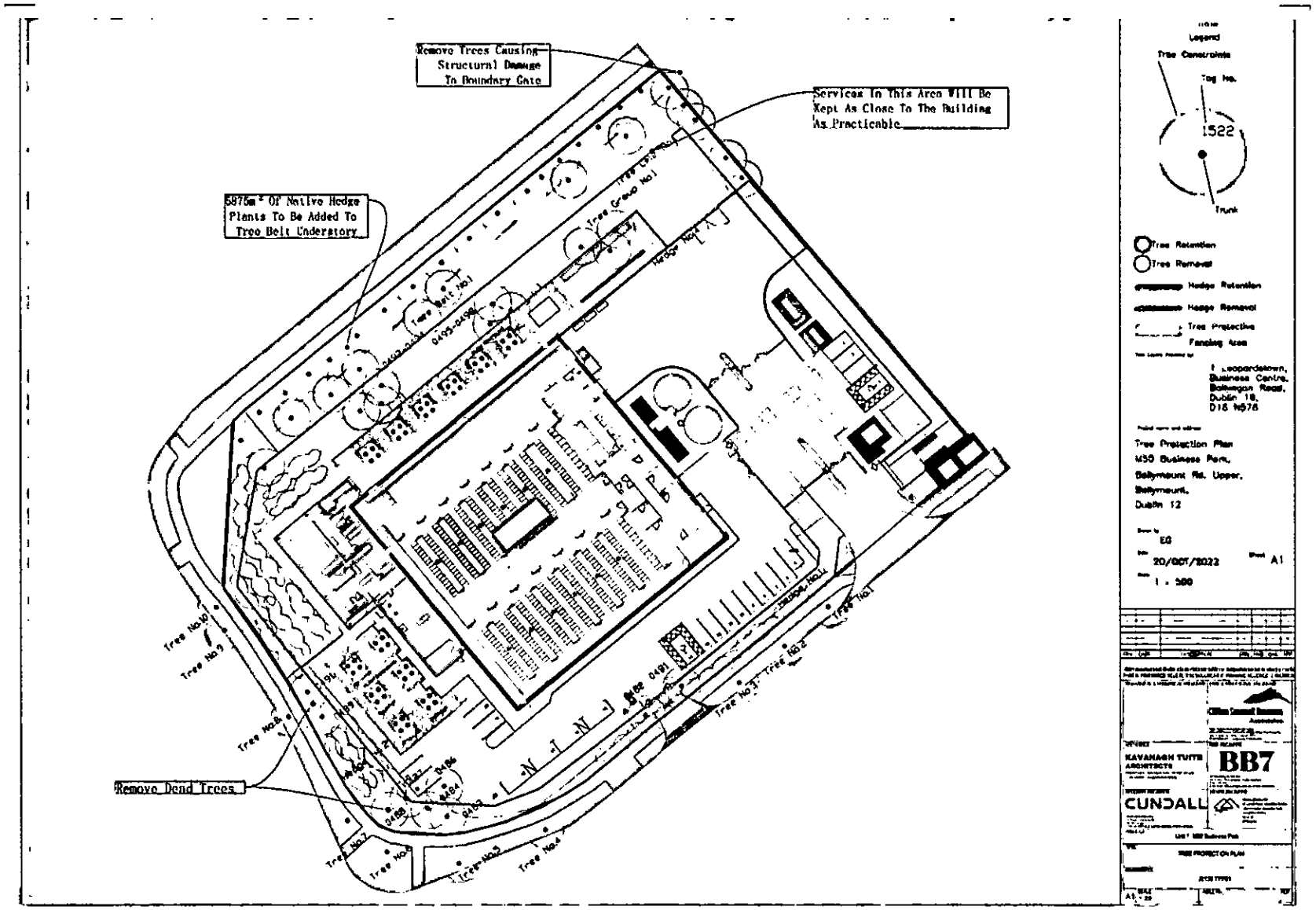


Figure 3. Showing the Proposed Development landscape plans with removal of trees indicated.

4. EXISTING ENVIRONMENT

4.1. DESIGNATED CONSERVATION AREAS

A Zone of Influence (ZoI) of a proposed development is the geographical area over which it could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a European site. In accordance with the OPR Practice Note, PN01, the ZoI should be established on a case-by-case basis using the Source- Pathway-Receptor framework.

The European Commission's *"Assessment of plans and projects in relation to Natura 2000 sites guidance on Article 6(3) and (4) of the Methodological Habitats Directive 92/43/EEC"* published 28 September 2021 states at section 3.1.3:

Identifying the Natura 2000 sites that may be affected should be done by taking into consideration all aspects of the plan or project that could have potential effects on any Natura 2000 sites located within the zone of influence of the plan or project. This should take into account all of the designating features (species, habitat types) that are significantly present on the sites and their conservation objectives. In particular, it should identify:

- *any Natura 2000 sites geographically overlapping with any of the actions or aspects of the plan or project in any of its phases, or adjacent to them;*
- *any Natura 2000 sites within the likely zone of influence of the plan or project Natura 2000 sites located in the surroundings of the plan or project (or at some distance) that could still be indirectly affected by aspects of the project, including as regards the use of natural resources (e.g. water) and various types of waste, discharge or emissions of substances or energy;*
- *Natura 2000 sites in the surroundings of the plan or project (or at some distance) which host fauna that can move to the project area and then suffer mortality or other impacts (e.g. loss of feeding areas, reduction of home range);*
- *Natura 2000 sites whose connectivity or ecological continuity can be affected by the plan or project.*

The range of Natura 2000 sites to be assessed, i.e. the zone in which impacts from the plan or project may arise, will depend on the nature of the plan or project and the distance at which effects may occur. For Natura 2000 sites located downstream along rivers or wetlands fed by aquifers, it may be that a plan or project can affect water flows, fish migration and so forth, even at a great distance. Emissions of pollutants may also have effects over a long distance. Some projects or plans that do not directly affect Natura 2000 sites may still have a significant impact on them if they cause a barrier effect or prevent ecological linkages. This may happen, for example, when plans affect features of the landscape

that connect Natura 2000 sites or that may obstruct the movements of species or disrupt the continuity of a fluvial or woodland ecosystem. To determine the possible effects of the plan or project on Natura 2000 sites, it is necessary to identify not only the relevant sites but also the habitats and species that are significantly present within them, as well as the site objectives.

The potential for source pathway receptor connectivity is firstly identified through GIS interrogation and detailed information is then provided on sites with connectivity. European sites that are located within a potential Zone of Influence of the Proposed Development are listed in Table 1 and presented in Figure 4 below. Spatial boundary data on the Natura 2000 network was extracted from the NPWS website (www.npws.ie) on 13 December 2022. This data was interrogated using GIS analysis to provide mapping, distances, locations and pathways to all sites of conservation concern including pNHAs, NHA and European sites.

The Proposed Development is to take place within the existing M50 Business Park in west Dublin City. The proposed development entails use of a warehouse as a Data Repository and associated internal alterations. Therefore there are no predicted discharges to the environment and no pathways to any European sites.

Table 1 European Sites located within the potential Zone of Influence[2] of the Proposed Development.

Site Code	Site name	Distance (km)[3]
000206	North Dublin Bay SAC	12.56
000210	South Dublin Bay SAC	9.54
002122	Wicklow Mountains SAC	8.20
004006	North Bull Island SPA	12.55
004024	South Dublin Bay and River Tolka Estuary SPA	9.57
004040	Wicklow Mountains SPA	8.67

The Proposed Development will not result in any changes to the amount of surface water run-off from the site during operation nor will it result in any contamination of surface waters during operation and will not result in any changes in foul water arising on the site.

[2] All European sites potentially connected irrespective of the nature or scale of the Proposed Development.
[3] Distances indicated are the closest geographical distance between the Proposed Development site and the European site boundary, as made available by the NPWS.

