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Cara Partners

Little Island Expansion

Cara Partners
Little Island Industrial Estate,
Co. Cork,
Ireland,
T45 RK30

Environmental Impact Assessment Report

SUSTECH

Submitted to Cork County Council
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NON-TECHNICAL SUMMARY

Introduction

Cara Partners is proposing a development at Little Island Industrial Estate, Little Island, Co. Cork. This Non-Technical Summary provides an overview of the existing site, a description of the proposed development and the associated requirement for an Environmental Impact Assessment (EIA).

Cara Partners has been operating in Cork since 1978 and is engaged in the manufacture of standardised herbal extracts used primarily as active pharmaceutical ingredients. Since mid-2021, Cara Partners has been wholly owned by the Schwabe Group (Dr. Willmar Schwabe GmbH & Co. KG) headquartered in Karlsruhe, Germany.

The Schwabe Group is one of the oldest pharmaceutical manufacturers in Europe, with a history extending over 150 years. The Group specialises in the research, development and manufacture of products derived from medicinal plants and herbal extracts and operates a global network of manufacturing and research facilities.

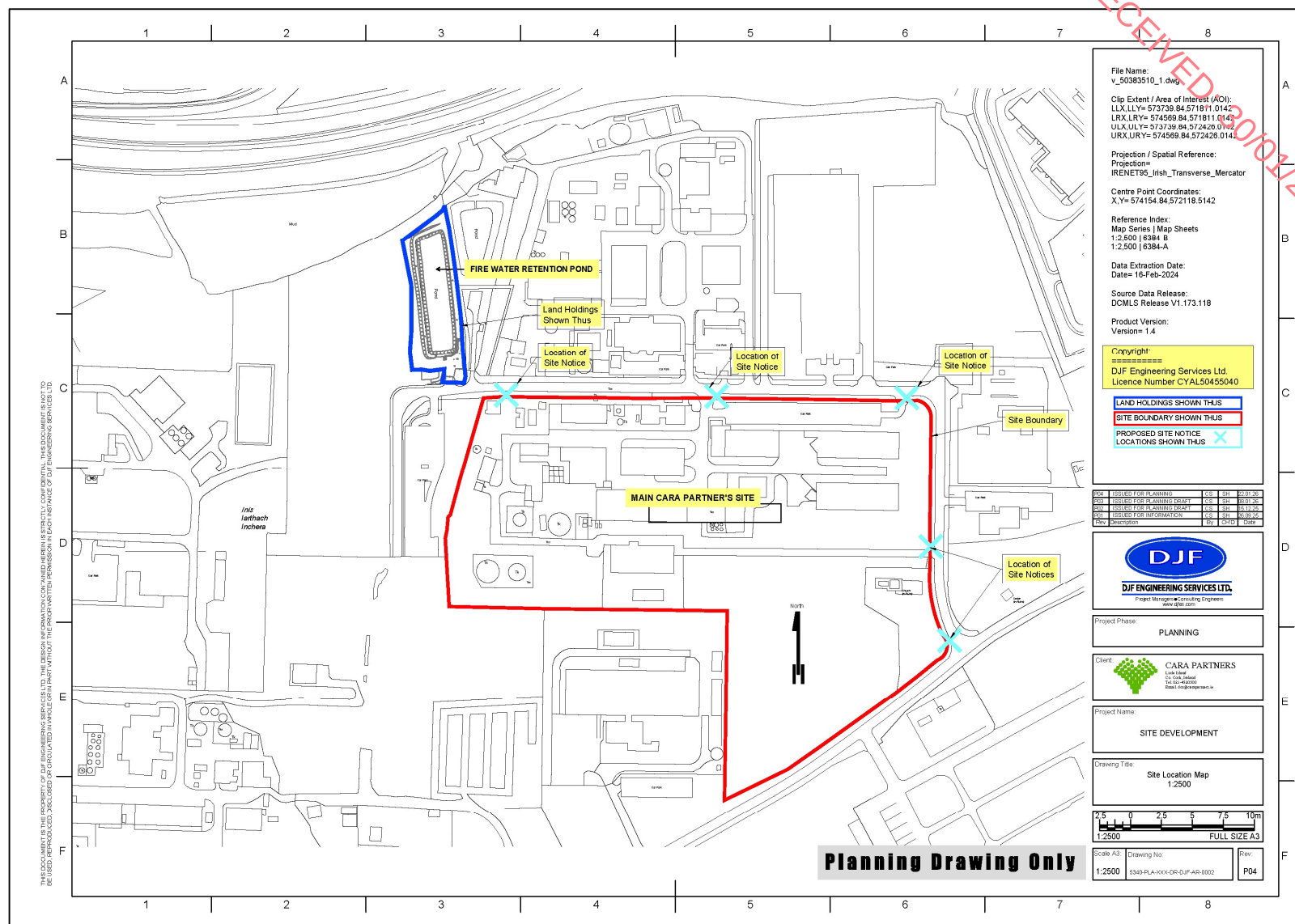
The Little Island facility plays a strategic role within the Schwabe Group's manufacturing network, supplying bulk pharmaceutical-grade herbal extracts to downstream formulation facilities in Europe and internationally.

The Cara Partners facility at Little Island is an existing industrial installation regulated by the Environmental Protection Agency (EPA) under an Industrial Emissions Licence (IEL) Reg. No. P0017-02. The site has been operating as a licensed pharmaceutical manufacturing facility for several decades and is subject to ongoing EPA regulation, monitoring, reporting and enforcement.

The proposed development will also require a review and amendment of the existing IEL. An application will be made to the EPA to review the existing IEL to reflect changes arising from the proposed development, including:

- additional process capacity;
- new process buildings and equipment;
- changes to emissions abatement infrastructure;
- upgrades to wastewater treatment systems; and
- associated operational changes.

Environmental controls, emission limit values, monitoring requirements and reporting obligations will continue to be regulated through the EPA licensing regime.



EIA Screening

Environmental Impact Assessment (EIA) is defined under Article 1(2)(g) of the revised EIA Directive (2014/52/EU) as a process consisting of:

- “(i) the preparation of an environmental impact assessment report by the developer, as referred to in Article 5(1) and (2);*
- (ii) the carrying out of consultations as referred to in Article 6 and, where relevant, Article 7;*
- (iii) the examination by the competent authority of the information presented in the environmental impact assessment report and any supplementary information provided, where necessary, by the developer in accordance with Article 5(3), and any relevant information received through the consultations under Articles 6 and 7;*
- (iv) the reasoned conclusion by the competent authority on the significant effects of the project on the environment, taking into account the results of the examination referred to in point (iii) and, where appropriate, its own supplementary examination; and*
- (v) the integration of the competent authority's reasoned conclusion into any of the decisions referred to in Article 8a.”*

In essence the EIA process can be considered as:

- the systematic examination of the likely significant effects of a proposed development on the environment;
- ensuring that adequate consideration is given to any such effects; and
- avoiding, reducing or offsetting any significant adverse effects;

This includes examination of the effects of a proposed development on:

- the natural environment;
- beneficial uses of the environment, including man-made structures, amenities and facilities; and
- the socio-cultural environment.

Typically, as part of the EIA process, an Environmental Impact Assessment Report (EIAR) is prepared and submitted to the planning authority (or An Bord Pleanála in the event of an appeal) along with the accompanying planning application.

An EIAR is defined as:

‘A statement of the effects, if any, which proposed development, if carried out, would have on the environment.’

The EIAR serves to describe the proposed development and any likely significant impacts arising as well as those measures proposed in order to manage such effects. This information can then be used by the assessment authority in deciding the application for a proposed development. The EIA process allows interested third parties (e.g. local residents, adjoining land users, etc.) the

opportunity to review the EIAR and comment on the proposed development prior to a planning decision being made.

It is the intention of Cara Partners ('Cara' or 'the Applicant') to ascertain the potential impact that the proposed development will have upon the subject site and surrounding areas, and to explore mitigating circumstances, to protect and enhance the environment to its fullest potential.

The current primary and secondary legislation which transposes the previous version of the EIA Directive into national law are contained in:

- *Planning and Development Acts 2000* (as amended); and
- *Planning and Development Regulations 2001* (as amended).

Under the *Planning and Development Regulations 2001* (as amended), hereafter 'the Regulations', development which requires an EIA is known as "Part 10 Development".

Schedule 5 (Parts 1 and 2) of the Regulations specifies 'development for the purposes of Part 10'.

The proposed development is listed in Part 2, Class 6 (b) of Schedule 5 as follows:

6. *Chemical Industry (development not included in Part 1 of this Schedule)*

...

(b) *All installations for production of pesticides and pharmaceutical products, paint and varnishes, elastomers and peroxides using a chemical or biological process.*

Given the nature of the proposed development (see Chapter 02 – Description of the Proposed Development) an EIAR has been prepared following the completion of the EIA screening process.

The primary objective of the EIA is to identify baseline environmental and socioeconomic conditions in the area of the proposed expansion, predict potential beneficial and/or adverse effects of the proposed development during both construction and operational phases and propose appropriate mitigating measures where necessary. These must be described in the EIAR.

Scoping of this EIAR was conducted at several meetings and informal communications that were held between representatives from Cork County Council, other stakeholders, the Project Design Team and the EIAR Team. This afforded the opportunity to discuss the proposed development, the EIA process and the specific content of the EIAR. All of the comments, suggestions and written responses provided were taken into account in the preparation of this EIAR.

This EIAR addresses, where applicable, the requirements of:

- The requirements of EU Directives and national legislation (primary and secondary) concerning Environmental Impact Assessment (especially having due regard to the revised provisions of Directive 2014/52/EU;
- EPA (2003) *Advice Notes on Current Practice in the Preparation of Environmental Impact Statements*;
- EPA (September 2015) *Advice Notes for Preparing Environmental Impact Statements – DRAFT*;

- DHPCLG (15/05/17) *Circular Letter PL 1/2017 Implementation of Directive 2014/52/EU on the effects of certain public and private projects on the environment (EIA Directive): Advice on Administrative Provisions in Advance of Transposition;*
- DHPCLG (May 2017) *Transposition of 2014 EIA Directive (2014/52/EU) in the Land Use Planning and EPA Licencing Systems: Key Issues Consultation Paper;*
- DHLGH (August 2018) *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment;*
- EPA (2022) *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports;*
- Project Ireland 2040 National Planning Framework;
- Regional Spatial and Economic Strategy for the Southern Region; and
- Cork County Development Plan 2022-2028.

Existing Site

The site is located within the IDA Little Island Industrial Estate, approximately 8 km east of Cork City Centre. Little Island is strategically located within Cork Harbour and benefits from direct access to national and regional road networks, port infrastructure and established utilities.

The site is accessed primarily via the R623, which connects Little Island to the N25 national primary route and the wider Cork metropolitan area. The estate is served by internal industrial roads designed to accommodate heavy goods vehicle (HGV) traffic associated with industrial uses.

The surrounding area is characterised by large-scale industrial, pharmaceutical, logistics, manufacturing and similar industrial/commercial developments. Adjacent and nearby land uses include pharmaceutical manufacturing facilities, warehousing, logistics hubs and utility infrastructure.

There are no immediately adjoining residential properties. The nearest residential areas are located at a considerable distance from the site and are separated by industrial land uses, transport infrastructure and natural buffers.

The site includes (RPS 495) on the Record of Protected Structures listed in the Cork County Development Plan 2022-2028.

The Historic Environment Viewer lists (incorrectly) three monuments within the proposed development site, a horizontal water-mill (RMP No. CO075-052----), a graveyard (RMP No. CO075-020001-) and church (RMP No. CO075-020002-).

However, one of these (horizontal water-mill (RMP No. CO075-052----) is incorrectly recorded as being within the site. It is clearly illustrated on the original Record of Monuments and Places (RMP) hard-copy series of maps, which show it located to the southeast of the development site.

The church 'Little Island Church (In Ruins)' is also a Protected Structure (RPS No. 00495) as listed in the Cork County Development Plan 2022-2028. No structures listed in the National Inventory of Architectural Heritage (NIAH) are located within the site boundary.

The planning history of the site is detailed further in Chapter 4 – Planning and Development Context.

The site is located in the townland of Wallingstown (Baile an Bhailisigh) in the Barony of Barrymore (Barraigh Mhóra), and the Civil Parish of Little Island (An tOileán Beag). Little Island owes its name to its huge neighbour, Great Island, on which the cathedral town of Cork looks out to the mouth of Cork Harbour. The earliest recorded name for Little Island is from a papal entry in 1302: Cellescoplappan. Also, at this time it was referred to as De Insula meaning 'of the island' in Latin. By 1489 it was Inysmacneyll; 1582 insula parva alias Inishvicneyl; and Little Island by 1614. The official modern Irish name for Little Island is Lime Ratha or An tOileán Beag.

The Little Island Industrial Estate was developed by the Industrial Development Authority (IDA) from the late 1960s onwards as part of a national strategy to provide large-scale industrial employment lands in proximity to Cork Harbour. Prior to its development, the lands comprised predominantly low-lying estuarine marshland and reclaimed agricultural land.

Cara Partners has operated continuously at the site since 1978 and the facility (along with the surrounding has a long-established history of industrial use.

Existing Activity

The principal activity at the site is the manufacture of standardised *Ginkgo biloba* extract, classified as an active pharmaceutical ingredient (API). The extract is produced as a bulk dry powder, which is subsequently transported offsite for formulation into finished pharmaceutical or nutraceutical products.

At a high level, existing operations include:

- receipt, storage and preparation of raw botanical material;
- solvent-based extraction of active compounds;
- concentration, purification and standardisation of extracts;
- solvent recovery and reuse;
- drying and milling of final product;
- blending and packaging of bulk extract; and
- quality control testing and laboratory analysis.

These activities are supported by extensive utilities, solvent handling systems, wastewater treatment infrastructure and emissions control systems.

The site operates on a 24-hour, 7-day basis, subject to production requirements, and currently employs approximately 100-120 personnel.

Current Heavy Commercial Vehicle movements are approximately 5-6 movements per day.

Need for Project

The proposed development is required to secure the long-term operational viability, regulatory compliance and strategic role of the Cara Partners facility at Little Island as a modern, resilient

and future-ready pharmaceutical manufacturing site. The development represents a planned and targeted investment in the continued evolution of the existing facility, ensuring that manufacturing activities can be carried out in a manner that meets current and future regulatory, environmental and operational requirements.

The project involves the provision of modern, purpose-designed production and process support infrastructure to replace and upgrade existing facilities, enabling the site to continue to operate in accordance with best-in-class Good Manufacturing Practice (GMP) standards, contemporary environmental performance expectations and high standards of occupational health and safety.

The proposed development builds on the established technical capability, operational expertise and infrastructure already in place at the Cara Partners site. By enhancing existing systems and utilities and improving the integration of production, abatement and support functions, the development will increase operational reliability, flexibility and efficiency while maintaining full compliance with applicable licensing and regulatory controls.

The integration of modern emissions abatement technologies, enhanced energy-efficiency measures and upgraded utility infrastructure will reduce environmental impact, improve resource efficiency and support the application of best available techniques (BAT). These measures will strengthen environmental performance across air, water and energy use, while supporting the site's long-term sustainability objectives.

In addition, the proposed development will play an important role in securing existing employment at the Cara Partners facility and supporting the creation of new high-value roles over time, reflecting the increased technical, operational and regulatory requirements associated with a modern pharmaceutical manufacturing environment.

Overall, the proposed development represents a long-term investment in the Cara Partners facility at Little Island, ensuring that the site remains a high-quality, compliant and environmentally responsible pharmaceutical manufacturing installation. The development will support the continued safe, efficient and sustainable operation of the facility over the long term, while maintaining high standards of product quality, GMP compliance and environmental stewardship.

Description of the Proposed Development

The proposed development comprises various elements to be developed on a phased basis over a period of ten years. A proposed site layout drawing is presented in NTS Figure 2 (Drg. Ref. 5340-PLA-XXX-DR-DJF-AR-0010).

1. **Unit 1 Production Building** – Construction of a replacement, multi-storey Unit 1 Production building approx. 34m L x 23m W x 26m H (approx. 3,000m²).
2. **In Process Tank Farm Bund** – Modifications to the existing 'In Process Tank Farm' bund and ancillary plant and services related to same including pipe racks.
3. **Laboratory Gas Bottle Store** – Construction of a new Laboratory Gas Bottle Store approx. 4m L x 2m W x 4m H and ancillary plant and services related to same including pipe racks.

4. **Regenerative Thermal Oxidiser** – Provision of a new Regenerative Thermal Oxidiser, associated exhaust stack (approx. 10mAGL) and ancillary plant and services related to same including pipe racks.
5. **Process Cooling** – Provision of 1no. process cooling tower (approx. 5mAGL) to be installed to provide additional cooling for manufacturing processes and ancillary plant and services related to same including pipe racks.
6. **Combined Heat and Power Plant and Heat Recovery System** – addition of a new natural-gas fired containerised combined heat and power (CHP) plant (approx. 6 MW_{TH} Total Rated Thermal Input) and associated containerised waste heat boiler system with exhaust stack approx. 13mAGL and ancillary plant, kiosks and services related to same including pipe racks.
7. **Ethanol Storage Tank** – addition of a new ethanol storage tank (2.4m diameter x 7m H) in existing solvent tank farm bund and ancillary plant and services related to same including pipe racks.
8. **Car Park** – extension to existing car park including associated lighting to provide a net increase of additional 67no. permanent car parking spaces.
9. **Wastewater Treatment Plant (WWTP) Control and Blower Building** - Single storey building associated with WWTP expansion, approx. 11m L x 10m W x 4m H (approx. 90m²); and ancillary plant and services related to same including pipe racks.
10. **WWTP Chemical storage tanks and bund** – new concrete base and bund (approx. 45m²) with tanks approx. 3.5m H and ancillary plant and services related to same including pipe racks.
11. **WWTP Inlet works** – new screens, tanks up to approx. 9m H and ancillary plant and services related to same including pipe racks
12. **WWTP Dissolved Air Flotation tank** – new tank approx. 5m L x 2m W x 4m H and ancillary plant and services related to same including pipe racks.
13. **Site Works** – All associated site services, site development works and landscaping to facilitate the proposed development.

The construction phase will take place over approximately ten years. Subject to receipt of planning, it is envisaged that construction work will commence in 2026. The specific timing of the commencement of each phase and/or individual elements therein will be subject to business requirements and associated resource availability. Where relevant in this EIAR, the impacts related to the most significant construction phase have been assessed (e.g. period of maximum estimated construction traffic etc.).

Employment levels across the project will vary depending on the construction programme and the extent of activities occurring on the site. It is anticipated that peak construction employment numbers may rise to c. 350-450 over a limited period of time.

The site construction working hours will be confined to between 08:00-20:00 hours Monday to Friday, 08:00-18:00 Saturday, inclusive (excluding public holidays and Sundays).

An outline Construction Environmental Management Plan (CEMP) has been prepared as part of the planning application which sets out the responsibilities, environmental standards and requirements for the duration of the construction phase of the project. The document includes the necessary environmental controls and mitigation measures to prevent/mitigate any potential impact on the surrounding environment. The document will be updated prior to commencement of the construction phase.

The operational phase of the proposed development will proceed similarly to the operation of the existing facility.

It is anticipated that the operation of the proposed development will result in c. 140-150 employees at peak operation.

The site will operate 24 hours per day, 7 days per week, 365 days per year on an appropriate shift system.

Examination of Alternatives

The revised EIA Directive 2014/52/EU requires an EIA to contain:

“A description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.”

As part of the EIA process, an examination of a number of alternative scenarios to the proposed development was considered:

- A “Do Nothing” scenario whereby no development takes place and the status quo is maintained;
- An examination of alternative locations for the proposed development; and
- A consideration of alternative site layouts and/or process configurations.

Schwabe, as the parent company of Cara Partners, undertook a strategic review of its long-term manufacturing requirements in response to anticipated future growth in demand for natural

active pharmaceutical ingredients (APIs), evolving regulatory expectations and the need to ensure resilient, sustainable and high-quality production capacity over the long term.

As part of this forward-looking assessment, a range of potential development pathways were examined to support future capacity requirements within the Group. These included the development of new facilities at existing locations in Germany, the expansion of established manufacturing operations in India and the United States, the potential procurement of third-party manufacturing capacity in Eastern Europe and the option of utilising contract manufacturing arrangements to supplement internal capabilities.

Each of these options was considered having regard to a range of factors, including regulatory and quality requirements, long-term operational resilience, environmental performance, supply chain robustness, availability of skilled resources and the ability to implement best-in-class GMP and environmental controls.

Following this assessment, the development of new, purpose-designed manufacturing capacity at the existing Cara Partners site in Little Island, Cork, was identified as the most strategic and sustainable option to support future growth objectives. This approach allows for investment in modern infrastructure within an established pharmaceutical manufacturing environment, while leveraging existing site capabilities, regulatory experience and supporting services and ensuring that future capacity can be developed in line with best available techniques, sustainability principles and evolving regulatory standards

As part of the configurations considered for the proposed development it was considered that utilisation of the existing site at Little Island was considered suitable including criteria such as:

In assessing the suitability of the Little Island site relative to alternative locations, a range of operational, environmental and locational factors were considered, including the following:

Schwabe considered a number of other locations as potential for the proposed development.

As part of the configurations considered for the proposed development it was considered that utilisation of the existing site at Little Island was considered suitable including criteria such as:

- Proximal location to the existing production facilities and associated utility requirements;
- Opportunity to reuse and repurpose existing infrastructure for new purposes;
- Supportive environment for the development of the site in Cork including long-standing support for appropriate manufacturing and employment uses within the area, including ongoing engagement and support from IDA Ireland in the sustainable development of the industrial estate;
- Availability of sustainable access to the site capable of supporting traffic associated with the site development and future business operations;
- Availability of suitably qualified labour for construction;
- Availability of sustainable access to the site capable of supporting traffic associated with the proposed development and ongoing production operations; and
- An environmental setting consistent with and compatible with the nature of the proposed development.

The site master planning process has addressed and reinforced consideration of optimising the layout of the site under several headings. A significant series of analyses and discussions were conducted for the site layout and build-out options during the project planning process which addressed:

- considering new build v. replacing aging plant and production building with a modern architecturally designed manufacturing facility;
- minimising impact on visual landscape;
- site context (in terms of relationship with existing buildings and surroundings);
- adjacent land uses (possible impact on adjacent land uses);
- site access (for both construction and operation);
- topography (possible limitations imposed by topography such as drainage);
- utilities and drainage (availability of connections to utilities and drainage).

Given the available footprint constraints within the existing site, alternative layouts and designs typically considered the internal configuration of the production buildings.

Test-fits for proposed external plant and infrastructure were completed for various locations around the site. This included locating the CHP in alternative locations around the site.

In particular as an alternative, a significant expansion of the WWTP was considered which involved the introduction of significant new tankage.

The proposed extraction and maceration processes are the optimum processes and are selected according to business needs and customer specifications. There are variations to the unit processes available, but the selected processes are considered having regard to optimum sustainable footprint and utility efficiency.

In essence it is proposed to complement existing processes currently employed onsite. By selecting processes already operational onsite, there are significant opportunities for the sustainable and economic rationalisation of operation by using existing infrastructure, processes and equipment where possible.

The proposed development and selected layout are based on the above criteria and Cara Partners and their design team are confident that this is the optimum configuration and arrangement that represents best practice, meets the needs of the business and reduces the overall environmental impact of the facility.

Population and Human Health

The EPA Guidelines require a consideration of the following major factors in the context of a proposed development:

- Employment
- Human Health (considered with reference to other headings such as water and air)
- Amenity (e.g. effects on amenity uses of a site or of other areas in the vicinity – may be addressed under the factor of Landscape)

An assessment of local residential receptors was also conducted.

The potential construction and operational phase impacts on local residences and businesses associated with the proposed development relate mainly to traffic, noise, water quality, air emissions and visual impacts, all of which are outlined within the corresponding chapters of the EIAR.

The potential impact on human health from air quality, noise and water from the operational phase are considered with respect to compliance with the respective legislative and/or guidance ascribed to each aspect. These are described in detail in the respective chapters of the EIAR. No significant negative impacts on human health were identified.

The construction phase will take place over a ten year period and will be sequenced in order to keep the existing facility operating in a safe and efficient manner.

Over this period of construction, there will be a direct positive temporary impact in terms of creating employment for approximately 350 – 450 construction staff during peak periods. It is anticipated that a significant number of this workforce will be employed from local areas.

The construction phase will also benefit both the skilled and unskilled labour force with a knock-on effect to building suppliers and other professional services suppliers.

There will be no long-term operational negative impacts on employment associated with the proposed development. There will be long-term direct positive impact on employment in terms of securing existing employment and creating additional employment opportunities for up to c. 150 staff total and indirectly supporting related employment during the operational phase.

During the construction phase, issues in relation to health and safety will relate solely to onsite works. The health and safety procedures/protocols adopted will be carried out in accordance with current national and EU Regulations and supervised by appropriately qualified and experienced managers. All applicable third-party safety guidelines will also be considered.

It is the policy of Cara Partners to conduct business in a responsible way and in a manner designed to protect the health and safety of employees, customers, the public and the environment.

The development has been designed to maximise containment, minimise the potential for accidental spillages and provide collection systems in the event of incidents.

Fire and smoke prevention, detection and suppression measures will be incorporated into the detailed design of the proposed development. Appropriate fire certification processes will be completed.

In addition, Cara Partners has a Site Emergency Plan in place which sets out information on employees' responsibilities, as well as fire, evacuation and emergency procedures for the existing site and will be updated to account for the proposed development.

Along with existing healthy workplace measures a new Slí na Sláinte walking route is proposed within the existing woodland to the southeast of the site which will be aligned with the relevant elements of the *Slí@Work* programme managed by the Irish Heart Foundation.

Aside from the measures outlined within this and other chapters of the EIAR, which relate to pollution prevention, traffic management, environmental protection and ensuring human health and safety, no additional remedial measures are considered necessary, as the proposed development is expected to have an overall positive long-term economic and social impact on the existing community and environs and is in full compliance with development strategies and strategic planning guidelines for the area.

Detailed measures, primarily through the effective implementation of a comprehensive CEMP, will serve to mitigate the impacts of the proposed development on the neighbouring community during the construction phase of the proposed development.

The overall residual impact of the scheme on the human environment is anticipated to be slight positive, due to the benefit of continuing to secure long-term investment in the existing business and in supporting environment-related infrastructure.

Air Quality and Odour

AWN Consulting Limited was commissioned to conduct an assessment of the likely impact on air quality associated with the proposed development at Cara Partners, Little Island, Co. Cork.

Baseline Environment

Baseline data and data available from similar environments indicates that levels of nitrogen dioxide (NO₂), particulate matter less than 10 microns (PM₁₀) and particulate matter less than 2.5 microns (PM_{2.5}) and are generally well below the National and European Union (EU) ambient air quality standards.

Impact Assessment

Do Nothing Scenario

Under the 'Do Nothing' Scenario, the proposed development will not be constructed, no construction works associated with the proposed development will take place and the previously identified effects of fugitive dust and particulate matter emissions and emissions from equipment and machinery will not occur. The existing facility would continue to operate with existing emissions sources as per its Industrial Emissions Licence P0017-02. Therefore, the construction and operational phase impacts outlined in this assessment are likely to occur in the future even in the absence of the proposed development.

An air dispersion modelling assessment of the Do Nothing emissions to air from existing sources was carried out. The assessment evaluated the impacts from nitrogen dioxide (NO₂), particulate matter (as PM₁₀ and PM_{2.5}) and total volatile organic compounds (TVOC) emissions at off-site locations including nearby residential properties. The dispersion modelling has determined that concentrations of all pollutants are in compliance with the relevant ambient air quality standards. The effect of Do Nothing emissions from the proposed development will be **direct, long-term, negative** and **not significant**.

Construction Phases

An assessment of the potential dust impacts as a result of the construction phase of the proposed development was carried out based on the UK Institute for Air Quality Management 2024 guidance document '*Guidance on the Assessment of Dust from Demolition and Construction*'. This established the sensitivity of the area to impacts from construction dust in terms of dust soiling of property, human health and ecological effects. The surrounding area was assessed as being of low sensitivity to dust soiling and of low sensitivity to dust-related human health effects.

The sensitivity of the area was combined with the dust emission magnitude for the site under three distinct categories: earthworks, construction and trackout (movement of vehicles) in order to determine the mitigation measures necessary to avoid significant dust impacts. It was determined that there is at most a medium risk of dust related impacts associated with the proposed development. In the absence of mitigation there is the potential for **direct, short-term, negative** and **slight** impacts to air quality.

In addition, construction phase traffic emissions have the potential to impact air quality, particularly due to the increase in the number of HGVs accessing the site. Construction stage traffic did not meet the scoping criteria for a detailed modelling assessment outlined in Transport Infrastructure Ireland's 2022 guidance document '*Air Quality Assessment of Specified Infrastructure Projects – PE-ENV-01106*'. As a result a detailed air assessment of construction stage traffic emissions has been scoped out from any further assessment and the construction stage traffic emissions will not have a significant effect on air quality.

Operational Phase

Operational phase traffic has the potential to impact air quality due to vehicle exhaust emissions as a result of the increased number of vehicles accessing the site. The change in traffic associated with the operational phase of the proposed development did not meet the PE-ENV-01106 criteria requiring a detailed air dispersion modelling assessment. Therefore, it can be determined that during the operational phase, the proposed development will have a **direct, long-term, negative** and **imperceptible** impact on air quality.

The operational assessment involved air dispersion modelling of pollutant emissions from existing emissions sources, as well as 1 no. proposed combined heat and power (CHP) engine, 1 no. proposed regenerative thermal oxidiser (RTO), and relocation of Unit 1 dust emission sources and reduction in associated emission limit values as part of the proposed development. The assessment evaluated the impacts from nitrogen dioxide (NO₂), particulate matter (as PM₁₀ and PM_{2.5}) and total volatile organic compounds (TVOC) emissions at off-site locations including nearby residential properties. The dispersion modelling has determined that concentrations of all pollutants are in compliance with the relevant ambient air quality standards. The effect of operational phase emissions from the proposed development will be **direct, long-term, negative** and **not significant**.

Cumulative Impact

There is the potential for cumulative impacts to air quality should the construction phase of the proposed development coincide with that of other developments within 500m of the site. A review of proposed/permitted developments in the vicinity of the site was undertaken and relevant developments with the potential for cumulative impacts were identified.

There is a medium risk of dust impacts associated with the proposed development. The dust mitigation measures outlined in section 6.6 of Chapter 6 will be applied during the construction phase which will avoid significant cumulative impacts on air quality. With appropriate mitigation measures in place, the predicted cumulative impacts on air quality associated with the construction phase of the proposed development and the permitted cumulative developments are deemed **direct, short-term, negative** and **not significant**.

The cumulative impact of operational phase emissions of NO₂ from the proposed development and other nearby industrial sites with relevant air emissions and an IE licence was assessed. The dispersion modelling has determined that concentrations of all pollutants are in compliance with the relevant ambient air quality standards. The effect of cumulative emissions will be **direct, long-term, negative** and **not significant**.

Overall, no significant impacts to air quality are predicted during the construction or operational phases of the proposed development.

Mitigation

Incorporated Design

The proposed development has been designed in terms of emission point stack heights and combustion plant technical specifications and odour control technology to ensure compliance with the emission limit values and conditions of its Industrial Emissions Licence P0017-02.

Construction Phases

Detailed dust mitigation measures, derived from the Institute for Air Quality Management 2024 guidance 'Guidance on the Assessment of Dust from Demolition and Construction' as well as other relevant dust management guidance, are outlined within section 6.6.1 of Chapter 6 and also in the Construction Environmental Management Plan (CEMP) to ensure that no significant nuisance as a result of construction dust emissions occurs at nearby sensitive receptors.

Operational Phase

The effect of the operational phase on air quality has been assessed as direct, long-term, negative and not significant. As the predicted concentrations of pollutants will be not significant no mitigation is required.

Residual Impact Assessment

Once these best practice dust mitigation measures are implemented the impacts to air quality during the construction of the proposed development are considered **direct, short-term, negative** and **not significant**, posing no nuisance at nearby sensitive receptors (such as local residences).

Monitoring

The monitoring measures are proposed to ensure the dust mitigation measures are working satisfactorily, full details of which can be found in section 6.6.3 of Chapter 6 and the CEMP.

Monitoring as per the conditions of the existing and future reviewed IE Licence for the site will be undertaken in line with the EPA requirements.

Noise and Vibration

Chapter 7 of the EIAR provides information on the assessment of noise and vibration impacts on the surrounding environment of the subject site during both the construction and operational phases of the development. The site is subject to EPA Licence (P0017-02).

The following approach was undertaken to assess the potential noise and vibration impact.

Environmental noise surveys conducted in the vicinity of the proposed development have been used to assess the existing baseline noise environment.

A review of the most applicable standards and guidelines has been conducted to set a range of acceptable noise and vibration criteria for the construction and operational phases of the proposed development.

Predictive calculations have been performed to determine the noise and vibration impact on the nearest sensitive locations during the construction phase.

A schedule of mitigation measures has been proposed for both the construction and operational phases to reduce, where necessary, the outward noise and vibration impacts from the development.

Baseline Noise Environment

The baseline noise environment at the closest noise sensitive locations to the proposed development and across the development site is dominated by noise associated with road traffic, birdsong and vegetation rustling.

Construction Phase

Construction noise calculations have been performed representing typical noise levels associated with the construction of the site. The results of the assessment have determined that construction works can operate within the recommended construction noise thresholds adopted for the project at the nearest noise sensitive locations due to distances from on-site works and the nearest sensitive areas.

A range of noise mitigation measures have been included to control construction noise levels at the closest site boundaries. The application of binding noise limits and hours of operation, construction site hoarding along with implementation of appropriate noise control measures, will ensure that the noise impact is controlled to within the construction significance thresholds.

Due to the nature of the construction proposed, no vibration impacts are predicted during the construction phase.

Operational Phase

Due to the low volumes of additional traffic flows as a result of the development along the surrounding road network the resultant effect is determined to be not significant. Plant noise has been assessed as being within the criteria outlined in EPA Licence (P0017-02).

There are no vibration sources associated with the operational phase.

Water Quality and Aqueous Emissions

The assessment of the potential impact of the proposed development on the hydrological environment was carried out according to the methodology specified by the EPA.

An Appropriate Assessment (including a Natura Impact Statement) has also been submitted with the Planning Application. Chapter 10 – Biodiversity also considers the biological quality of the receiving waters.

During the operational phase, the site generates three distinct aqueous streams. These streams are:

- Surface water/stormwater runoff
- Sanitary/foul wastewater
- Process effluent

Further details of these aqueous streams are provided in Chapter 8.

Existing Stormwater Management

The existing surface water drainage system consists primarily of an underground network of gravity fed pipes serviced by downpipes and surface gullies.

The system collects rainwater run-off from internal access roads, carparking areas, hardstanding areas and roof areas not designated as 'at-risk'.

There are some temporary car parking/compound areas and access roads which are gravelled and are percolating to ground.

Parts of the existing site are natural ground covered by grassland, soft landscaping and/or spoil/bare ground and has no surface water drainage features in place. Rainwater falling on this portion of the site would be expected to lodge on the surface and then drain away by a combination of infiltration and surface flow.

The stormwater system drains to the firewater retention area to the northeast of the main site whereupon the stormwater passes through an existing Class 1 Full Retention Separator prior to discharge to the tidal areas via the SW 001 emission point proximal to the Dunkettle Interchange.