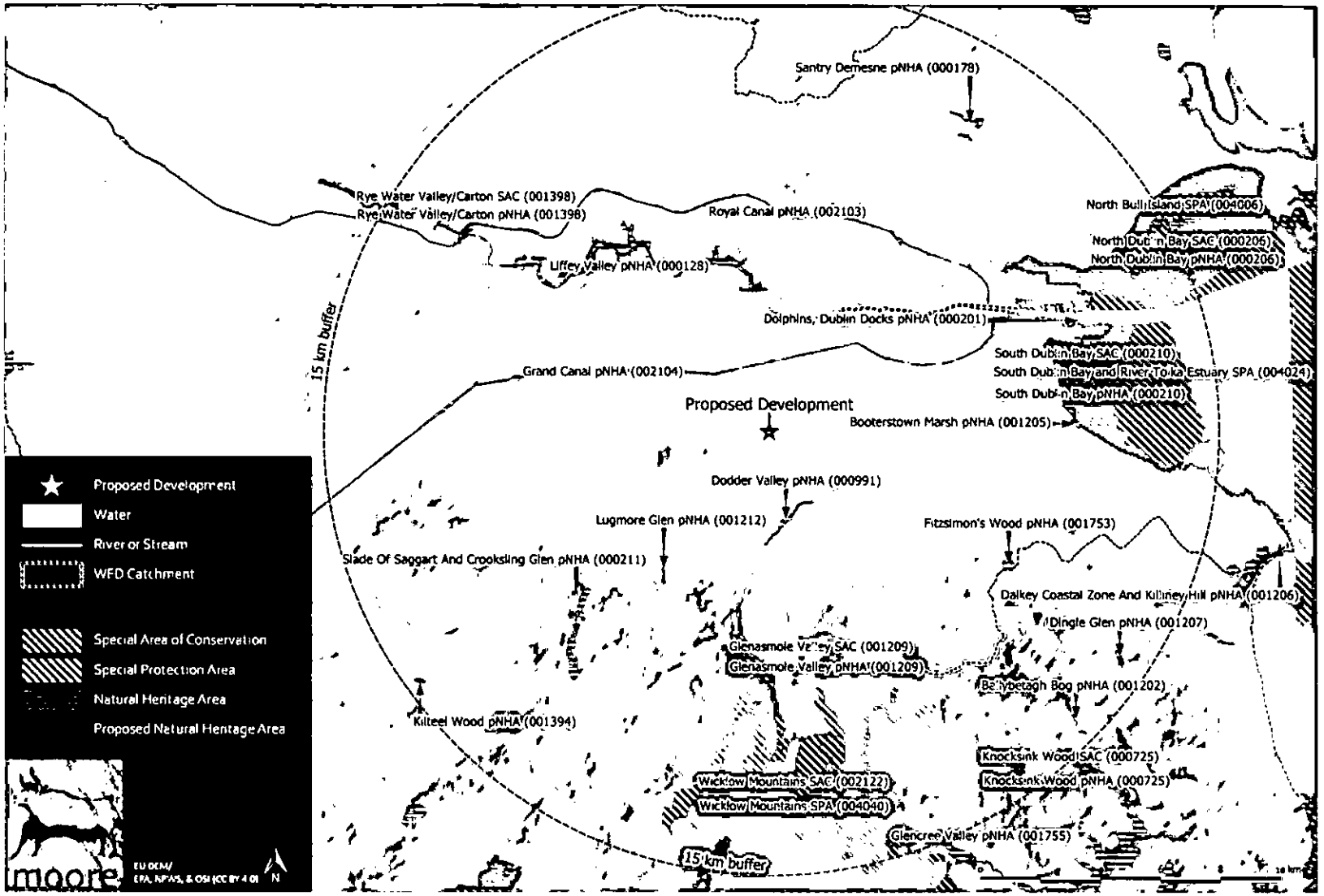


Figure 4. Showing European sites and NHAs/pNHAs within the wider Potential Zone of Influence of the Proposed Development.

4.2. HABITAT DESCRIPTIONS

The Proposed Development comprises an existing landscaped site of an industrial warehouse unit at the M50 Business Park. The predominant habitats are visible on Figure 2 and include a surrounding mixed species landscaped Treeline (WL2), Amenity Grassland (GA2) and Buildings and artificial surfaces (BL3) with scattered trees including Sycamore, Beech, Poplar, Birch and Willow.

There were no invasive species recorded at the proposed development site.

4.1. FAUNA

4.1.1. Mammals

Otters

There are no otter habitats in the study area and no potential for otters on the site.

Badgers

There are no badger setts in the study area and no potential for badgers on the site. The field boundaries were surveyed and no setts were recorded.

Bats

There is low potential for bat habitats or bat commuting on site.

The results of the bat survey report that the site is brightly lit both internally and externally. Security lighting is on site and in neighbouring industrial properties which create a brightly lit environment.

No bats were noted on site.

No confirmed bat roosts will be lost.

No trees of bat roosting potential are noted on site.

4.1.2. Birds

All birds are protected under the Wildlife Acts. A list of breeding bird species recorded during fieldwork in 2022 is presented in Table 2 below.

Table 2. Birds recorded during fieldwork in July and August 2022.

Birds	Scientific name	BWI Status	Habitat Type
Magpie	*Pica pica*	Green	Anywhere in lowland areas
Woodpigeon	*Columba palumbus*	Green	Gardens, woods, hedges
Wren	*Troglodytes troglodytes*	Green	Gardens, woods, hedges

5. ASSESSMENT OF IMPACTS

5.1. SITE EVALUATION

Due cognisance of features of the landscape which are of major importance for wild flora and fauna, such as those with a "*stepping stone*" and ecological corridors function, as referenced in Article 10 of the Habitats Directive were considered in this assessment.

Following a detailed literature review, desktop assessment and field survey the footprint of the proposed development site can be categorised into three main habitat types:

- mixed species landscaped Treeline (WL2),
- Amenity Grassland (GA2) and
- Buildings and artificial surfaces (BL3) with scattered trees.

There are no rare or protected species recorded on the site and there were no records of invasive species.

The habitats under the footprint of the proposed development are of low local ecological value.

The ecological value of the site was assessed following the guidelines set out in the Institute of Ecology and Environmental Management's Guidelines for Ecological Impact Assessment (2019) and according to the Natura Scheme for evaluating ecological sites (after Nairn & Fossitt, 2004). Judgements on the evaluation were made using geographic frames of reference, *e.g.* European, National, Regional or Local.

The Proposed Development is located within the existing M50 Business Park in west Dublin City. The Proposed Development entails use of a warehouse as a Data Repository and associated internal alterations. Therefore there are no predicted discharges to the environment and no pathways to any European sites.

5.2. IMPACT ASSESSMENT

5.2.1. Direct Effects

Habitats

The Proposed Development included pruning and removal of a number of semi-mature and immature trees.

There were no invasive species recorded in the Project area.

There will be no significant effects on biodiversity from the Proposed Development.

Fauna

Otters

There will be no direct or indirect effects on otters.

Badgers

There will be no direct or indirect effects on badgers.

Bats

Given that no bat species were found using the site and the site is brightly lit the proposed project will not have any significant effect on local bat populations. No bat roosts or potential bat roosts will be lost due to this development. The proposed development is not in proximity to sensitive bat areas. The potential for collision risk and impact on flight paths in relation to bats is considered low due to the low level of bat activity on site and the buildings would be deemed to be clearly visible to bats.

Birds

There are no predicted significant effects on birds. As a precaution all tree surgery will be undertaken outside the bird nesting season March 1 to August 31.

5.2.2. Indirect Effects

Given that no bat species were found using the site and the site is brightly lit the proposed project will not have any significant effect on local bat populations.

5.2.3. Cumulative Effects

Cumulative impacts or effects are changes in the environment that result from numerous human-induced, small-scale alterations. Cumulative impacts can be thought of as occurring through two main

pathways: first, through persistent additions or losses of the same materials or resource, and second, through the compounding effects as a result of the coming together of two or more effects.

A review of the National Planning Application Database was undertaken. The first stage of this review confirmed that there were no data gaps in the area where the Proposed Development is located. The database was then queried for developments granted planning permission within 250m of the Proposed Development within the last three years.

There are no predicted in-combination effects on biodiversity given the nature and small scale of the proposed works.

6. CONCLUSION & RECOMMENDATION

As a precaution all tree surgery will be undertaken outside the bird nesting season March 1 to August 31.

The existing woodland northern boundary belt is to be bolstered with additional native tree planting and understory species.

There are no predicted significant effects from the proposed development on habitats, flora, fauna or biodiversity.

7. REFERENCES

CIEEM (2019) Guidelines for Ecological Impact Assessment in the UK And Ireland Terrestrial, Freshwater, Coastal and Marine September 2018 Version 1.1 - Updated September 2019.

Department of the Environment, Heritage and Local Government (2010) Guidance on Appropriate Assessment of Plans and Projects in Ireland (as amended February 2010).

EPA (2022) Guidelines on Information to be contained in an EIAR; EPA, May 2022.

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

European Commission (2018) Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC.

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

Nairn, R. and J. Fossitt (2004) The Ecological Impacts of Roads, and an Approach to their Assessment for National Road Schemes. In: J. Davenport and J.L Davenport (eds) The Effects of Human Transport on Ecosystems: Cars and Planes, Boats and Trains, 98-114. Dublin. Royal Irish Academy.

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NRA (2009) Guidelines for Assessment of Ecological Impacts of National Road Schemes. Dublin: National Roads Authority. Available at: http://www.nra.ie/Environment/

Parnell, J. and T. Curtis (2012) Webb's An Irish Flora. Cork University Press.