In the event of a fire or spillage, the stormwater discharge from the site will cease and all runoff will be diverted to the purpose-built firewater retention pond.

Diversion to the retention pond is triggered by the following conditions:

- High TOC
- High pH
- Low pH
- Instrument Failure
- Low Chemical
- High Level BT1
- Fire alarms

In the event of an incident requiring the retention and isolation of contaminated material, no such material will be removed offsite until appropriate engagement with relevant stakeholders has been completed such as CCC, EPA, Uisce Éireann etc. as per the IEL requirements.

Rainwater collected in bunded areas is subject to an operational procedure which includes a sampling and monitoring inspection for contamination prior to pumping of clean uncontaminated rainwater to the stormwater network.

Existing Wastewater Management

Process wastewater arising from manufacturing activities are collected by gravity via a segregated drainage network and directed to the onsite wastewater treatment plant (WWTP). The WWTP provides biological and physico-chemical treatment prior to discharge to the municipal Uisce Éireann network for ultimate treatment at Carrigrennan Municipal WWTP (MWWTP).

The onsite WWTP comprises the following principal unit processes:

- Balancing (via 2no. balance tanks c. 240 m³ total balancing capacity) and neutralisation
- Activated sludge plant (c. 720 m³) with both surface aeration and local venturi aeration
- Traditional clarifier (6.5m diameter) for solids separation
- Sludge dewatering via a dedicated belt press

The general principle of operation is that the wastewater is collected in a balance tank where it is mixed and balanced for hydraulic and load purposes. Thereafter the equalised flow is pumped forward to the aeration tank where the activated sludge flocs, comprising a mixed multitrophic microorganism ecology, mixes with the incoming effluent and treats it via carbonaceous oxidation and nitrification processes.

The sludge is then pumped to a surface overflow clarifier where the solids are separated from the treated supernatant.

The solids are returned to the aeration tank to maintain the necessary concentration of sludge for optimum treatment. Excess activated sludge is directed to an onsite sludge dewatering system (belt press) where they are further dewatered and sent offsite as waste.

The treated effluent is then discharged to the municipal Uisce Éireann network for further treatment at Carrigrennan municipal WWTP (MWWTP).

Detailed SOPs are in place for the operation, monitoring and management of the onsite WWTP.

Foul/sanitary wastewater related to the c. 100-120 employees onsite is also managed at the WWTP and is ultimately discharged to the municipal network.

Treated wastewater is controlled via the existing site IEL and associated Emission Limit Values (ELVs).

The proposed development includes significant upgrades to the infrastructure at the WWTP but it is noted that it is not proposed to amend the existing IEL ELVs.

Proposed Stormwater Management

The existing site drainage networks will continue to be utilised as described previously. The existing site drainage networks have capacity to accommodate the proposed development.

Other than the extension to the existing car park (see comment re. permeable paving below), there is a small addition of new impermeable site area being introduced as part of the proposed development which is considered insignificant in the context of the overall site.

No changes to the existing stormwater monitoring, interception, attenuation and diversion system are proposed.

No changes to the existing outfall arrangements are proposed and as the existing outfall is limited by an existing hydrobrake, there are no changes to maximum stormwater discharge flow rates proposed.

There is no change to the existing emission point proposed (Emission Point Ref. SW 001).

The existing attenuation system has capacity to incorporate the proposed development.

Where necessary, tie-ins to these existing networks will be completed in accordance with building and regulatory requirements.

In line with Sustainable Drainage Systems (SuDS) design requirements and as per the Cork County Development Plan, where appropriate, a permeable pavement system is proposed for the car park extension. This permeable paving design will incorporate a geotextile membrane to mitigate the impact of hydrocarbon pollutants on the subsurface environment.

Proposed Wastewater Management

The main design principles adopted for the proposed development were:

- To focus on leveraging existing assets onsite and reuse/repurpose them where possible so as to utilise existing infrastructure as sustainably as possible.
- To increase biological treatment capacity within the existing site asset footprint.
- To increase the efficiencies of the existing aeration system and in the sludge management system.
- To mitigate against a requirement for increasing the current licensed discharge envelope from the site.

The proposed development can be accommodated within the existing discharge envelope subject to a number of phased upgrades summarised as follows:

- New Inlet Works
 - Repurposing of existing Balance Tank to become combination inlet sump and balance tank.
 - Installation of new 2mm automatic screening unit.
 - Installation of new 0.2mm microscreen unit.
 - New duty/standby inlet forward feed pumps.
- Repurposed Main Balance Tank
 - Repurposing of spare tank onsite to become new converted balance tank (c. 430 m³).
 - New chemical dosing/neutralisation.
 - New duty/standby jet mixer for balance tank.
 - New duty/standby balance tank forward feed pumps.

- Reconfiguration Biological Treatment
 - Replace existing inefficient surface aerators with fine bubble diffusion system (FBD) and high efficiency blowers.
- New Solids Separation
 - Replacement of existing traditional clarifier with new Dissolved Air Flotation (DAF) unit permitting a higher concentration of MLSS in the system.
 - New duty/standby forward feed pumps.
 - New duty/standby sludge pumps.
- New Sludge Management
 - Replacement of existing belt press with more efficient screw press.
- New Blower Building
 - New blower building to house new duty/assist/standby blowers, MCC and facilitate an upgrade of the PLC and SCADA.
- Ancillary
 - Reconfiguration of foul/sanitary wastewater management at WWTP.
 - All necessary pipework, racks etc. to support the above.

The discharge will be continuously monitored for flow, temperature and pH and the ELVs stipulated in the existing IEL will continue to apply unless otherwise revised by the EPA.

Detailed mitigation measures are proposed in the Chapter to mitigate the risk of impacts on the surface water environment during the construction and operational phase of the development.

The proposed development is considered to have a not significant, neutral and long-term residual impact on the water environment subject to compliance with the requirements of the future IEL and by the implementation of the mitigation measures outlined in the Chapter.

Soils, Geology and Hydrogeology

Introduction and assessment methodology

This section presents an assessment of the impacts of the proposed development in terms of soils, geology and hydrogeology of the local environment, as defined in the EPA 'Advice Notes on Current Practice in the Preparation of EIS', 2003, EPA 'Guidelines on the information to be contained in Environmental Impact Assessment Reports', 2022, and published guidance from the Institute of Geologists of Ireland (IGI, 2013 and 2022). The assessment has been carried out in accordance with the Planning and Development Regulations 2001 (as amended) and Directive 2014/52/EU. In assessing likely potential and predicted impacts, account is taken of both the importance of the attributes and the predicted scale and duration of the likely impacts.

Proposed Development

The study area includes the footprint of the proposed development site (see Chapter 02) and its immediate surroundings, extending to a wider zone where relevant to groundwater. The proposed development includes limited clearance and bulk excavations estimated to be c. 3,736 m³. Excavation depths will range from <1 m below ground level (m bgl) to c. 3 m bgl.

Receiving Environment

The site of the proposed development is located within an established industrial estate. The site has been in light industrial use since 1976 and it and the surrounding area are currently in light industrial use.

The study area includes the site and its immediate surroundings, extending to a wider zone where relevant. Topography at the site ranges from c. 6 to 11 m above Ordnance Datum. The depth to limestone bedrock at the site ranges from c. 1 to 18 m bgl. The shallow subsurface is predominantly clayey made ground, underlain by natural clays. The western edge of the site is underlain by sand and gravels.

There is potential for localised, unknown soils contamination to be present at the site and neighbouring sites. A designated geological heritage site, Rock Farm Quarries, is located c. 800 m to the east of the site. There are no mineral sites of resource importance, or geohazards, recorded in the study area. The Cork Harbour Special Protection Area is located c. 400 m to the west of the site. The nearest Special Area of Conservation (SAC) is the Great Island Channel (IE0001058) which is approximately 2 km to the east of the site. Dunkettle Shore proposed Natural Heritage Area is located approximately 300 m west of the site.

The bedrock aquifer beneath the site, a Regionally Important Aquifer-Karstified (diffuse), is classified as “High Vulnerability (H)”. An area within the southeastern corner of the Site is classified as “Extreme (E)” vulnerability. The site is within a Groundwater Body (GWB) recorded as Industrial Facility (P0016-02). The GWB is classified as of ‘Good Status’, with a risk category of ‘Not At Risk’ in WFD data (2019-2024). Groundwater at on-site wells is recorded at depths from c. 4 to 8 m bgl and flows generally north-westward, discharging to a drainage ditch, which flows to Bury’s Bridge Basin and then to Lough Mahon (IE_SW_060_0750). Monitoring of on-site groundwater has detected local elevated concentrations of ammoniacal nitrogen and sulphate and trace detections of compounds such as MTBE and chlorinated solvents. Exceedances of Groundwater Threshold Values (GTVs) for ammoniacal nitrogen and sulphate have been recorded but quality trends over time suggest stable or improving conditions.

The Waulsortian limestone bedrock is considered of low importance and sensitivity. Due to the potential for unknown contamination, soils are considered of medium importance and sensitivity. The bedrock aquifer is classified as a Regionally Important Karstified Aquifer (Rkd) and of high importance and high sensitivity.

Assessment of Potential Effects

In a ‘Do Nothing Effect’ scenario the effect on the receiving environment would be considered neutral.

A conceptual site model based on all available reviewed data was prepared to identify potentially viable Source (S) Pathway (P) Receptor (R) linkages related to the construction and operational phases of the proposed development. Construction phase SPR linkages assessed in section 9 include: (a) permanent removal from site of a proportion of the excavated material; (b) incorrect stockpiling; (c) disturbance, handling or removal of contaminated soil; (d) erosion and compaction with potential for reduced infiltration, waterlogging, degradation of soil structure, run-off and erosion; (e) importation of contaminated fill materials with migration of

contaminants to receptors; (f) migration of spilled/leaked pollutants stored or used on site to receptors; and (g) temporary dewatering during construction.

Operational phase SPR linkages assessed in section 9 include: (a) migration of any spilled/leaked pollutants stored/used on site to ground with migration to receptors; (b) migration of any wastewater leaks on pipework to receptors; and (c) reduced infiltration of rainwater due to increased hardstanding.

Rock Farm Quarries is located c. 800 m to the east of the site, across hydraulic gradient with no viable pathway for contamination to migrate from the site to Rock Farm Quarries.

Mitigation Measures

Mitigation measures were considered in the design and planning of the proposed development and are detailed in section 9 of this Chapter. Implementation of mitigation measures, including the Construction and Environmental Management Plan during the construction phase, will result in minimisation of any post-mitigation impacts. During the operational phase, the mitigation measures described in section 9 of this Chapter, supplemented by management under the site EMS, IEL and ongoing monitoring, will result in minimisation of any post-mitigation impacts.

Residual Effects

No significant residual impacts on soils, geology, or hydrogeology are anticipated during the construction or operational phase of the proposed development, following the implementation of the mitigation measures as outlined in section 9 of this Chapter.

Cumulative Effects

Cumulative effects were considered as defined by the EU Guidelines. On 18 November 2025 there were no committed developments likely to give rise to cumulative impacts with it. The proposed development envisages a phased development over c. 10 years. On assessment of either a consecutive or cumulative completion of phases it was considered that, with application of the mitigation and monitoring described in section 9 of this Chapter, the potential effects would remain unchanged.

Monitoring

Monitoring during the construction and operational phases will ensure mitigation measures are implemented and that no unforeseen impacts occur to soils, geology, or hydrogeology.

Biodiversity

This Biodiversity Chapter has been prepared by NM Ecology Ltd on behalf of Cara Partners Ltd (the applicant) regarding a masterplan for the expansion of their facility in the Little Island Industrial Estate. The masterplan includes inter alia the construction of a new production building, installation of a regenerative thermal oxidiser, provision of additional car parking, upgrades to on-site waste water treatment works, and other associated works. The aim of this chapter is to identify and evaluate the impacts of the proposed development on ecosystems and their components, including designated sites, habitats, flora and fauna.

The site has some connections to designated sites in nearby coastal waters, including the Dunkettle Shore pNHA, Cork Harbour SPA and Great Island Channel SAC. In response, best-

practice pollution-prevention measures will be implemented during the construction phase of the proposed development, which will prevent any impact on the qualifying interests of the pNHA / SPA / SAC. The application is accompanied by a Natura Impact Statement, in which it was concluded that the proposed development will not adversely affect the integrity of the Great Channel Island SAC, Cork Harbour SPA or any other European site, either alone or in combination with other plans or projects.

The majority of the proposed development will be constructed on existing building and artificial surfaces, amenity grassland and ornamental / non-native shrubs. All are of negligible botanical importance, so their removal will not have any ecological impact. No rare flora or legally-restricted invasive plant species (e.g. Japanese knotweed) were recorded at the Site.

Habitats within the Site are of negligible suitability for otters, badgers or other protected mammals. Buildings are unsuitable for roosting bats, and foraging habitats are of low quality due to the extent of artificial lighting in the surrounding area. Parts of the applicant's landholding may be used by common suburban bird species, but no species of conservation importance were recorded.

In summary, we conclude that the proposed development will not cause any significant negative impacts on designated sites, habitats, legally protected species, or any other features of ecological importance.

Landscape and Visual Impact Assessment

The purpose of this chapter is to assess the landscape and visual impacts associated with the proposed development. The assessment begins with a description of the existing landscape setting and visual resources to establish baseline conditions. The proposed development is then applied to the baseline, and the impacts of that upon the existing landscape setting and visual resources are then assessed.

Based on the results of the baseline data and assessment, there is a low risk of cumulative impacts arising from the development. The surrounding lands are zoned for industrial use and the existence of a large-scale pharmaceutical plant on the site already dominates the views and landscape.

Accordingly, given this existing character and the future industrial development of the surrounding lands, the proposed development is not predicted to cause any adverse landscape or visual impacts and is unlikely to give rise to a negative cumulative impact.

It was determined that the proposed developments would have an imperceptible effect, or an effect capable of measurement but without significant consequence.

Traffic and Transportation

This chapter of the EIAR has been prepared by Traffic Transport and Road Safety Associates Ltd. (TTRSA).

The traffic and transport impacts of the proposed development have been assessed by utilising the following approach based on the aforementioned TTA guidelines. The assessment combines:

- Undertaking desktop based study including preparation of a Mobility Management Plan for the proposed development;
- Undertaking site based field work including traffic count surveys;
- Undertaking traffic modelling of the operation of the potentially impacted junctions during construction and operational phases of the proposed development;
- Reviewing the environmental impact of traffic related to the construction and operation of the proposed development, including road safety, against significance criteria; and

Considering whether mitigation measures are required to ensure that any potential roads, traffic and transport effects are kept to a minimum.

Existing Site Traffic Characteristics

As stated within the Mobility Management Plan included within Appendix 12-A, *'the site operates 24-hours a day, 7-days a week but ceases production for public holidays. The site operates on a two-shift pattern (07:30-19.30 and 19:30-07:30), with non-shift staff working typically working 8-hour shifts on a flexi time contract'*.

To inform the preparation of this chapter of the EIAR, a 24-hour (trip generation) traffic survey of traffic entering and exiting the proposed development site was undertaken on Wednesday 18th June 2025. The output data from this traffic survey is included within Appendix 12-B.

Existing Site Access

The proposed development site has four site accesses all off the L7074 local road: one at the western extremity of the site frontage, one on the eastern boundary of the site approximately 80m to the north of the R623/L7074 junction; one access off the L7074 local road at each of the eastern and western extremities of the car park aligning the northern site frontage.

The first two of these accesses are not in everyday use, the latter two accesses are in everyday use and are therefore of relevance to this chapter of the EIAR. The access to the western end of the car park serves as entry to the car park and also as an exit for Heavy Commercial Vehicles (HCV) such as raw material and product shipments, whilst the access to the eastern end of the car park serves as an exit only for cars and other light vehicles. A one-way link from west to east extends between these accesses through the car park.

Survey Data Collection

As agreed within the scoping for the assessment contained within this chapter of the EIAR, traffic count surveys were undertaken by TTRSA on Wednesday 18th June 2025, at the following locations: the R623/L7074 junction; and the aforementioned two site access junctions at each end of the car park onto the L7074.

These traffic count surveys covered the development AM and PM peak traffic hours identified within the trip generation traffic survey noted in Section 12.4.2. The AM and PM peak hours identified for assessment within this chapter of the EIAR are an AM (development) peak hour of 07:00-07:59 and a PM (development) peak hour of 15:30-16:29.

The TII permanent traffic counter located on the N25 at Little Island (traffic counter reference TMU N25 002.5E) recorded a 24-hour traffic volume on Wednesday 18th June 2025 of 66968 vehicles, compared to a workday average traffic volume of 62975 vehicles over the 12-month period from 1 July 2024 to 30th June 2025 inclusive. Traffic levels recorded on Wednesday 18th June 2025 were therefore 6.3% above 'normal' and the traffic count data is therefore considered by TTRSA to be robust and suitable for use within comparative traffic analysis without factoring to adjust for seasonality.

The peak-hour traffic count survey data including Passenger Car Unit (PCU) conversion, whereby vehicles are converted into standardised units for assessment, is included within the Chapter.

Construction Phase Trip Generation

The maximum level of construction phase trip generation has been provided to TTRSA by Sustech in consultation with Cara Partners, indicating that: during the peak traffic periods 150 two-way worker car/LGV trips and 10 two-way trips by buses carrying workers are predicted; and that during the traffic peak periods a maximum of 20 two-way HCV trips are predicted.

Operational Phase Trip Generation

As stated within the Mobility Management Plan included the application, '*Cara Partners currently employs 120 staff at its Little Island site of which 81 are Cara Permanent staff. Various other external contractors can be on-site on any given day depending on what activities are taking place. Following the expansion of production at the Little Island site, Cara Partners envisage employing 178 staff of which 134 will be Cara Permanent staff.*' TTRSA has been informed by Sustech in consultation with Cara Partners, that the planned changes to production resulting from the proposed development will also result in an additional 4 two-way HCV movements per day.

Predicted (additional) operational phase trip generation is shown in NTS Table 1 and is included within the traffic calculations contained within the Chapter.

NTS Table 1 Predicted (additional) operational phase trip generation – one-way traffic movements.

	Predicted (additional) Operational Phase Trips (one-way)					
	Arrivals			Departures		
	Daily	AM	PM	Daily	AM	PM
HCVs	4	1	1	4	1	1
Cars/LGVs	50	50	5	50	5	50
PCUs		52	7	-	7	52

PCUs rounded to the nearest whole number

Traffic Modelling Approach

To fully assess the impact of the proposed development on the local highway network, the operation of the following junctions have all been assessed for the development peak hours in the construction, opening and future assessment years using PICADY junction models, which are recognised by TII as being an appropriate software package for this type of assessment:

- The R623/L7074 junction;

- The L7074/Cara Partners site entrance; and,
- The L7074/Cara Partners site exit.

Traffic movements related to all scenarios are detailed within the traffic calculations included within the Chapter.

The results show that all of the junctions potentially impacted by the proposed development will continue to operate with considerable spare capacity and minimal queuing through to 2050.

Based on the results of the assessment, the impact of the proposed development on the capacity of the local road network is not significant.

Road Structure Impact

During a site visit on Thursday 19th June 2025 the surface of the L7074 local road was observed to have been recently resurfaced as part of the Little Island Sustainable Transport Interventions scheme. The volume of traffic associated with the construction and operational phases of the proposed development are not anticipated to result in a measurable impact to the structure of the L7074 local road.

Road Safety Impact

Road safety impact is typically assessed in terms of the collision record on the local road network in the vicinity of a development. Safety related geometrical measurements are also assessed, for example, visibility to and from access points and junctions.

Collision data is not currently publicly available due to ongoing issues in relation to GDPR and associated data-sharing agreements between An Garda Síochána and the Road Safety Authority.

Construction Phase Mitigation

Implementation of a Construction Traffic Management Plan is recommended to minimise the impact of traffic from the construction phase of the proposed development on the local road network.

Operational Phase Mitigation

Implementation of the Mobility Management Plan included within the planning application and the Chapter is recommended to minimise the impact of traffic from the operational phase of the proposed development on the local road network.

Taking into account the analysis completed and mitigation proposed, no residual short-term or long-term traffic and transport related environmental impacts are predicted as a result of the proposed development. The traffic and transport related impact of the development is not significant.

Material Assets

Material assets comprise the valued resources of the environment that are intrinsic to specific places and are of natural or human origin. The objective is to ensure the sustainable use of material assets and to ensure that they will be available for future generations.

Material Assets of Natural Origin

Stormwater Discharge to Lough Mahon

Clean, uncontaminated surface water collected onsite is discharged to Lough Mahon via an existing outfall. Further detail is provided in Chapter 8 – Water Quality and Aqueous Emissions.

Natural Gas

Natural gas is the main fuel source onsite for the steam boilers with a typical peak production usage of c. 1.9 million m³/yr (equivalent to c. 20.9 million kWhr).

This is anticipated to rise to a maximum of c. 3.9 million m³/yr (equivalent to c. 30 million kWhr) upon installation of the proposed natural-gas fired Combined Heat and Power (CHP) system with associated waste heat recovery.

The proposed natural-gas fired Combined Heat and Power (CHP) plant with waste heat recovery will replace some of the thermal demand estimated at c. 14.4 million kWhr_{TH} (assuming 6,240 hours/yr operation).

Other Fuels

A minor amount of LPG and other fuels is used for forklifts and the emergency fire pumping equipment.

There is no significant change proposed to current usage patterns consequent to the proposed development.

Material Assets of Human Origin

Potable Water Supply

Water for use in the process is provided from the municipal potable supply network. The current demand is relatively modest at c. 180 m³/day. It is anticipated that the proposed development will see abstraction rise to 260 m³/d and there is sufficient capacity in the municipal network to facilitate this increase.

Potable water will be used onsite for domestic purposes and welfare facilities.

The relevant Water Supply Zone (WSZ) within which services the municipal network is the Cork Harbour and City WSZ. The raw water for Inniscarra Water Treatment Plant (WTP) is abstracted from the River Lee at Inniscarra Reservoir. The plant has a current average daily production of c. 64,000 m³/d.

It is anticipated that a number of site employees will complete the Uisce Éireann Water Stewardship Programme and there is an ongoing programme of water conservation in place including reviewing the use of alternative sources of water (such as harvested rainwater) for different applications. This approach to water management will continue with the proposed development.

Municipal Sewer

There is an existing onsite WWTP. Treated wastewater is discharged to the Uisce Éireann municipal sewer network for further treatment in the Carrigrennan municipal WWTP. Both foul and process effluent are discharged to the municipal WWTP for treatment.

The proposed development will be facilitated within the existing IEL trade effluent discharge envelope.

Temporary welfare facilities for construction personnel will be appropriately connected to the network where necessary.

There will be a modest increase in foul wastewater discharged from the site associated with an increase in headcount of c. 40-50 people and there is sufficient capacity in the local network to accommodate this very modest increase.

Further details are provided in Chapter 8 – Water Quality and Aqueous Emissions.

Electricity Supply

Current electrical consumption is c. 8.5 million kWh. The proposed development estimates a future electrical demand of up to c. 12.2 million kWh.

The proposed CHP system will be capable of providing the bulk of the required future electrical demand assuming 6,240 hours/yr operation).

Future alternative energy sources (solar etc.) will be considered at detailed design stage subject to a number of factors including but not limited to ATEX considerations of roof-mounted solar and other health and safety considerations as required. Where separate planning consent is required to facilitate same, this will be sought as required.

Telecommunications

The site is serviced with respect to telecommunications lines for telephone and broadband services and the proposed development can be accommodated within the existing service infrastructure.

Potential Impact of the Proposed Development

The potential impact of the proposed development would be an overloading of the available water, sewerage, gas and electricity supply infrastructure if sufficient capacity was not available.

Construction Phase

There will be minimal use of natural resources during the Construction Phase. Natural resources consumed will include the use of aggregates and clean fill and the use of fuels for construction related machinery. There will be a minimal use of water resources during the Construction Phase. The services onsite can accommodate all requirements of the Construction Phase.

Therefore, the potential impact of the proposed development on natural resources and public utilities during the Construction Phase is considered to be short-term and imperceptible.

Operational Phase

During the operational phase there will be resource requirements for the production process in particular natural gas and potable water.

Energy efficiency and water conservation measures will be incorporated into the detailed design of the facility.

There is a potential impact on material assets of both natural and human origin if mitigation measures associated with the proposed development are not implemented. These potential impacts are discussed within the relevant chapters of this EIAR.

In relation to the operational phase, the potential impact of the proposed development on material assets is considered to be long-term and slight-negative.

Mitigation Measures

Extensions to utilities, if required at detailed design, will be constructed in accordance with the requirements of the relevant bodies (e.g. ESB/EirGrid, Uisce Éireann, Gas Networks Ireland etc.) to avoid/minimise disruption to their services. Appropriate consultation with these bodies will be held.

Potable water consumption rates and wastewater discharge limits will ultimately be limited to the values set by Uisce Éireann and, ultimately, the EPA. Electricity and gas consumption rates will be limited to the values set by the utility providers.

All connections to potable water, sewer, electricity and natural gas material assets will be made and reinstated to the requirements of the relevant bodies that are responsible for maintaining these assets.

Monitoring

Onsite water consumption will continue to be monitored using water meters. Treated process effluent will be monitored as per EPA requirements.

Similarly, other utility consumption rates will be appropriately monitored and recorded.

It is an objective of Cara Partners to maintain a sustainable and efficient use of utilities to reduce overall environmental impact and footprint.

Residual Impact

The mitigation measures outlined in this chapter and throughout the EIAR will be implemented as part of the site's CEMP, regulatory and licensing obligations.

The overall predicted impact of the proposed development on material assets is considered to be long-term and slight-negative.

Archaeological and Cultural Heritage

An archaeological and cultural heritage assessment was undertaken in relation to the proposed development at Little Island Industrial Estate, Co. Cork (ITM 574221, 572099). The site is located in the townland of Wallingstown, in the Barony of Barrymore, in the Civil Parish of Little Island.

The site consists of an extensive factory complex belonging to Cara Partners Ltd. The existing industrial site covers a substantial area located c. 210 metres south of the N25 motorway and c. 30 metres east of the R623. Lough Mahon is c. 600 metres to the south of the site.

The Historic Environment Viewer lists three monuments within the proposed development site, a horizontal water-mill (RMP No. CO075-052---), a graveyard (RMP No. CO075-020001-) and church (RMP No. CO075-020002-). However, one of these (horizontal water-mill (RMP No.

CO075-052----) is clearly illustrated on the original Record of Monuments and Places (RMP) hard-copy series of maps, which show it located to the southeast of the development site. The church is also a Protected Structure (RPS No. 00495) as listed in the Cork County Development Plan 2022-2028. No structures listed in the National Inventory of Architectural Heritage (NIAH) are located within the site boundary. The site was not previously subject to archaeological investigations.

The site was not subject to archaeological investigations previously. However, a number of investigations took place within the environs of the site, including archaeological monitoring (98E0089) of the Irotech Laboratories, c. 830 metres to the southeast. A single sherd of post-medieval pottery and a struck limestone flake were recovered during the investigation. Archaeological monitoring (01N0183) of a waste-water treatment plant in Carrigrennan, c. 2.5 kilometres southeast of the proposed development site, revealed two possible shell middens (CO075-024001- & CO075-095----), a section of levelled field boundary, and a polished stone axe, indicating prehistoric activity within the area of Little Island. Archaeological monitoring (03E0742) was carried out during conservation works of Wallingstown Castle (CO075-021----), c. 80 metres southeast of the proposed development site. No material of archaeological interest was recovered during the investigation.

During the planned 2003 extension of the Cara Partners factory complex, archaeological monitoring (03E1825) was carried out as a condition of the planning permission for a new Dry End Facility. The proposed development site lay within the Zone of Archaeological Potential for the church (CO075-02001-), graveyard (CO075-02002-) and Wallingstown Castle (CO075-021----). The proposed development site was located to the southeast of the Cara Partners site, c. 150 metres north of the R623 and c. 60 metres north of the church remains. No evidence of any archaeological finds or features were noted.

When permission was granted for the construction of the Wallingstown Castle House office buildings, c. 70 metres east of the proposed development site and c. 60 metres north of Wallingstown Castle, archaeological monitoring (16E0407) was carried out. No archaeological material was uncovered during monitoring of the groundworks. Archaeological monitoring (16E0421) took place on the former Mitsui Deman electrolytic manganese dioxide plant, as part of planned redevelopment in 2016, c. 130 metres south of the Cara Partners site. The plant was initially built in 1973 and underwent several phases of expansion until it closed in 2003. No archaeological material or finds were uncovered during the investigation.

The predicted effects on the known archaeological heritage in relation to the proposed development are regarded as being none. No effects on the recorded archaeological resource (SMRs/RMPs) were identified, and no indirect or visual effects on the nearest recorded monument outside the proposed development site boundary was noted. Wallingstown church (CO075-02001-) and Graveyard (CO075-02002-) are located in a separately screened area within the southeast corner of the site and won't be impacted by the proposed development.

A potential effect on the archaeological resource lies in the uncovering of sub-surface archaeological features during groundworks associated with the proposed works and associated infrastructure within the undisturbed areas of the site. However, some ground impacts will be caused during works associated with the construction of the proposed development. Though, the anticipated archaeological potential would be considered low given the already extensive

impacts from existing infrastructure, archaeological monitoring should be considered in any grant of planning permission for the proposed development.

The following mitigation measures will be carried out subject to the approval of the National Monuments Service (NMS) of the Department of Housing, Local Government and Heritage (DHLGH) and further mitigation may be sought by the NMS.

- Monitoring of groundworks will be carried out to establish whether previously unknown archaeological features or deposits are present. If features of archaeological significance are exposed, then further mitigation measures will be implemented following consultation with the National Monuments Service. This will be carried out by experienced, licence-eligible archaeologists working under licence from the Department of Housing, Local Government and Heritage.
- Adequate time and resources will be provided by the developer for the resolution of any archaeology identified within the development site and which will be directly impacted by groundworks (if applicable). Time and resources will also be allowed for any post-excavation work and specialist analysis necessary following any archaeological excavation that takes place.
- A report is required to be compiled on completion of any archaeological excavation and will be submitted to the relevant authorities.

The residual effects are likely to be neutral and none to imperceptible if the recommended mitigation measures are implemented.

Resource and Waste Management

In terms of waste management, the receiving environment of Cork is part of the Southern Region Waste Management Region which comprises the administrative areas Clare, Limerick, Tipperary, Kilkenny, Carlow, Wexford, Kerry, Cork and Waterford.

The National Management Plan for a Circular Economy 2024-2030 supersedes the Southern Region Waste Management Plan. The policy responses and actions identified build on the previous vision, strategy and progress made under the 2015-2021 Regional Waste Management Plans (RWMP) and provide a flexible policy framework to:

- Promote sustainable consumption patterns and prevent waste;
- Strengthen national waste collection and treatment capacity;
- Support producers, enterprises and facilities enabling transition to the circular economy; and
- Deliver measures through collaboration and shared ownership.

The policy promotes prevention, minimisation, re-use and recycling of waste in accordance with the waste hierarchy and in association with industries, businesses, other statutory and non-statutory Agencies.

Current Waste Management Practice

Both at a global level (Schwabe Group) and at a local site level, a high priority is placed on sustainable waste management practices which minimise the overall environmental impact of the site.

A hierarchy of waste management favouring elimination of wastes over minimisation and disposal is practiced onsite. It is noted that due to the nature of the processes onsite, there is a relatively small amount of waste generated onsite.

The site is currently licensed by the Environmental Protection Agency under Industrial Emissions Licence Register No. P0017-02. There are a number of conditions within the existing IEL that mandate the control and monitoring of waste generated onsite.

All waste is removed from site via an appropriately permitted contractor to an appropriate permitted facility.

In 2024, 99.97% of non-hazardous waste was recycled/reclaimed. The vast bulk of which (4,987.4 tonnes) related to the composting of spent leaf material.

In 2024, 58.99% of hazardous waste was recycled/reclaimed or used for energy generation.

The total waste recycling rate in 2024 is 89.71%.

Construction Phase

The potential impacts of the proposed development, in relation to construction waste are that, should a Resource and Waste Management Plan not be implemented, targets and objectives outlined in the relevant national and regional waste management policies would not be achieved.

The use of unlicensed waste contractors could give rise to inappropriate management of waste and result in environmental impacts and/or pollution.

In addition, if waste is not managed and stored correctly onsite, this may lead to litter or pollution issues on the site, adjacent sites or in the surrounding area.

If the Resource and Waste Management Plan is implemented and a high level of due diligence is carried out at the site, it is envisaged that the environmental impact of the Construction Phase of the development will be short term and imperceptible.

Operational Phase

As with the construction and demolition waste, the potential impacts of the development are that, should a Waste Management Strategy not be developed for the proposed development, then targets and objectives outlined in the relevant national and regional waste management policies would not be achieved.

Similarly, the use of unlicensed waste contractors could give rise to inappropriate management of waste and result in environmental impacts and/or pollution.

In addition, if waste is not managed and stored correctly on site, this may lead to litter or pollution issues on the site, adjacent sites or in the surrounding area.

Compliance with the IEL and adherence to the waste hierarchy for the proposed development will ensure that a high level of recycling, recovery and reuse is achieved at the site, thereby minimising the potential impacts of the development.

The RWMP will continue to be developed, implemented and reviewed regularly by the Contractor. This RWMP will include all the relevant information required and provides procedures for each waste that will be produced at this stage of the development.

As outlined above, there is a significantly successful practice of waste management at the existing facility. This will be expanded to accommodate the proposed development.

There will be dedicated storage areas for non-hazardous waste which will have separate receptacles for all recyclable materials so that onsite segregation will take place. In addition, general waste receptacles will be available for waste not suitable for recycling.

Hazardous waste will be stored and handled separately and disposed of using fully licensed and permitted contractors.

Other typical measures will include:

- All wastes will be continued to be managed in accordance with IEL requirements and the site EMS. These are subject to periodic audits.
- Ensure that waste is properly packaged and labelled according to the type of waste.
- Ensure that personnel involved in the management of waste are qualified and trained to perform job specific duties.
- Liaise with personnel, contractors and regulators on all waste/certification matters.
- Ensure that waste is properly segregated and the waste being shipped meets the appropriate waste acceptance criteria.
- Ensure that waste is disposed of in a manner compliant with all regulations and standards of practice.
- Ensure that copies of licenses for all approved disposal locations used by the waste contractor are on file as per the EMS.
- The waste contractor may be subject to audits by Cara personnel to verify compliance with regulations and standards.

The impacts of the proposed development, in terms of waste disposal to landfill during operation, will therefore be minimised by the waste management strategy for the proposed development.

There will be permanent stripping of topsoil, subsoil and excavation of rock. The segregation of construction materials at source will ensure that optimum recycling, reuse and recovery of waste materials will be achieved. Therefore, during the Construction Phase, provided the mitigation measures are implemented, the predicted impact will be neutral and long-term.

All solid waste generated onsite will be subject to the site waste management strategy which includes source segregation and policies of reduce, reuse and recycle.

As long as practices onsite comply with the waste management strategy then the predicted impact will be long-term and imperceptible.

Climate

AWN Consulting Ltd were appointed to undertake an assessment of the likely impacts upon climate from the proposed development at the Cara Partners site at Little Island Industrial Estate, Co. Cork as described in Chapter 16 – Climate of the EIAR.

The climate assessment incorporates the following assessment elements:

- An assessment of the potential greenhouse gas emissions during the construction, operational and decommissioning phases of the proposed development
- The vulnerability of the proposed development to the negative effects of future climate change including meteorological extremes and other projected climate impacts
- The design measures to reduce the direct emissions that may contribute to the effects of climate change and measures to increase the resilience of the proposed development from the negative effects of climate change.

The assessment was carried out using guidance from the Environment Protection Agency (EPA), Transport Infrastructure Ireland (TII), the Institute of Sustainability and Environment Professional (ISEP) and the European Commission.

Existing Environment

The existing climate baseline was determined by reference to data from the EPA on Ireland's total greenhouse gas (GHG) emissions and alignment with Ireland's 2030 sectoral emissions ceilings and carbon budgets. The EPA state that Ireland had total GHG emissions of 57.6 Mt CO₂e in 2024. This is 1.03 Mt CO₂e higher than Ireland's annual target for emissions in 2024. EPA projections indicate that Ireland has used 79% of the 295 Mt CO₂e Carbon Budget for the five-year period 2021-2025. This leaves 21% of the budget available for 2025, requiring a substantial 17.5% annual emissions reduction for 2025 to stay within budget.

Impact Assessment

In the Do-Nothing scenario, the site will remain as per the baseline and will change in accordance with trends within the wider area. The Do-Nothing scenario is considered neutral in terms of the climate assessment.

Greenhouse Gas Assessment

The Greenhouse Gas Assessment (GHGA) quantifies the GHG emissions from a project over its lifetime and compares these emissions to relevant carbon budgets, targets and policy to contextualise magnitude. Greenhouse Gas emissions associated with the construction and operational phases of the proposed development were calculated using the online TII Carbon Assessment Tool with information provided by the design team. For the construction period a total of 3,442 tCO₂e was predicted based on the information supplied. Total annualised operational GHG emissions were predicted to be a small percentage (0.01%) of the 2030 total tCO₂e for Ireland at 7,798 tCO₂e and 0.2% of the 2030 sectoral budget for industry.

In accordance with guidance from the EPA GHG emission impacts were determined to be direct, long-term, negative, slight and not significant.

Climate Change Risk Assessment

A detailed Climate Change Risk Assessment of the construction phase was scoped out of the assessment. However, consideration was given to aspects such as the increased risk from both fluvial and pluvial flooding, temperature extremes, storm damage and wildfire.

The vulnerability of the proposed development to the risks of the adverse impacts from climate change was found to be Low based on a risk specific site sensitivity of Medium or Low and a risk specific site exposure of Medium or Low.

The Risk Assessment took account of potential changes in climate that are predicted for Ireland which may include increases in rainfall, extremes of temperature, extreme wind and drought amongst other factors.

With design mitigation in place, it was found that there are no significant risks to the proposed development as a result of the potential adverse effects of climate change. Therefore, the assessment of the impacts is found to be direct, long-term, negative and not significant.

Cumulative Impact

With respect to the requirement for a cumulative assessment PE-ENV-01104 states that *“the identified receptor for the GHG Assessment is the global climate and impacts on the receptor from a project are not geographically constrained, the normal approach for cumulative assessment in EIA is not considered applicable. By presenting the GHG impact of a project in the context of its alignment to Ireland’s trajectory of net zero and any sectoral carbon budgets, this assessment will demonstrate the potential for the project to affect Ireland’s ability to meet its national carbon reduction target. This assessment approach is considered to be inherently cumulative”*.

The cumulative impact of the proposed development in relation to GHG emissions is considered to be direct, long-term, slight and not significant.

Mitigation

Construction Phase

The principal source of GHG emissions from the construction phase was the embodied carbon from materials and construction activities. Therefore, best practice measures were suggested to minimise the production of GHG emissions during the construction process.

Contractors should undertake appropriate due diligence to minimise emissions of GHGs during construction and should take best practicable means to mitigate and protect the proposed development against the effects of local climate extremes during the construction phase.

Operational Phase

Mitigation measures include designing stormwater systems to OPW standards with a 20% rainfall allowance and integrating green infrastructure; selecting high-performance materials and cladding for temperature resilience and considerations for wind and storms; implementing efficient water-use systems to address dry spells; and ensuring structural design meets wind-loading requirements under future climate scenarios. These measures have been considered when assessing the vulnerability of the proposed development to climate change.

Residual Effects

The residual effects of climate upon the proposed development have been determined in the context of its contribution to the overall reduction in production of GHG emissions in Ireland. The proposed development has incorporated some best practice mitigation measures and is committing to reducing climate impacts where feasible. Once mitigation measures are put in place, the effect of the proposed development in relation to GHG emissions is considered direct, long-term, negative and slight, which is overall not significant in EIA terms.

It was considered that there were no significant risks to the proposed development because of the impacts caused by climate change, therefore the residual effect was considered direct, long-term, negative and not significant.

Monitoring

There are no predicted monitoring requirements from the Climate Assessment.

Major Accidents and Hazards

This chapter of the EIAR has been prepared by Sustech. It describes other events (natural and other external) that could contribute to (cause or exacerbate) a major accident or hazard at the Cara Partners site, as well as the potential for a major accident at the site to impact on the surrounding environs.

The site is not an Establishment under the Control of Major Accidents and Hazards Regulations 2015 (as amended).

The construction phase of the proposed development does not give rise to credible major accident scenarios with off-site consequences and its potential hazards are adequately addressed through normal construction safety controls.

A number of potential major accident and hazard scenarios that could develop relating to site operations. These may happen in combination or separately. These include: pool fire; flash fire; vapour cloud explosion; uncontrolled chemical release; and release of contaminated firewater.

Given the nature of the existing development and extant regulatory requirements, there a significant number of mitigation measures in place with respect to Major Accidents and Hazards.

These include but are not limited to measures relating to: fire prevention and detection; fire suppression and firefighting infrastructure; contaminated firewater management and pollution control; secondary containment and spill prevention; emergency response and management; road transport control; and management systems and ongoing process control.

The proposed development will be fully integrated into the existing suite of major accident prevention and mitigation measures, plans and procedures in operation at the Cara Partners site.

All new buildings, plant, and process modifications will be designed to align with the site's established fire prevention, detection, and suppression systems, secondary containment arrangements, drainage and firewater management infrastructure and emergency response framework.

The development will be subject to the site's formal change management and risk assessment procedures to ensure that any new or modified hazards are identified, assessed and adequately controlled prior to commissioning.

Upon completion, the development will be incorporated into the Site Emergency Plan, Firewater Risk Assessment and relevant operational and maintenance regimes, ensuring continuity of control, regulatory compliance and consistency with existing major accident mitigation arrangements across the site.

Having regard to the mitigation measures described in the Chapter and their integration into the design, construction and operation of the proposed development, the residual impact associated with major accidents and hazards is assessed as not significant.

In accordance with the EPA Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (2022), the assessment has considered both the potential of the project to give rise to accidents or disasters and the vulnerability of the project to such events.

The proposed development does not introduce novel or atypical hazards beyond those already present at the site and will be fully incorporated into existing, well-established accident prevention, control and emergency response systems operating under an Industrial Emissions Licence and an ISO 45001:2018 certified management framework.

Robust preventative and mitigation measures, which include fire prevention and suppression systems, secondary containment, firewater retention, controlled drainage, emergency planning and formal change management procedures, ensure that credible accident scenarios are of low likelihood and that consequences, should an incident occur, would be effectively contained within the site boundary.

On this basis, and taking account of the regulatory controls, monitoring and continuous improvement mechanisms in place, the residual risk to human health, the environment and surrounding land uses is considered to be low.

Interactions and Cumulative Impacts

The potential cumulative impacts between the various environmental media have been examined during the EIA. The different stages of both the construction and the operational phases have also been assessed, where relevant, in the individual chapters of the EIAR.

No other proposed developments of significance in the area have been identified. The relative impact of the proposed development is unlikely to have any significant cumulative impact with current development in the area.

The interactions between the environmental factors and impacts discussed in the EIAR have been assessed. All of the interactions identified are deemed neutral or not applicable. No negative impacts are expected to arise as a result of interactions between different environmental disciplines.

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GLOSSARY

AA	Appropriate Assessment
AADT	Annual Average Daily Traffic
ACA	Architectural Conservation Area
A-weighting	The “A” suffix denotes the fact that the sound levels have been “A-weighted” in order to account for the non-linear nature of human hearing. All sound levels in this report are expressed in terms of decibels (dB) relative to 2×10^{-5} Pa.
BAT	Best Available Techniques
BAT-AEL	Best Available Techniques-Associated Emission Level
BATC	BAT Conclusions
bgl	Below ground level
BH	Borehole
BOD	Biochemical Oxygen Demand
Bq	Bequerel
BREF	BAT Reference Note
BS	British Standard
CEMP	Construction Environmental Management Plan
CIP	Clean-In-Place
COD	Chemical Oxygen Demand
COMAH	Control of Major Accidents and Hazards
CSO	Central Statistics Office
dB	Decibel. The scale in which sound pressure level is expressed. It is defined as 20 times the logarithm of the ratio between the RMS pressure of the sound field and the reference pressure of 20 micropascals (20 μ Pa).
dB(A)	Decibel (A-weighted).
C&D	Construction and Demolition
CCRA	Climate Change Risk Assessment
Cfu	Colony-forming unit
CGS	County Geological Site
CID	Commission Implementing Decision
cpm	Chances Per Million (years)
Deg Sat	Degree of Saturation

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DEM	Digital Elevation Model
DEHLG	Department of Environment, Heritage and Local Government (Ireland)
DHLGH	Department of Heritage, Local Government and Housing (Ireland)
DHPCLG	Department of Housing, Planning Community and Local Government (Ireland)
DN	Do-Nothing (scenario)
DS	Do-Something (scenario)
DMP	Decommissioning Management Plan
DMRB	Design Manual for Roads and Bridges
DMURS	Design Manual for Urban Roads and Streets
EC	European Commission
EcIA	Ecological Impact Assessment
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
ELV	Emission Limit Value
EMS	Environmental Management System
EPA	Environmental Protection Agency
EQS	Environmental Quality Standard
ESB	Electricity Supply Board
ETS	Emissions Trading Scheme
EU	European Union
EV	Electric Vehicle
FOG	Fats, Oils and Greases
FRA	Flood Risk Assessment
FWR	Firewater Retention (facility)
GEP	Good Engineering Practice
GHG	Greenhouse Gas
GHGA	Greenhouse Gas Assessment
GMP	Good Manufacturing Practice
GSi	Geological Survey of Ireland
GWB	Groundwater Body
GWDTE	Groundwater Dependent Ecosystem
Ha	Hectare

HCV	Heavy Commercial Vehicle
HDV	Heavy Duty Vehicle
HGV	Heavy Goods Vehicle
HPLC	High Performance Liquid Chromatography
Hz	Hertz. The unit of sound frequency in cycles per second.
IAQM	Institute of Air Quality Management
IARC	International Research on Cancer
IDA	Industrial Development Authority
IED	Industrial Emissions Directive
IEL	Industrial Emissions Licence
IGH	Irish Geological Heritage
ISO	International Organisation for Standardisation
kHz	Kilohertz
KT	Kilotonne
KVA	Kilo volt-amp
kWh	Kilowatt hour
L_{A10}	Is the A-weighted sound level that is exceeded for 10% of the sample period. It is typically used as a descriptor for traffic noise.
L_{A90}	Is the A-weighted sound level that is exceeded for 90% of the sample period. It is typically used as a descriptor for background noise.
L_{Aeq}	Is the A-weighted equivalent continuous sound level over the sample period.
L_{Aeq,15mins}	Is the A-weighted equivalent continuous sound level over a 15 min sample period.
L_{Aeq, T}	Is the equivalent continuous sound level. It is a type of average and is used to describe a fluctuating noise in terms of a single noise level over the sample period. It is typically used as a descriptor for ambient noise.
L_{Afmax}	Is the instantaneous maximum sound level measured during the sample period.
L_{Afmax}	Is the A-weighted instantaneous maximum sound level measured during the sample period using the 'F' time weighting.
L_{Afmin}	Is the A-weighted instantaneous minimum sound level measured during the sample period using the 'F' time weighting.
L_{Amin}	Is the instantaneous minimum sound level measured during the sample period.

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L_{Ar,T}	Is the rated sound pressure level, including any penalties for tonal or impulsive noise, over a reference period T
L_{A10, T}	Is the sound level that is exceeded for 10% of the sample period, T. It is typically used as a descriptor for traffic noise.
L_{A90, T}	Is the sound level that is exceeded for 90% of the sample period, T. It is typically used as a descriptor for background noise.
LAP	Local Area Plan
LCPD	Large Combustion Plant Directive
LDPE	Low Density Polyethylene
LFO	Light Fuel Oil
mbgl	Meters below ground level
MCP	Medium Combustion Plant
MIC	Maximum Import Capacity
mOD	Meters Over Datum
MW	Megawatt
MWe	Megawatt electric
MWWTP	Municipal Wastewater Treatment Plant
NBDC	National Biodiversity Data Centre
NHA	Natural Heritage Areas
NIS	Natura Impact Statement
NMS	National Monuments Service
NO₂	Nitrogen Dioxide
NPWS	National Parks and Wildlife Service
NRA	National Roads Authority
NSL	Noise Sensitive Location
oCEMP	Outline Construction Environmental Management Plan
OHSAS	Occupational Health and Safety Assessment Series
o-P	Ortho-phosphate (also known as Molybdate Reactive Phosphorus)
OPW	Office of Public Works
Pa	Pascal
PEC	Predicted Environmental Concentration
PFD	Process Flow Diagram
PLC	Programmable Logic Controller
PM	Particulate Matter

PM_{2.5}	Particulate Matter less than 2.5 µm
PM₁₀	Particulate Matter less than 10 µm
pNHA	Proposed Natural Heritage Area
PPV	Peak Particle Velocity is a measure of the velocity of vibration displacement in terms of millimetres per second (mm/s).
PVMRM	Plume Volume Molar Ratio Method
QA	Quality Assurance
QC	Quality Control
RBD	River Basin District
RBMP	River Basin Management Plan
RMS	Root Mean Square. The RMS (Root Mean Square) value of a set of numbers is the square root of the average of their squares.
RPG	Regional Planning Guidelines 2010 – 2022
RPS	Register of Protected Structures
RSA	Road Safety Authority
RSES	Regional Spatial and Economic Strategy
SAC	Special Area of Conservation
SCADA	Supervisory Control And Data Acquisition
SEL	is the A weighted equivalent sound level (L _{AX}) which, when maintained for one second, contains the same quantity of sound energy as the actual time varying level of one noise event.
SIP	Steam-In-Place
SOP	Standard Operating Procedure
SRF	Soil Recovery Facility
TDP	Town Development Plan
TII	Transport Infrastructure Ireland
TSS	Total Suspended Solids
TTA	Traffic and Transport Assessment
ULC	Unlimited Company
UV	Ultra-Violet
UNFCCC	United Nations Framework Convention on Climate Change
USEPA	United States Environmental Protection Agency
WAC	Waste Acceptance Criteria
WFD	Water Framework Directive

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WWTP	Wastewater Treatment Plant
YoO	Year of Opening
ZOI	Zone of Influence

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1.0 INTRODUCTION

1.1.1 Purpose of EIA and the EIAR

Environmental Impact Assessment (EIA) is defined under Article 1(2)(g) of the revised EIA Directive (2014/52/EU) as a process consisting of:

“(i) the preparation of an environmental impact assessment report by the developer, as referred to in Article 5(1) and (2);

(ii) the carrying out of consultations as referred to in Article 6 and, where relevant, Article 7;

(iii) the examination by the competent authority of the information presented in the environmental impact assessment report and any supplementary information provided, where necessary, by the developer in accordance with Article 5(3), and any relevant information received through the consultations under Articles 6 and 7;

(iv) the reasoned conclusion by the competent authority on the significant effects of the project on the environment, taking into account the results of the examination referred to in point (iii) and, where appropriate, its own supplementary examination; and

(v) the integration of the competent authority's reasoned conclusion into any of the decisions referred to in Article 8a.”

In essence the EIA process can be considered as:

- the systematic examination of the likely significant effects of a proposed development on the environment;
- ensuring that adequate consideration is given to any such effects; and
- avoiding, reducing or offsetting any significant adverse effects;

This includes examination of the effects of a proposed development on:

- the natural environment;
- beneficial uses of the environment, including man-made structures, amenities and facilities; and
- the socio-cultural environment.

Typically, as part of the EIA process, an Environmental Impact Assessment Report (EIAR) is prepared and submitted to the planning authority (or An Bord Pleanála in the event of an appeal) along with the accompanying planning application.

An EIAR is defined as:

‘A statement of the effects, if any, which proposed development, if carried out, would have on the environment.’

The EIAR serves to describe the proposed development and any likely significant impacts arising as well as those measures proposed in order to manage such effects. This information can then be used by the assessment authority in deciding the application for a proposed development.

The EIA process allows interested third parties (e.g. local residents, adjoining land users, etc.) the opportunity to review the EIAR and comment on the proposed development prior to a planning decision being made.

It is the intention of Cara Partners ('Cara' or 'the Applicant') to ascertain the potential impact that the proposed development will have upon the subject site and surrounding areas, and to explore mitigating circumstances, to protect and enhance the environment to its fullest potential.

1.2 Relevant Legislation

1.2.1 Environmental Impact Assessment and EIA Screening

The current primary and secondary legislation which transposes the previous version of the EIA Directive into national law are contained in:

- *Planning and Development Acts 2000* (as amended); and
- *Planning and Development Regulations 2001* (as amended).

Under the *Planning and Development Regulations 2001* (as amended), hereafter 'the Regulations', development which requires an EIA is known as "Part 10 Development".

Schedule 5 (Parts 1 and 2) of the Regulations specifies 'development for the purposes of Part 10'.

The proposed development is listed in Part 2, Class 6 (b) of Schedule 5 as follows:

6. *Chemical Industry (development not included in Part 1 of this Schedule)*

...

(b) *All installations for production of pesticides and pharmaceutical products, paint and varnishes, elastomers and peroxides using a chemical or biological process.*

Given the nature of the proposed development (see Chapter 02 – Description of the Proposed Development) an EIAR has been prepared following the completion of the EIA screening process.

1.2.2 Habitats Directive and Appropriate Assessment

In accordance with the *Planning and Development Acts 2000* (as amended) and the *European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011)* (as amended), an Appropriate Assessment (AA) has been carried out to assess the potential effects on the integrity of the Natura 2000 network. The Stage 2 Appropriate Assessment Natura Impact Statement is included as part of the planning application.

1.2.3 Environmental Protection Agency Act 1992

As per the First Schedule to the *Environmental Protection Agency Act 1992* (as amended), the licensed activities are as follows:

5.16 *The production of pharmaceutical products including intermediates*

The existing facility currently operates under Industrial Emissions Licence P0126-03 originally granted 18/10/17 and technically amended on a number of subsequent occasions.

The site proposes to apply for a review of the existing IEL after the planning application is submitted for the proposed development has been granted.

1.2.4 Emissions Trading Directive

The *EU Emissions Trading Directive* (2003/87/EC) (as amended) has been transposed into national law by the *European Communities (Greenhouse Gas Emissions Trading) Regulations 2012* (as amended). The Emissions Trading Scheme (ETS) generally applies to facilities with a cumulative gross total rated thermal input of >20 MW of combustion plant onsite.

The proposed development does not come within the scope of the Emissions Trading Scheme.

1.2.5 Medium Combustion Plant Directive

The Medium Combustion Plant Directive has been transposed in Irish national law by the *European Union (Medium Combustion Plants) Regulations 2017 (S.I. 595 of 2017)* (as amended).

Where combustion units onsite fall within the scope of the MCP Regulations, the site will meet all of its statutory obligations in this regard.

1.2.6 Control of Major Accidents Hazards Regulations

The site itself is not an Establishment as defined under the Control of the Major Accidents Hazards (COMAH) Regulations 2015 (as amended, however a number of listed establishments are located in the vicinity as follows:

- Upper Tier Establishment
 - BASF Ireland (c. 200m to the southwest)
- Lower Tier Establishment
 - Viatris Little Island aka Upjohn Manufacturing Ireland (across the road to the north of the site)
 - Janssen Pharmaceuticals (c. 350m to the east)
 - BOC Gases (c. 500m to the southeast)

Additional human health and safety considerations are considered in Chapter 17 'Major Accidents and Hazards'.

1.3 Relevant Guidance

A non-exhaustive list of relevant guidance used in the preparation of this EIAR is presented below:

- The relevant requirements of EU Directives and national legislation (primary and secondary) concerning Environmental Impact Assessment (especially having due regard to the revised provisions of Directive 2014/52/EU);
- EPA (2003) *Advice Notes on Current Practice in the Preparation of Environmental Impact Statements*;
- EPA (September 2015) *Advice Notes for Preparing Environmental Impact Statements – DRAFT*;
- European Commission (2017) *Environmental Impact Assessment of Projects – Guidance on the preparation of the Environmental Impact Assessment Report – (Directive 2011/92/EU as amended by 2014/52/EU)*
- DHPCLG (15/05/17) *Circular Letter PL 1/2017 Implementation of Directive 2014/52/EU on the effects of certain public and private projects on the environment (EIA Directive): Advice on Administrative Provisions in Advance of Transposition*;
- DHPCLG (May 2017) *Transposition of 2014 EIA Directive (2014/52/EU) in the Land Use Planning and EPA Licencing Systems: Key Issues Consultation Paper*;
- DHLGH (August 2018) *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment*; and
- EPA (2022) *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports*.

Mandatory information to be contained in an EIAR is formally prescribed in:

- Article 5(1) of Directive 2014/52/EU;
- Paragraph 10(d) of Part 11 (First Schedule) of the European Communities (Environmental Impact Assessment) (Amendment) Regulations, 1999; and
- Schedule 6 of the Planning and Development Regulations, 2001 (S.I. No. 600 of 2001) (as amended).

1.4 Scoping of the Environmental Impact Assessment Report

The scoping exercise is an important element of an EIAR, incorporating inputs from relevant experts, statutory bodies, the developer/applicant, and interested members of the public. The intention of the scoping process is to identify a worst-case impact scenario, thus ensuring that all possible effects are adequately assessed. Outcomes of the scoping exercise are used to inform the content of the EIAR ensuring adequate assessment of any impacts considered to be significant and any issues of contention that need to be addressed.

1.4.1 Classification of Project Type

In the revised EPA Advice Notes, the nature of the proposed development is not specifically classified albeit it is occurring on a site that is designated as Project Type 7. Accordingly, this EIAR has been prepared having specific regard to the guidance contained therein.

1.4.2 Initial Scoping

An initial informal scoping exercise was conducted to establish the range and aspects of the environment to be considered within the EIAR. It was conducted by Sustech (representing the EIAR Team), DJF Engineering (representing the Project Design Team) and Cara Partners (the Applicant).

It was agreed that the scope of the EIAR prepared in respect of the proposed development would address, where applicable, the requirements of:

- EU Directives and national legislation (primary and secondary) concerning Environmental Impact Assessment (especially having due regard to the revised provisions of Directive 2014/52/EU);
- EPA (2003) *Advice Notes on Current Practice in the Preparation of Environmental Impact Statements*;
- EPA (September 2015) *Advice Notes for Preparing Environmental Impact Statements – DRAFT*;
- DHPCLG (15/05/17) *Circular Letter PL 1/2017 Implementation of Directive 2014/52/EU on the effects of certain public and private projects on the environment (EIA Directive): Advice on Administrative Provisions in Advance of Transposition*;
- DHPCLG (May 2017) *Transposition of 2014 EIA Directive (2014/52/EU) in the Land Use Planning and EPA Licencing Systems: Key Issues Consultation Paper*;
- DHLGH (August 2018) *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment*;
- EPA (2022) *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports*;
- Project Ireland 2040 National Planning Framework;
- Regional Spatial and Economic Strategy for the Southern Region; and
- Cork County Development Plan 2022-2028.

The EIAR was scoped to include:

- a) a description of the project comprising information on the site, design, size and other relevant features of the project;
- b) a description of the likely significant effects of the project on the environment;
- c) a description of the features of the project and/or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment;

- d) a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment;
- e) a non-technical summary of the information referred to in points (a) to (d); and
- f) any additional information specified in Annex IV (of the EIA Directive) relevant to the specific characteristics of a particular project or type of project and to the environmental features likely to be affected.

In scoping the extent of the EIA, the EIAR must consider the direct and indirect significant effects of a project on the following factors:

- a) population and human health;
- b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC;
- c) land, soil, water, air and climate;
- d) material assets, cultural heritage and the landscape;
- e) The inter-relationship between the factors referred to in points (a) to (d).

As part of the initial scoping exercise, it was concluded that an assessment of the potential impacts (positive, neutral or negative) of the proposed development on each of the above topics was warranted and as such is included in the EIAR.

Noise emissions, waste generation and traffic movement associated with the proposed development, as for most developments on industrial sites, were considered a source of potential environmental impact, and as such are also given due consideration in this EIAR.

The EIA scoping process also considered cumulative impacts.

Scoping of this EIAR was conducted at several meetings and informal communications that were held between representatives from Cork County Council, various other stakeholders, the Project Design Team and the EIAR Team. This afforded the opportunity to discuss the proposed development, the EIA process and the specific content of the EIAR. Further consultations with relevant stakeholders are detailed in section 0.

1.5 EIAR Methodology

1.5.1 EIAR Preparation

The primary objective of the EIAR is to identify baseline environmental and socioeconomic conditions in the proposed facility, predict potential beneficial and/or adverse effects of the development during both construction, commissioning and operational phases and propose appropriate mitigating actions where necessary.

In preparing this Environmental Impact Assessment Report, the following regulations and guidelines were considered:

- EU Directives and national legislation (primary and secondary) concerning Environmental Impact Assessment (especially having due regard to the revised provisions of Directive 2014/52/EU;
- EPA (2003) *Advice Notes on Current Practice in the Preparation of Environmental Impact Statements*;
- EPA (September 2015) *Advice Notes for Preparing Environmental Impact Statements – DRAFT*;
- EPA (2022) *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports*; and
- Other guidance and best practice where relevant.

Information on the project and the receiving environment was obtained through several means including:

- Site visits;
- Field surveys;
- Site investigations;
- Meetings and communications with Cork County Council;
- Review of existing data for the general area of the site;
- Review of previous studies carried out at the proposed development site and locality;
- Engagement of experienced specialist consultants for various aspects of the EIAR.

1.5.2 EIAR Format

EIAR's require the assimilation, coordination and presentation of a wide range of information to allow for the overall assessment of the environmental impacts of a proposed development. This EIAR has been prepared following the 'Grouped Format Structure' as outlined in the EPA's Guidelines (2002) and Section 4 of the revised Guidelines (2022).

To assist in the presentation and review of information compiled, this EIAR has been structured into the following Non-Technical Summary and 18 chapters:

- Non-Technical Summary
- Chapter 01 – Introduction
- Chapter 02 – Description of the Proposed Development
- Chapter 03 – Examination of Alternatives
- Chapter 04 – Planning and Development Context
- Chapter 05 – Population and Human Health
- Chapter 06 – Air Quality and Odour
- Chapter 07 – Noise and Vibration
- Chapter 08 – Water Quality and Aqueous Emissions
- Chapter 09 – Soils, Geology and Hydrogeology
- Chapter 10 – Biodiversity
- Chapter 11 – Landscape and Visual Impact Assessment
- Chapter 12 – Traffic and Transportation

- Chapter 13 – Material Assets
- Chapter 14 – Archaeological and Cultural Heritage
- Chapter 15 – Resource and Waste Management
- Chapter 16 – Climate
- Chapter 17 – Major Accidents and Hazards
- Chapter 18 – Interactions and Cumulative Impacts

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In Chapters 5 – 17, information specific to that particular topic has been provided under the following broad headings (with variations adopted as required to reflect the information requirements of each individual topic):

Introduction: Introduces the purpose of the section and specifies the specialist who implemented the assessment.

Methodology: Outlines the method by which the relevant impact assessment has been conducted.

Receiving Environment: In describing the receiving environment, an assessment is made of the context into which the proposed development will fit. For each specialist section this description is relevant to that item.

Characteristics of the Proposed Development: Consideration of the "Characteristics of the Proposed Development" allows for a projection of the "Level of Impact" on any particular aspect of the environment which could arise. For each chapter those characteristics of the proposed development which are relevant to the area of study are described.

Potential Impact of the Proposed Development: This section allows for a description of the specific direct and indirect impacts which the proposed development may have. This is done with reference to the Receiving Environment and the Characteristics of the Proposed Development, while also referring to the magnitude, duration, consequences and significance of the proposed development.

Do Nothing Scenario: In order to provide a qualitative and equitable assessment of the proposed development, it is important to also consider the proposed development in the context of the likely impacts upon the receiving environment should the proposed development not take place.

Remedial and Mitigation Measures: This includes a description of all remedial or mitigation measures that are either practicable or reasonable having regard to the potential impacts of the proposed development. Mitigation measures are recommended, where appropriate, to minimise any significant negative impacts identified.

Predicted Impact of the Proposed Development: This section allows for the qualitative description of the direct and indirect impacts which the proposed development may have, assuming all mitigation measures are fully and successfully applied. This is therefore completed regarding both the Potential Impact of the Proposed Development and Remedial and Mitigation Measures proposed, producing a definitive and concise statement of the residual impact of the proposed development.

Monitoring: This involves a description of any monitoring required in the construction, operational, and post-operational phases, where required. This section addresses the impacts, which require monitoring, and the agencies that are responsible for specifying, approving and assessing such monitoring.

Interactions: Although all environmental factors are inter-related to some extent, some factors have significant interaction and interdependencies with other factors. This section highlights the environmental factors that interact with each other in this respect.

Chapter 18 addresses issues that arise under cumulative effects and interactions.

Where appropriate, the impact assessment criteria outlined in Table 1-1 were applied on completion of a given chapter.

Table 1-1: Impact assessment criteria as per Table 3.4 of the revised EPA Guidelines (2022)

Impact Characteristic	Term	Description
Quality of Effects	Positive Effects	A change which improves the quality of the environment (for example, by increasing species diversity; or the improving reproductive capacity of an ecosystem, or by removing nuisances or improving amenities).
	Neutral Effects	No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
	Negative Effects	A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem; or damaging health or property or by causing nuisance).
Significance of Effects	Imperceptible	An effect capable of measurement but without significant consequences.
	Not significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.
	Slight	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
	Moderate	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
	Significant	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.
	Very Significant	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.
	Profound	An impact which obliterates sensitive characteristics.
Extent and Context of Effects	Extent	Describe the size of the area, the number of sites, and the proportion of a population affected by an effect.
	Context	Describe whether the extent, duration, or frequency will conform or contrast with established (baseline) conditions (is it the biggest, longest effect ever?)
Probability of Effect	Likely	The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented.
	Unlikely	The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.
Duration of Effect	Momentary	Effects lasting from seconds to minutes.
	Brief	Effects lasting less than a day.
	Temporary	Effects lasting less than a year.
	Short-term	Impact lasting one to seven years.
	Medium-term	Impact lasting seven to fifteen years.

Impact Characteristic	Term	Description
	Long-term	Impact lasting fifteen to sixty years.
	Permanent	Impact lasting over sixty years.
	Reversible	Effects that can be undone, for example through remediation or restoration.
	Frequency	How often the effect will occur. (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually).
Type	Indirect	Impacts on the environment, which are not a direct result of the project, often produced away from the project site or because of a complex pathway.
	Cumulative	The addition of many minor or significant effects, including effects of other projects, to create larger, more significant effects.
	‘Do Nothing’	The environment as it would be in the future should the subject project not be carried out.
	‘Worst Case’	The impacts arising from a development in the case where the mitigation measures substantially fail.
	Indeterminable	When the full consequences of a change in the environment cannot be described.
	Irreversible	When the character, distinctiveness, diversity, or reproductive capacity of an environment is permanently lost.
	Residual	The degree of environmental change that will occur after the proposed mitigation measures have taken effect.
	Synergistic	Where the resultant effect is of greater significance than the sum of its constituents, (e.g. combination of SO _x and NO _x to produce smog).
	‘Worst Case’	The impacts arising from a development in the case where the mitigation measures substantially fail.

1.5.3 EIAR Team

Sustech has fulfilled the role of Lead Consultant and Project Coordinator on behalf of Cara Partners for the preparation of the EIAR. DJF Engineering has also provided substantial support to the production of the EIAR. Table 1-2 lists the specialists who contributed to the project and Table 1-3 lists the EIAR contributors and their qualifications and experience.

Table 1-2: List of consultants collaborating or contributing to the EIAR and contact information.

Consultant	Contact Information
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DJF Engineering Services Ltd.	Tramore House, Reeveswood, Douglas Road, Cork. T12 R8XW Tel: 021 2392424 Web: www.djfes.com
Prochem Engineering	North Valley Business Centre, Cork, T23 KC67 Tel: 021 206 6178 Web: www.prochem.ie
McCutcheon Halley Planning	6 Joyce House, Barrack Square, Ballincollig, Cork, P31 YX97 Tel: 021 420 8710 Web: www.mhplanning.ie
AWN Consulting/Trinity Consultants	The Tecpro Building IDA Business and Technology Park Clonsaugh Dublin 17 D17 XD90 Web: www.awnconsulting.com
Geosyntec Consultants Ltd.	Unit 10, Northwood Court Northwood Crescent Dublin D09 W8DT Web: www.geosyntec.com
NM Ecology Limited	38 Maywood Avenue, Raheny, Dublin, D05 YC 95 Tel: 0876839771 Email: info@nmecology.ie

Consultant	Contact Information
TTRSA	Barron, Blacklion, Co. Cavan Tel: 0719853847 Web: www.ttrsa.com
Archaeological Consultancy Services Unit	13 Upper Baggot Street 2nd Floor Dublin 4 Co. Dublin Tel: 01 253 0983 Web: www.archaeologicalconsultancy.com
Scott Landscape Design	Leamlara, Co. Cork, T56 E272 Tel: 021 464 2645 Web: www.sld.ie

Table 1-3: List of qualifications and experience outlining professional competency of chapter contributors.