Smith, G.F., O'Donoghue, P., O'Hora, K. and E. Delaney (2011) Best Practice Guidance for Habitat Survey and Mapping. The Heritage Council.

Appendix 1

TII Evaluation of Habitats

Ecological valuation: Examples
International Importance: ☐ 'European Site' including Special Area of Conservation (SAC), Site of Community Importance (SCI), Special Protection Area (SPA) or proposed Special Area of Conservation. ☐ Proposed Special Protection Area (pSPA). ☐ Site that fulfills the criteria for designation as a 'European Site' (see Annex III of the Habitats Directive, as amended). ☐ Features essential to maintaining the coherence of the Natura 2000 Network.[4] ☐ Site containing 'best examples' of the habitat types listed in Annex I of the Habitats Directive. ☐ Resident or regularly occurring populations (assessed to be important at the national level)[5] of the following: ☐ Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive; and/or ☐ Species of animal and plants listed in Annex II and/or IV of the Habitats Directive. ☐ Ramsar Site (Convention on Wetlands of International Importance Especially Waterfowl Habitat 1971). ☐ World Heritage Site (Convention for the Protection of World Cultural & Natural Heritage, 1972). ☐ Biosphere Reserve (UNESCO Man & The Biosphere Programme). ☐ Site hosting significant species populations under the Bonn Convention (Convention on the Conservation of Migratory Species of Wild Animals, 1979). ☐ Site hosting significant populations under the Berne Convention (Convention on the Conservation of European Wildlife and Natural Habitats, 1979). ☐ Biogenetic Reserve under the Council of Europe. ☐ European Diploma Site under the Council of Europe. ☐ Salmonid water designated pursuant to the European Communities (Quality of Salmonid Waters) Regulations, 1988, (S.I. No. 293 of 1988).[6]
National Importance: ☐ Site designated or proposed as a Natural Heritage Area (NHA). ☐ Statutory Nature Reserve. ☐ Refuge for Fauna and Flora protected under the Wildlife Acts. ☐ National Park. ☐ Undesignated site fulfilling the criteria for designation as a Natural Heritage Area (NHA); Statutory Nature Reserve; Refuge for Fauna and Flora protected under the Wildlife Act; and/or a National Park. ☐ Resident or regularly occurring populations (assessed to be important at the national level)[7] of the following: ☐ Species protected under the Wildlife Acts; and/or ☐ Species listed on the relevant Red Data list. ☐ Site containing 'viable areas'[8] of the habitat types listed in Annex I of the Habitats Directive.

County Importance:

- ☐ Area of Special Amenity.[9]
- ☐ Area subject to a Tree Preservation Order.
- ☐ Area of High Amenity, or equivalent, designated under the County Development Plan.
- ☐ Resident or regularly occurring populations (assessed to be important at the County level)[10] of the following:
  - ☐ Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive;
  - ☐ Species of animal and plants listed in Annex II and/or IV of the Habitats Directive;
  - ☐ Species protected under the Wildlife Acts; and/or
  - ☐ Species listed on the relevant Red Data list.
- ☐ Site containing area or areas of the habitat types listed in Annex I of the Habitats Directive that do not fulfil the criteria for valuation as of International or National importance.
- ☐ County important populations of species, or viable areas of semi-natural habitats or natural heritage features identified in the National or Local BAP,[11] if this has been prepared.
- ☐ Sites containing semi-natural habitat types with high biodiversity in a county context and a high degree of naturalness, or populations of species that are uncommon within the county.
- ☐ Sites containing habitats and species that are rare or are undergoing a decline in quality or extent at a national level.

Local Importance (higher value):

- ☐ Locally important populations of priority species or habitats or natural heritage features identified in the Local BAP, if this has been prepared;
- ☐ Resident or regularly occurring populations (assessed to be important at the Local level)[12] of the following:
  - ☐ Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive;
  - ☐ Species of animal and plants listed in Annex II and/or IV of the Habitats Directive;
  - ☐ Species protected under the Wildlife Acts; and/or
  - ☐ Species listed on the relevant Red Data list.
- ☐ Sites containing semi-natural habitat types with high biodiversity in a local context and a high degree of naturalness, or populations of species that are uncommon in the locality;
- ☐ Sites or features containing common or lower value habitats, including naturalised species that are nevertheless essential in maintaining links and ecological corridors between features of higher ecological value.

Local Importance (lower value):

- ☐ Sites containing small areas of semi-natural habitat that are of some local importance for wildlife;
- ☐ Sites or features containing non-native species that are of some importance in maintaining habitat links.

Appendix 2

Site Photos

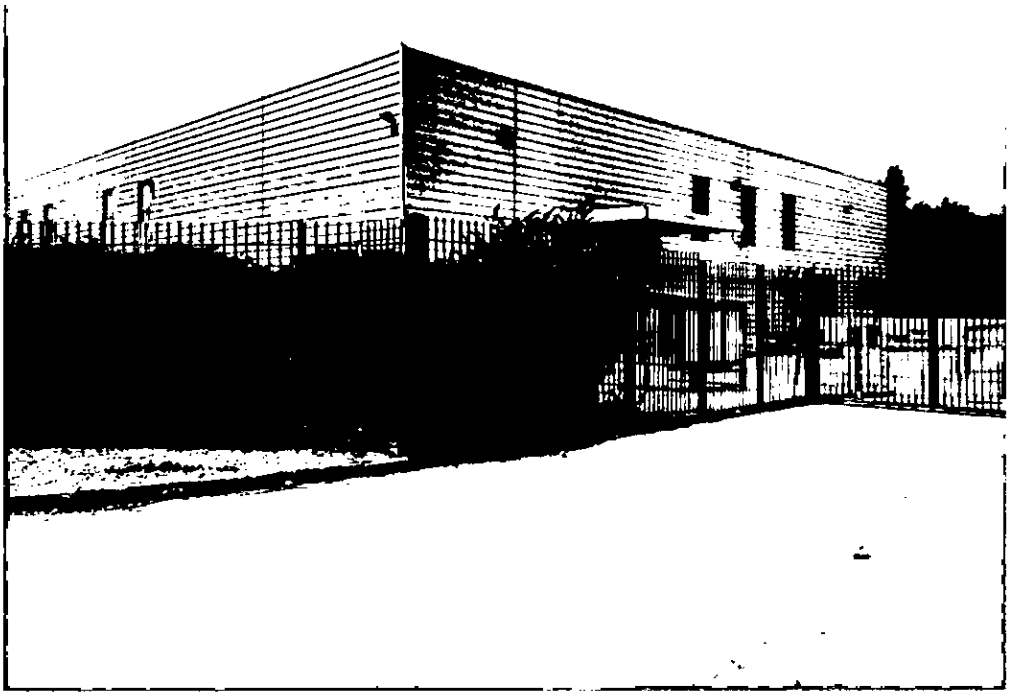


Photo 1. Existing building on site.

Photo 2. Existing northern boundary treeline of mixed Sycamore.

Photo 3. Example of scattered tree groups, this one showing Birch inside the northern boundary.

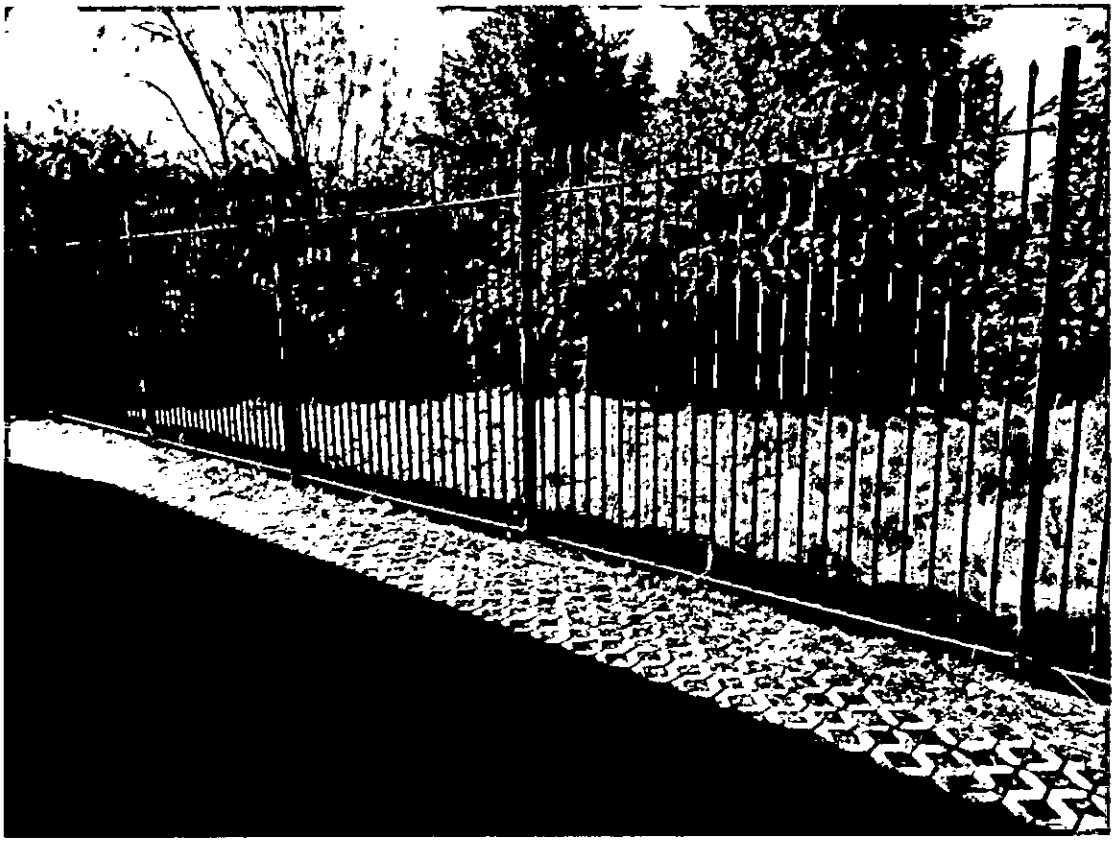


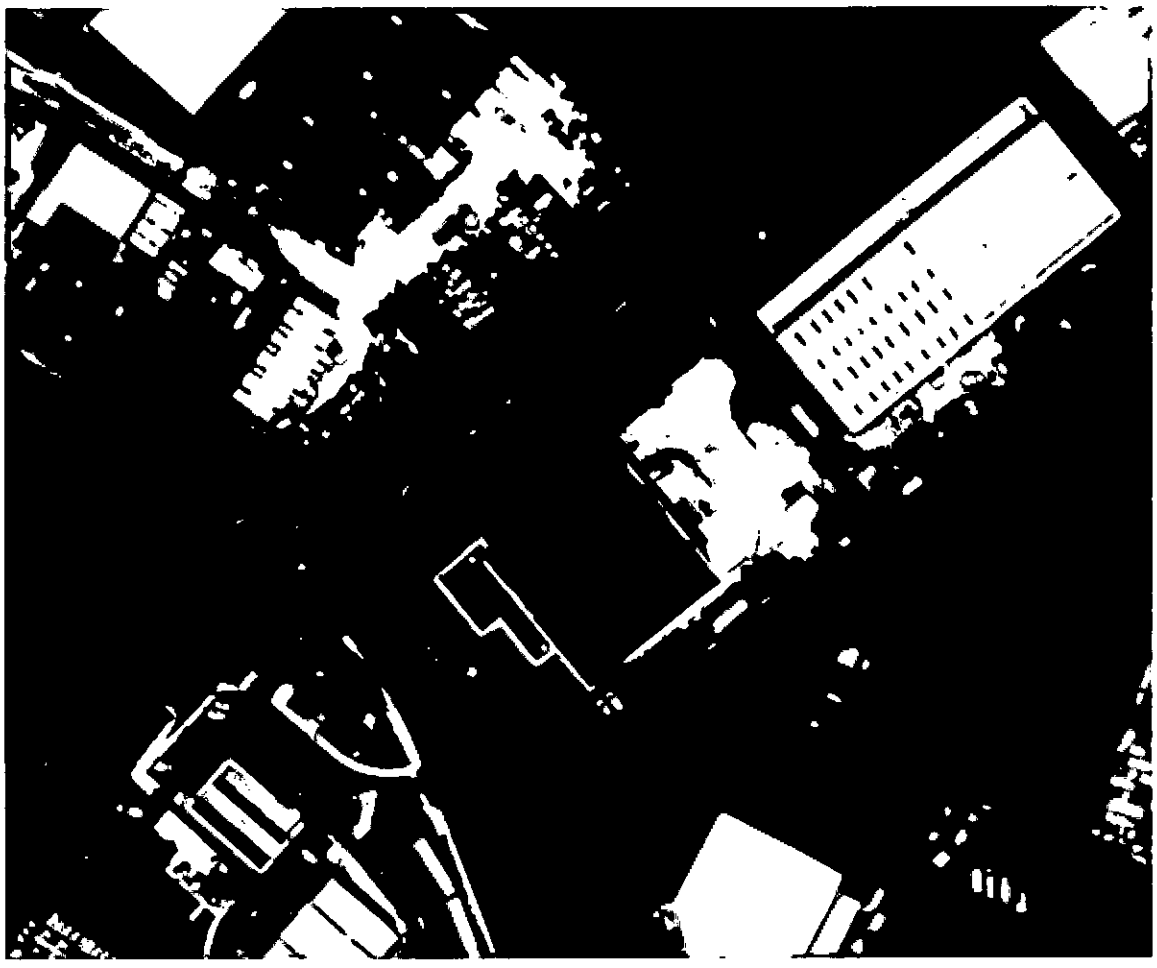
Photo 4. Example of porous paving and amenity grassland.

Appendix B (ii) – Bat Fauna Survey

ALTEMAR

Marine & Environmental Consultancy

Bat Fauna Survey for change of use from warehouse to data repository facility at Unit 1, M50 Business Park, Ballymount Avenue, Dublin 12.



14th December 2022

Prepared by: Bryan Deegan (MCIEEM) of Altemar Ltd.
On behalf of: Mullins Developments LLC

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

SUMMARY

Structure:	An existing warehouse structure, boundary fence, carpark, security hut. There is also a treeline located along the subject site's north western boundary.
Location:	Unit 1, M50 Business Park, Ballymount Avenue, Dublin 12.
Bat species present:	None Roosting. None foraging.
Proposed work:	Change of use from warehouse to data repository facility.
Impact on bats:	The site is brightly lit both internally and externally. Security lighting is on site and in neighbouring industrial properties which create a brightly lit environment. No bats were noted on site. No confirmed bat roosts will be lost. No trees of bat roosting potential are noted on site. Given that no bat species were found using the site and the site is brightly lit the proposed project will not have any significant effect on local bat populations. No bat roosts or potential bat roosts will be lost due to this development. The proposed development is not in proximity to sensitive bat areas. The potential for collision risk and impact on flight paths in relation to bats is considered is considered low due to the low level of bat activity on site and the buildings would be deemed to be clearly visible to bats.
Survey by:	Bryan Deegan MCIEEM
Survey date:	15th September 2022

Receiving Environment

Background

Creighton Properties LLC intend to apply for Permission for development at this site, Unit 1, M50 Business Park, Ballymount Avenue, Dublin 12.

The proposed development will consist of:

the change of use from warehouse to data repository facility, alterations to external facades, provision of a new 1100 mm parapet, reclad roof, internal alterations, refurbishment of the existing office space, solar panels at roof level, external plant and equipment to include 12 no. condenser modules, an emergency back-up generator and associated fuel storage tank, transformer, extension to the existing sub-station (c. 13 m2), 2 no. sprinkler tanks and pumphouse, bin store, 22 parking spaces including 2 electrical vehicle charging points, bicycle parking shelter, landscaping, planting, new security fence, external lighting, CCTV, altered vehicular gates, permeable hard surfaces, alterations to internal foul sewerage and water supply networks, provision of SuDS compliant surface water drainage system and all associated site works.

The proposed site outline and location are demonstrated in Figure 1.

Landscape

The landscape strategy for the proposed development has been prepared by Kavanagh Tuite Architects. The proposed landscape plan is demonstrated in Figure 2.