Name	Company	Title	Chapter
Eoghan O'Flaherty • B.A. Mod (Hons) Env. Sci. • Pg. Dip. (Statistics) • Adv. Pg. Dip (Planning and Environmental Law) • >15 years' experience in environmental consultancy	Sustech	Director and Principal Environmental Consultant	EIAR Coordination and Management Chapter 1 – Introduction Chapter 2 – Description of the Proposed Development Chapter 3 – Examination of Alternatives Chapter 5 – Population and Human Health Chapter 8 – Water Quality and Aqueous Emissions Chapter 13 – Material Assets Chapter 15 – Resource and Waste Management Chapter 17 – Major Accidents and Hazards Chapter 18 – Interactions and Cumulative Impacts
Sean Hegarty • BE • C. Eng • MIEI • MISTructE • >15 years' experience	DJF Engineering	Director	Chapter 2 – Description of the Proposed Development
Sue Cullen • B. Env. Studies, Urban and Regional Planning • MIPI • 25 years' experience	McCutcheon Halley Planning	Director	Chapter 4 – Planning and Development Context
Saoirse Kavanagh • BA • MSc Sustainable Development and Planning • 6 years' experience	McCutcheon Halley Planning	Executive Planning Consultant	Chapter 4 – Planning and Development Context
Dr. Jovanna Arndt • B.Sc., Ph.D. • AMIEnvSc, MIAQM • 9 years' experience	AWN Consulting/ Trinity Consultants	Principal Air Quality Consultant	Chapter 6 – Air Quality and Odour Chapter 16 – Climate
Abe Scheele • Diploma in Acoustics and Noise Control • C&G Level 2 Sound Engineering • >9 years' experience	AWN Consulting/ Trinity Consultants	Acoustic Consultant	Chapter 7 – Noise and Vibration
Mike Simms • BE, MEng.	AWN Consulting/	Principal	Chapter 7 – Noise and Vibration

Name	Company	Title	Chapter
• MIA, MIET • >20 years' experience	Trinity Consultants	Acoustic Consultant	
Sarah Berry • BSc • MISEP • 9 years' experience	AWN Consulting/ Trinity Consultants	Principal Climate Consultant	Chapter 16 – Climate
Caolan Leneghan • BSc, MSc • MISEP • 5 years' experience	AWN Consulting/ Trinity Consultants	Principal Climate Consultant	Chapter 16 – Climate
Graham Webb • BEng • c. 30 years' experience	Geosyntec	Principal Consultant	Chapter 9 - Soils, Geology and Hydrogeology
Nick Marchant • B.Sc., M.Sc. • MCIEEM • >15 years' experience	NM Ecology Ltd	Consultant Ecologist	Appropriate Assessment, Natura Impact Statement & Chapter 10 - Biodiversity
Donald Murphy • B.A. (Hons), M.A., • MIAI • 30 years' experience	ACSU	Managing Director	Chapter 11 – Landscape & Visual Impact Assessment Chapter 14 - Archaeological and Cultural Heritage
Ian Russell • B.A. (Hons), MA • MIAI • 20 years' experience	ACSU	Senior Archaeologist & Project Manager	Chapter 11 – Landscape & Visual Impact Assessment Chapter 14 - Archaeological and Cultural Heritage
Matt Steele • MSc Transport and Planning Management, TII Auditor • FCILT FRGS MCIHT • >25 years' experience	TTRSA	Director	Chapter 12 – Traffic and Transportation & Mobility Management Plan
Pamela Townley • BSc Hons • >25 years' experience	TTRSA	Director	Chapter 12 – Traffic and Transportation

1.5.4 Consultation

Consultation was conducted throughout the EIA process and included (but is not limited to) communication with:

- Cork County Council
 - Planning Department
 - Roads Department
 - Sustainable Travel/Active Travel

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2.0 DESCRIPTION OF THE PROPOSED DEVELOPMENT

2.1 Introduction

This chapter of the Environmental Impact Assessment Report (EIAR) provides a comprehensive description of the proposed development at the Cara Partners manufacturing facility located within the IDA Little Island Industrial Estate, Little Island, County Cork and has been prepared by Sustech. This chapter has been prepared having regard to the specific guidance contained in Section 3.5 of the EPA Guidelines¹.

The following chapter provides an overview of the existing operation and a description of all elements of the proposed development, referred to throughout this Environmental Impact Assessment Report (EIAR) as the 'proposed development'. Where reference in this EIAR is made to the 'site' (or similar language) it typically refers to the area of the site outlined in red in Figure 2-1.

This chapter should be read in conjunction with the remainder of the EIAR, including but not limited to the chapters addressing air quality, water quality, waste management, traffic and transportation, noise and vibration and major accident hazards.

2.2 Regulatory Context

The Cara Partners facility at Little Island is an existing industrial installation regulated by the Environmental Protection Agency (EPA) under an Industrial Emissions Licence (IEL) Reg. No. P0017-02. The site has been operating as a licensed pharmaceutical manufacturing facility for several decades and is subject to ongoing EPA regulation, monitoring, reporting and enforcement.

The proposed development will also require a review and amendment of the existing IEL. An application will be made to the EPA to review the existing IEL to reflect changes arising from the proposed development, including:

- additional process capacity;
- new process buildings and equipment;
- changes to emissions abatement infrastructure;
- upgrades to wastewater treatment systems; and
- associated operational changes.

Environmental controls, emission limit values, monitoring requirements and reporting obligations will continue to be regulated through the EPA licensing regime.

A copy of the site's Environmental Policy is provided in Appendix 2-A.

¹ EPA (2022) *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports*

The site is also regulated by other authorities such as the Health Products Regulatory Authority (HPRA).

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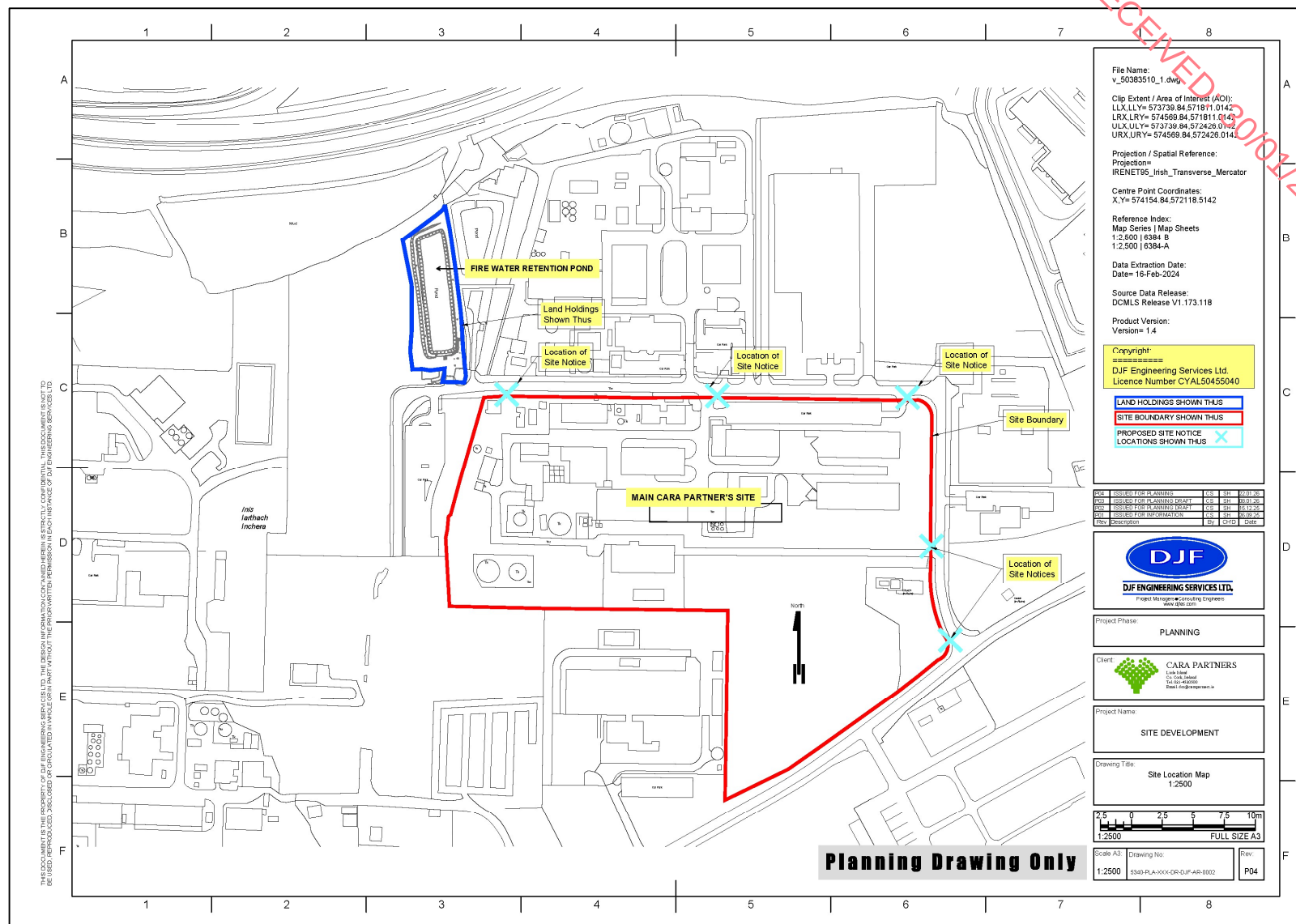


Figure 2-1 Proposed site location drawing (ref. Drg. No. 5340-PLA-XXX-DR-DJF-AR-0002).

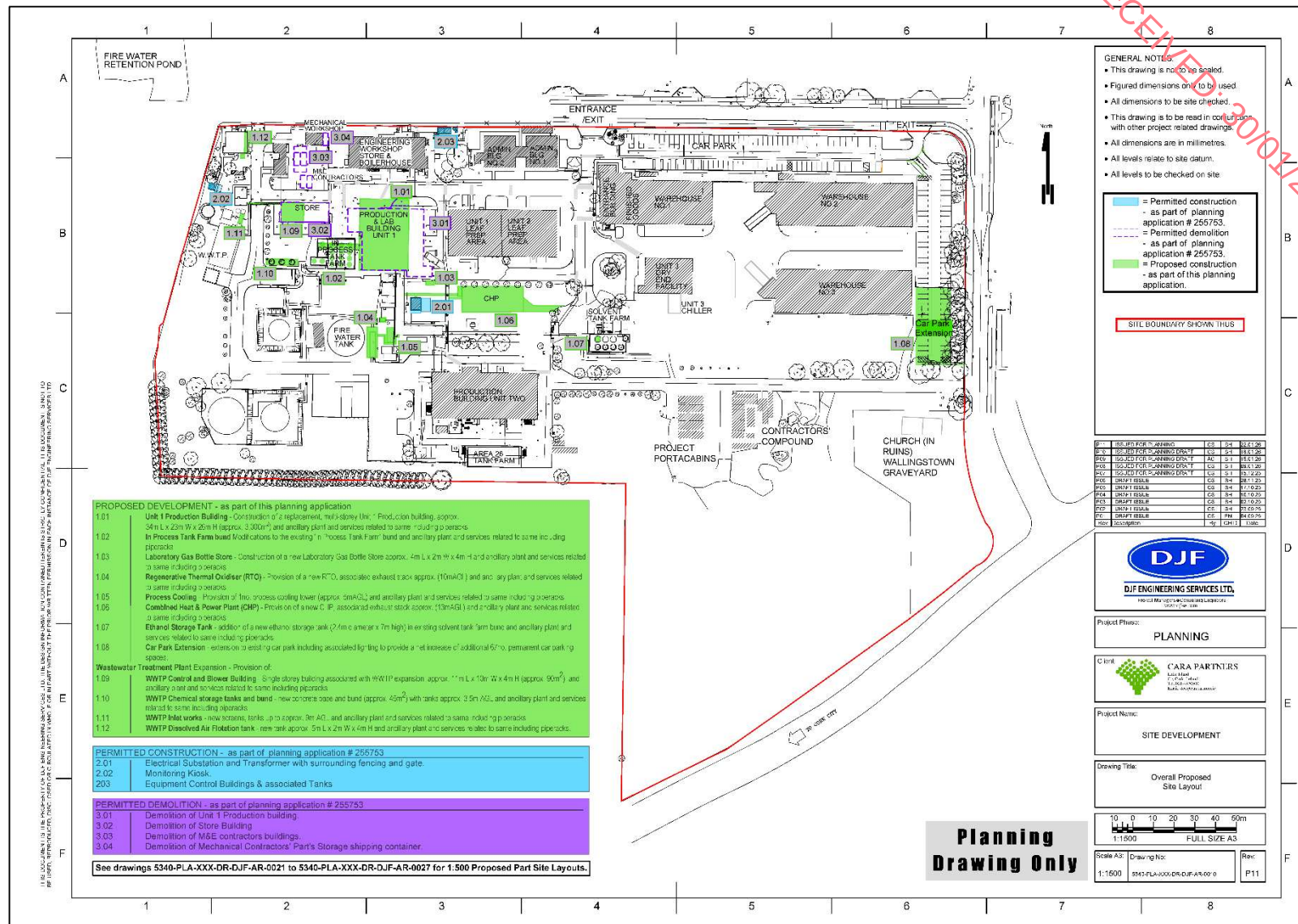


Figure 2-2 Proposed site layout drawing (ref. Drg. No. 5340-PLA-XXX-DR-DJF-AR-0010).

2.3 Site Context, Land Use and History

2.3.1 Site Context and Land Use

The site is located within the IDA Little Island Industrial Estate, approximately 8 km east of Cork City Centre. Little Island is strategically located within Cork Harbour and benefits from direct access to national and regional road networks, port infrastructure and established utilities.

The site is accessed primarily via the R623, which connects Little Island to the N25 national primary route and the wider Cork metropolitan area. The estate is served by internal industrial roads designed to accommodate heavy goods vehicle (HGV) traffic associated with industrial uses.

The surrounding area is characterised by large-scale industrial, pharmaceutical, logistics, manufacturing and similar industrial/commercial developments. Adjacent and nearby land uses include pharmaceutical manufacturing facilities, warehousing, logistics hubs and utility infrastructure.

There are no immediately adjoining residential properties. The nearest residential areas are located at a considerable distance from the site and are separated by industrial land uses, transport infrastructure and natural buffers.

The site includes (RPS 495) on the Record of Protected Structures listed in the Cork County Development Plan 2022-2028.

The Historic Environment Viewer lists (incorrectly) three monuments within the proposed development site, a horizontal water-mill (RMP No. CO075-052----), a graveyard (RMP No. CO075-020001-) and church (RMP No. CO075-020002-).

However, one of these (horizontal water-mill (RMP No. CO075-052----) is incorrectly recorded as being within the site. It is clearly illustrated on the original Record of Monuments and Places (RMP) hard-copy series of maps, which show it located to the southeast of the development site.

The church 'Little Island Church (In Ruins)' is also a Protected Structure (RPS No. 00495) as listed in the Cork County Development Plan 2022-2028. No structures listed in the National Inventory of Architectural Heritage (NIAH) are located within the site boundary.

The planning history of the site is detailed further in Chapter 4 – Planning and Development Context.

2.3.2 Site History

A detailed history of the site is presented in Chapter 14 'Archaeological and Cultural Heritage'.

The planning history of the site is detailed further in Chapter 4 – Planning and Development Context.

2.3.2.1 *Summary of Site History*

The site is located in the townland of Wallingstown (Baile an Bhailisigh) in the Barony of Barrymore (Barraigh Mhóra), and the Civil Parish of Little Island (An tOileán Beag). Little Island owes its name to its huge neighbour, Great Island, on which the cathedral town of Cobh looks out to the mouth of Cork Harbour. The earliest recorded name for Little Island is from a papal entry in 1302: Cellescoplappan. Also, at this time it was referred to as De Insula meaning 'of the island' in Latin. By 1489 it was Inysmacneyll; 1582 insula parva alias Inishvicneyl; and Little Island by 1614. The official modern Irish name for Little Island is Lime Ratha or An tOileán Beag.

The Little Island Industrial Estate was developed by the Industrial Development Authority (IDA) from the late 1960s onwards as part of a national strategy to provide large-scale industrial employment lands in proximity to Cork Harbour. Prior to its development, the lands comprised predominantly low-lying estuarine marshland and reclaimed agricultural land.

Cara Partners has operated continuously at the site since 1978 and the facility (along with the surrounding) has a long-established history of industrial use.

2.3.2.2 *Recent Development*

The most recent planning permission for the site (Planning Ref. 255753) comprised permission for modifications to the existing facility including construction, retention and demolition of various structures and buildings onsite.

Various drawings submitted with this application show the proposed development incorporating aspects of the granted permission referenced above.

2.4 The Applicant

Cara Partners has been operating in Cork since 1978 and is engaged in the manufacture of standardised herbal extracts used primarily as active pharmaceutical ingredients. Since mid-2021, Cara Partners has been wholly owned by the Schwabe Group (Dr. Willmar Schwabe GmbH & Co. KG) headquartered in Karlsruhe, Germany.

The Schwabe Group is one of the oldest pharmaceutical manufacturers in Europe, with a history extending over 150 years. The Group specialises in the research, development and manufacture of products derived from medicinal plants and herbal extracts and operates a global network of manufacturing and research facilities.

The Little Island facility plays a strategic role within the Schwabe Group's manufacturing network, supplying bulk pharmaceutical-grade herbal extracts to downstream formulation facilities in Europe and internationally.

2.5 Existing Site Description

2.5.1 Overview of Existing Site

The existing Cara Partners site extends to approximately 8.6 hectares and comprises:

- multiple production-related buildings;
- warehouses and storage areas;
- solvent tank farms;
- laboratory and quality control facilities;
- utilities buildings and infrastructure;
- an onsite biological wastewater treatment plant;
- associated plant and utilities infrastructure;
- internal roadways, hardstanding and parking areas; and
- ancillary administrative and welfare facilities.

2.5.2 Utilities, Wastewater and Emissions Control

The site includes:

- solvent storage and recovery systems designed to minimise solvent consumption and emissions of volatile organic compounds (VOCs);
- an onsite wastewater treatment plant treating process effluent prior to discharge in accordance with licence requirements;
- air emissions abatement systems associated with existing processes; and
- firewater retention and containment infrastructure.

All existing utilities and environmental control systems operate in compliance with the current IEL.

2.5.3 Church and Graveyard

As previously mentioned, the site includes an existing ruined church and associated graveyard. There is no new development proposed for this area of the site. Further details regarding this area of the site are included in Chapter 14.

2.6 Need for the Project

The proposed development is required to secure the long-term operational viability, regulatory compliance and strategic role of the Cara Partners facility at Little Island as a modern, resilient and future-ready pharmaceutical manufacturing site. The development represents a planned and targeted investment in the continued evolution of the existing facility, ensuring that manufacturing activities can be carried out in a manner that meets current and future regulatory, environmental and operational requirements.

The project involves the provision of modern, purpose-designed production and process-support infrastructure to replace and upgrade existing facilities, enabling the site to continue to operate in accordance with best-in-class Good Manufacturing Practice (GMP) standards, contemporary environmental performance expectations and high standards of occupational health and safety.

The proposed development builds on the established technical capability, operational expertise and infrastructure already in place at the Cara Partners site. By enhancing existing systems and utilities and improving the integration of production, abatement and support functions, the development will increase operational reliability, flexibility and efficiency while maintaining full compliance with applicable licensing and regulatory controls.

The integration of modern emissions abatement technologies, enhanced energy-efficiency measures and upgraded utility infrastructure will reduce environmental impact, improve resource efficiency and support the application of best available techniques (BAT). These measures will strengthen environmental performance across air, water and energy use, while supporting the site's long-term sustainability objectives.

In addition, the proposed development will play an important role in securing existing employment at the Cara Partners facility and supporting the creation of new high-value roles over time, reflecting the increased technical, operational and regulatory requirements associated with a modern pharmaceutical manufacturing environment.

Overall, the proposed development represents a long-term investment in the Cara Partners facility at Little Island, ensuring that the site remains a high-quality, compliant and environmentally responsible pharmaceutical manufacturing installation. The development will support the continued safe, efficient and sustainable operation of the facility over the long term, while maintaining high standards of product quality, GMP compliance and environmental stewardship.

2.7 Description of Existing Activity

The principal activity at the site is the manufacture of standardised *Ginkgo biloba* extract, classified as an active pharmaceutical ingredient (API). The extract is produced as a bulk dry powder, which is subsequently transported offsite for formulation into finished pharmaceutical or nutraceutical products.

At a high level, existing operations include:

- receipt, storage and preparation of raw botanical material;
- solvent-based extraction of active compounds;
- concentration, purification and standardisation of extracts;
- solvent recovery and reuse;
- drying and milling of final product;
- blending and packaging of bulk extract; and
- quality control testing and laboratory analysis.

These activities are supported by extensive utilities, solvent handling systems, wastewater treatment infrastructure and emissions control systems.

The site operates on a 24-hour, 7-day basis, subject to production requirements, and currently employs approximately 100-120 personnel.

Current Heavy Commercial Vehicle movements are approximately 5-6 movements per day.

2.8 Typical Process Operations

The operations in this section describe typical process operations generally in use onsite. Where relevant, it also describes additional and/or alternative process operations which may be considered as part of the detailed design of the proposed development.

In general, however, the proposed development (described further in section 2.9), from a manufacturing perspective, will comprise an expansion of the existing major unit processes.

2.8.1 Major Unit Processes

The following sections provide descriptions of typical process unit operations for the solvent-based processing of herbal extracts.

2.8.1.1 *Receipt and Storage of Raw Botanical Material*

Raw botanical materials are delivered to the site by road transport from approved and audited suppliers. On arrival, consignments are received into designated goods-in areas where deliveries are checked against accompanying documentation and visually inspected to confirm the integrity of packaging and the absence of obvious contamination or damage.

Materials are logged into the site inventory system and assigned batch identification numbers to ensure full traceability throughout the manufacturing process.

Following receipt, raw botanical materials are transferred to dedicated on-site storage warehouses prior to processing. Storage conditions are designed to preserve material quality and stability and to prevent degradation or contamination.

Measures are in place to control environmental conditions and materials are managed in accordance with quality management requirements.

Raw material storage areas are segregated from processing areas and are managed to maintain appropriate housekeeping and hygiene standards.

2.8.1.2 *Preparation and Milling of Raw Botanical Material*

Prior to extraction and as necessary, raw botanical materials undergo a series of preparation steps designed to ensure consistency and optimise extraction efficiency. This preparation stage may include drying (where required), inspection and controlled size reduction of the botanical material.

These operations are carried out in designated preparation areas using enclosed or contained equipment to minimise dust generation and material loss.

A key preparation step is the milling of the botanical leaf or raw material to achieve a defined particle size distribution suitable for solvent extraction. Milling improves solvent contact with the plant matrix and enhances mass transfer of the target compounds during extraction. Milling systems are operated under controlled conditions and incorporate dust management measures to protect both product quality and the working environment.

Prepared material may be temporarily stored in dedicated intermediate containers or silos before being transferred to the extraction stage. Alternatively, conveying systems are used to transport the prepared material for onward processing.

2.8.1.3 *Extraction and Separation*

Prepared botanical material is transferred from intermediate storage into enclosed extraction vessels, where it is contacted with a suitable solvent system, typically aqueous solutions of acetone, ethanol, methyl ethyl ketone or other solvent.

The extraction process is designed to selectively dissolve the target active constituents contained within the plant matrix while limiting the extraction of undesired components. Extraction parameters such as contact time, temperature and solvent ratio are controlled to ensure consistent performance and product quality.

Extraction is undertaken within sealed systems equipped with agitation and temperature control to promote efficient solvent penetration and mass transfer. Extraction may take place across a number of vessels sequentially or in parallel.

Following extraction, the liquid extract is separated from the spent botanical solids using a combination of filtration and/or centrifugation systems, depending on product requirements. This stage is designed to remove suspended solids and fine particulates, producing a clarified extract suitable for subsequent concentration and purification steps.

The exhausted plant solids are removed from the vessels and treated to remove residual solvents before transfer for appropriate off-site recovery or disposal as a defined waste or by-product stream.

These materials are temporarily stored in designated areas prior to removal from site by authorised waste contractors, in accordance with the site's waste management procedures and the requirements of the IEL.

2.8.1.4 *Concentration and Purification of Extract*

The clarified liquid extract undergoes concentration to reduce solvent volume and increase the concentration of active constituents. Concentration is typically achieved using evaporation systems operated under reduced pressure, which allows solvent removal at relatively low temperatures and minimises thermal degradation of heat-sensitive compounds.

Recovered solvent vapours are condensed and collected for reuse. The concentration stage significantly reduces the volume of material requiring further processing and improves the efficiency of downstream purification and drying operations. Concentration systems are fully enclosed and designed to minimise fugitive emissions.

Following concentration, additional purification or standardisation steps may be applied to adjust the chemical profile of the extract and ensure compliance with defined product specifications. These steps are product-dependent and may include selective precipitation, phase separation or adsorption-based techniques.

The purpose of this stage is to remove undesirable components, improve batch-to-batch consistency and achieve a standardised extract composition. Process controls and in-process testing are applied to verify that the extract meets the required quality criteria prior to drying.

2.8.1.5 *Solvent Recovery and Reuse*

Solvent recovery is a critical element of the existing manufacturing process and is integral to both environmental performance and operational efficiency. Where possible, solvents removed during concentration, purification and drying are recovered through condensation systems and returned to dedicated solvent storage tanks.

Recovered solvents are reused in subsequent extraction cycles wherever practicable. This closed-loop solvent management approach reduces overall solvent consumption, minimises waste generation and significantly reduces the potential for solvent-related emissions to air and water.

2.8.1.6 *Drying and Milling*

Once the extract has been concentrated, it is converted from a liquid or semi-solid form into a dry powder. Drying is typically carried out using belt drying or equivalent thermal drying technologies, selected to produce a stable product with controlled moisture content and particle characteristics.

Drying systems are enclosed and equipped with appropriate air handling and dust control measures. The resulting dry extract powder is collected in dedicated containers and transferred to downstream processing areas for further handling.

Following drying, the extract powder may undergo milling, screening or sieving to achieve the required particle size distribution. This step ensures consistency of the final product and facilitates efficient downstream handling, blending (standardisation) and packaging.

Milling operations are conducted in contained systems to minimise dust emissions and prevent cross-contamination. Finished material is transferred to intermediate storage containers pending blending (standardisation) or packaging or the material may be directed for packaging directly.

2.8.1.7 *Blending and Packaging*

Where required, dried extracts are blended to achieve final batch standardisation targets. Blending may involve combining multiple production batches or incorporating inert carriers to ensure uniformity of active constituent concentration.

Blending operations are carried out in controlled environments using dedicated equipment designed to ensure homogeneity and traceability. This stage represents the final adjustment of product characteristics prior to packaging.

Following blending, the finished extract is packaged in bulk containers suitable for transport and downstream formulation. Packaging systems are designed to protect product integrity and prevent contamination during handling and transport.

Each packaged batch is labelled and documented to maintain full traceability through the supply chain. Finished products are stored temporarily in designated dispatch areas before being transported offsite by approved logistics providers.

2.8.2 *Ancillary and Support Functions*

2.8.2.1 *Raw Materials, Solvent and Chemical Storage*

Other than where detailed previously, all materials, solvents and chemicals are appropriately stored in dedicated storage areas. Bulk solvent storage is located in dedicated bunded solvent tank farms.

Smaller chemical storage locations can include fixed and mobile bunding solutions which are designed to collect and retain the greater of either: 110% of the volume of the largest vessel located within the bund; or 25% of the total volume of the materials stored within the bund.

2.8.2.2 *Heat Recovery*

At various stages in the process, significant energy efficiency measures are introduced. The primary application is through the use of heat exchangers to capture waste heat of certain streams which is then used elsewhere in the process.

2.8.2.3 *Major Utilities*

Process and Potable Water

Water for use in the process is provided from the municipal potable supply network. The current demand is relatively modest at c. 180 m³/day. It is anticipated that the proposed development will see abstraction rise to 260 m³/d and there is sufficient capacity in the municipal network to facilitate this increase. See Chapter 13 – Material Assets for further details.

Potable water will be used onsite for domestic purposes and welfare facilities.

The relevant Water Supply Zone (WSZ) within which services the municipal network is the Cork Harbour and City WSZ. The raw water for Inniscarra Water Treatment Plant (WTP) is abstracted from the River Lee at Inniscarra Reservoir. The plant has a current average daily production of c. 64,000 m³/d.

Firefighting Water

Firefighting water supplying a hydrant ring main is supplied via a dedicated firefighting supply tank.

Heat and Fuel

Natural gas is the main fuel source onsite for the steam boilers with a typical peak production usage of c. 1.9 million m³/yr (equivalent to c. 20.9 million kWh). This is anticipated to rise to a maximum of c. 3.9 million m³/yr (equivalent to c. 30 million kWh) upon installation of the proposed natural-gas fired Combined Heat and Power (CHP) system with associated waste heat recovery.

The proposed natural-gas fired Combined Heat and Power (CHP) plant with waste heat recovery will replace some of the thermal demand estimated at c. 14.4 million kWh_{TH} (assuming 6,240 hours/yr operation).

A minor amount of LPG and other fuels is used to forklifts and the emergency fire pumping equipment.

There is no significant change proposed to this volume consequent to the proposed development.

Electricity

Current electrical consumption is c. 8.5 million kWh. The proposed development estimates a future electrical demand of up to c. 12.2 million kWh.

The proposed CHP system will be capable of providing the bulk of the required future electrical demand assuming 6,240 hours/yr operation).

Telecommunications

The site is serviced with respect to telecommunications lines for telephone and broadband services and the proposed development can be accommodated within the existing service infrastructure.

2.8.2.4 Drainage Networks

There are existing extensive site drainage networks in place.

During the operational phase, the site generates three distinct aqueous streams. These streams are:

- Surface water/stormwater runoff
- Sanitary/foul wastewater
- Process effluent

Further details are provided in Chapter 8 – Water Quality and Aqueous Emissions.

2.8.2.5 Stormwater Management

The existing surface water drainage system consists primarily of an underground network of gravity fed pipes serviced by downpipes and surface gullies.

The system collects rainwater run-off from internal access roads, carparking areas, hardstanding areas and roof areas not designated as 'at-risk'. There are some temporary car parking/compound areas and access roads which are gravelled and are percolating to ground.

The stormwater system drains to the firewater retention area to the northeast of the main site whereupon the stormwater passes through a Class 1 Full Retention Separator prior to discharge to the tidal areas proximal to the Dunkettle Interchange which form part of the Lough Mahon waterbody.

In normal operation the network conveys clean, uncontaminated stormwater to the discharge point via a hydrobrake and through the existing Class 1 Full Retention Separator.

In the event of a fire or spillage, the stormwater discharge from the site will cease and all runoff will be diverted to the purpose-built firewater retention pond.

Diversion to the retention pond is triggered by:

- A verified fire alarm; or
- Exceedance of trigger level values of pH and/or TOC (in the case of a significant spillage).

In the event of an incident requiring the retention and isolation of contaminated material, no such material will be removed offsite until appropriate engagement with relevant stakeholders has been completed such as CCC, EPA, Uisce Éireann etc.

Further details are provided in Chapter 8 – Water Quality and Aqueous Emissions.

2.8.2.6 Pest and Rodent Control

Due to the nature of the raw material, there is a substantial pest, vermin and rodent control programme implemented by suitably qualified contractor on the site. All control measures are as per best industrial practice.

2.8.3 Air Abatement Technologies

Carbon Adsorption Units

There is an existing dual Carbon Adsorption Unit (CAU) system in place which is used to capture volatile organic compounds (VOCs) from process exhaust air before it is discharged to atmosphere. These VOCs typically arise from solvent use during extraction, concentration, drying or solvent recovery operations associated with manufacturing operations onsite. The system operates on the principle of adsorption of solvent molecules on granular activated carbon (GAC) when the exhaust air is filtered through the GAC media. When saturated, the media is replaced and the spent carbon media is disposed of appropriately.

It is noted that a significant aspect of the proposed development is replacement of the existing CAU system with a Regenerative Thermal Oxidiser (RTO) system.

Filtration

There are also a number of filter abatement systems employed onsite to reduce the discharge of particulate matter to air.

Other Considerations

Where applicable, additional abatement technologies such as use of low-NO_x burners are employed onsite on applicable combustion equipment.

All air abatement measures employed onsite are subject to the control of the existing IEL.

2.8.4 Wastewater Management

Process wastewater arising from manufacturing activities are collected by gravity via a segregated drainage network and directed to the onsite wastewater treatment plant (WWTP). The WWTP provides biological and physico-chemical treatment prior to discharge to the municipal Uisce Éireann network for ultimate treatment at Carrigrennan Municipal WWTP (MWWTP).

The onsite WWTP comprises the following principal unit processes:

- Balancing (via 2no. balance tanks c. 240 m³ total balancing capacity) and neutralisation
- Activated sludge plant (c. 720 m³) with both surface aeration and local venturi aeration

- Traditional clarifier (6.5m diameter) for solids separation
- Sludge dewatering via a dedicated belt press

Foul wastewater is also managed at the WWTP.

Treated wastewater is controlled via the existing site IEL and associated Emission Limit Values (ELVs), see Figure 2-3 below.

The proposed development includes significant upgrades to the infrastructure at the WWTP but it is noted that it is not proposed to amend the existing IEL ELVs.

B.3 Emission to Sewer		
Emission Point Reference No.:	DP 001	
Name of Receiving Waters:	Lough Mahon following treatment in Carrigrennan WWTP	
Location:		
Volume to be emitted:	Maximum in any one day:	240 m ³
	Maximum rate per hour:	17 m ³
Parameter	Emission Limit Value	
Temperature	30°C (max.)	
pH	6.0 – 9.0	
	mg/l	kg/day
BOD	400	66
COD	800	130
Suspended Solids	600	60
Sulphate (as SO ₄)	1000	--
Total Nitrogen (as N)	200	--
Ammonia (as N)	40	--
Total Phosphorus (as P)	50	--
Detergents (as MBAS)	10	--
Lead (as Pb)	0.5	0.1
Zinc (as Zn)	0.5	0.1
Fats, Oils & Grease	20	--

Figure 2-3 Cara Partners wastewater discharge ELVs (as per Schedule B.3 of P0017-02 as amended).

Further details are provided in Chapter 8 – Water Quality and Aqueous Emissions.

2.8.4.1 Lead Acetate Process

There is currently a specific process stream (which operates infrequently) which includes the use of lead compounds. Accordingly, there is specific process infrastructure in place to manage and

segregate process wastewater which has significant lead material. This segregated lead waste is removed offsite by an appropriate permitted contractor to an appropriately permitted facility.

It is noted that the proposed development includes the removal of this lead process from site operations.

2.8.5 Laboratory Support

There is an onsite laboratory to support manufacturing operations.

2.8.6 Maintenance, Storage and Workshops

There are a number of maintenance and warehouse/stores locations providing support to site operations.

2.8.7 Administration

There are several administrative offices throughout the site and are generally proximal to their relevant support functions however the bulk of the administration support is located in 2no. administration buildings located to the north of the site (proximal to the site entrance).

2.9 Overview of the Proposed Development

2.9.1 General Characteristics of the Proposed Development

The proposed development comprises various elements to be developed on a phased basis over a period of ten years. A proposed site layout drawing is presented in Figure 2-2 (Drg. Ref. 5340-PLA-XXX-DR-DJF-AR-0010).