Figure 1. Proposed site outline

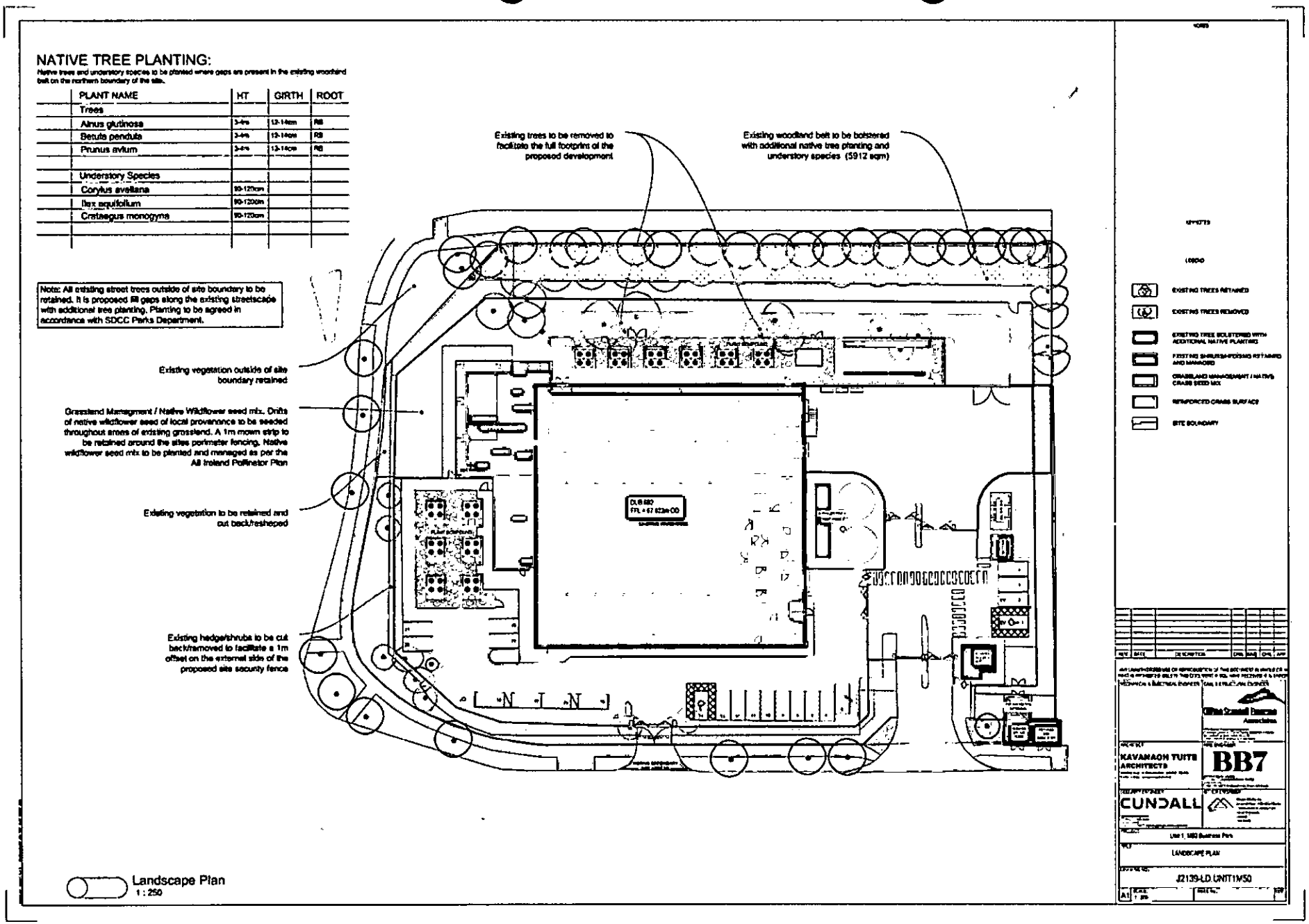


Figure 2. Proposed landscape plan

Arborist

An Arboricultural Assessment Report has been prepared by Veon Limited to accompany this planning application. This report outlines the following impact of the proposed development, and demonstrates how its impact can be mitigated:

'To facilitate the proposed development the following tree and hedge vegetation will need to be removed. o Tree Nos. 0481, 0482, 0483, 0484, 0486, 0487, 0488, 0489, 0490, 0492, 0493, 0494, 0495, 0496, 0498, Tree Group No.1, c.70m of Tree Belt No.1, Tree Line No.1, Hedge No.3, Hedge No.4.

The above tree and hedge vegetation is of a semi-mature age class, <20 years old, and was planted as part of the landscaping of this industrial estate, as such, it holds less ecological value and its loss is more easily mitigated through replacement planting elsewhere in the site area.

Tree Belt No.1, along the northern boundary, will be bolstered with 5875m² of native species understory planting to mitigate the loss of vegetation on site.

The remaining, and newly planted, vegetation will have organic mulch applied around their bases to contribute to their longevity.

If permeable paving is to be used on the southern and eastern side of the site area, and the existing tarmac is to be removed, then care will need to be taken not to damage the roots beneath. Ground protection, such as Cell-Web, will then need to be applied over the roots and filled with angular stone before laying the slabs. This method will spread the loading over the soil surface and allow for gas and water exchange.

Services will need to be kept as close to the building as practicably possible and trenchless solutions should be employed to avoid root damage to the peripheral vegetation.

Tree Nos. 1-11 are growing just outside of the site area but they contribute to the overall value of this area; therefore, care will need to be taken to avoid damage to these trees during the construction process i.e. avoid storing materials around their bases and/or causing mechanical damage with machinery.'

The tree constraints plan and tree protection plan are demonstrated in Figures 3 & 4.

Lighting Plan

The proposed lighting plan is seen in Figure 5. Elevated light levels will be seen across the site that would not be conducive to optimal foraging conditions for bats. It should be noted however, that no foraging was noted on site and the proposed project is within an existing industrial estate with significant existing light levels.

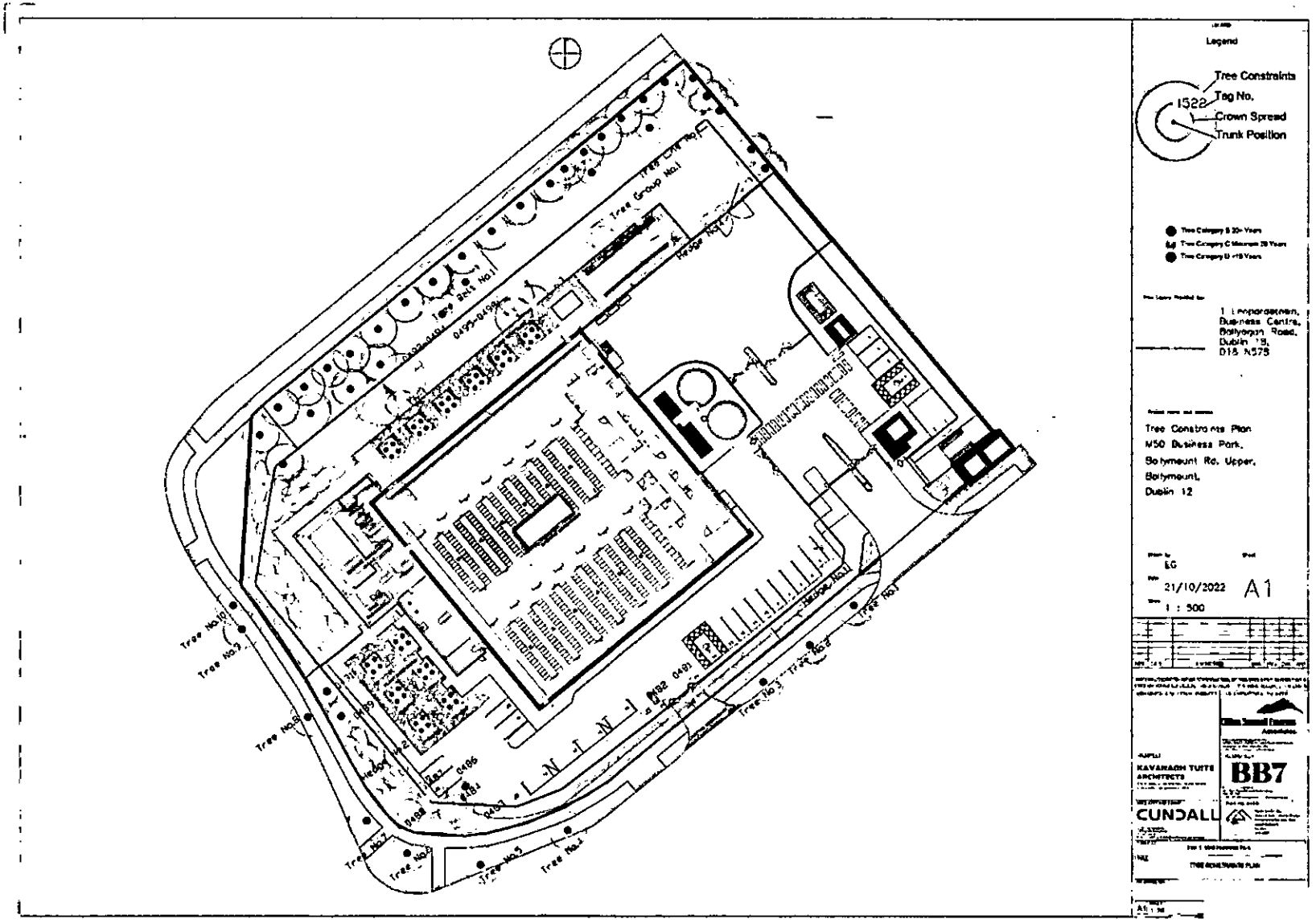


Figure 3. Tree constraints plan

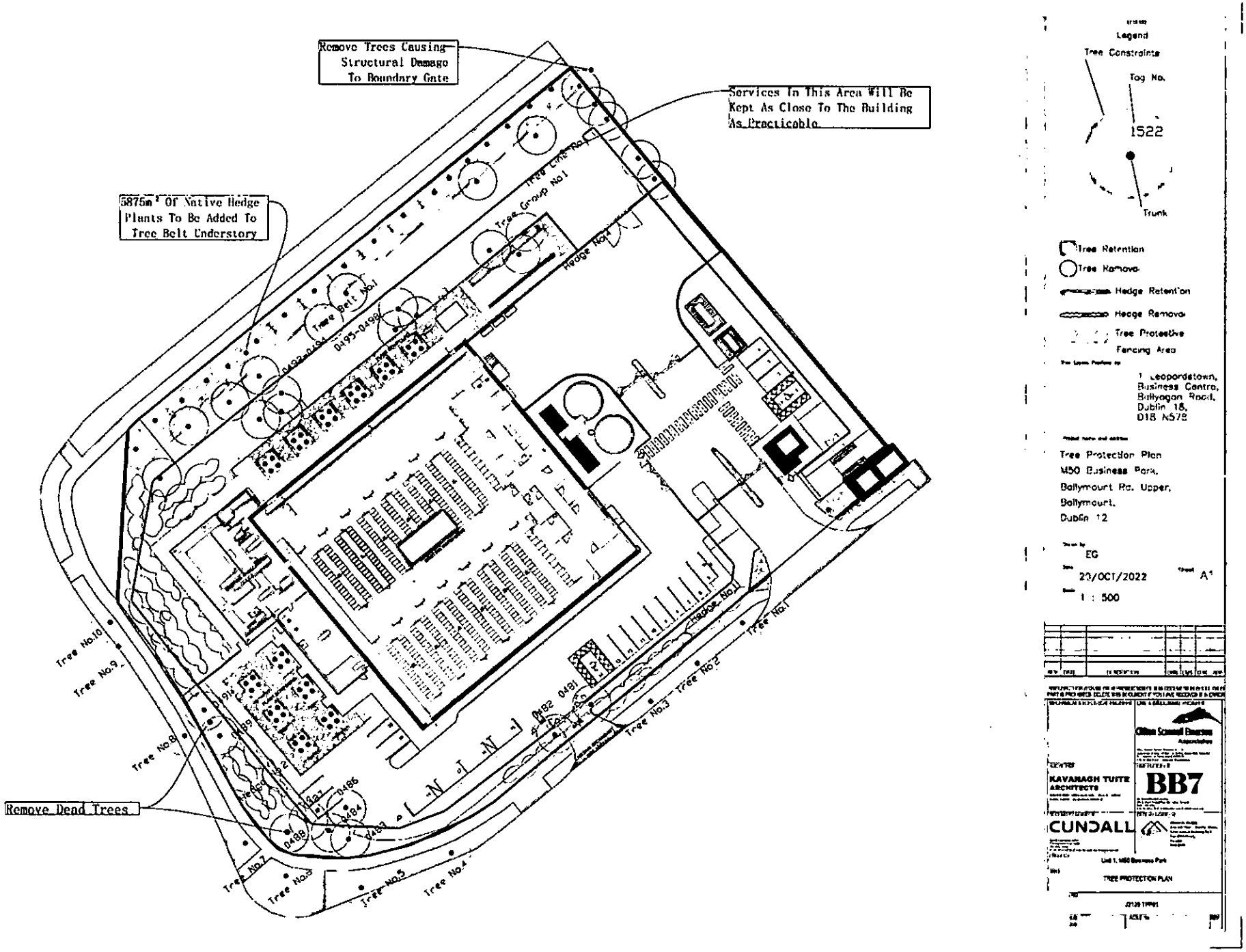


Figure 4. Tree Protection Plan

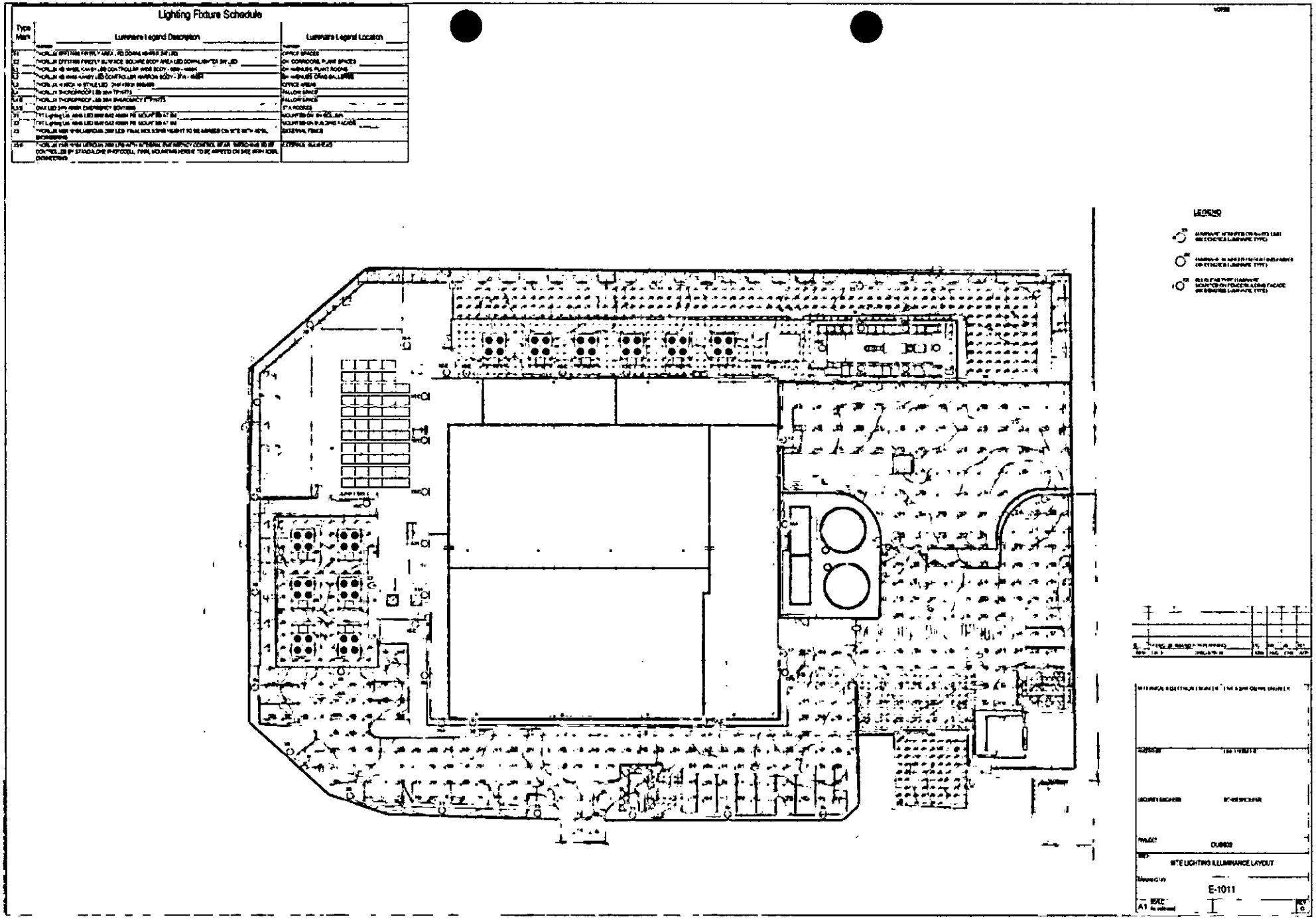


Figure 5. Lighting Plan

Competency of Assessor

This report has been prepared by Bryan Deegan MSc, BSc (MCIEEM). Bryan has over 26 years of experience providing ecological consultancy services in Ireland. He has extensive experience in carrying out a wide range of bat surveys including dusk emergence, dawn re-entry and static detector surveys. He also has extensive experience reducing the potential impact of projects that involve external lighting on Bats. Bryan trained with Conor Kelleher author of the Bat Mitigation Guidelines for Ireland (Kelleher and Marnell (2022)) and Bryan is currently providing bat ecology (impact assessment and enhancement) services to Dun Laoghaire Rathdown County Council primarily on the Shanganagh Park Masterplan. The desk and field surveys were carried out having regard to the guidance: Bat Surveys for Professional Ecologists – Good Practice Guidelines 3rd Edition (Collins, J. (Ed.) 2016) and Marnell, Kelleher and Mullen (2022), Bat Mitigation Guidelines for Ireland V2 (which update and replace the Bat Mitigation Guidelines for Ireland published in 2006).

Legislative Context

Wildlife Act 1976 (as amended by, inter alia, the Wildlife (Amendment) Act 2000).