- 1) **Unit 1 Production Building** – Construction of a replacement, multi-storey Unit 1 Production building approx. 34m L x 23m W x 26m H (approx. 3,000m²).
- 2) **In Process Tank Farm Bund** – Modifications to the existing 'In Process Tank Farm' bund and ancillary plant and services related to same including pipe racks.
- 3) **Laboratory Gas Bottle Store** – Construction of a new Laboratory Gas Bottle Store approx. 4m L x 2m W x 4m H and ancillary plant and services related to same including pipe racks.
- 4) **Regenerative Thermal Oxidiser** – Provision of a new Regenerative Thermal Oxidiser, associated exhaust stack (approx. 10mAGL) and ancillary plant and services related to same including pipe racks.
- 5) **Process Cooling** – Provision of 1no. process cooling tower (approx. 5mAGL) to be installed to provide additional cooling for manufacturing processes and ancillary plant and services related to same including pipe racks.
- 6) **Combined Heat and Power Plant and Heat Recovery System** – addition of a new natural-gas fired containerised combined heat and power (CHP) plant (approx. 6 MW_{TH} Total Rated Thermal Input) and associated containerised waste heat boiler system with exhaust stack approx. 13mAGL and ancillary plant, kiosks and services related to same including pipe racks.
- 7) **Ethanol Storage Tank** – addition of a new ethanol storage tank (2.4m diameter x 7m H) in existing solvent tank farm bund and ancillary plant and services related to same including pipe racks.
- 8) **Car Park** – extension to existing car park including associated lighting to provide a net increase of additional 67no. permanent car parking spaces.
- 9) **Wastewater Treatment Plant (WWTP) Control and Blower Building** - Single storey building associated with WWTP expansion, approx. 11m L x 10m W x 4m H (approx. 90m²); and ancillary plant and services related to same including pipe racks.
- 10) **WWTP Chemical storage tanks and bund** – new concrete base and bund (approx. 45m²) with tanks approx. 3.5m H and ancillary plant and services related to same including pipe racks.
- 11) **WWTP Inlet works** – new screens, tanks up to approx. 9m H and ancillary plant and services related to same including pipe racks

- 12) **WWTP Dissolved Air Flotation tank** – new tank approx. 5m L x 2m W x 4m H and ancillary plant and services related to same including pipe racks.
- 13) **Site Works** – All associated site services, site development works and landscaping to facilitate the proposed development.

2.9.2 Specific Characteristics of the Proposed Development

Specific details of the phase of proposed development are available in the drawings and other reports submitted with the planning application and should be read in conjunction with this EIAR.

A high-level summary of some of the principal elements of the of the proposed development is detailed below.

Where relevant, additional specific characteristics relevant to a specific environmental aspect are addressed in individual chapters elsewhere in this EIAR.

2.9.2.1 Unit 1 Production Building

The bulk of the 'new' elements of construction of the proposed development comprises a new multistorey 'Unit 1 Production Building' which will house new multiproduct processing capabilities and a new laboratory space on the top floor.

The proposed development seeks to elevate the architectural quality and visual coherence of the site while aligning with the broader industrial context. The design reflects a thoughtful response to both the fragmented nature of the existing site and the more unified, modern aesthetic of neighbouring developments.

The proposed building introduces a refined and unified architectural language, drawing inspiration from both internal site improvements (e.g., Unit 2) and external contextual cues. Key elements of the design include:

- Two-Tone Grey Cladding
- Curtain Wall Glazing System
- Horizontal Cladding Lines
- Material Quality
- Scale and Massing Consideration
- Branding Integration

The cladding system proposed is the PAROC AST E Panel system which provides the planning expectations and technical performance requirements in terms of durability, fire safety and structural efficiency.

The design prioritises visual integration with the surrounding landscape and built environment. The use of grey tones aligns with the prevailing aesthetic of neighbouring developments, while the restrained material palette and clean lines ensure the building complements rather than competes with its context.

2.9.2.2 Multiproduct Processing

As detailed above in section 2.8, the existing development facilitates the extraction and purification of the *Ginkgo biloba* extract from the parent botanical raw material.

The proposed development will expand this general extraction process approach to other extracts currently completed elsewhere in the Schwabe Group network along with facilitating the future development of other extracts from other raw materials (if required).

The proposed design will comply with current Good Manufacturing Practice (cGMP) requirements for the manufacture and sale of Active Pharmaceutical Ingredients (APIs).

The major unit processes detailed previously are still applicable to the proposed development and the new production processes facilitate new production as follows:

- Train No. 1
 - Production of *Aesculus* powder product via ethanol-based extraction
 - Production of *Crataegus* liquid/powder product via ethanol-based extraction
 - Production of *Hypercium* powder product via methanol-based extraction
 - Production of *Passiflora* liquid product via ethanol-based extraction
- Train No. 2
 - Production of *Pelargonium* powder product via ethanol-based extraction/maceration

New plant and equipment will be required including but not limited to: tanks; vessels; macerators; condensers; filters; dryers; mills; and ancillary pipework and fittings.

Raw material generally comes in bales or large bags of leaf and is unwrapped, shredded, passes through a sifter to remove debris, stones etc. All raw material is milled to pre-defined particles size and fed to the first contact tank in the extraction train.

Train No. 1 will extract the active pharmaceutical ingredient from the herbal plant leaf by contacting it with a heated solvent to typically 50 to 60°C, where the API present in the leaf is extracted into the solvent. After extraction the spent leaf is removed via decanter and dried to remove trace solvent. The solvent containing the API is then concentrated in a forced circulation evaporator where solvent is removed to very low levels typically <3%. After this step some products are transferred into IBCs and go to the warehouse for liquid products. Excipients may be added where necessary inc. glycerol, propylene glycol and L-ascorbic acid. An example process flow diagram (PFD) is provided in Figure 2-4.

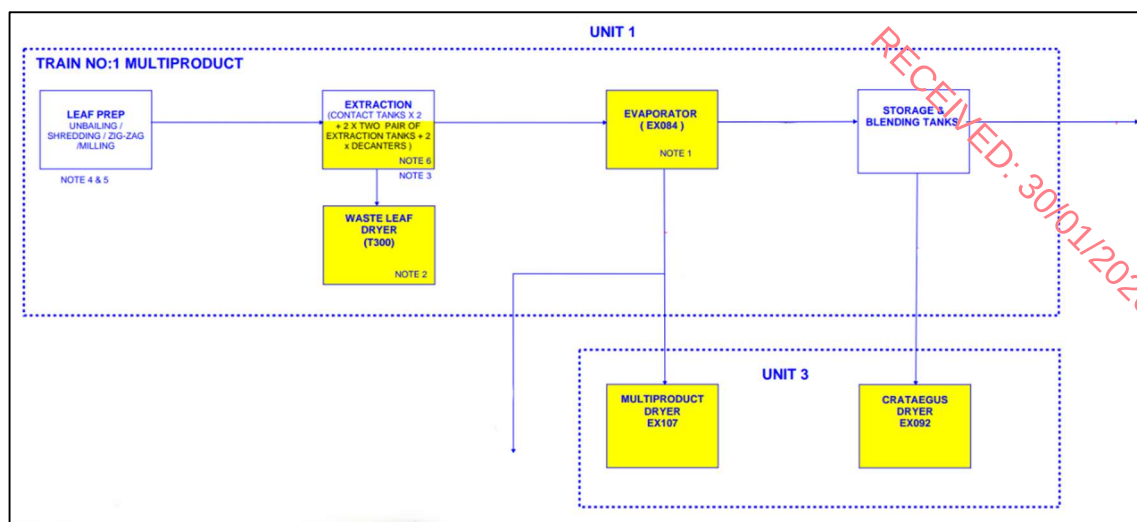


Figure 2-4 Example Train No.1 process flow diagram (PFD).

Train No. 2 will produce a *Pelargonium* powder product. The pelargonium flower is milled and added to a silo. From the silo it is transferred into a macerator which has a mesh screen on the base so that the pelargonium cannot pass through the mesh. Ethanol is added to the macerator at ambient temperature and a number of maceration and extraction cycles are completed. After the solvent maceration steps are completed, the solvent containing the API is sent to an evaporator where the solvent is removed from the API. The base of the macerator opens and the spent pelargonium remaining in the macerator is discharged into a waste bin. Depending on the variant required, the processing steps can vary to include addition of other materials including ethanol, maltodextrin etc.

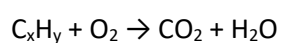
Where required, new/existing drying trains will be utilised to produce the final product and packaging may be completed within the Unit 1 building or elsewhere onsite (e.g. in Unit 3).

Operations in the new Unit 1 building will generally follow a 24 hour/5 day per week shift pattern however the site will continue to be considered as a 24/7 operation to facilitate all activities onsite.

2.9.2.3 Regenerative Thermal Oxidiser

As noted in section 2.8.3, the existing CAU system will be fully replaced by a new Regenerative Thermal Oxidiser (RTO).

The operating principle of an RTO is the principle of oxidation with regenerative exhaust air preheating, where the hydrocarbons (mainly VOCs) are oxidised at temperatures of approx. 800 °C to 900 °C. Here, the hydrocarbons are converted, using the existing atmospheric oxygen, to carbon dioxide and water vapor according to the following general reaction equation:



The products of this reaction can be discharged to the environment without further measures.

To operate this process in the most energy-efficient way, RTOs are equipped with a regenerative heat exchanger for preheating the exhaust air internally. It consists of special ceramic honeycombs and/or ceramic saddles and is characterised by a very high heat storage capacity, a large heat transfer surface and thus a particularly high thermal efficiency.

The treated waste gas is then exhausted to a stack c. 10 mAGL.

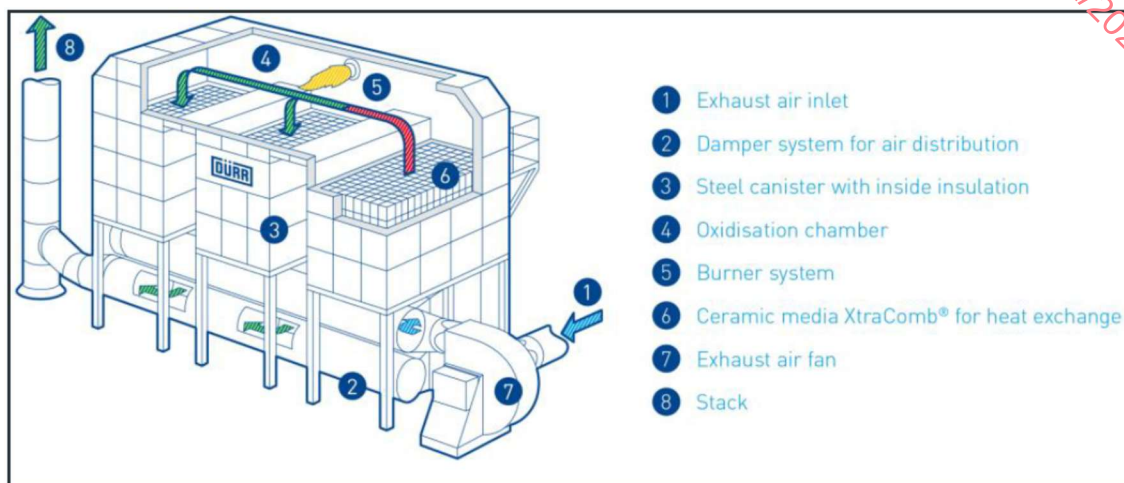


Figure 2-5 Example of typical RTO arrangement (this example Dürr RTO Oxi.X RA) © Dürr GmbH.

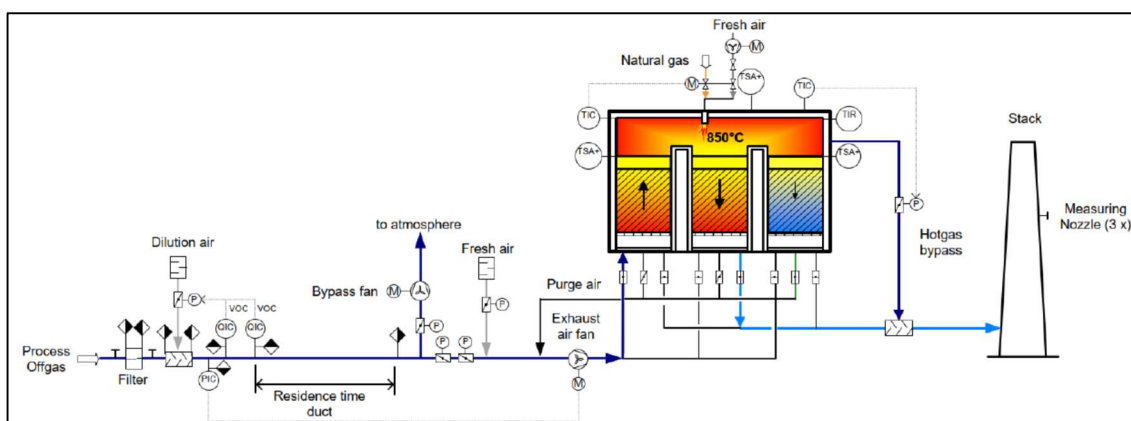


Figure 2-6 Example of typical RTO process flow diagram (this example Dürr RTO Oxi.X RA) © Dürr GmbH.

This approach is compliant with Best Available Techniques.

It is noted that the existing CAU system may be retained until the RTO system is fully commissioned and operational.

Emissions from the proposed RTO are considered further in Chapter 06 – Air Quality and Odour.

2.9.2.4 Combined Heat and Power Plant

In order to secure the energy requirements for the existing and proposed development, a new containerised c. 5.965 MW_{TH} Combined Heat and Power (CHP) plant is proposed which will provide electrical power as well as recovering energy with the production of steam and low pressure hot water via a Heat Recovery Steam Generator (HRSG) system with an economiser.

Key parameters of the proposed system include (assuming a maximum operating profile of 6,240 run hours/year at 100% load):

- Natural gas fired generator: c. 3.9 million Nm³ gas/yr consumption
- Electrical generation: c. 16,704 MW_Ehr annually
- Heat generation: c. 14,427 MW_{TH}hr annually
 - Includes steam (4,545 kW_{TH}) and LPHW (c. 9,883 kW_{TH})
- Steam generation: c. 1,065 kg/hr at 8 barg
- Hot water generation: c. 95.4 m³/hr

The exhaust stack will be c. 13 mAGL.

There will be necessary ancillary utility supports installed to facilitate the introduction of the new CHP.

Emissions from the proposed CHP are considered further in Chapter 06 – Air Quality and Odour.

2.9.2.5 WWTP Upgrades

As referenced in section 2.8.4, there is an existing WWTP onsite performing within the current IEL discharge envelope (see Figure 2-3).

The main design principles adopted for the proposed development were:

- To focus on leveraging existing assets onsite and reuse/repurpose them where possible so as to utilise existing infrastructure as sustainably as possible.
- To increase biological treatment capacity within the existing site asset footprint.
- To increase the efficiencies of the existing aeration system and in the sludge management system.
- To mitigate against a requirement for increasing the current licensed discharge envelope from the site.

The proposed design will be able to increase from max. daily influent to WWTP from c. 300 m³/d to 400 m³/d along with a weekly Chemical Oxygen Demand (COD) influent load increasing from c. 1,600 kg COD/d to c. 2,000 kg/d within the current licensed discharge envelope.

The proposed development can be accommodated within the existing discharge envelope subject to a number of phased upgrades summarised as follows:

- New Inlet Works
 - Repurposing of existing Balance Tank to become combination inlet sump and balance tank.
 - Installation of new 2mm automatic screening unit.
 - Installation of new 0.2mm microscreen unit.
 - New duty/standby inlet forward feed pumps.
- Repurposed Main Balance Tank
 - Repurposing of spare tank onsite to become new converted balance tank (c. 430 m³).

- New chemical dosing/neutralisation.
- New duty/standby jet mixer for balance tank.
- New duty/standby balance tank forward feed pumps.
- Reconfiguration Biological Treatment
 - Replace existing inefficient surface aerators with fine bubble diffusion system (FBD) and high efficiency blowers.
- New Solids Separation
 - Replacement of existing traditional clarifier with new Dissolved Air Flotation (DAF) unit permitting a higher concentration of MLSS in the system.
 - New duty/standby forward feed pumps.
 - New duty/standby sludge pumps.
- New Sludge Management
 - Replacement of existing belt press with more efficient screw press.
- New Blower Building
 - New blower building to house new duty/assist/standby blowers, MCC and facilitate an upgrade of the PLC and SCADA.
- Ancillary
 - Reconfiguration of foul/sanitary wastewater management at WWTP.
 - All necessary pipework, racks etc. to support the above.

Further details related to the WWTP and associated emissions from the WWTP are considered further in Chapter 08 – Water Quality and Aqueous Emissions.

2.9.2.6 *Drainage*

The existing site drainage networks will continue to be utilised as described previously in sections 2.8.2.4 and 2.8.2.5. The existing site drainage networks have capacity to accommodate the proposed development.

Where necessary, tie-ins to these existing networks will be completed in accordance with building and regulatory requirements.

In line with Sustainable Drainage Systems (SuDS) design requirements and as per the Cork County Development Plan, where appropriate, a permeable pavement system is proposed for the car park extension. This permeable paving design will incorporate a geotextile membrane to mitigate the impact of hydrocarbon pollutants on the subsurface environment.

Further details related to the site drainage are considered further in Chapter 08 – Water Quality and Aqueous Emissions.

2.9.2.7 *Ancillary Utility Support*

Appropriate utility support including HVAC, cooling water, chilled water, compressed air and nitrogen will be provided to support the proposed development.

Steam and hot water will be provided by a combination of either or both of: the existing boilers operating in duty/standby or duty/duty configuration; and/or the new CHP system with waste heat recovery.

2.9.2.8 Traffic and Transportation

The proposed development foresees an increase in site staffing of c. 40-50%.

Car Parking

The total gross floor area classifications of the existing and proposed development onsite are summarised in Table 2-1.

Table 2-1 Existing and proposed gross floor area classifications and associated permitted car park provision at Cara Partners site.

Location	Total GFA (m ²)	Car Parking Provision ^{Note 1}	Total Spaces Permitted as per CDP
Office	2,731	1 space per 17 m ² (+10% for visitors)	161 + 16 = 177
Industrial	7,383	1 space per 50 m ²	148
Warehouse	3,939	1 space per 100 m ²	39
Total			364
Note 1: As per parking standards in Table 12.6 of Cork County Development Plan 2022.			

The total proposed car parking capacity post development will be 158 spaces which is significantly less than the provision provided for within the Cork CDP 2022.

Further details related to the traffic and transportation are considered further in Chapter 12 – Traffic and Transportation.

Site Access

Site access will be provided via the existing access route to the site.

For the construction phase, appropriate traffic management solutions will be implemented to ensure interference with existing operations is mitigated and alternative construction entrances are proposed via existing access gates which are not used for normal operations.

Heavy Commercial Vehicles

Heavy Commercial Vehicle movements are expected to increase from c. 5-6 movements per day to 8-9 movements per day.

2.9.2.9 Landscaping

The existing landscaping arrangements will generally be maintained onsite and the existing boundary treatments will remain *in situ*.

The proposed development includes for the supplementary planting of the southern boundary with native species as well as the introduction of a c. 0.45 km Slí na Sláinte footpath for employees through the existing woodland area.

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2.10 Construction Phase Overview

This section details the construction works required for the proposed facility and indicates the mitigation measures to be implemented to ensure that potential environmental impacts are minimised. Each chapter of the EIAR details specific mitigation measures to be implemented relative to the environmental aspect being assessed.

The final details on how construction will be undertaken will be a decision for the appointed contractor(s). It is, therefore, envisaged that there will be some flexibility in the methods of construction to be used, subject at all times to compliance with the provisions of this EIAR and related statutory approvals. As part of the contract requirements all construction contractors employed will be obliged to implement high standards of site management in order to maintain a safe working environment and to minimise possible environmental impacts.

In the light of this, the likely construction methods are discussed below, and the impacts of these construction methods are assessed in the relevant sections of the EIAR.

The construction approach to the proposed development is discussed under the following headings:

- Duration and Phasing
- Site Preparation and Pre-construction Activities
- Construction Plant
- Construction Employment
- Construction Hours
- Construction Techniques and Standards
- Materials
- Pipe/Drainage Works
- Waste Management
- Fencing and Security
- Temporary Environmental Protection Measures

2.10.1 Duration and Phasing

Construction of the proposed development will take place on a phased basis over a ten-year period beginning in 2026 in order to meet Cara's target objectives.

The specific timing of the commencement of each phase and/or individual elements therein will be subject to business requirements and associated resource availability.

Where relevant in this EIAR, the impacts related to the most significant construction phase have been assessed (e.g. period of maximum estimated construction traffic etc.).

2.10.1.1 Indicative Phasing Timeline

An indicative, high-level timeline has been developed which outlines how the phased construction of the proposed development may progress.

All elements outlined below may be subject to change.

Phase	Start
Unit 1 Site set up & enabling works	Q3 2026
Unit 1 Production Building construction	Q3 2026
External Plant & Equipment including In Process Tank Farm, Laboratory Gas Bottle Store, Regenerative Thermal Oxidiser, Process Cooling, CHP & other external plant & equipment associated with Unit 1	Q2 2027
Car Park Upgrade	Q2 2028
WWTP Upgrade including WWTP building construction	Q1 2032

Where necessary, individual elements (or subparts) may commence earlier as required (e.g. phased upgrade of some WWTP infrastructure etc.).

Given the nature of the proposed development, it is noted that various elements within a given construction phase may not be completed before the next phase of construction commences.

2.10.2 Site Preparation and Pre-construction Activities

Site preparation works will be required in order to facilitate the development. Such works will involve site clearance and excavation works.

These preparation works may be summarised as follows:

- Hoarding and fencing to the construction areas and site compound
- Bulk excavations for proposed construction
- Temporary access roads within the site

This stage of the works will also include the establishment of the site facilities which will be housed in the Contractors facilities on site.

These facilities include:

- Site Offices
- Site Facilities (canteen, toilets, drying rooms etc.)
- Offices for Construction Management teams
- Secure compound for the storage of all on site machinery and materials.
- Fabrication areas and workshops
- Temporary vehicle parking
- Wheel-washing facilities for vehicles leaving the site

2.10.3 Construction Plant

Equipment to be used during the construction of the facility will be typical of a project of this scale. In general, the following machinery will be used:

- Tracked backhoe excavators
- Cranes
- Dumper trucks
- Wheeled excavators
- Mobile cranes
- Teleporters
- Delivery vehicles for concrete and materials
- Light vans

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2.10.3.1 Traffic and Access

Vehicle movements during the construction phase will consist of HGVs (delivering material and equipment to site) and light vehicles/cars used by construction personnel and site visitors. Temporary construction of specific vehicular parking facilities will be provided onsite during the construction phase. A temporary construction car parking area will be provided on-site to accommodate construction worker vehicles for the duration of the works.

Access to the Cara Partners facility is via the IDA Estate Road which connects to the R623.

Primary site access for construction plant and material deliveries will be via the existing western gate to the site.

Construction personnel travelling by car or van to the site will enter via the main plant entrance or via an existing gate on the eastern side of the site

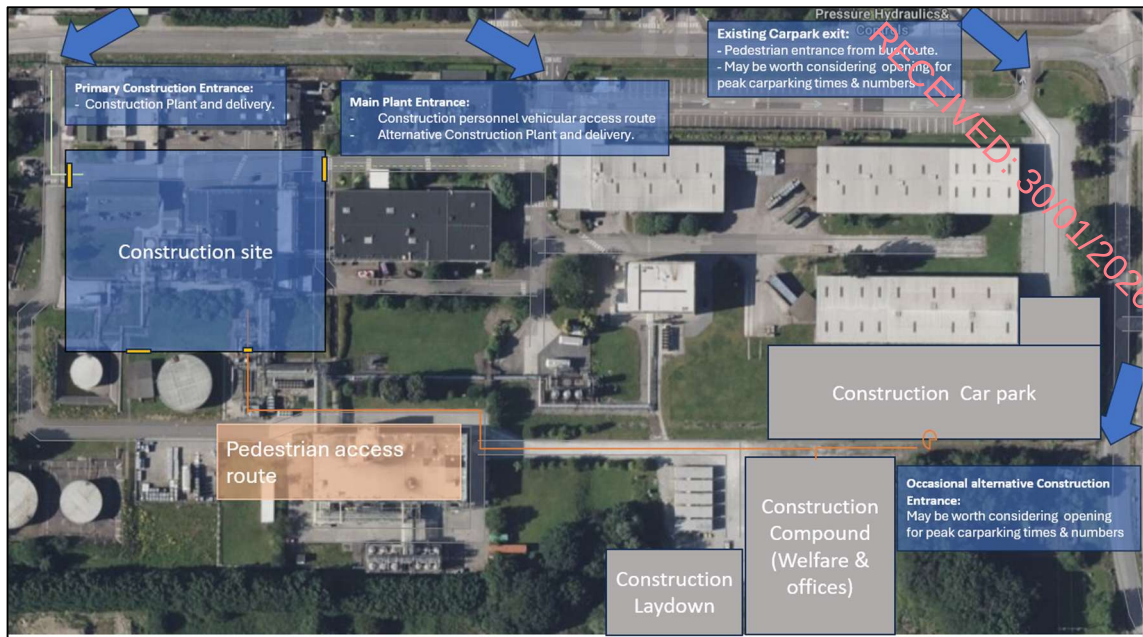


Figure 2-7 Proposed site construction access arrangements.

Further details on traffic associated with the construction of the proposed development are provided in Chapter 12 - Traffic and Transportation.

2.10.4 Construction Employment

Employment levels across the project will vary depending on the construction programme and the extent of activities occurring on the site. It is expected that during peak activities, there will be approximately 350 – 450 skilled and unskilled persons working directly on the construction site. It is anticipated that a significant number of this workforce will be employed from local areas.

2.10.5 Construction Accommodation/Facilities

The relevant statutory requirements will be provided for all workers on the construction site including where required:

- Canteen facilities and drinking water supply
- Toilet, wash up and locker facilities and hot water
- Drying room
- Car parking for workforce
- First Aid Office
- Site & construction management team offices
- Site offices for contractors
- Security huts
- Secure site compounds

2.10.6 Construction Hours

The site construction working hours will be confined to between 08:00-20:00 hours Monday to Friday, 08:00-18:00 Saturday, inclusive (excluding public holidays and Sundays).

Working hours may vary slightly depending on weather conditions and daylight hours during winter months. Heavy construction activities will be avoided where possible outside the normal working hours outlined above.

2.10.7 Construction Techniques and Standards

The design and construction of the civil works will be to the standards applied in the Irish construction industry. The work will be fit for the purpose intended and comply with any requirements of a competent authority, Irish standards or Irish standard codes of practices.

Health and safety procedures/protocols adopted will be carried out in accordance with current National and EU Regulations (as amended), principally; the *Safety Health and Welfare at Work (Construction) Regulations 2013 (S.I. No. 291 of 2013)* (as amended), the *Safety Health and Welfare at Work (Work at Height) Regulations 2006 (S.I. No. 318 of 2006)* (as amended), the *Safety Health and Welfare at Work (Control of Vibrations at Work) Regulations 2006 (S.I. No. 370 of 2006)* (as amended), the *Safety Health and Welfare at Work (Control of Noise at Work) Regulations 2006 (S.I. No. 371 of 2006)* (as amended) and the provisions of the *Safety, Health and Welfare Act, 2005* (as amended). All applicable Third-Party safety guidelines will also be considered.

Where necessary, specialist construction techniques will be used, particular in relation to works in and around the protected structures onsite.

Noise and vibration will be managed in accordance with the details provided in the Outline CEMP and as detailed in Chapter 07 – Noise and Vibration.

2.10.7.1 Rock Breaking

Localised rock excavation will be required to achieve design formation levels across parts of the site. Where encountered, rock will primarily be removed using mechanical breaking methods such as hydraulic peckers attached to tracked excavators. This approach minimises vibration, noise and fly-rock risk compared with other techniques.

Rock breaking works are expected to occur intermittently over a 2-3 week period, depending on ground conditions, and will be undertaken during standard construction hours.

Where practicable, alternative excavation methods such as ripping will be used to reduce vibration impacts.

An estimate of 224 m³ (560 tonnes) of broken rock will be excavated during the construction phase. The resulting broken rock will be reused on site where suitable or removed to an appropriately licensed facility.

2.10.7.2 Piling

Piling is not envisaged to be required.

2.10.8 Materials

In so far as possible, construction materials will be from local sources. All imported material that will be used on site will be from approved sources. Where possible and subject to appropriate assessment, materials will be reused onsite.

2.10.9 Waste Management

During the construction phase both solid and liquid waste will be produced at the facility. Minor quantities of liquid waste will be produced during the construction phase of the facility. Waste oils, solvents and paints will be stored in a temporary bunded area prior to transport off site by a licensed contractor. During the construction phase domestic effluent generated onsite will discharge to temporary sewage containment facilities (holding tanks) prior to transport and treatment off site by an Authorised contractor. Where possible, welfare facilities may also be temporarily connected to the existing foul sewage network.

It is envisaged that any spoil materials arising from the construction, excavated soil and rock which cannot be reused onsite will be removed from site to appropriate licensed facilities by an appropriately licensed contractor. All solid waste generated during the construction phase will be adequately stored prior to transfer to an authorised facility for recovery/recycling/disposal.

See Chapter 9 – Soils, Geology and Hydrogeology and Chapter 15 – Waste Management for further details of mitigation measures.

See Appendix 2-B for further details.

2.10.10 Fencing and Security

All of the works will take place within a secure site. The construction site, including compound and temporary contractors' facilities will be fenced off for health and safety reasons to restrict unauthorised entry as is reasonably practicable unless natural boundaries do so exist as to render temporary fencing unnecessary. During the construction phase appropriate temporary fencing will be erected to define and secure the extent of construction site.

2.10.11 Temporary Environmental Protection Measures

An outline Construction Environmental Management Plan (CEMP) is attached as Appendix 2-B. The final CEMP will take into account the mitigation measures referenced in the EIAR and any additional requirements imposed by the Planning Authority. Measures include:

- During the construction stage site construction roads will be sprayed with water during dry periods to mitigate against the formation of dry dust particles.
- The movement of excavated materials on site may lead to the formation of airborne dust particles during dry weather periods. Where required, water suppressants will be used during these dry weather conditions.
- Where temporary stockpiles are required the material will be stored in designated areas and will be covered with tarpaulins or regularly dampened during dry weather periods.
- During the construction phase of the development, oil and fuel storage tanks, chemicals and all other materials that pose a risk to waters if spilled, will be stored in designated storage areas, which will be bunded to a volume of 110% of the capacity of the largest tank/container within the bunded area(s). Filling and draw-off points will be located entirely within the bunded area(s). Drainage from the bunded area(s) will be diverted for collection and safe disposal. Bunded pallets will be used for storage of drums.
- No washing-out of concrete trucks will be allowed on site.
- Where necessary, to ensure the protection of the trees, tree protection fences will be installed at the start of the works. The fences, which will typically be temporary Harris fences on self-supporting pads, will prevent construction equipment from operating beyond the fence line and protect the trees adjacent to the works.

2.11 Commissioning Phase Overview

Section 3.5.4 of the revised EPA Guidelines require EIAR's to provide a description of commissioning if the proposed project is not substantially operational in the period immediately following construction.

In the case of the proposed development, while there will be a short initial period of testing, calibration and certification it is anticipated that the expanded plant will be operational as soon as possible post-construction. The potential impacts and mitigation measures outlined in this EIAR in relation to the Construction Phase and Operational Phase of the proposed development are more than adequate to cover any commissioning operations that may be conducted onsite. Therefore, a distinct Commissioning Phase is not considered any further for the proposed development.

2.12 Operational Phase Overview

Details of the characteristics of the proposed development have been provided in section 2.9.

The development has been designed to maximise containment, minimise the potential for accidental spillages and provide collection systems in the event of incidents.

Fire and smoke prevention, detection and suppression measures will be incorporated into the detailed design of the proposed development as required.

In addition, Cara Partners has an Emergency Response Plan in place which sets out information on employees' responsibilities, as well as fire, evacuation and emergency procedures for the existing site and will be updated to account for the proposed development.

2.12.1 Manufacturing Operations

The proposed development will not significantly alter the existing operational characteristics and profile of the site as detailed in section 2.8. The operation of new infrastructural elements will be accommodated within new and/or revised SOPs as appropriate. All operators will be appropriately trained in the operation of the relevant infrastructure.

The site will remain a secure site and only authorised personnel will be allowed access to the site.

All necessary permits including Fire Safety Certificates and Disability Access Certificates will be obtained as required.

A review application for a revision to IEL P0017-02 will be made to the EPA.

2.12.2 Accident/Incident Management and Emergency Response

There is an existing Fire and Emergency Procedure in place for the site. This will be revised and updated as appropriate taking into account the proposed development as it progresses through the construction phases to operational phase.

2.12.3 Solid Waste Management

As described in Chapter 15 – Waste Management, a segregation system will continue to be operated onsite, such that each waste stream is segregated in separate waste receptacles, in a dedicated waste management area. Materials will be sent offsite for recycling where possible and, if not suitable for recycling, materials will be disposed of to an appropriate waste disposal facility.

All waste streams will be classed as hazardous or non-hazardous, following the European List of Waste Code Descriptions and disposed of using suitably licensed and permitted waste

contractors, to licensed or permitted waste facilities, in full compliance with the requirements of the relevant legislation and the EPA.

All waste contractors used will be required to demonstrate that they hold waste collection permits for the vehicles which will service the site and that the waste collection permits allow them to collect the material that they are proposing to collect from the site, and that the disposal destination is listed on the permit.

The waste contractors will also have to demonstrate that the proposed disposal destination is fully licensed and is permitted to take the waste material that the contractor proposes to bring to that site.

2.12.4 Site Layout

The site layout of the proposed development (Figure 2-2) is such that the phased construction of the expanded facility can be accommodated with minimal interruption to other operations onsite.

2.12.5 Site Access and Traffic

A full traffic and transportation assessment has been conducted for the site and the details are in Chapter 12 – Traffic and Transportation.

A Mobility Management Plan accompanies the planning application.

2.12.6 Employment and Hours of Operation

It is anticipated that the operation of the proposed development will result in c. 140-150 employees at peak operation.

The site will operate 24 hours per day, 7 days per week, 365 days per year on an appropriate shift system.

2.13 Process Control, Monitoring and Risk Management

The site has a substantive process control and monitoring system in place onsite. The proposed development will tie into that system as required.

In planning the proposed development, full account has and will be taken of the requirements of regulatory authorities, including:

- the *Building Regulations 1997 to 2025* (as amended);
- construction industry guidelines and relevant Irish Standards or other approved standards;
- the *Safety, Health and Welfare at Work Acts 2005* (as amended);
- the *Safety, Health and Welfare at Work (General Application) Regulations 2007* (as amended); and
- the *Safety, Health and Welfare at Work (Construction) Regulations 2013* (as amended).

2.13.1 General Principles of Prevention

Insofar as is reasonably practicable, detailed facility and process design will be conducted adhering to the principles of the HSA General Application Regulations 2007, including:

- The avoidance of risks.
- The evaluation of unavoidable risks.
- The combating of risks at source.
- The adaptation of work to the individual, especially with regard to the design of places of work and the choice of work equipment. The choice of systems of work, with a view, in particular, to alleviating monotonous work and work at a predetermined work rate and to reducing their effect on health, was also of prime importance in the design of the facility.
- The adaptation of the place of work to technical progress.
- The replacement of dangerous articles, substances or systems of work by non-dangerous or less dangerous articles, substances or systems of work.
- The development of an adequate prevention policy in relation to safety, health and welfare at work, which takes account of technology, organisation of work, working conditions, social factors and the influence of factors related to the working environment.
- Giving collective protective measures priority over individual protective measures.
- Provision of appropriate training and instructions to employees.

2.13.2 Fire Safety and Fire Suppression

Where required, fire detection and alarm systems will be designed in accordance with Irish Standards and best practice.

Fire protection will be provided in accordance with insurers guidelines and the relevant statutory requirements.

Where necessary, the proposed development will be equipped with appropriate fire-fighting equipment.

2.14 Vulnerability to Major Accidents/Disasters

There is a comprehensive Site Emergency Plan in place with respect to responding to a major incident.

The proposed development will be incorporated within the scope of the existing plan as required.

See Chapter 17 – Major Accidents and Hazards for further details on the vulnerabilities and risks associated with fire, major accidents, geohazards and flooding.

2.15 Decommissioning

In the unlikely event of decommissioning and closure of the proposed development, a Decommissioning Management Plan (DMP) or other such plan as required by the EPA or other authority, will be prepared and, as approved by the EPA, will be adopted.

2.16 Future Growth and Expansion

If expansion (including intensification of use and/or increase in production capacity) is found to be necessary, it will require a review of the IEL for the site and additional planning applications. Such applications will be the subject of further study based on the operation of the proposed facility.

2.17 Other Related Projects

All projects related to the proposed development are considered within the envelope of this EIAR and planning application.

There are no planned off-site projects which are specifically required in order to support the proposed development.

There are no secondary projects anticipated as a result of the proposed development.

Appendix 2-A

Cara Partners Environmental Policy

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Environmental Policy Statement for Cara Partners

Cara Partners manufactures Active Pharmaceutical Ingredients (API) using chemical extraction and drying processes and is located in Little Island, Co. Cork.

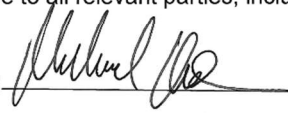
The Senior management of Cara Partners is committed to the protection of the environment by managing environmental matters as an integral part of our business. It is our policy to utilise appropriate environmental controls and systems to achieve a high standard of environmental compliance throughout our operation, with specific emphasis on our relevant emissions as under our IE License P0017-02.

We strive to achieve environmental excellence in every aspect of our business through continuous development and improving the efficiency of our operations to minimise resource and material consumption, in addition to waste and emissions generation. We are committed to maintaining our environmental systems which will manage our environmental impact to the natural environment.

Cara Partners is committed to complying with the applicable legislation, regulations and any other relevant requirements. We aim to achieve this by implementing systems, programmes and procedures to reduce the risk of environmental impact and to responsibly consume resources such as energy, water and material.

In order to reach our environmental goals of sustainable performance and continuous improvement, Cara Partners generates environment objectives and targets each year which are reviewed on an annual basis. Together with our EPA licence these objectives and targets help us establish the framework for implementing our environmental policy.

This environmental policy is communicated to all employees and contractors to create awareness and understanding of environmental responsibilities, and to support the objectives and targets set by Cara Partners. This policy is made available to all relevant parties, including stakeholders and neighbours.

Signed: 

Date: 23/01/25.

Michael Kirk

Site Lead

Appendix 2-B

Outline Construction Environmental Management Plan

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PROJECT:

Production Expansion at the existing facility at Little Island Industrial Estate, Wallingstown, Little Island, Co. Cork.

DOCUMENT TITLE:

Outline Construction & Environmental Management Plan

DJF Engineering Services Ltd.

Tramore House, Reeveswood, Douglas Road, Cork, Ireland

Tel: 021-2392424 • Email: info@djfes.com • Web: www.djfes.com

Current Issue	Date	Issue Description	Approvals	
			By	Approved
P01	17/10/2025	Draft Issue	SH	FM
P02	28/01/2026	Planning Issue	AC	SH

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1.0 GENERAL INFORMATION

1.1 Background

Cara Partners Limited Partnership, acting by its general partner Wallingstown Company Limited, intend to apply for permission for new construction and all associated site works at the existing facility at Little Island Industrial Estate, Wallingstown, Little Island, Co. Cork, T45 RK30.

Cara Partners have engaged DJF Engineering services Ltd. to prepare an Outline Construction Environmental Management Plan for this project.

1.2 Outline CEMP

This Outline Construction Environmental Management Plan (CEMP) has been prepared to outline the Project construction works and demonstrate that all construction and demolition waste materials generated by the project are dealt with in a systematic method and in accordance with current governing legislation. It provides the main project measures that will be put in place and procedures to be followed for the works, both permanent and temporary.

1.3 Development of CEMP

A more detailed Plan will be prepared following:

- Appointment of a contractor; and
- Completion of detailed design.

The detailed Construction and Environmental Management Plan will be prepared by the Contractor appointed to undertake the works. The detailed Plan will be required to comply in full with CIRIA C532 and CIRIA C584.

This outline Plan has been prepared for the construction phase of the proposed scheme and takes account of all current legislative publications and guidance documents including:

- CIRIA document C532, control of water pollution from construction sites.
- CIRIA document C584 , Coastal and Marine Environmental Site Guide
- The Waste management Act, 1996.
- Best Practice Guidelines for the preparation of resource & waste management plans for construction & demolition projects (EPA 2021).
- CIRIA document SPU SP 133, Waste Minimisation in Construction: Site Guide, 1997.
- CIRIA document SPU SP 134, Waste Minimisation and Recycling in Construction: Design Manual, 1998.
- CIRIA. 2010 (third edition C692). Environmental Good Practice on Site. CIRIA, UK.

All details presented reflect the preliminary design information available.

The Main Contractor shall have overall responsibility for the implementation of the Plan, with day-to-day implementation managed by the appointed Contractor and PSCS. Oversight and enforcement will be provided by Cara Partners' EHS function to ensure the CEMP remains a live document that is suitable, adequate and effective, and that all activities are carried out in compliance with the site's Industrial Emissions Licence.

2.0 DESCRIPTION OF THE PROJECT

2.1 General

Cara Partners Limited Partnership, acting by its general partner Wallingstown Company Limited, intends to apply for permission for the construction of new multi-storey pharmaceutical building, laboratory together with associated structures, plant, equipment, and pipe racks.

The works will include modifications to existing process areas, installation of new process systems, tanks, and supporting infrastructure. The project also provides for site upgrades, including an extension to the existing car park and improvements to utilities and services.

All associated ancillary works, landscaping, and site development works will be carried out at the existing facility at Little Island Industrial Estate, Wallingstown, Little Island, Co. Cork, T45 RK30.

The general scope of the development is indicated on the drawings submitted with the Planning Application.

The proposed development includes the following:

Unit 1 Production Building - Construction of a replacement, multi-storey Unit 1 Production building, approx. 34m L x 23m W x 26m H (approx. 3,000m²) and ancillary plant and services related to same including pipe racks

In Process Tank Farm Bund Modifications to the existing 'In Process Tank Farm' bund and ancillary plant and services related to same including pipe racks

Laboratory Gas Bottle Store - Construction of a new Laboratory Gas Bottle Store approx. 4m L x 2m W x 4m H and ancillary plant and services related to same including pipe racks

Regenerative Thermal Oxidiser - Provision of a new Regenerative Thermal Oxidiser, associated exhaust stack approx. (10mAGL) and ancillary plant and services related to same including pipe racks

Process Cooling - Provision of 1no. process cooling tower (approx. 5mAGL) and ancillary plant and services related to same including pipe racks.

Combined Heat & Power Plant (CHP) - Provision of a new CHP, associated exhaust stack approx. (13mAGL) and ancillary plant and services related to same including pipe racks.

Ethanol Storage Tank - addition of a new ethanol storage tank (2.4m diameter x 7m high) in existing solvent tank farm bund and ancillary plant and services related to same including pipe racks.

Car Park – extension to existing car park including associated lighting to provide a net increase of additional 67 no. permanent car parking spaces.

WWTP Control and Blower Building – Single storey building associated with WWTP expansion, approx. 11m L x 10m W x 4m H (approx. 90m²); and ancillary plant and services related to same including pipe racks.

WWTP Chemical storage tanks and bund – new concrete base and bund (approx. 45m²) with tanks approx. 3.5m AGL and ancillary plant and services related to same including pipe racks.

WWTP Inlet works – new screens, tanks up to approx. 9m AGL and ancillary plant and services related to same including pipe racks.

WWTP Dissolved Air Flotation tank – new tank approx. 5m L x 2m W x 4m H and ancillary plant and services related to same including pipe racks.

Site Works – All associated site services, site development works and landscaping to facilitate the proposed development

2.2 Phasing, Construction Programme and Milestones

The proposed works will be phased. The table below reflects the envisaged phasing of construction for each of the major elements of the proposed development:

Phase	Start
Unit 1 Site set up & enabling works	Q3 2026
Unit 1 Production Building Construction	Q3 2026
External Plant & Equipment including In Process Tank Farm, Laboratory Gas Bottle Store, Regenerative Thermal Oxidiser, Process Cooling, & other external plant & equipment associated with Unit 1, CHP and other external plant & equipment	Q2 2027
Car Park Upgrade	Q2 2028
WWTP Upgrade including WWTP building construction	Q1 2032

Given the nature of the proposed development, it is noted that various elements within a given construction phase may not be completed before the next phase of construction commences.

2.3 Reference Documents

The documents listed below are key documents for the basis of this outline CEMP and the more detailed CEMP to be developed prior to construction.

Document	Revision / Date
Cara Partners Emissions License	IEL P0017-02
CIRIA document C532, control of water pollution from construction sites.	2001
Best Practice Guidelines for the preparation of resource & waste management plans for construction & demolition projects (EPA)	2021
Sustech Environmental Impact Assessment Report	2025
Cork County Council Planning Conditions	TBC

2.4 Hours of Operation,

Construction operations will generally be restricted to between 08:00am hours and 08:00pm hours Monday to Friday and 08:00am hours and 06:00pm hours on Saturdays, with no Sunday operations.

- Mon-Fri – 08.00am – 08.00pm
- Saturday – 08.00am – 06.00pm
- Sunday & Bank Holidays – No Working

Any works outside the stated hours of operation will be agreed with the local authority in advance.

2.5 Parties to the Project

Key parties to the project are listed below:

Role	Company
Client	Cara Partners
Civil/Structural/Architectural Consultants	DJF Engineering Services
Process, Mechanical, Electrical & Instrumentation	Prochem
PSDP	Prochem
Environmental	Sustech
Wastewater Treatment	WeW
Contractors	Various to be appointed

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3.0 PROJECT ENVIRONMENTAL POLICY

3.1 General

The Client and project team are committed to:

- Executing the Project in full compliance with all applicable environmental regulations and to other requirements to which we subscribe.
- Implementing good environmental practice as part of designs, e.g., carry out design reviews, risk assessments, etc. on all relevant projects.
- Preventing pollution from activities through a system of operational controls that include written instructions and staff training appropriate to the environmental requirements of their work.
- Continually improving Project environmental performance by setting objectives and targets and implementing them through an environmental programme.
- Informing all project employees about Environmental Policy and explaining what they should do to protect the environment.
- Implementing this Policy through the successful operation of the CEMP

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4.0 ENVIRONMENTAL ROLES & RESPONSIBILITIES

4.1 General

While the Project Supervisor Construction Stage (PSCS) / Contractor will manage the obligations of the project during construction, Cara Partners (client) and the Project Supervisor Design Process (PSDP) will ensure same is undertaken correctly.

4.2 Contractor Team

It is envisaged that the appointed Contractor's Project Team will include a Project Manager, Construction Manager, and Environmental Manager. This structure will be defined by the Contractor and will include the names of the assigned personnel with the appropriate responsibility and reporting structure reflected.

4.3 Duties and Responsibilities

The general role of key people on site implementing the CEMP are set out below:

The Project Manager - liaises with the Project Team in assigning duties and responsibilities in relation to the CEMP to individual members of the main contractor's project team.

The Construction Manager - liaises with the Environmental Manager when preparing site works where there is a risk of environmental damage and manages the construction personnel and general works.

The Environmental Manager - ensures that the CEMP is developed, implemented and maintained.

Full details of the personnel and their responsibilities will be added to the finalised CEMP.

4.4 Project CEMP Responsibilities

At operational level, appropriate personnel from the Main Contractor and each Sub-Contractor on site shall be assigned the direct responsibility to ensure that the discrete operations stated in the Project CEMP are performed on an on-going basis.

4.5 Training

Copies of the Project C&D Waste Management Plan will be available to all relevant personnel on site.

All site personnel and sub-contractors will be instructed about the objectives of the Project CEMP and informed of the responsibilities which falls upon them as a consequence of its provisions where source segregation, selective demolition and material re-use techniques apply.

All training will be recorded on signed log sheets. Each member of staff will be given instructions on how to comply with the Project CEMP.

4.6 Records

A record shall be maintained of all waste removed from the site. The record shall include information on the type of waste removed, the quantity removed, the date removed, and details of whether the waste in question was being removed for either disposal or recovery/recycling, details of the transporter of waste, details of the facility to which waste is removed (including licence or permit number).

A location shall be identified where all records in relation to waste transport, recycling, disposal will be held for inspection.

4.7 Prohibited Activities

The following activities will be strictly prohibited:

- The unauthorised disposal, recovery or movement of waste.
- Burning waste
- Burying waste on site.
- Transferring waste to unauthorised persons or unauthorised sites.

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5.0 ENVIRONMENTAL CONSIDERATIONS

5.1 Environmental Impact Assessment

An Environmental Impact Assessment Report has been prepared by Sustech for the proposed development. The detailed CEMP is to also refer to the EIAR as prepared by Sustech as issued with the Planning Application and comply with same.

5.2 AA Screening

The detailed CEMP is to also refer to the AA Screening and NIS reports prepared by NM Ecology as issued with the Planning Application and comply with same.

6.0 MITIGATION MEASURES

The final CEMP will take into account the mitigation measures referenced in the EIAR and any additional requirements imposed by the Planning Authority.

Measures include:

- During the construction stage site construction roads will be sprayed with water during dry periods to mitigate against the formation of dry dust particles.
- The movement of excavated materials on site may lead to the formation of airborne dust particles during dry weather periods. Where required, water suppressants will be used during these dry weather conditions.
- Where temporary stockpiles are required, the material will be stored in designated areas and will be covered with tarpaulins or regularly dampened during dry weather periods.
- During the construction phase of the development, oil and fuel storage tanks, chemicals and all other materials that pose a risk to waters if spilled, will be stored in designated storage areas, which will be bunded to a volume of 110% of the capacity of the largest tank/container within the bunded area(s). Filling and draw-off points will be located entirely within the bunded area(s). Drainage from the bunded area(s) will be diverted for collection and safe disposal. Bunded pallets will be used for storage of drums.
- No washing-out of concrete trucks will be allowed on site.
- Where necessary, to ensure the protection of the trees, tree protection fences will be installed at the start of the works. The fences, which will typically be temporary Harris fences on self-supporting pads, will prevent construction equipment from operating beyond the fence line and protect the trees adjacent to the works.

7.0 DISPOSAL OF EXCAVATED, DEMOLITION AND CONSTRUCTION MATERIAL

7.1 General

It is anticipated that waste materials associated with construction will have to be moved off site. It is the intention to engage specialist waste contractors, who will possess the requisite authorisations and licensing, for the collection and movement of waste off-site and to take the material to a facility which currently holds an appropriate Waste Licence/Waste Permit/Certificate of Registration.

7.2 Contaminated Soil

Any contaminated soil requiring excavation shall be classified in accordance with the EPA Waste Classification Guidance and segregated prior to off-site disposal at an appropriately licensed facility.

7.3 Contaminated Building Materials

Any contaminated or hazardous building materials will be classified in accordance with the EPA Waste Classification Guidance and segregated before disposal off site to a suitable licensed facility.

7.4 Excavated soil & earthworks

Prior to any excavation works, the Contractor will be required to assess the available information (ref undergrounds, existing live services, existing structures etc.) and to verify same by means of scanning, tracing and hand digging as appropriate.

Where deemed appropriate, excavated soil and earthworks will be re-used elsewhere on site. Where deemed not appropriate for re-use on site, excavated soil and earthworks will be disposed of off-site in a licenced disposal site.

All excavated material not required for reuse on site will be separated as necessary for removal off site by appropriate permitted contractors to appropriately permitted facilities.

7.5 Concrete Waste

Concrete will be source segregated and temporarily stored in a dedicated area on site for subsequent recovery at a remote facility.

7.6 Masonry/brick and wood

Masonry/bricks and wood will be source segregated and temporarily stored in a dedicated area on site for subsequent recovery at a remote facility.

7.7 Steel and other metals

Steel (including cladding, flooring, roofing, and framing) and other metals will be source segregated and temporarily stored in a dedicated area on site for subsequent recovery at a remote facility.

7.8 Packaging

Packaging will be source segregated and temporarily stored in a dedicated area on site for subsequent recovery at a remote facility.

7.9 Glass

Any glass will be source segregated and temporarily stored in a dedicated area on site for subsequent recovery at a remote facility.

7.10 Hazardous Waste

Any hazardous Waste will be identified, removed and kept separate from other C&D waste materials.

It will then be tested/assessed and appropriate methods of treatment will be implemented, with off-site disposal by specialist, certified waste disposal contractors.

7.11 Other Construction & Demolition Waste Materials

Other C&D Waste Materials will be collected in receptacles with mixed C&D waste materials for subsequent separation and recovery at a remote facility.

8.0 TRAFFIC MANAGEMENT

8.1 General

Construction traffic will be managed to ensure the protection of personnel under the existing site measures; restricted and monitored access, and speed limits. Public roads outside the site will be regularly inspected for cleanliness and cleaned as necessary. The Traffic Management Plan will detail how pedestrian and vehicular traffic on site will be managed, including access and egress to public roads. This Plan shall be in place prior to commencement of construction. A summary of the environmental elements only is provided below.

8.2 Traffic Management Map

A preliminary Construction Management Layout has been developed and is included as an appendix to this outline CEMP.

As the project progresses, this map will be updated to meet changing requirements. The map will be posted in locations that allows for review by the entire project workforce. The map will be posted in accessible areas including the site safety notice board, canteen, and permit office.

8.3 Site Access

Access to the Cara Partners facility is via the IDA Estate Road which connects to the R623.

Primary Site access for construction plant and material deliveries will be via the existing western gate to the site.

Construction personnel travelling by car or van to the site will enter via the main plant entrance or via an existing gate on the Eastern side of the site



Primary construction plant & delivery access via existing western gate



Eastern gate proposed to be used for access to construction personnel car park at peak of construction

8.4 Car parking

Peak volumes of construction traffic will be mitigated by requiring construction personnel to carpool.

To accommodate the workforce required for this project, it is envisaged that temporary car parking for up to 160 light vehicles will be required on site. This parking will be managed within the area as shown on the Construction Management Layout.

8.5 Site Rules

Site rules consistent with safe and efficient operation of construction sites will be established. These will include for environmental impacts and mitigations.

8.6 Management of Deliveries

Deliveries will be coordinated to ensure that they do not coincide with heavy traffic times.

8.7 Construction Plant on site

Contractors shall ensure that plant and vehicles entering the site are in good working order and will not present any environmental risks to the site. Fuelling and preventative maintenance of equipment will be performed only in the designated area. Reference to be made to the construction site set up and logistics plan. Where required, wheel washes will be provided for all heavy vehicles leaving the site. The wash water from any wheel wash will be appropriately bunded.

8.8 Emergency Vehicles

Emergency vehicle access routes will be maintained at all times with full access around the site. In the event that an emergency vehicle must attend site, they will be met at security point by a member of the Emergency Response Team (ERT) and accompanied to the incident location. Road closures shall be properly planned and communicated to the workforce. An Emergency Response Plan will be developed prior to construction commencement.

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APPENDIX 1- EIAR & NIS MITIGATION MEASURES

Cara Partners

Summary of Proposed Mitigation Measures

1 Introduction

This document is provided as an aide to summarise the proposed mitigation measures detailed in the Environmental Impact Assessment Report and Stage 2 Appropriate Assessment Natura Impact Statement accompanying the Cara Partners planning application.

If is provided for reference purposes only.

This document should be read in conjunction with the relevant documents.

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Category	Reference Document	Proposed Measure
Proposed Development	EIAR – Chp 02 section 2.10.6	Construction Hours The site construction working hours will be confined to between 08:00-20:00 hours Monday to Friday, 08:00-18:00 Saturday, inclusive (excluding public holidays and Sundays). Working hours may vary slightly depending on weather conditions and daylight hours during winter months. Heavy construction activities will be avoided where possible outside the normal working hours outlined above.
Proposed Development	EIAR – Chp 02 section 2.10.9	Waste Management During the construction phase both solid and liquid waste will be produced at the facility. Minor quantities of liquid waste will be produced during the construction phase of the facility. Waste oils, solvents and paints will be stored in a temporary bunded area prior to transport off site by a licensed contractor. During the construction phase domestic effluent generated onsite will discharge to temporary sewage containment facilities (holding tanks) prior to transport and treatment off site by an Authorised contractor. Where possible, welfare facilities may also be temporarily connected to the existing foul sewage network. It is envisaged that any spoil materials arising from the construction, excavated soil and rock which cannot be reused onsite will be removed from site to appropriate licensed facilities by an appropriately licensed contractor. All solid waste generated during the construction phase will be adequately stored prior to transfer to an authorised facility for recovery/recycling/disposal.
Proposed Development	EIAR – Chp 02 section 2.10.10	Fencing and Security All of the works will take place within a secure site. The construction site, including compound and temporary contractors' facilities will be fenced off for health and safety reasons to restrict unauthorised entry as is reasonably practicable unless natural boundaries do so exist as to render temporary fencing

Category	Reference Document	Proposed Measure
		unnecessary. During the construction phase appropriate temporary fencing will be erected to define and secure the extent of construction site.
Proposed Development	EIAR – Chp 02 section 2.10.11	Temporary Environmental Protection Measures A preliminary Construction Environmental Management Plan (CEMP) is attached as Appendix 2-A to the EIAR. The final CEMP will take into account the mitigation measures referenced in the EIAR and any additional requirements imposed by the Planning Authority. Measures include: • During the construction stage site construction roads will be sprayed with water during dry periods to mitigate against the formation of dry dust particles. • The movement of excavated materials on site may lead to the formation of airborne dust particles during dry weather periods. Where required, water suppressants will be used during these dry weather conditions. • Where temporary stockpiles are required the material will be stored in designated areas and will be covered with tarpaulins or regularly dampened during dry weather periods. • During the construction phase of the development, oil and fuel storage tanks, chemicals and all other materials that pose a risk to waters if spilled, will be stored in designated storage areas, which will be bunded to a volume of 110% of the capacity of the largest tank/container within the bunded area(s). Filling and draw-off points will be located entirely within the bunded area(s). Drainage from the bunded area(s) will be diverted for collection and safe disposal. Bunded pallets will be used for storage of drums.
Population and Human Health	EIAR – Chp 05 section 5.7	In the event of closure or significant production cutbacks, Cara Partners will actively endeavour to assist the employees in seeking alternative employment through measures such as career advice, campaigning of similar viable industries and liaison with relevant state agencies.
Population and Human Health	EIAR – Chp 05 section 5.9	Continual monitoring of emissions from the proposed development will be carried out as required. No further monitoring, as applicable to socio-economic impacts, is considered necessary.

Category	Reference Document	Proposed Measure
Population and Human Health	EIAR – Chp 05 section 5.9	Cara Partners will continue to monitor comments and feedback from the local community and will continue to liaise with the local community with respect to any concerns or comments they may have.
Air Quality and Odour	EIAR – Chp 06 section 6.6.1	Communications • Develop and implement a stakeholder communications plan that includes community engagement before work commences on site. • Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager. • Display the head or regional office contact information.
Air Quality and Odour	EIAR – Chp 06 section 6.6.1	Site Management • Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken. • Make the complaints log available to the local authority when asked. • Record any exceptional incidents that cause dust and/or air emissions, either on- or offsite, and the action taken to resolve the situation in the log book.
Air Quality and Odour	EIAR – Chp 06 section 6.6.1	Preparing and Maintaining the Site • Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible. • Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site. • Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period • Avoid site runoff of water or mud. • Keep site fencing, barriers and scaffolding clean using wet methods. • Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below. • Cover, seed or fence stockpiles to prevent wind whipping.

Category	Reference Document	Proposed Measure
Air Quality and Odour	EIAR – Chp 06 section 6.6.1	Operating Vehicles/Machinery and Sustainable Travel • Ensure all vehicles switch off engines when stationary – no idling vehicles. • Avoid the use of diesel- or petrol-powered generators and use mains electricity or battery powered equipment where practicable. • Impose and signpost a maximum-speed-limit of 25 km/hr on surfaced and 15 km/hr on unsurfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authority, where appropriate).
Air Quality and Odour	EIAR – Chp 06 section 6.6.1	Operations • Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems • Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate • Use enclosed chutes and conveyors and covered skips. • Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate. • Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.
Air Quality and Odour	EIAR – Chp 06 section 6.6.1	Waste Management • Bonfires and burning of waste materials are legally prohibited.
Air Quality and Odour	EIAR – Chp 06 section 6.6.1	Measures Specific to Earthworks • Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable. Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as is practicable. • Only remove the cover in small areas during work and not all at once.

Category	Reference Document	Proposed Measure
Air Quality and Odour	EIAR – Chp 06 section 6.6.1	Measures Specific to Construction • Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.
Air Quality and Odour	EIAR – Chp 06 section 6.6.1	Measures Specific to Trackout • Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use. • Avoid dry sweeping of large areas. • Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport. • Record all inspections of haul routes and any subsequent action in a site logbook. • Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable). • Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permit. • Access gates to be located at least 10 m from receptors where possible.
Air Quality and Odour	EIAR – Chp 06 section 6.6.3	Monitoring • To determine if any short-term dust impacts will occur, undertaking daily on-site and off-site inspections where receptors (including roads) are nearby highly recommended by the IAQM guidance. Inspection results should be recorded in the site inspection log. This should include regular dust soiling checks of surfaces such as street furniture, cars and windowsills within 100 m of site boundary, with cleaning to be provided if necessary • Carry out regular site inspections to monitor compliance with the CEMP, record inspection results, and make an inspection log available to the local authority when asked. • Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during

Category	Reference Document	Proposed Measure
		prolonged dry or windy conditions. The potential for dust generation increases when rainfall is less than 0.2 mm/day and at wind speeds of greater than 10 m/s. To determine if these conditions are likely to affect the site, the weather forecast should be consulted daily, specifically the hourly forecasts for wind speeds as well as 12-hour rainfall radar showing anticipated amounts of precipitation in mm. Monitoring of operational phase emissions as per the conditions of the existing and future reviewed IE Licence for the site will be undertaken in line with the EPA requirements.
Noise and Vibration	EIAR – Chp 07 section 7.6.1	All plant items used during the construction phase will comply with standards outlined in European Communities (Construction Plant and Equipment) (Permissible Noise Levels) Regulations, 1998.
Noise and Vibration	EIAR – Chp 07 section 7.6.1	Guidance set out in BS5228-1:2009+A1, that covers noise control on construction sites shall apply.
Noise and Vibration	EIAR – Chp 07 section 7.6.1	The adoption of Best Practicable Means is usually the most effective approach to controlling noise from construction sites. Impacts will be mitigated by keeping within the outlined within construction noise criteria detailed in the EIAR.
Noise and Vibration	EIAR – Chp 07 section 7.6.1	The following are examples of possible noise reductions measures: - phasing the works to maximise the benefit from perimeter structures. - reduction of compressor noise through the use of silencers or by use of sound reduced models fitted with acoustic enclosures, if necessary. - fitted with silencers or mufflers to pneumatic tools, where necessary. - any deliveries will be programmed to arrive during daytime hours only. Care will be taken when unloading vehicles to minimise disturbance to local residents. Delivery vehicles will be prohibited from waiting within the site with their engines running. - all plant items will be properly maintained and operated according to the manufacturers' recommendations in such a manner as to avoid causing excessive noise. All plant will be sited so that the noise effect at nearest noise-sensitive properties is minimised. - erection of local hoarding, screens or barriers to shield particularly noisy activities, where necessary.

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		problems concerning noise from construction works can sometimes be avoided by taking a considerate and neighbourly approach to relations with local residents. Works will not be undertaken outside of the hours agreed with the local authority.
Noise and Vibration	EIAR – Chp 07 section 7.6.2	The requirements of IEL P0017-02 (and any future revision thereto) with respect to noise control and monitoring shall continue to apply.
Water Quality and Aqueous Emissions	EIAR – Chp 08 section 8.7.1	Construction Phase - Stockpiles of excavated materials will be stored appropriately in order to minimise the risk of runoff from wet excavated materials or from rainwater falling on the material, entering surrounding water bodies. - The control of runoff, which is likely to contain increased loads of suspended solids, will be controlled by the use of mitigation measures such as bunds, silt fences or by covering the stockpiles with plastic sheeting, for example. - Where stormwater run-off collects in excavations, this will be redirected to temporary settlement sumps as required. The size, quantity and number of settlement sumps required will be reviewed prior to commencement of development based on determining factors such as volume of water requiring treatment, silt load, topography and access constraints. Stormwater collected in settlement sumps will be discharged to existing stormwater drainage system or process wastewater network as appropriate. - The provision of wheel wash or road cleaning facilities close to the site entrance shall reduce the deposition of mud, soils and other substances on the surrounding road network. - In order to minimise any impact on the underlying subsurface strata, surface water and groundwater from material spillages, all oils, solvents and paints used during construction will be stored within specially constructed dedicated, temporary, bunded areas or suitable bunded lockable storage containers. Oil and fuel storage tanks shall be stored in designated bunded areas. These areas shall be bunded to a volume of 110% of the capacity of the largest tank/container present or 25% of the total tank capacity within the bund (plus an allowance of 30 mm for

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		rainwater ingress). Filling and draw-off points will be located entirely within the bunded area(s). Drainage from the bunded area(s) shall be diverted for collection and safe disposal. • All grout/concrete washout facilities will be established away from exposed excavations and surface waters and into dedicated skips on site. There will be no washout of concrete trucks onsite. Such activities will be monitored, and the skips will be appropriately located and secured. • In the event of a major spillage the contractor's Construction Stage Construction Environmental Management Plan will be followed. The first action is to stop the source of pollution and contain the spillage. • Refuelling of construction vehicles and the addition of hydraulic oils or lubricants to vehicles, will take place in a designated area of the site either within a bunded area or over a drip tray. Spill kits and hydrocarbon adsorbent packs will be stored in this area and operators will be fully trained in the use of this equipment. • If vehicles cannot be moved to the dedicated refuelling area, a mobile bowser (comprising a double skinned tank) will be used by trained personnel to deliver fuel to the vehicle. Spill kits and drip trays will be used to contain any spillages, should they occur. • Waste fuels and materials shall be stored in designated areas that are isolated from surface water drains or open waters (e.g. excavations). Skips shall be closed or covered to prevent materials being blown or washed away and to reduce the likelihood of contaminated water leakage. Hazardous wastes such as waste oil, chemicals and preservatives, shall be stored in sealed containers and kept separate from other waste materials while awaiting collection by a registered waste carrier. Where possible, fuelling, lubrication and storage areas shall not be located within 25m of drainage ditches, surface waters or open excavations. Fuel interceptor tanks shall be installed on the site to treat any runoff if required. • All potentially hazardous materials shall be securely stored on site. • All associated hazardous waste residuals, such as oil, solvent, glue and solvent based paint containers will be stored within appropriately covered skips prior to removal by a suitable Local Authority or EPA approved waste management contractor for offsite treatment, recycling and/or

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		disposal. Any other building waste will be disposed of to designated skips for removal by a duly approved waste management contractor to an appropriately licensed facility.
Water Quality and Aqueous Emissions	EIAR – Chp 08 section 8.7.2	Operational Phase • The site will continue to operate under the current (or revised) Industrial Emissions Licence and will aim to adhere to all relevant limits, conditions and provisions contained therein. • Sanitary/foul wastewater will be discharged via the municipal sewerage network subject to any conditions set by the Local Authority and/or Uisce Eireann. • Stormwater will be managed in accordance with the systems described in this chapter. • Contaminated stormwater will be isolated, collected and disposed of as appropriate (e.g. via the onsite process effluent network or for offsite disposal). • Process wastewater will continue to undergo treatment in the onsite WWTP prior to discharge to the municipal sewer network for further treatment.
Water Quality and Aqueous Emissions	EIAR – Chp 08 section 8.7.3	Regular monitoring of stormwater and process wastewater discharge will be conducted during the construction and operational phases of the proposed development as per the future requirements of the IEL and any additional monitoring proposed by Cork County Council.
Soils, Geology and Hydrogeology	EIAR – Chp 09 section 9.5.1.1	CEMP An outline construction environmental management plan (CEMP) has been prepared for the construction phase. A construction stage construction management plan (CSCEMP) will be prepared by the site contractor to ensure effective soil and water management in accordance with best practices during the construction phase. The CSCEMP will cover potentially polluting activities and include an emergency response procedure. All relevant personnel working on the site will be trained in the implementation of the procedures.
Soils, Geology and Hydrogeology	EIAR – Chp 09 section 9.5.1.2	Soil Excavation – Reuse of Excavated Topsoil or Subsoil Excavated soils will be reused on-site where feasible for infilling and landscaping works, particularly for levelling, landscaping and reinstatement works. Any soils stripping will be carefully planned to avoid unnecessary exposure of subsoils, especially in areas of high groundwater vulnerability.

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		The potential slight significance of the impact of removal on soils at the site will be mitigated by reuse of excavated topsoil or subsoil.
Soils, Geology and Hydrogeology	EIAR – Chp 09 section 9.5.1.3	Mitigation of Incorrect Stockpiling of Excavated Soil Intended for Reuse Poor practice during stockpiling of excavated soil intended for reuse may lead to degradation of the stockpiled soil as a resource. The potential slight significance of poor stockpiling practice on the stockpiled soils will be mitigated by application of best practices in soil stockpiling. Temporary stockpiles will be located away from drainage ditches and surface water features and will be managed to prevent erosion, dust generation, and runoff. Movement of soil will be minimised to preserve its structure and reduce degradation.
Soils, Geology and Hydrogeology	EIAR – Chp 09 section 9.5.1.4	Excavation, Disturbance, Handling, Storage or Removal of Potentially Contaminated Soil The potential slight adverse impact on in situ soils of excavation, disturbance, handling, storage or removal of unknown contaminated soils will be mitigated by application of best practices in the management of contaminated land. If contaminated soils are encountered, they will be required to be handled, transported on-site and off-site for disposal or recovery by licensed contractors, in accordance with best practice and associated EPA guidance on contaminated soil management. All excavated material will be visually inspected for signs of contamination, such as staining or odours. If contamination is suspected, samples will be taken and analysed to determine the presence of pollutants. Any material found to be contaminated will be delineated, separated and removed from site by a licensed waste contractor. Where feasible and safe, uncontaminated made ground may be reused as fill material, subject to validation testing and approval under the site's waste management procedures.