Bats in Ireland are protected by the Wildlife (Amendment) Act 2000. Based on this legislation it is an offence to wilfully interfere with or destroy the breeding or resting place of any species of bat. Under this legislation it is an offence to *"Intentionally kill, injure or take a bat, possess or control any live or dead specimen or anything derived from a bat, wilfully interfere with any structure or place used for breeding or resting by a bat, wilfully interfere with a bat while it is occupying a structure or place which it uses for that purpose. "*

Habitats Directive- Council Directive 92/43/EEC 1992 on the conservation of natural habitats and of wild fauna and flora has been transposed into Irish Law, including, via, *inter alia*, the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended). See Art.73 of the 2011 Regulations which revokes the 1997 Regulations.

Annex II of the Council Directive 92/43/EEC 1992 on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) lists animal and plant species of Community interest, the conservation of which requires the designation of Special Areas of Conservation (SACs); Annex IV lists animal and plant species of Community interest in need of strict protection. All bat species in Ireland are listed on Annex IV of the Directive, while the Lesser Horseshoe Bat (*Rhinolophus hipposideros*) is protected under Annex II which related to the designation of Special Areas of Conservation for a species.

Under the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended), all bat species are listed under the First Schedule and, pursuant to, *inter alia*, Part 6 and Regulation 51, it is an offence to:

- Deliberately capture or kill a bat;
- Deliberately disturb a bat particularly during the period of breeding, hibernating or migrating;
- Damage or destroy a breeding site or resting place of a bat;
- Keep, sell, transport, exchange, offer for sale or offer for exchange any bat taken in the wild.

Bat survey

This report presents the results of site visit by Bryan Deegan (MCIEEM) on the 6th September 2022. A bat emergent and detector survey was carried out. Trees on site were examined for bat roosting potential.

Survey methodology

As outlined in Marnell *et al.* 2022 *'The presence of a large maternity roost can normally be determined on a single visit at any time of year, provided that the entire structure is accessible and that any signs of bats have not been removed by others. However, most roosts are less obvious. A visit during the summer or autumn has the advantage that bats may be seen or heard. Buildings (which for this definition exclude cellars and other underground structures) are rarely used for hibernation alone, so droppings deposited by active bats provide the best clues. Roosts of species which habitually enter roof voids are probably the easiest to detect as the droppings will normally be readily visible. Roosts of crevice-dwelling species may require careful searching and, in some situations, the opening up of*

otherwise inaccessible areas. If this is not possible, best judgement might have to be used and a precautionary approach adopted. Roosts used by a small number of bats, as opposed to large maternity sites, can be particularly difficult to detect and may require extensive searching backed up by bat detector surveys (including static detectors) or emergence counts.' In relation to the factors influencing survey results the guidelines outlines the following *'During the winter, bats will move around to find sites that present the optimum environmental conditions for their age, sex and bodyweight and some species will only be found in underground sites when the weather is particularly cold. During the summer, bats may be reluctant to leave their roost during heavy rain or when the temperature is unseasonably low, so exit counts should record the conditions under which they were made. Similarly, there may be times when females with young do not emerge at all or emerge only briefly and return while other bats are still emerging thus confusing the count. Within roosts, bats will move around according to the temperature and may or may not be visible on any particular visit. Bats also react to disturbance, so a survey the day after a disturbance event, may give a misleading picture of roost usage.'*

The survey involved the methodologies outlined in Collins (2016) which included the roost inspection methodologies i.e. external methodology outlined in section 5.2.4.1 and the internal survey outlines in section 5.2.4.2 of the guidelines. In addition, the methodologies for Presence absence surveys (Section 7) was carried out for dust emergent surveys.'

As outlined in Collins (2016) 'The bat active period is generally considered to be between April and October inclusive (although the season is likely to be shorter in northern latitudes). However, because bats wake up during mild conditions, bat activity can also be recorded during winter months.'

Survey Results

Trees as potential bat roosts.

A ground level roost assessment was carried and used to examine the trees on site for features that could form bat roosts. Potential roosting features include heavy ivy growth, broken limbs, areas of decay, vertical or horizontal cracks, cracks in bark etc. None of the trees on site had features that would be considered to be of importance to roosting bats. All trees on site were assessed. No bats, evidence of bats or bat roost were identified in any of the onsite trees. A derogation license is therefore not required for the removal of trees on site.

Plate 1. Tree line and area of grassland to the north east of the site (brightly lit during night).

Buildings as potential bat roosts.

An internal and external assessment of the buildings on site was carried out. Although the warehouse building appears in little use the inside was brightly lit. External security lighting was also in place. The building showed no signs of bat use internally or externally.

Plate 2. Brightly lit interior of building.

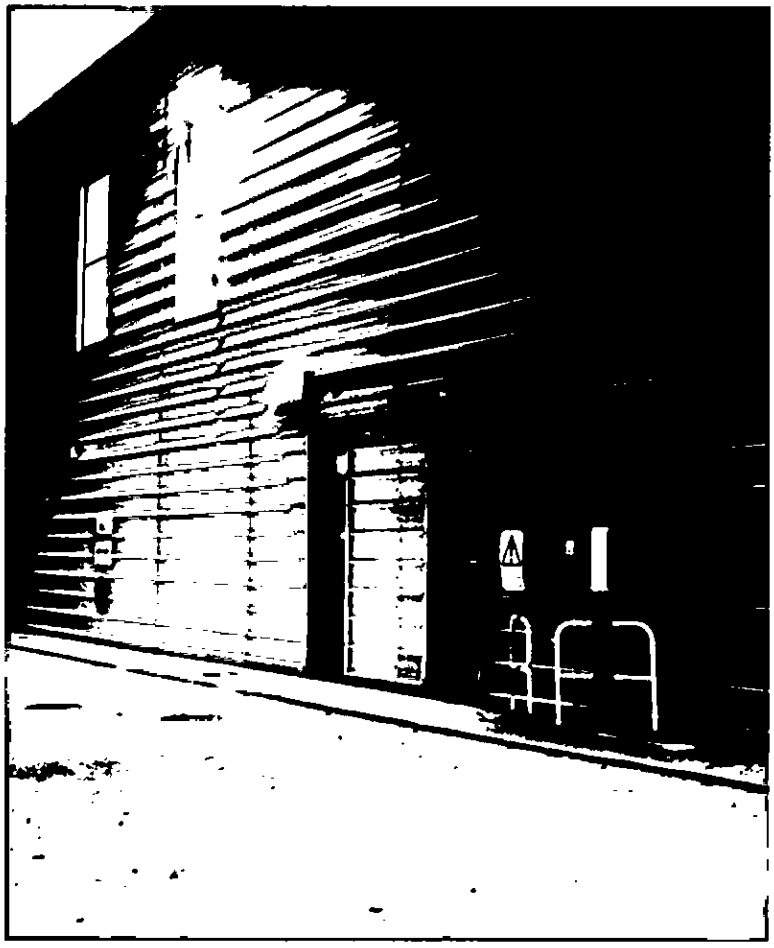


Plate 3. Brightly lit (security lighting) exterior of building.

Emergent/detector surveys.

Emergent/detector surveys were carried out by Bryan Deegan on the 15th September 2022.

The detector survey was undertaken within the active bat season and the transects covered the entire site multiple times during the night. Weather conditions were good with mild temperatures of 14°C after sunset. Winds were light and there was no rainfall. Insects were observed in flight during the survey.

As outlined in Collins (2016) in relation to weather conditions *'The aim should be to carry out surveys in conditions that are close to optimal (sunset temperature 10°C or above, no rain or strong wind.), particularly when only one survey is planned.... Where surveys are carried out when the temperature at sunset is below 10°C should be justified by the ecologist and the effect on bat behaviour considered.'* There were no constraints in relation to the surveys carried out. All areas of the site were accessible and weather conditions were optimal for bat assessments.

At dusk, bat detector surveys were carried out onsite using a*n Echo meter touch 2 Pro* detector to determine bat activity. Bats if present were identified by their ultrasonic calls coupled with behavioural and flight observations. No bats were noted on site.

Bat assessment findings

Review of local bat records

The review of existing bat records (sourced from Bat Conservation Ireland's National Bat Records Database) within a 2km^2 grid (Reference grid OO03V) encompassing the study area reveals that none of the nine known Irish species have been observed locally. The National Biodiversity Data Centre's online viewer was consulted in order to determine whether there have been recorded bat sightings in the wider area. The following species were noted in the wider area: Brown Long-eared Bat (*Plecotus autirus*), Daubenton's Bat (*Myotis daubentonii*), Soprano Pipistrelle (*Pipistrellus pygmaeus*), and Lesser Noctule (*Nyctalus leisleri*) (Figures 5-6).