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Soils, Geology and Hydrogeology	EIAR – Chp 09 section 9.5.1.5	Mitigation of Potential Effects of Importation and Use of Contaminated Fill Material Potential for importation and use of contaminated fill material to the site and resulting migration of contamination to in-situ soils, bedrock or groundwater, including the bedrock aquifer, will be mitigated by measures, including those set out below. All imported aggregate and fill materials will be sourced from authorised suppliers and will comply with relevant environmental and engineering standards. Materials will be assessed for suitability and potential contamination prior to delivery. The use of recycled materials will be considered where appropriate, provided they meet the required specifications and pose no risk to soil or groundwater quality.
Soils, Geology and Hydrogeology	EIAR – Chp 09 section 9.5.1.6	Mitigation of Soil Compaction and Erosion Potential for soils compaction and erosion at the site will be mitigated by measures including use of designated haul routes and post-construction soils remediation.
Soils, Geology and Hydrogeology	EIAR – Chp 09 section 9.5.1.7	Leak or Spill of Potentially Polluting Materials Used or Stored On-Site During the Construction Phase to Soil or Groundwater Potentially polluting materials stored or used on site during construction phase activities, include oils, fuels and cements (incl. concrete, wash waters, grouts). Potential for impacts from leaks or spills of these stored materials will be mitigated by measures including those set out below. Mitigation will include bunded storage, spill kits, and emergency response protocols. To minimise the risk of hydrocarbon contamination, refuelling and maintenance of construction vehicles will be carried out in designated areas away from surface water drains or channels. Fuel and oil storage tanks will be located in bunded areas with a capacity of at least 110% of the largest container. Spill kits and absorbent materials will be readily available on-site, and personnel will be trained in their use. Mobile refuelling units will be double-skinned and equipped with containment systems to prevent leaks during transport and use. Cement mitigation measures such as designated washout areas and containment systems will be used. Concrete and cement materials will be handled in a manner that prevents alkaline runoff from entering the soils or groundwater. Wet concrete activities will be risk assessed, and washout of concrete trucks will

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		occur off-site or in designated containment areas. Measures will be implemented to prevent discharge of water containing cement to the ground, and all mixing and pouring will be carried out in controlled zones with appropriate drainage and containment.
Soils, Geology and Hydrogeology	EIAR – Chp 09 section 9.5.1.8	Dewatering of Excavations Where dewatering of excavations is required during the construction phase the potential for imperceptible impacts on groundwater will be mitigated by measures including those set out below. Dewatering will be carried out in a controlled manner to minimise impacts on groundwater levels and flow. Discharge of abstracted water will be directed to appropriate treatment or attenuation systems before release to surface water or sewer networks. Monitoring of groundwater levels will be undertaken during dewatering activities to ensure that sensitive receptors, such as nearby surface water features or ecological habitats, are not adversely affected.
Soils, Geology and Hydrogeology	EIAR – Chp 09 section 9.5.2.1	Accidental Leaks/Spills of Potentially Polluting Substances Leaks or spills of potentially polluting substances may arise from activities involving process chemical storage/use and storage/use of other potentially polluting substances, such as oils, fuels or solvents. Mitigation measures such as bunding, integrity testing of storage systems and the associated provisions of the Environmental Management System (EMS) along with the Industrial Emissions Licence (IEL) will be implemented. All hydrocarbon storage will be bunded, and impermeable surfacing will be used in high-risk areas. Routine inspections and spill response procedures will be implemented to prevent and manage any incidents. Fuel, oil and solvent storage tanks will be located in bunded areas with a capacity of at least 110% of the largest container or 25% of the total volume of primary containment vessels within a given bund, whichever is the greater.

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		Spill kits and absorbent materials will be readily available on-site, and personnel will be trained in their use. In order to minimise any impact on the underlying subsurface strata from material spillages, fuel and chemical storage tanks will be stored above ground in designated areas with an impervious base. These areas will be bunded to a volume of 110% of the capacity of the largest tank/ container within the bunded area or 25% of the total volume of primary containment vessels within a given bund, whichever is the greater as per EPA requirements. Drainage from the bunded areas will be inspected and properly managed. All bunding and integrity testing will be completed as per IEL requirements. Testing will ensure that containment systems remain effective and that any deterioration or damage is identified and addressed promptly. Records of inspections and maintenance will be maintained, and corrective actions will be implemented where necessary to prevent environmental impacts. Any chemicals, oils, herbicides required for site maintenance will be stored in suitable contained areas.
Soils, Geology and Hydrogeology	EIAR – Chp 09 section 9.5.2.2	Leakage from Wastewater Sewers Leaks or spills from the wastewater treatment system have a potential slight pre-mitigation effect on in-situ soils and potential slight to moderate pre-mitigation effects on groundwater from leaks or spills will be mitigated by measures including those set out below. Mitigation measures will include robust pipe materials, leak detection systems, and regular maintenance under the EMS and IEL to ensure that the risk of leakage is minimised.
Soils, Geology and Hydrogeology	EIAR – Chp 09 section 9.8	Monitoring will be undertaken during the construction and operational phases to ensure that mitigation measures are effectively implemented and that no unforeseen impacts occur to soils, geology, or hydrogeology. During the construction phase, monitoring will include visual inspections of excavation activities, soils stockpiles, and fuel/chemical handling areas to ensure compliance with the Construction Environmental

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		Management Plan (CEMP). Groundwater levels and quality may also be monitored if dewatering is required. During the operational phase, groundwater monitoring will continue in accordance with EPA licensing requirements. This will include sampling from existing monitoring wells for parameters such as pH, conductivity, ammoniacal nitrogen, sulphate, and volatile organic compounds (VOCs). Results will be reviewed regularly to confirm that site activities are not adversely affecting the underlying aquifer or nearby surface water features. Any exceedances will be investigated and addressed through corrective actions outlined as per EPA requirements.
Biodiversity	EIAR – Chp 10 section 10.7.1	Stormwater monitoring / diversion • All stormwater discharging to Lough Mahon passes through an existing Class 1 Full Retention Separator. • The existing drainage system passes through a monitoring chamber where it is tested for Total Organic Content (TOC), pH and Ammonia and is subject to visual inspection. If the storm water is within acceptable trigger values, it continues and is discharged via the outfall. If the storm water is not within acceptable trigger values, it is diverted into the adjacent Fire Water Retention Pond, from where it may be further tested and treated if necessary. • Diversion of the storm water flow into the Fire Water Retention Pond may occur by automatic detection and / or manual override. This method of management ensures that the discharge to the outfall is closely monitored and maintained within approved parameters. • The above method of management will continue in place during the construction phase, and on completion of the development.
Biodiversity	EIAR – Chp 10 section 10.7.1	Pollution-prevention measures • A Resource Waste Management Plan has been prepared and identifies waste material that may be generated during the construction of the proposed development and addresses its storage and appropriate removal from the site.

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		• Chemicals used will be stored in sealed containers. • Chemicals shall be applied in such a way as to avoid any spillage or leakage. • Fuelling and lubrication of equipment shall be carried out in bunded areas only which are located as far as possible away from any other drainage outfall. • All refuelling, oiling and greasing will take place above drip trays or on an impermeable surface which provides protection to underground strata and watercourses and away from drains and watercourses as far as reasonably practicable. Vehicles will not be left unattended during refuelling. • Storage areas, machinery depots and site offices will be located within the site boundary • Spill kits will be made available, and all staff will be properly trained on correct use. • All fuels, lubricants and hydraulic fluids required to be stored on site will be kept in secure containers within it. • Containers will be properly secured to prevent unauthorised access and misuse. An effective spillage procedure will be put in place with all staff properly briefed. Any waste oils or hydraulic fluids will be collected, stored in appropriate containers and disposed of offsite in an appropriate manner. • All plant shall be well maintained with any fuel or oil drips attended to on an ongoing basis. Any minor spillage during this process will be cleaned up immediately. • Should any incident occur, the situation will be dealt with and coordinated by the nearest supervisor who will be responsible for instructions by the Local Authority. • Fuels, lubricants and hydraulic fluids for equipment used on the construction site shall be carefully handled to avoid spillage, properly secured against unauthorised access or vandalism, and provided with spill containment according to current best practice (Enterprise Ireland BPGCS005). • Any spillage of fuels, lubricants or hydraulic oils shall be immediately contained and the contaminated soil removed from the site and properly disposed of. • Oil booms and oil soakage pads shall be kept on site to deal with any accidental spillage. • Waste oils and hydraulic fluids shall be collected in leak-proof containers and removed from the site for disposal or recycling.

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		- Existing outfall monitoring chamber to be visually checked regularly for any evidence or indications of contaminants or water pollution e.g. - Change in water colour - Changes in water transparency - Oily sheen to water surface - Floating detritus - Scums and foams - Disposal of raw or uncured waste concrete will be controlled to ensure that Cork Harbour will not be impacted. - Best practice in bulk-liquid concrete management addressing pouring and handling, secure shuttering / form-work, adequate curing times will be implemented. - Washing of concrete equipment such as cleaning ready mix concrete lorries and mixers will not be permitted onsite. - Vehicles carrying loose aggregate and workings will be covered at all times. - Material stockpiles (stored onsite pending removal off site) and exposed surfaces will be dampened down using a water spray to minimise the potential for wind pick-up. - Regular inspection of access roadways to inspect for dust deposits will be undertaken and, if necessary, cleaning of access roadways and site boundaries will be undertaken. - Where practicable, stockpiles of soils and materials will be located as far as possible from sensitive properties and ecological receptors, taking account of prevailing wind directions and seasonal variations in the prevailing wind. - All construction plant and equipment is maintained in good working order and not left running when not in use.
Biodiversity	EIAR – Chp 10 section 10.7.2	The existing pollution prevention measures will continue to operate including: - Continued operation of Class 1 Full Retention Separator. - Continued operation stormwater sampling and monitoring including the operation of the diversion and retention system as required.

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		- Continued implementation of spill management plan. - Appropriate storage and bunding of potentially polluting substances as required. - Compliance with any other relevant measures detailed in the current and revised IEL.
Biodiversity	NIS – section 5.4	Storm water monitoring / diversion - All storm water discharging to Lough Mahon passes through an existing Class 1 Full Retention Separator. - The existing drainage system passes through a monitoring chamber where it is tested for Total Organic Content (TOC), pH and Ammonia and is subject to visual inspection. If the storm water is within acceptable trigger values, it continues and is discharged via the outfall. If the storm water is not within acceptable trigger values, it is diverted into the adjacent Fire Water Retention Pond, from where it may be further tested, and treated if necessary. - Diversion of the storm water flow, into the Fire Water Retention Pond, may occur by automatic detection and / or manual override. This method of management ensures that the discharge to the outfall is closely monitored and maintained within approved parameters. - The above method of management will continue in place during the construction phase, and on completion of the development.
Biodiversity	NIS – section 5.4	Pollution-prevention measures - A Resource Waste Management Plan has been prepared and identifies waste material that may be generated during the construction of the proposed development and addresses its storage and appropriate removal from the site. - Chemicals used will be stored in sealed containers. - Chemicals shall be applied in such a way as to avoid any spillage or leakage. - Fuelling and lubrication of equipment shall be carried out in bunded areas only which are located as far as possible away from any other drainage outfall. - All refuelling, oiling and greasing will take place above drip trays or on an impermeable surface which provides protection to underground strata and watercourses and away from drains and

Category	Reference Document	Proposed Measure
		watercourses as far as reasonably practicable. Vehicles will not be left unattended during refuelling. • Storage areas, machinery depots and site offices will be located within the site boundary • Spill kits will be made available, and all staff will be properly trained on correct use. • All fuels, lubricants and hydraulic fluids required to be stored on site will be kept in secure containers within it. • Containers will be properly secured to prevent unauthorised access and misuse. An effective spillage procedure will be put in place with all staff properly briefed. Any waste oils or hydraulic fluids will be collected, stored in appropriate containers and disposed of offsite in an appropriate manner. • All plant shall be well maintained with any fuel or oil drips attended to on an ongoing basis. Any minor spillage during this process will be cleaned up immediately. • Should any incident occur, the situation will be dealt with and coordinated by the nearest supervisor who will be responsible for instructions by the Local Authority. • Fuels, lubricants and hydraulic fluids for equipment used on the construction site shall be carefully handled to avoid spillage, properly secured against unauthorised access or vandalism, and provided with spill containment according to current best practice (Enterprise Ireland BPGCS005). • Any spillage of fuels, lubricants or hydraulic oils shall be immediately contained and the contaminated soil removed from the site and properly disposed of. • Oil booms and oil soakage pads shall be kept on site to deal with any accidental spillage. • Waste oils and hydraulic fluids shall be collected in leak-proof containers and removed from the site for disposal or re-cycling. • Existing outfall monitoring chamber to be visually checked regularly for any evidence or indications of contaminants or water pollution e.g. ○ Change in water colour ○ Changes in water transparency ○ Oily sheen to water surface

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		○ Floating detritus ○ Scums and foams • Disposal of raw or uncured waste concrete will be controlled to ensure that Cork Harbour will not be impacted. • Best practice in bulk-liquid concrete management addressing pouring and handling, secure shuttering / form-work, adequate curing times will be implemented. • Washing of concrete equipment such as cleaning ready mix concrete lorries and mixers will not be permitted onsite. • Vehicles carrying loose aggregate and workings will be covered at all times. • Material stockpiles (stored onsite pending removal off site) and exposed surfaces will be dampened down using a water spray to minimise the potential for wind pick-up. • Regular inspection of access roadways to inspect for dust deposits will be undertaken and, if necessary, cleaning of access roadways and site boundaries will be undertaken. • Where practicable, stockpiles of soils and materials will be located as far as possible from sensitive properties and ecological receptors, taking account of prevailing wind directions and seasonal variations in the prevailing wind. • All construction plant and equipment is maintained in good working order and not left running when not in use.
Landscape and Visual Impact	EIAR – Chp 11 section 11.7.3	During construction, site hoarding may be erected as a health and safety precaution. Hours of work will be restricted according to the local authority and local requirements. Visual effects will be mitigated during the construction phase through appropriate site management and work practices to ensure site deliveries are effective, all internal and external roads are kept clean, dust and noise are kept to a minimum, and the site is kept tidy and rubbish-free. Site lighting will be kept to a minimum where utilised.
Landscape and Visual Impact	EIAR – Chp 11 section 11.7.4	The landscape plan will be implemented to reduce the impact of the proposed development on the surrounding natural and archaeological environments.

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		All lighting will be according to design specifications. The design, finish, colour, and texture of the completed structures will be in keeping with their surroundings and be sympathetic to the surrounding environment in minimising any visual impact.
Traffic and Transportation	EIAR – section 12.6.1	Construction Phase Mitigation Implementation of a Construction Traffic Management Plan is recommended to minimise the impact of traffic from the construction phase of the proposed development on the local road network.
Traffic and Transportation	EIAR – section 12.6.2	Operational Phase Mitigation Implementation of the Mobility Management Plan included within Appendix 12-A is recommended to minimise the impact of traffic from the operational phase of the proposed development on the local road network.
Traffic and Transportation	MMP – section 6.2	Action Plan measures to encourage walking to/from work Cara Partners currently encourages walking to work by: • Having umbrellas available at reception for staff to borrow on wet days; • Ensuring that good levels of public lighting are provided on-site; • Conducting site audits of walking/pedestrian facilities; • Providing showers/changing/storage/locker facilities for staff walking to the site. • Offering in-house health checks for staff interested in getting more active; • Providing high-visibility vests for staff; • Promoting the health and environmental benefits of walking to staff; • Promoting walking through organised walking events/ lunchtime walks for staff; • Promoting use of the local Slí na Sláinte walking route; and, • Participating in an annual team walking and running events.

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		As part of implementing this Mobility Management Plan, Cara Partners will also display maps of local walking routes, including the walking time to destinations such as the Eastgate Retail park and Little Island (formerly Littleisland) railway station.
Traffic and Transportation	MMP – section 6.3	Action Plan measures to encourage cycling to/from work Cara Partners currently encourages cycling to work by: • Providing staff access to the Cycle to Work scheme; • Providing secure covered cycle parking; • Providing showers/changing/storage/locker facilities for staff cycling to the site; • Organising bike maintenance courses for staff; and, • Providing high-visibility vests for staff. As part of implementing this Mobility Management Plan, and based on the measures supported by staff as detailed within Section 3.3.5, Cara Partners will: • Promote cycling through cycle to work days with rewards for those participating; • Promote the health benefits of cycling to staff; • Provide emergency cycle repair equipment on site; and, • Investigate the provision of a drying room to allow those cycling (and walking) to work to dry wet clothes.
Traffic and Transportation	MMP – section 6.4	Action Plan measures to encourage public transport use to/from work To encourage the use of public transport for journeys to and from work by staff, as part of implementing this Mobility Management Plan, and based on the measures supported by staff as detailed within Section 3.3.5, Cara Partners will: • Provide staff with access to ‘Taxsaver’ public transport tickets;

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		• Include public transport and timetable information induction packs for new staff, also including a one-month public transport ticket for those staff where the use of public transport is a viable option for their travel to and from work; • Publicise TFI Apps that increase the convenience and ease of bus travel, for example the TFI Live app which allows passengers to access live real time departure and journey planning information across the TFI network; and, TFI Go app which allows the purchase of tickets via a smartphone at a low cost to the user than cash fares; • Make staff and visitors aware of the benefits of using the TFI Leap Card; and, • Organise promotional events related to public transport including for example prize draw for free public transport tickets. The 'TaxSaver' ticket scheme encourages staff to use public transport by allowing employers to provide employees with bus, and rail tickets, which are not subject to tax, PRSI, or USC. Tickets can be provided through salary sacrifice, as an alternative to a cash bonus, or as a benefit-in-kind.
Traffic and Transportation	MMP – section 6.5	Action Plan measures to encourage carsharing As part of implementing this Mobility Management Plan, Cara Partners will encourage car sharing by staff, putting processes in place to help staff identify potential car sharing partners and running related promotional events. The NTA provides guidelines for establishing and promoting car sharing within businesses. The Mobility Management Plan Co-ordinator will also liaise with Cork County Council and the Little Island Business Association to identify employers with similar shift/working hours to Cara Partners, and investigate whether there is potential for car sharing between Cara Partners staff and others employed locally.
Traffic and Transportation	MMP – section 6.6	Action Plan measures to reduce car-dependency Flexible working

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		Cara partners has flexible work hours and the option to work from home two days per week. Employing people from the local area Cara Partners encourages employment from the local area, and will continue to actively recruit locally, thereby reducing the distances that staff need to travel to and from work, and encouraging access by active travel modes. Reducing the Need for Business Travel Cara Partners provides (and will continue provide) a video-conferencing option for all regular/routine meetings.
Traffic and Transportation	MMP – section 7.1	Monitoring Monitoring of the implementation of this Mobility Management Plan is a key role of the Mobility Management Plan Coordinator. The primary form of monitoring will be annual staff travel surveys. These surveys will be focused on travel behaviour and the monitoring of action plan related measures. The surveys will also be used to monitor the uptake of Mobility Management Plan measures. A monitoring report, including current trajectories towards established targets will be prepared by the Mobility Management Plan Coordinator and submitted to the Mobility Management Plan Working Group within two months of completion of the surveys.
Traffic and Transportation	MMP – section 7.2	Evaluation

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		The Mobility Management Plan will be reviewed annually by the Mobility Management Plan Working Group, taking full account of the results of the staff travel surveys and the trajectories toward established targets. The review of the Mobility Management Plan may involve: • Changing priorities within the implementation of the Action Plan based on progress and experience to ensure that the Mobility Management Plan modal split targets within Sections 5.3 are achieved; • The setting of increasingly challenging targets if the proposed targets are achieved ahead of schedule; • Introducing additional activities and/or measures to the Action Plan through the following of national best practice or local innovation; and, • Recommending the level of annual budget required to implement the measures contained within the Action Plan. The findings of this Mobility Management Plan review will be disseminated to staff (as covered in Section 6.1.2) and Cork County Council within four months of completion of the review.
Material Assets	EIAR – section 13.6	Extensions to utilities, if required at detailed design, will be constructed in accordance with the requirements of the relevant bodies (e.g. ESB/EirGrid, Uisce Éireann, Gas Networks Ireland etc.) to avoid/minimise disruption to their services. Appropriate consultation with these bodies will be held. Potable water consumption rates and wastewater discharge limits will ultimately be limited to the values set by Uisce Eireann and, ultimately, the EPA. Electricity and gas consumption rates will be limited to the values set by the utility providers. All connections to potable water, sewer, electricity and natural gas material assets will be made and reinstated to the requirements of the relevant bodies that are responsible for maintaining these assets.
Material Assets	EIAR – section 13.7	Onsite water consumption will continue to be monitored using water meters. Treated process effluent will be monitored as per EPA requirements.

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Archaeological and Cultural Heritage	EIAR – section 14.6.1.1	Similarly, other utility consumption rates will be appropriately monitored and recorded. Some ground impacts will be caused during works associated with the construction of the proposed development. Though the anticipated archaeological potential would be considered low given the already extensive impacts from existing infrastructure, archaeological monitoring should be considered in any grant of planning permission for the proposed development. The following mitigation measures will be carried out subject to the approval of the National Monuments Service (NMS) of the Department of Housing, Local Government and Heritage (DHLGH) and further mitigation may be sought by the NMS. - Monitoring of groundworks will be carried out to establish whether previously unknown archaeological features or deposits are present. If features of archaeological significance are exposed, then further mitigation measures will be implemented following consultation with the National Monuments Service. This will be carried out by experienced, licence-eligible archaeologists working under licence from the Department of Housing, Local Government and Heritage. - Adequate time and resources will be provided by the developer for the resolution of any archaeology identified within the development site and which will be directly impacted by groundworks (if applicable). Time and resources will also be allowed for any post-excavation work and specialist analysis necessary following any archaeological excavation that takes place. - A report is required to be compiled on completion of any archaeological excavation and will be submitted to the relevant authorities.
Resource and Waste Management	EIAR – section 15.7.1	The RWMP will continue to be developed, implemented and reviewed regularly by the Contractor. This RWMP will include all the relevant information required and provides procedures for each waste that will be produced at this stage of the development.
Resource and Waste Management	EIAR – section 15.7.1	II C&D waste will be segregated onsite, and the materials will be stored in a specifically designated area of the site. Waste contractors that have recovery facilities for different materials, will be sourced to achieve a high level of recovery and recycling. All waste taken from the site will only be removed by a waste

Category	Reference Document	Proposed Measure
		contractor permitted. All waste that is collected from the site will be only taken to a site permitted by a Local Authority or licensed by the EPA.
Resource and Waste Management	EIAR – section 15.7.1	Other typical measures will include: • A Resource Manager will be appointed by the construction contractor to oversee and take ownership of the waste programme to ensure compliance with the RWMP. • All non-hazardous waste materials will be transferred to skips or other suitable receptacles in designated waste storage areas. • All hazardous waste will be packaged in appropriate receptacles and stored in dedicated hazardous waste storage areas pending transportation offsite. • All waste storage areas will be audited regularly to ensure the wastes are being segregated and stored in accordance with the RWMP. • If any potentially contaminated soil is encountered during the construction works, it will be segregated from all other soils, tested to confirm the classification of the soil for disposal purposes and will be collected and disposed of by a permitted waste contractor to a suitably licenced landfill. • All waste leaving site will be recycled, recovered or reused where possible, with the exception of those waste streams where appropriate facilities are currently not available. • Quantities of waste leaving the site will be recorded and copies of relevant documentation maintained onsite.
Resource and Waste Management	EIAR – section 15.7.2	As outlined in the EIAR, there is a significantly successful practice of waste management at the existing facility. This will be expanded to accommodate the proposed development. There will be dedicated storage areas for non-hazardous waste which will have separate receptacles for all recyclable materials so that onsite segregation will take place. In addition, general waste receptacles will be available for waste not suitable for recycling. Hazardous waste will be stored and handled separately and disposed of using fully licensed and permitted contractors.

Category	Reference Document	Proposed Measure
Resource and Waste Management	EIAR – section 15.7.2	Other typical measures will include: • All wastes will be continued to be managed in accordance with IEL requirements and the site EMS. These are subject to periodic audits. • Ensure that waste is properly packaged and labelled according to the type of waste. • Ensure that personnel involved in the management of waste are qualified and trained to perform job specific duties. • Liaise with personnel, contractors and regulators on all waste/certification matters. • Ensure that waste is properly segregated and the waste being shipped meets the appropriate waste acceptance criteria. • Ensure that waste is disposed of in a manner compliant with all regulations and standards of practice. • Ensure that copies of licenses for all approved disposal locations used by the waste contractor are on file as per the EMS. • The waste contractor may be subject to audits by Cara personnel to verify compliance with regulations and standards.
Resource and Waste Management	EIAR – section 15.9	Waste materials leaving the site will be recorded and copies of appropriate permits will be kept onsite. All monitoring will be performed in accordance with IEL and EMS requirements.
Climate	EIAR – section 16.8.1	Best practice measures to reduce the embodied carbon of the construction works include: • Appointing a suitably competent contractor who will undertake waste audits detailing resource recovery best practice and identify materials can be reused/recycled; • Materials will be reused on site where possible; • Prevention of on-site or delivery vehicles from leaving engines idling, even over short periods; • Ensure all plant and machinery are well maintained and inspected regularly; • Minimising waste of materials due to poor timing or over ordering on site will aid to minimise the embodied carbon footprint of the site; and • Sourcing materials locally where possible to reduce transport related CO₂ emissions.

Category	Reference Document	Proposed Measure
		In terms of impact on the proposed development due to climate change, during construction the Contractor will be required to mitigate against the effects of extreme rainfall, flooding through site risk assessments and method statements. The Contractor will also be required to mitigate against the effects of extreme wind/storms, temperature extremes through site risk assessments and method statements. All materials used during construction will be accompanied by certified datasheets which will set out the limiting operating temperatures. Temperatures can affect the performance of some materials, and this will require consideration during construction. During construction, the Contractor will be required to mitigate against the effects of fog, lighting and hail through site risk assessments and method statements.
Climate	EIAR – section 16.8.2	Mitigation measures include designing stormwater systems to OPW standards with a 20% rainfall allowance and integrating green infrastructure; selecting high-performance materials and cladding for temperature resilience and considerations for wind and storms; implementing efficient water-use systems to address dry spells; and ensuring structural design meets wind-loading requirements under future climate scenarios. These measures have been considered when assessing the vulnerability of the proposed development to climate change (see section 16.7.2.3 of the EIAR). No additional specific mitigation measures in relation to climate have been identified for the operational phase.
Major Accidents and Hazards	EIAR – section 17.7	Existing measures include: Fire Prevention and Detection - There is a comprehensive site-wide fire detection and alarm system in place which incorporates smoke detectors, heat detectors, hydrogen and LEL detectors, UV flame detectors, sprinkler head activation and manual break-glass units. - Fire alarms are linked to defined emergency response levels (Levels 1–3), ensuring proportionate escalation, internal response and notification of external emergency services where required.

Category	Reference Document	Proposed Measure
		○ Fire detection and alarm systems are designed to recognised standards (e.g. I.S. 3218) and are subject to routine testing and maintenance in accordance with insurance and manufacturer requirements.
Major Accidents and Hazards	EIAR – section 17.7	Existing measures include: ● Fire Suppression and Firefighting Infrastructure ○ There are extensive automatic sprinkler systems installed across production, storage and warehouse areas, designed for defined fire durations and supplied by a dedicated firewater storage tank. ○ A dedicated firewater storage tank (c. 1,400 m³) with diesel-driven fire pumps provides reliable firewater supply independent of mains supply. ○ On-site fire mains and hydrants are provided to support both internal firefighting and intervention by the Local Authority Fire Service. ○ Fire compartmentation and separation distances across the site limit fire escalation and mitigate domino effects between process, storage and warehouse areas.
Major Accidents and Hazards	EIAR – section 17.7	Existing measures include: ● Firewater and Pollution Control ○ A dedicated firewater retention pond is provided to capture and contain firewater run-off during fire events, preventing uncontrolled discharge to receiving waters. This system can also operate to divert and retain major spills. ○ Automatic shut-off valves on the stormwater system are activated upon fire alarm activation or pollutant detection, ensuring immediate diversion of contaminated firewater to retention infrastructure. ○ Continuous online monitoring of stormwater quality (pH and TOC) with SCADA integration enables early detection of contamination and automated response. ○ Retained firewater will be managed through controlled treatment via the on-site wastewater treatment plant or off-site disposal, subject to agreement with the EPA and other regulatory stakeholders.

Category	Reference Document	Proposed Measure
Major Accidents and Hazards	EIAR – section 17.7	Existing measures include: • Secondary Containment and Spill Prevention ○ Bunding and secondary containment are provided for tanks, drum stores and chemical storage areas to prevent loss of containment and migration of spills. ○ Bunds and containment structures are subject to routine inspection and integrity testing programmes in accordance with IEL requirements. ○ Leak detection and inspection regimes are in place for pipelines conveying solvents and process liquids, including solvent runs and regular visual inspections.
Major Accidents and Hazards	EIAR – section 17.7	Existing measures include: • Emergency Response and Management ○ A comprehensive Site Emergency Plan (Appendix 17-B) is implemented, defining roles, responsibilities, and response actions for fire, chemical release, and environmental incidents. ○ A trained Site Emergency Controller (SEC) and Emergency Response Team (ERT) are available to manage incidents, with defined interfaces to the Local Authority Fire Service (typical response time ~15 minutes). ○ Incident response arrangements include notification protocols for statutory authorities (EPA, HSA) and neighbouring receptors where off-site impacts may arise.
Major Accidents and Hazards	EIAR – section 17.7	Existing measures include: • Road Transport Control ○ All vehicles conveying dangerous substances by road are subject to the <i>European Agreement Concerning the International Carriage of Dangerous Goods by Road</i> (ADR). The ADR sets out the requirements for packing, loading, filling, transporting and unloading dangerous goods, and the requirements for the performance of the containers, the segregation/separation of incompatible materials, the separation of dangerous goods from other goods, and the actions to be taken in the event of an emergency.

Category	Reference Document	Proposed Measure
		Specialised vehicles that convey dangerous substances, must be certified for the transport of dangerous goods on an annual basis. Therefore, in addition to holding a Commercial Vehicle Road Test certificate (either as a heavy or light commercial vehicle), these vehicles must also hold an ADR vehicle certificate. Drivers of vehicles conveying dangerous goods must hold a valid ADR Training Certificate, which requires completion of an approved basic and/or tanker specialisation driver training course and successful completion of an exam, which, in Ireland, is managed by the Chartered Institute of Logistics.
Major Accidents and Hazards	EIAR – section 17.7	Existing measures include: Management Systems and Ongoing Process Control - The site is certified to the ISO 45001:2018 standard. - Formal change management procedures are in place to ensure that any modifications to processes, storage arrangements, or infrastructure are assessed for major accident risk prior to implementation. - Where appropriate, relevant Hazardous Area Classification assessments related to ATEX zoning are completed. - There is an appropriate permitting system in place with respect to authorising activities that could be considered higher risk (e.g. ‘hot works’ etc.). - There are various SOPs in place for the appropriate and safe management of hazardous materials including a specific chemical spill control SOP. - Appropriate training on relevant site policies and procedures is in place.
Major Accidents and Hazards	EIAR – section 17.7	The proposed development will be fully integrated into the existing suite of major accident prevention and mitigation measures, plans and procedures in operation at the Cara Partners site. All new buildings, plant, and process modifications will be designed to align with the site’s established fire prevention, detection, and suppression systems, secondary containment arrangements, drainage and firewater management infrastructure and emergency response framework.

Category	Reference Document	Proposed Measure
		The development will be subject to the site's formal change management and risk assessment procedures to ensure that any new or modified hazards are identified, assessed and adequately controlled prior to commissioning. Upon completion, the development will be incorporated into the Site Emergency Plan, Firewater Risk Assessment and relevant operational and maintenance regimes, ensuring continuity of control, regulatory compliance and consistency with existing major accident mitigation arrangements across the site.
Interactions and Cumulative Effects	EIAR – section 17.7	Prior to the commencement of construction activities the CEMP will be updated for the proposed expansion to incorporate all mitigation measures identified within this EIAR and any subsequent planning requirements. A suitably qualified senior member of the Construction Management Team will be assigned responsibility for its execution, maintenance and on-going review. The appointed Principal Contractor and all sub-contractors will have important roles to ensure compliance with the CEMP.
Interactions and Cumulative Effects	EIAR – section 17.7	The CEMP will include plans for dust, waste, water, traffic and noise management and set out the necessary measures to ensure protection of the environment during the construction phase.
Interactions and Cumulative Effects	EIAR – section 17.7	The CEMP will be incorporated into the Construction Management Plan which will include detailed arrangements and plans for traffic and site logistics.
Interactions and Cumulative Effects	EIAR – section 17.7	Communications will be maintained with Cork County Council through the construction phase of the development to ensure any new development proposals brought forward can be considered for potential cumulative impacts.
Interactions and Cumulative Effects	EIAR – section 17.7	The CEMP will be maintained as a 'live' document which can respond to external influences outside of the control of the site construction management team.

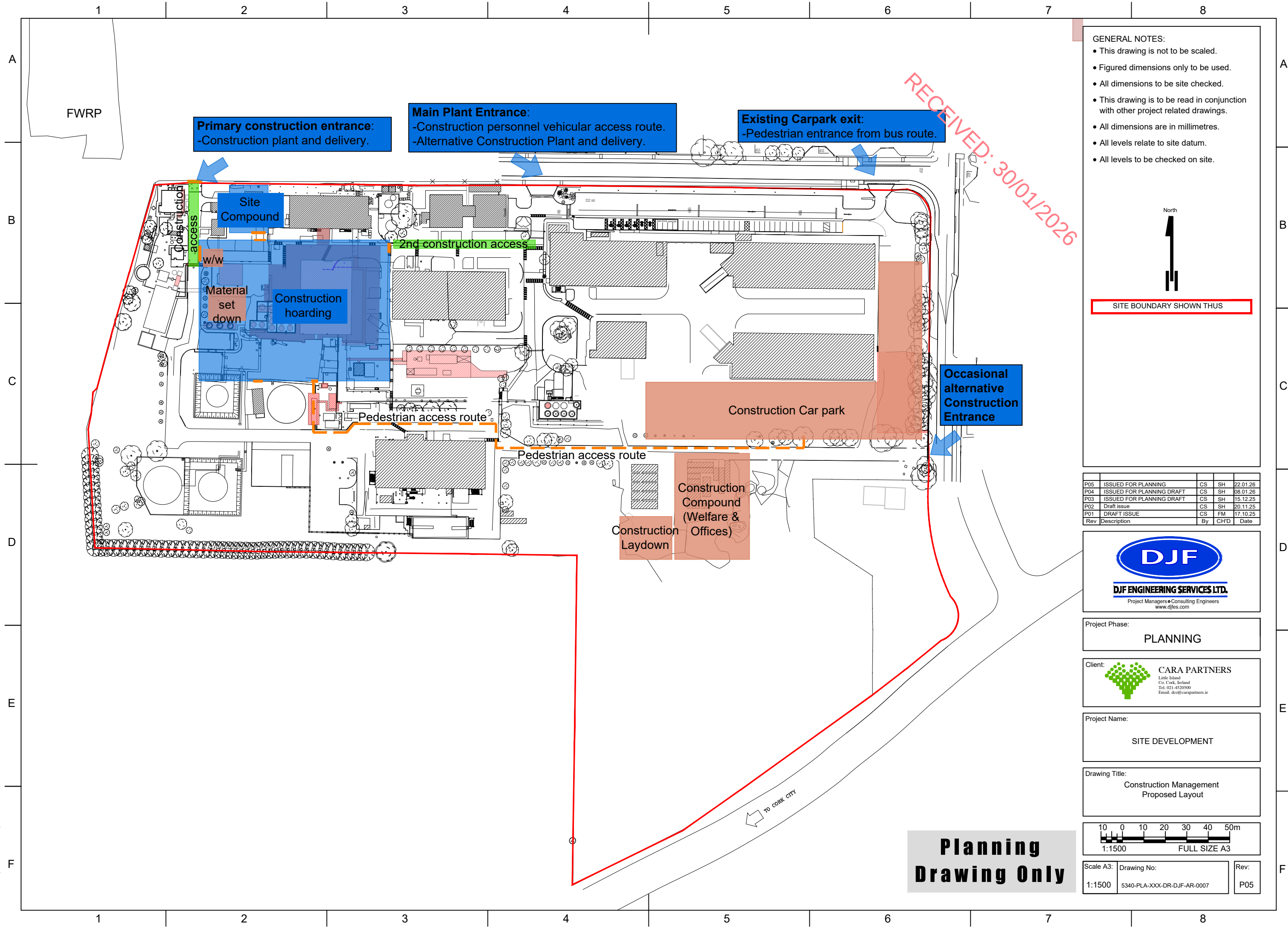
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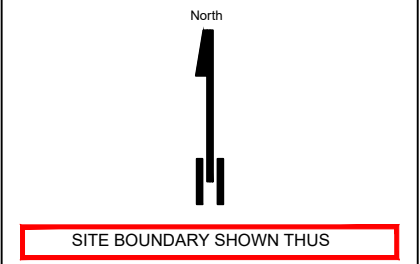
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APPENDIX 2- CONSTRUCTION MANAGEMENT LAYOUT

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- GENERAL NOTES:
- This drawing is not to be scaled.
 - Figured dimensions only to be used.
 - All dimensions to be site checked.
 - This drawing is to be read in conjunction with other project related drawings.
 - All dimensions are in millimetres.
 - All levels relate to site datum.
 - All levels to be checked on site.