Figure 5. Brown Long-eared Bat (*Plecotus auritus*) (yellow), Daubenton's Bat (*Myotis daubentonii*) (purple), and both Brown Long-eared Bat and Daubenton's Bat (orange) (Source NBDC) (Site location – red circle)

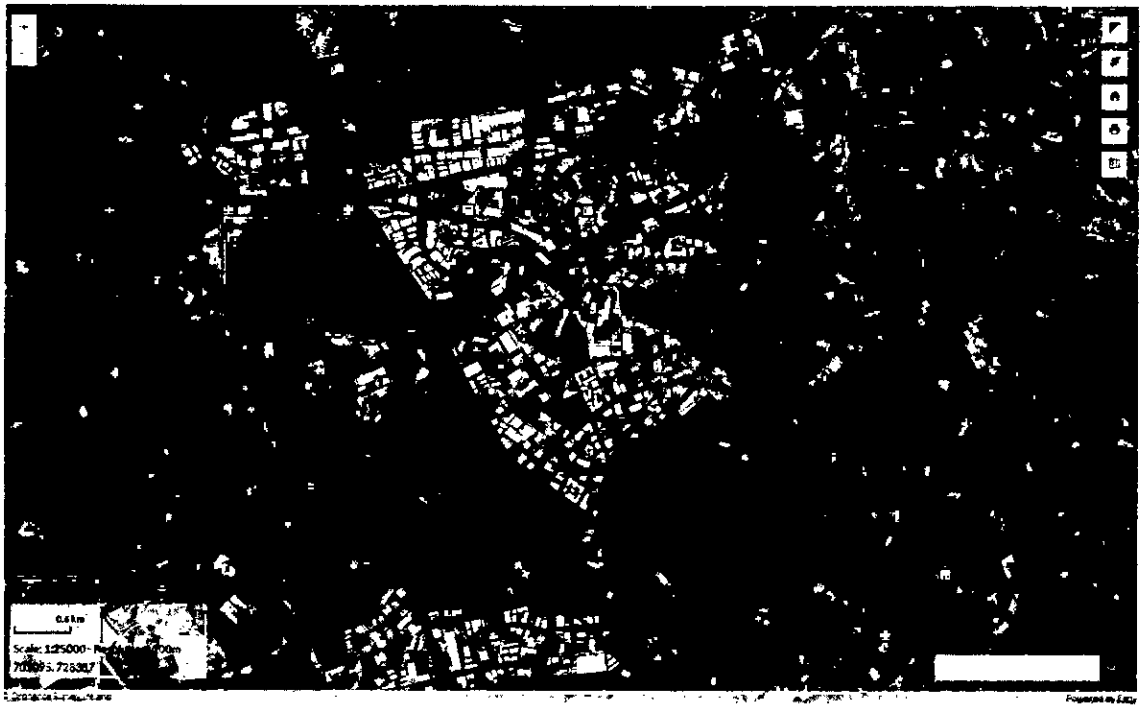


Figure 6. Lesser Noctule (*Nyctalus leisleri*) (purple), Soprano Pipistrelle (*Pipistrellus pygmaeus*) (yellow), and both Soprano Pipistrelle and Lesser Noctule (orange) (Source NBDC) (Site location – red circle)

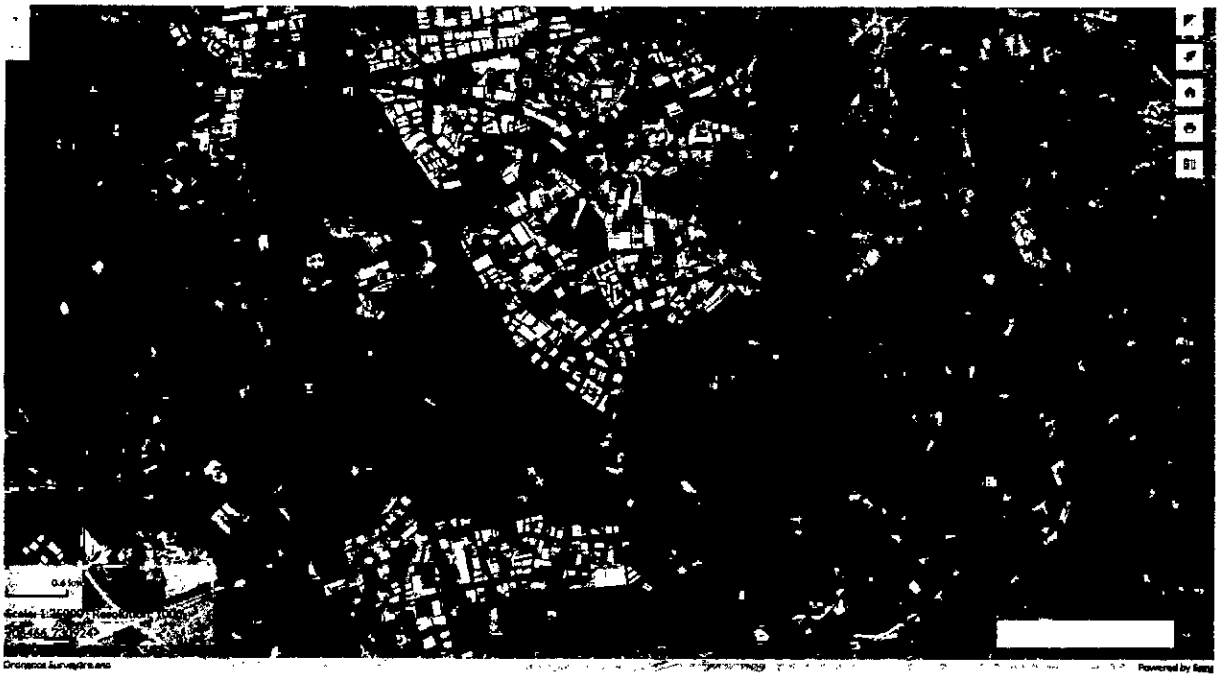


Figure 7. Common Pipistrelle (Pipistrellus pipistrellus sensu stricto) (purple), Pipistrelle (*Pipistrellus pipistrellus sensu lato*) (Combined Soprano and Common pipistrelle) (yellow), and both Common Pipistrelle (*Pipistrellus pipistrellus sensu stricto*) (purple), Pipistrelle (*Pipistrellus pipistrellus sensu lato*) (orange) (Source NBDC) (Site location – red circle)

Evaluation of Results

The bat surveys comply with bat survey guidance documentation including Marnell et al (2022) and Collins (2016). No bats were observed emerging from trees or buildings on site. No evidence of bats roosting in buildings or trees was noted. No bats were noted foraging on site. No bats were noted transiting through the subject site. The site is of relatively low importance to the local bat population.

Potential Impact of the development on Bats

No bats were noted on site. No bats were noted roosting on site. No trees of bat roosting potential are noted on site. The site is brightly lit both internally and externally. Security lighting is on site and in neighbouring industrial properties which create a brightly lit environment. No bats were noted on site. No confirmed bat roosts will be lost.

Given that no bat species were found using the site and the site is brightly lit from within and externally, the proposed project will not have any significant effect on local bat populations. No bat roosts or potential bat roosts will be lost due to this development. The proposed development is not in proximity to sensitive bat areas. The project is within a brightly lit industrial estate. The potential for collision risk and impact on flight paths in relation to bats is considered is considered low due to the low level of bat activity on site and the buildings would be deemed to be clearly visible to bats.

Mitigation Measures

As outlined in Marnell et al. (2022) *"Mitigation should be proportionate. The level of mitigation required depends on the size and type of impact, and the importance of the population affected."* In addition, as outlined in Marnell et. al (2022) *'Mitigation for bats normally comprises the following elements:*

- *Avoidance of deliberate, killing, injury or disturbance – taking all reasonable steps to ensure works do not harm individuals by altering working methods or timing to avoid bats. The seasonal occupation of most roosts provides good opportunities for this*
- *Roost creation, restoration or enhancement – to provide appropriate replacements for roosts to be lost or damaged*
- *Long-term habitat management and maintenance – to ensure the population will persist*
- *Post-development population monitoring – to assess the success of the scheme and to inform management or remedial operations.'*

However, no bats were noted on site. No bats were noted roosting on site. No trees of bat roosting potential are noted on site. As a result, the following mitigation will be implemented:

- Lighting at all construction stage will be done sensitively, pointing inwards with no external spill, on site with no significant direct lighting outside of the proposed site.

The following is recommended (not mitigation):

- That the external lighting on site is reviewed to minimise spill and comply with bat lighting guidelines.
- The use of security lighting being permanently on is reviewed with the installation of PIR's or similar timing to minimize lighting on site.

Predicted Residual Impact of Planned Development on Bats

Given that no bat species were found using the site and the site is brightly lit from within and externally, the proposed project will not have any significant effect on local bat populations. No bat roosts or potential bat roosts will be lost due to this development. The proposed development is not in proximity to sensitive bat areas. The potential for collision risk and impact on flight paths in relation to bats is considered is considered low due to the low level of bat activity on site and the buildings would be deemed to be clearly visible to bats. No significant effect on bats would be foreseen.

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