P05	ISSUED FOR PLANNING	CS	SH	22.01.26
P04	ISSUED FOR PLANNING DRAFT	CS	SH	08.01.26
P03	ISSUED FOR PLANNING DRAFT	CS	SH	15.12.25
P02	Draft issue	CS	SH	20.11.25
P01	DRAFT ISSUE	CS	FM	17.10.25
Rev	Description	By	CH'D	Date



Project Phase:

PLANNING

Client:

CARA PARTNERS
Little Island
Co. Cork, Ireland
Tel: 021 4530500
Email: dcc@carapartners.ie

Project Name:

SITE DEVELOPMENT

Drawing Title:

Construction Management
Proposed Layout



Scale A3:	Drawing No:	Rev:
1:1500	5340-PLA-XXX-DR-DJF-AR-0007	P05

Planning
Drawing Only

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3.0 EXAMINATION OF ALTERNATIVES

3.1 Introduction

This chapter is framed around the guidance provided by the Environmental Protection Agency on the preparation of Environmental Impact Assessment Reports and describes the importance attached to the consideration of alternatives in the overall EIA process. This chapter has been prepared by Sustech.

References include:

- EPA (2003) *Advice Notes on Current Practice in the Preparation of Environmental Impact Statements*;
- EPA (September 2015) *Advice Notes for Preparing Environmental Impact Statements – DRAFT*;
- EPA (August 2017) *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports*;
- DHPCLG (15/05/17) *Circular Letter PL 1/2017 Implementation of Directive 2014/52/EU on the effects of certain public and private projects on the environment (EIA Directive): Advice on Administrative Provisions in Advance of Transposition*;
- DHPCLG (May 2017) *Transposition of 2014 EIA Directive (2014/52/EU) in the Land Use Planning and EPA Licencing Systems: Key Issues Consultation Paper*; and
- EPA (2022) *Guidelines on the information to be contained in Environmental Impact Assessment Reports (EIAR)*.

Annex IV(2) of the amended Directive¹ requires an EIAR to contain:

‘A description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.’

In particular, the detailed guidance provided in Section 3.4 of the revised EPA Guidelines has been considered.

It is a critical requirement of the EIA process that viable alternatives, including a “Do-Nothing Scenario”, are assessed in the context of environmental impact.

Considerations of the impacts on alternatives examined during the project design development are presented in this chapter, including explanations of what environmental factors were considered and how these considerations influenced the selection of the preferred scheme.

In addition to overall location considerations, alternative layouts and alternative designs were examined. All options were individually considered with respect to given site constraints and

¹ Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment.

operability and care was taken to ensure that any marginal environmental impact was minimised or mitigated in each design option.

3.2 Need for Project

The proposed development is required to secure the long-term operational viability, regulatory compliance and strategic role of the Cara Partners facility at Little Island as a modern, resilient and future-ready pharmaceutical manufacturing site. The development represents a planned and targeted investment in the continued evolution of the existing facility, ensuring that manufacturing activities can be carried out in a manner that meets current and future regulatory, environmental and operational requirements.

The project involves the provision of modern, purpose-designed production and process-support infrastructure to replace and upgrade existing facilities, enabling the site to continue to operate in accordance with best-in-class Good Manufacturing Practice (GMP) standards, contemporary environmental performance expectations and high standards of occupational health and safety.

The proposed development builds on the established technical capability, operational expertise and infrastructure already in place at the Cara Partners site. By enhancing existing systems and utilities and improving the integration of production, abatement and support functions, the development will increase operational reliability, flexibility and efficiency while maintaining full compliance with applicable licensing and regulatory controls.

The integration of modern emissions abatement technologies, enhanced energy-efficiency measures and upgraded utility infrastructure will reduce environmental impact, improve resource efficiency and support the application of best available techniques (BAT). These measures will strengthen environmental performance across air, water and energy use, while supporting the site's long-term sustainability objectives.

In addition, the proposed development will play an important role in securing existing employment at the Cara Partners facility and supporting the creation of new high-value roles over time, reflecting the increased technical, operational and regulatory requirements associated with a modern pharmaceutical manufacturing environment.

Overall, the proposed development represents a long-term investment in the Cara Partners facility at Little Island, ensuring that the site remains a high-quality, compliant and environmentally responsible pharmaceutical manufacturing installation. The development will support the continued safe, efficient and sustainable operation of the facility over the long term, while maintaining high standards of product quality, GMP compliance and environmental stewardship.

3.3 'Do-Nothing' Alternative

The 'Do Nothing' alternative would mean that the site would mean that the multiproduct production building would not be built and additional site upgrades would not be completed.

Furthermore, additional abatement equipment (i.e. the Regenerative Thermal Oxidiser) which is required to comply with the provisions of the Best Available Techniques Conclusions² (BATC) for common waste gas management and treatment systems in the chemical sector would not be installed.

Current production operations may be affected by a decision to not proceed with the proposed development.

Over time, as increased flexibility for other products becomes required the site would be at risk of competition from other sources and ultimately the economic viability of the site may become vulnerable.

3.4 Examination of Alternative Locations

Schwabe, as the parent company of Cara Partners, undertook a strategic review of its long-term manufacturing requirements in response to anticipated future growth in demand for natural active pharmaceutical ingredients (APIs), evolving regulatory expectations and the need to ensure resilient, sustainable and high-quality production capacity over the long term.

As part of this forward-looking assessment, a range of potential development pathways were examined to support future capacity requirements within the Group. These included the development of new facilities at existing locations in Germany, the expansion of established manufacturing operations in India and the United States, the potential procurement of third-party manufacturing capacity in Eastern Europe and the option of utilising contract manufacturing arrangements to supplement internal capabilities.

Each of these options was considered having regard to a range of factors, including regulatory and quality requirements, long-term operational resilience, environmental performance, supply chain robustness, availability of skilled resources and the ability to implement best-in-class GMP and environmental controls.

Following this assessment, the development of new, purpose-designed manufacturing capacity at the existing Cara Partners site in Little Island, Cork, was identified as the most strategic and sustainable option to support future growth objectives. This approach allows for investment in modern infrastructure within an established pharmaceutical manufacturing environment, while leveraging existing site capabilities, regulatory experience and supporting services and ensuring

² Commission Implementing Decision (EU) 2022/2427 of 6 December 2022 establishing the best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions, for common waste gas management and treatment systems in the chemical sector

that future capacity can be developed in line with best available techniques, sustainability principles and evolving regulatory standards

As part of the configurations considered for the proposed development it was considered that utilisation of the existing site at Little Island was considered suitable including criteria such as:

In assessing the suitability of the Little Island site relative to alternative locations, a range of operational, environmental and locational factors were considered, including the following:

Schwabe considered a number of other locations as potential for the proposed development.

As part of the configurations considered for the proposed development it was considered that utilisation of the existing site at Little Island was considered suitable including criteria such as:

- Proximal location to the existing production facilities and associated utility requirements;
- Opportunity to reuse and repurpose existing infrastructure for new purposes;
- Supportive environment for the development of the site in Cork including long-standing support for appropriate manufacturing and employment uses within the area, including ongoing engagement and support from IDA Ireland in the sustainable development of the industrial estate;
- Availability of sustainable access to the site capable of supporting traffic associated with the site development and future business operations;
- Availability of suitably qualified labour for construction;
- Availability of sustainable access to the site capable of supporting traffic associated with the proposed development and ongoing production operations; and
- An environmental setting consistent with and compatible with the nature of the proposed development.

3.5 Examination of Alternative Layouts and Designs

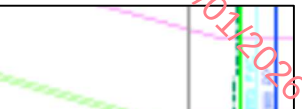
The site master planning process has addressed and reinforced consideration of optimising the layout of the site under several headings. A significant series of analyses and discussions were conducted for the site layout and build-out options during the project planning process which addressed:

- considering new build v. replacing aging plant and production building with a modern architecturally designed manufacturing facility;
- minimising impact on visual landscape;
- site context (in terms of relationship with existing buildings and surroundings);
- adjacent land uses (possible impact on adjacent land uses);
- site access (for both construction and operation);
- topography (possible limitations imposed by topography such as drainage);
- utilities and drainage (availability of connections to utilities and drainage).

Given the available footprint constraints within the existing site, alternative layouts and designs typically considered the internal configuration of the production buildings.

as considered (see Figure

as considered (see Figure



option for the following

- Prioritises the reuse and repurposing of existing assets and structures;
- Proximity to existing utility runs;
- Minimises potential impacts beyond the site boundary;
- More efficient use of space.

The proposed development format was chosen as being the best option that meets the requirements of the aspects outlined above whilst minimising the overall environmental impact of development at the site.

3.6 Examination of Alternative Processes and Mitigation Measures

The proposed extraction and maceration processes are the optimum processes and are selected according to business needs and customer specifications. There are variations to the unit processes available, but the selected processes are considered having regard to optimum sustainable footprint and utility efficiency.

In essence it is proposed to complement existing processes currently employed onsite. By selecting processes already operational onsite, there are significant opportunities for the sustainable and economic rationalisation of operation by using existing infrastructure, processes and equipment where possible.

Traffic elements of the proposed development are considered further in Chapter 12 – Traffic and Transportation.

3.7 Conclusion

The proposed development and selected layout are based on the above criteria and Cara Partners and their design team are confident that this is the optimum configuration and arrangement that represents best practice, meets the needs of the business and reduces the overall environmental impact of the facility.

4.0 PLANNING AND DEVELOPMENT CONTEXT

4.1 Introduction

This chapter of the Environmental Impact Assessment Report (EIAR) sets out an overview of the national, regional, and local planning policy relevant to the proposed development, and assesses the compliance of the proposal with planning policy. This chapter should be read in conjunction with the submitted drawings and supporting reports.

4.2 Expertise and Qualifications

This chapter of the EIAR has been prepared by Susan Cullen, Director, and by Saoirse Kavanagh, Executive Planning Consultant, of McCutcheon Halley Chartered Planning Consultants.

Susan Cullen holds a Bachelor of Environmental Studies, Honours Urban and Regional Planning from the University of Waterloo, Canada. She is a Corporate Member of the Irish Planning Institute and has 25 years of experience working a variety and large-scale projects including inputs into and the coordination of Environmental Impact Assessment Reports.

Saoirse holds a Bachelor's Degree in Arts (International), majoring in Geography, and a Master's in Planning and Sustainable Development. She has over 6 years' experience working with multidisciplinary teams and has provided input into a variety of projects. In particular, she has co-ordinated the preparation of numerous Environmental Impact Assessment Reports (EIARs) including the completion of the Introduction, Alternatives, and Population and Human Health chapters.

4.3 Site Context

The Cara Partners site is within the Little Island Industrial Estate, which is in the west of Little Island, c. 2.50 km south-east of Glanmire and c. 7km east of Cork City. The River Lee and Lough Mahon to the south separate the site from Mahon and Cork City to the west.

The Little Island Industrial Estate consists of various companies including two pharmaceutical manufacturers – Cara Partners and Viatris, the Little Island AGI pumping Station, Hydraulic Repair Services, DPD Depot, EHS Fire Training Centre and Dosco Manufacturing.



Figure 4-1 Site Location in relation to Little Island and Cork City.

4.4 Existing Site Characteristics

The site is accessed from the R623 to the south and currently comprises several industrial buildings. The N25, connecting Cork to Waterford, bounds Little Island to the north and separates the area from Glanmire.

The Cara Partners site is a pharmaceutical manufacturing facility, which is dedicated to the production of a standardised extract of Ginkgo Biloba, an Active Pharmaceutical Ingredient (API) which is manufactured at commercial scale. Cara Partners has been producing this extract in Cork since 1978.

Over the years, the site has developed and expanded as required to facilitate the ongoing processes at the facility. Planning permission has recently been granted permission, under reference 25/5753 for the regularisation of some structures and the demolition of Unit 1 Production building, among other structures.



Figure 4-2 Site location (outlined in yellow).

4.5 Characteristics of the Proposed Development

4.5.1 General Characteristics of the Proposed Development

The proposed development comprises various elements to be developed on a phased basis over a period of ten years. A proposed site layout drawing is presented in Drg. Ref. 5340-PLA-XXX-DR-DJF-AR-0010.

- 1) **Unit 1 Production Building** – Construction of a replacement, multi-storey Unit 1 Production building approx. 34m L x 23m W x 26m H (approx. 3,000m²).
- 2) **In Process Tank Farm Bund** – Modifications to the existing 'In Process Tank Farm' bund and ancillary plant and services related to same including pipe racks.
- 3) **Laboratory Gas Bottle Store** – Construction of a new Laboratory Gas Bottle Store approx. 4m L x 2m W x 4m H and ancillary plant and services related to same including pipe racks.
- 4) **Regenerative Thermal Oxidiser** – Provision of a new Regenerative Thermal Oxidiser, associated exhaust stack (approx. 10mAGL) and ancillary plant and services related to same including pipe racks.
- 5) **Process Cooling** – Provision of 1no. process cooling tower (approx. 5mAGL) to be installed to provide additional cooling for manufacturing processes and ancillary plant and services related to same including pipe racks.
- 6) **Combined Heat and Power Plant and Heat Recovery System** – addition of a new natural-gas fired containerised combined heat and power (CHP) plant (approx. 6 MW_{TH} Total Rated Thermal Input) and associated containerised waste heat boiler system with exhaust stack approx. 13mAGL and ancillary plant, kiosks and services related to same including pipe racks.
- 7) **Ethanol Storage Tank** – addition of a new ethanol storage tank (2.4m diameter x 7m H) in existing solvent tank farm bund and ancillary plant and services related to same including pipe racks.
- 8) **Car Park** – extension to existing car park including associated lighting to provide a net increase of additional 67no. permanent car parking spaces.
- 9) **Wastewater Treatment Plant (WWTP) Control and Blower Building** - Single storey building associated with WWTP expansion, approx. 11m L x 10m W x 4m H (approx. 90m²); and ancillary plant and services related to same including pipe racks.
- 10) **WWTP Chemical storage tanks and bund** – new concrete base and bund (approx. 45m²) with tanks approx. 3.5m H and ancillary plant and services related to same including pipe racks.
- 11) **WWTP Inlet works** – new screens, tanks up to approx. 9m H and ancillary plant and services related to same including pipe racks

- 12) **WWTP Dissolved Air Flotation tank** – new tank approx. 5m L x 2m W x 4m H and ancillary plant and services related to same including pipe racks.
- 13) **Site Works** – All associated site services, site development works and landscaping to facilitate the proposed development.

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4.6 Planning Policy Context

4.6.1 Relevant National Policy Guidance

4.6.1.1 Project Ireland 2040 National Planning Framework



The NPF highlights a key aspect in relation to developing Ireland's cities such as:

'Focusing investment to improve the collective 'offer' within each of the four cities, i.e. infrastructure, quality of life and choice in terms of housing, employment and amenities.'

The National Planning Framework (NPF) supports the development of industrial projects. The NPF both recognises and supports, *"enterprise specialisations and clusters, which can drive economic activity in each region, noting in particular the important role that largescale industrial projects play at a regional level."*

National Policy Objective 20 states that:

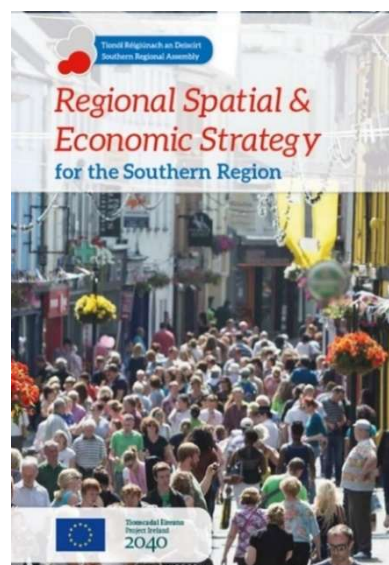
"In meeting urban development requirements, there will be a presumption in favour of development that can encourage more people and generate more jobs and activity within existing cities, towns and villages, subject to development meeting appropriate planning standards and achieving targeted growth"

4.6.2 Relevant Regional Policy Guidance

4.6.2.1 Regional Spatial and Economic Strategy for the Southern Region 2020-2032

The Regional Spatial and Economic Strategy for the Southern Region identifies large-scale and high-value manufacturing as a key enterprise strength within the Cork Metropolitan Area. The region accommodates a significant concentration of global companies operating in sectors such as technology, engineering, life sciences, and food and beverage production, contributing substantially to employment and economic growth.

Little Island is designated as a Strategic Employment Area and comprises a well-established business park with a range of industrial uses. The area benefits from strategic transport connectivity, including direct access to the N25 and a dedicated rail station, enhancing its role as a key employment location within the metropolitan area.



Cork Metropolitan Area Strategic Plan (MASP) Policy Objective 12 supports the provision of infrastructure for Strategic Employment Locations. The policy aims to:

“...support the sustainable development of identified and future Strategic Employment Locations and to ensure the delivery of associated infrastructural requirements subject to the outcome of environmental assessments and the planning process.

...seek investment and inter agency co-ordination to the delivery of infrastructure packages to assist the sustainable growth, regeneration and integration of employment land use and sustainable transport planning for existing and future identified locations in the Cork Metropolitan Area.”

4.6.3 Relevant Local Policy Guidance

4.6.3.1 Cork Local Economic and Community Plan (LECP) 2024-2030



The Cork Local Economic and Community Plan (LECP) acknowledges that plans, strategies and projects facilitating new development or the intensification of existing activities (including projects relating to new or expanded residential, sustainable transport, industrial, enterprise, and recreational/sports developments etc) should be supported where

they are consistent with the principles of proper planning and sustainable development, as guided by the policies of the County Development Plan.

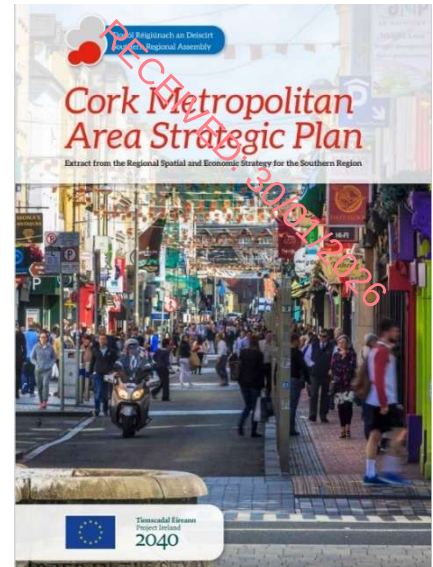
The LECP further recognises the fundamental role of Cork Harbour in the local and national economy, its strategic importance in connecting Ireland to global trade routes, and its capacity to support further economic development. Cork Harbour is acknowledged as a key location for pharmaceutical, biopharmaceutical, chemical manufacturing and other global industries.

4.6.3.2 Cork Metropolitan Area Strategic Plan

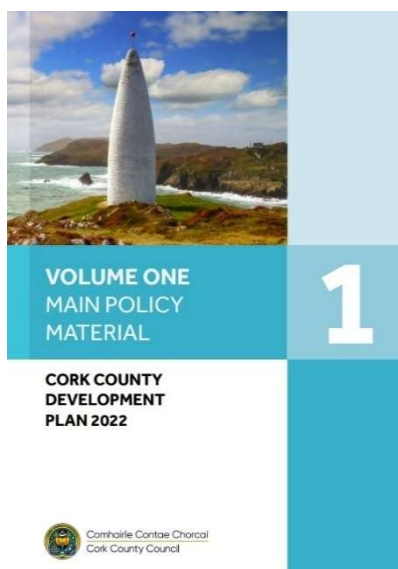
The Cork Metropolitan Area Strategic Plan (CMASP) acknowledges Little Island as a Strategic Employment Area, featuring a business park, a range of industries, and convenient access to both a rail station and the N25.

CMASP Policy Objective 3 recognises the strategic importance of Cork Harbour and sets out the following key considerations:

- To promote Cork Harbour as a unique and strategic asset in the Cork Metropolitan Area and the Region and seek investment in the sustainable development of projects that will strengthen the potential for Cork Harbour to be a first mover in Marine Spatial Planning, a significant driver for economic growth, balanced with the protection of the harbour's ecology and natural habitats (Cork Harbour SPA).
- To seek a specific planning framework initiative through the Core Strategies of Local Authority Development Plans as appropriate to guide the sustainable future management of different uses in the Cork Harbour area, including strategic economic uses, while protecting the sensitive ecosystems and designated natural habitats.
- The initiative under Part (b) shall address opportunities of a waterfront city and the harbour area, the opportunities for harbour communities, enhanced transport and public transport connections, Tier 1 Port activity, industries, clusters of economic specialism, research and innovation in the marine economy, renewable energy, ecology and habitat protection, ecosystems services, tourism, greenways and blueways inter alia.
- The delivery of plans and projects in the Cork Harbour area as a result of this objective shall be subject to quality site selection processes that consider environmental constraints and undertake environmental assessments including EcIA, SEA, EIA and AA processes as appropriate



4.6.3.3 Cork County Development Plan 2022-2028



The Vision of the Plan is to provide for the development of County Cork *“as an attractive, competitive and sustainable place in which to live, visit and do business.”* This will be achieved by supporting a high quality economy, protecting and enhancing the County's natural and built environment, promoting its rich cultural heritage, and strengthening the vitality and viability of both rural and urban communities, to the highest standards.

The Core Strategy identifies Carrigtwohill, Little Island, Ringaskiddy and Whitegate, within the County Metropolitan Area, as Strategic Employment Locations suitable for large-scale employment development. These locations are recognised for their strategic importance as set out in the

Cork Metropolitan Area Strategic Plan (MASP), particularly in supporting foreign direct investment and the continued growth of indigenous enterprises.

These 'Strategic Employment Locations' are recognised as key areas for the continued accommodation of foreign direct investment enterprises requiring stand-alone premises, while also supporting the development of specialised employment functions of national and international significance.

Economic Development

Little Island is designated as a Main Town within the Cobh Municipal District and is identified in the Cork County Development Plan 2022–2028 as one of four Strategic Employment Locations in the Cork Harbour area. It also forms part of the East Cork Growth Corridor.

The Development Plan recognises Little Island's strategic location along the N25 national route and its enhanced accessibility arising from the upgrading of the Dunkettle Interchange. Its position on the East Cork Rail Corridor further strengthens its strategic connectivity and role within the metropolitan area.

The following objectives extracted from 'Volume 1 Main Policy Material' and 'Volume 4 South Cork' outline the relevant aims for economic and industrial development within Cork County:

- Objective EC 8-1 seeks investment in the sustainable development of projects that will strengthen the potential for Cork Harbour to continue its role as a key economic driver within the region.
- Objective EC 8-3 promotes the development of Strategic Employment Locations suitable for large scale industrial developments at Little Island.
- Objective LI-GO-06 seeks to ensure that future industrial development in Little Island does not negatively impact upon the amenity enjoyed by the existing and future residents of the area.

Economic Role of Cork Harbour

The Development Plan recognises Cork Harbour as a unique and strategically significant asset at both national and international levels, comprising five County Metropolitan Towns, including Cobh, Carrigtwohill, Midleton, Passage West/Glenbrook/Monkstown, and Carrigaline, and four Strategic Employment Locations: Ringaskiddy, Little Island, Carrigtwohill, and Whitegate/Aghada.

Reflecting the strategic importance of Cork Harbour, Objective CS 2-3(b) highlights the importance of recognising Cork Harbour as a unique and strategic asset, and of promoting the development of the Cork Harbour Economy as a key driver of economic growth at a metropolitan, county, regional, national and international level, while simultaneously ensuring the future sustainable development of the Cork Harbour area, taking account of its environmental, ecological, heritage and landscape values.

A Cork Harbour Economy Analysis undertaken for the Plan indicates the Harbour's economy has the potential to more than double its GDP by 2040, from €4.5 billion to €12.4 billion, supporting

an additional c.35,000 population and 21,000 jobs. The Plan also highlights a strong economic return on investment, with €1.5 billion in public infrastructure projected to generate €769 m in returns during delivery and an additional €643 million annually thereafter.

Spatial Strategy for Economic Development

Building on the strategic role of Cork Harbour as a key economic driver for the County and the wider Southern Region, the Development Plan recognises that Cork County's ability to achieve its employment and economic growth targets depends on its capacity to accommodate new development and support enterprise. In this regard, the Plan prioritises the provision of sufficient, competitively priced and well-serviced development lands, utilities, and commercial properties, particularly within urban areas, with proposals detailed set out in the settlement-specific volumes of the Plan.

Consistent with the Regional Spatial and Economic Strategy (RSES), the Plan supports the concentration of employment development within the main towns and Strategic Employment Locations to improve employment choice, optimise serviced land, and encourage proximity between workplaces, homes, and services. Employment development is also coordinated with transport, water, and housing infrastructure to reduce commuting times and support sustainable travel.

To guide this strategy, the Plan identifies a hierarchy of employment centres (Table 8.5), including Special Policy Areas at Little Island and Marino Point, which are to be protected and promoted as key locations for sustainable employment development. The Cork Metropolitan Area and Cork Harbour are specifically recognised as the primary drivers of jobs and investment in the County, with Strategic Employment Locations such as Ringaskiddy, Little Island, Carrigtwohill, Whitegate/Aghada and Marino Point prioritised to accommodate existing and future industrial and enterprise growth.

Biodiversity and Environment

Policy Context

The Cork County Development Plan recognises Ireland's commitment to conserving and sustainably managing biodiversity through international, EU, national, and local frameworks, including the Convention on Biological Diversity, Natura 2000, the EU 2030 Biodiversity Strategy, and the National Biodiversity Action Plan, and integrates the protection and sustainable management of biodiversity and ecosystems into its policies and objectives in line with national and regional planning guidance.

Objective BE 15-1 aims to:

- a) *Support and comply with the objectives of the National Biodiversity Plan 2017-2021 (and any future National Biodiversity Plan which may be adopted during the period of this Plan) as appropriate,*
- b) *Implement the current County Biodiversity Action Plan and any future updated Plan;*

- c) *Support and comply with biodiversity policy set out in other national and regional policy documents as appropriate*

Protecting Sites, Habitats and Species

Cork Harbour (SPA 004030) lies to the north and east of Little Island. Cork Harbour is designated a Special Protection Area for the occurrence of nationally and internationally important wintering waterfowl which use coastal habitats including mudflats and saltmarsh protected under the SAC designation.

The Great Island Channel (SAC 001058) stretches from Little Island to Midleton and is a site of major importance for the two habitats listed on the EU Habitats Directive that it contains, as well as for its important numbers of wintering waders and wildfowl.

Objective LI-GO-04 notes that new development should be sensitively designed and planned to provide for the protection of the adjacent SPA and SAC.

County Development Plan Objective BE 15-2 aims to:

- a) *Protect all natural heritage sites which are designated or proposed for designation under European legislation, National legislation and International Agreements. Maintain and where possible enhance appropriate ecological linkages between these. This includes Special Areas of Conservation, Special Protection Areas, Marine Protected Areas, Natural Heritage Areas, proposed Natural Heritage Areas, Statutory Nature Reserves, Refuges for Fauna and Ramsar Sites. These sites are listed in Volume 2 of the Plan.*
- b) *Provide protection to species listed in the Flora Protection Order 2015, to Annexes of the Habitats and Birds Directives, and to animal species protected under the Wildlife Acts in accordance with relevant legal requirements. These species are listed in Volume 2 of the Plan.*
- c) *Protect and where possible enhance areas of local biodiversity value, ecological corridors and habitats that are features of the County's ecological network. This includes rivers, lakes, streams and ponds, peatland and other wetland habitats, woodlands, hedgerows, tree lines, veteran trees, natural and semi-natural grasslands as well as coastal and marine habitats. It particularly includes habitats of special conservation significance in Cork as listed in Volume 2 of the Plan.*
- d) *Recognise the value of protecting geological heritage sites of local and national interest, as they become notified to the local authority, and protect them from inappropriate development*
- e) *Encourage, pursuant to Article 10 of the Habitats Directive, the protection and enhancement of features of the landscape, such as traditional field boundaries, important for the ecological coherence of the Natura 2000 network and essential for the migration, dispersal and genetic exchange of wild species.*

Biodiversity Considerations for New Development or Other Activities

Cork County Council plays a key role in protecting biodiversity through its management of development, regulation of discharges and waste permits, and implementation of planning and nature conservation legislation, supported by its guidance on biodiversity in the planning process, which is to be updated during the lifetime of the Plan.

County Development Plan Objective BE 15-6 aims for:

- a) Providing ongoing support and guidance to developers on incorporating biodiversity considerations into new development through preplanning communications and the Council's guidance document 'Biodiversity and the Planning Process – guidance for developments on the management of biodiversity issues during the planning process' and any updated versions of this advice;*
- b) Encouraging the retention and integration of existing trees, hedgerows and other features of high natural value within new developments;*
- c) Requiring the incorporation of primarily native tree and other plant species, particularly pollinator friendly species in the landscaping of new developments;*
- d) Fulfilling Appropriate Assessment and Environmental Impact Assessment obligations and carrying out Ecological Impact Assessment in relation to development and activities, as appropriate;*
- e) Ensuring that an appropriate level of assessment is completed in relation to wetland habitats subject to proposals which would involve drainage or reclamation. This includes lakes and ponds, watercourses, springs and swamps, marshes, heath, peatlands, some woodlands as well as some coastal and marine habitats;*
- f) Ensuring that the implementation of appropriate mitigation (including habitat enhancement, new planting or other habitat creation initiatives) is incorporated into new development, where the implementation of such development would result in unavoidable impacts on biodiversity - supporting the principle of biodiversity net gain.*

Seveso Sites

The Cork County Development Plan lists the lower tier and upper tier Seveso sites within Cork County. There are two lower tier Seveso Sites in Little Island – BOC Gases and Janssen Pharmaceutical Sciences UC – and one upper tier Seveso site – BAF Ireland Ltd.

Objective EC 8-11 relates to proposed development adjacent to existing Seveso establishments and states the following:

- a) Have regard to the advice of the Health & Safety Authority when proposals for development within the consultation zone of a SEVESO site are being considered.*
- b) Have regard to the provision of the 'Major Accident Directive' (Seveso III) (European Council Directive 2012/18/EU) and in consultation with the HSA impose restrictions, on developments adjoining or within proximity of a Seveso site. The extent of restrictions on development will*

be dependent on the type of risk present and the quantity and form of the dangerous substance present or likely to be present.

c) In areas where Seveso sites exist in appropriate locations ensure that proposed uses in adjacent sites do not compromise the potential for expansion of the existing Seveso use and in particular the exclusion of developments with the potential to attract large numbers of the public.

Contaminated Land

The Cork County Development Plan aligns with the EPA's National Hazardous Waste Management Plan, requiring that all undeveloped or potentially contaminated sites, be remediated before redevelopment. Developers are responsible for site investigations, soil testing, reporting, and decontamination to prevent risks to human health and the environment, including off-site migration of contaminants and invasive species.

County Development Plan Objective BE 15-11 sets out the following:

- a) Require that prior to permitting development on contaminated sites, developers will carry out a full contaminated land risk assessment to demonstrate: - How the proposed land uses will be compatible with the protection of health and safety (including the durability of structures and services) during both construction and occupation; and - How any contaminated soil or water encountered will be appropriately dealt with.*
- b) In the case of development which requires the removal of soil, stones and invasive species, any removal requires the appropriate permits and disposal to authorised sites.*

Air Quality

The Cork County Development Plan recognises that poor air quality, in both urban and rural areas, poses significant health, economic, and environmental risks. The Council will have regard to EU, national, and regional policy to reduce air pollution, support the "Polluter Pays" principle, and promote compliance with air quality standards, including monitoring and management of key pollutants such as particulate matter and nitrogen dioxide.

County Development Plan Objective BE 15-12 notes the following:

- a) Monitor air quality and air quality trends in accordance with EU policy directives, preserve good air quality where it exists, and take appropriate action, where required, including the provision of additional air quality monitoring infrastructure in urban areas and along major roads.*
- b) Radon barriers should be provided in all new developments in compliance with best practice and relevant Building Regulations.*
- c) Air emissions associated with all new development are to be in line with Environmental Quality Standards as set out in the Air Quality Standards Regulations 2011, or any updated/superseding documents.*

Waste

The Cork County Development Plan recognises that a significant proportion of waste in the County arises from construction and demolition activity. The Council promotes the retention, refurbishment, and repurposing of existing structures to preserve embodied energy, minimise waste, and reduce the use of new materials.

In line with national and regional policy, C&D waste is now largely recycled or reused. The Plan requires Construction and Demolition Waste Management Plans for larger projects, mandates on-site segregation and reuse where feasible, and ensures that any residual waste is managed through authorised facilities, consistent with EPA best practice guidance.

Water Management

Water Sensitive Urban Design

The Cork County Development Plan promotes a shift in surface water management from purely volumetric control to enhancing water quality, biodiversity, and climate resilience through nature-based solutions. Water Sensitive Urban Design (WSUD) is encouraged from the inception of projects, providing synergies with flood management and supporting the delivery and enhancement of Green Infrastructure at both site and settlement levels, as illustrated in the main towns' green infrastructure diagrams.

County Development Plan Objective WM 11-10 sets out the following:

- a) *Require that all new developments incorporate sustainable drainage systems (SuDS). Efforts should be taken to limit the extent of hard surfacing and impermeable paving.*
- b) *Encourage the application of a Water Sensitive Urban Design approach in the design of new development or other urban interventions. Opportunities to contribute to, protect or re-enforce existing green infrastructure corridors or assets should be maximised.*
- c) *Optimise and maximise the application of Sustainable Urban Drainage Systems (SuDS) to mitigate flood risk, enhance biodiversity, protect and enhance visual and recreational amenity; all in the most innovative and creative manner appropriate and in accordance with best practices. Proposals should demonstrate that due consideration has been given to nature based solutions in the first instance in arriving at the preferred SuDS solution for any development.*
- d) *Provide adequate storm water infrastructure in order to accommodate the planned levels of growth expected for the County.*
- e) *Where surface water from a development is discharging to a waterbody, appropriate pollution control measures (e.g, hydrocarbon interceptors, silt traps) should be implemented.*
- f) *The capacity and efficiency of the national road network drainage regimes will be safeguarded for national road drainage purposes.*

Flood Risk Management Policies

County Development Plan Objective WM 11-15 requires “*flood risk assessments to be undertaken for all new developments within the County in accordance with The Planning System and Flood Risk Management – Guidelines for Planning Authorities (2009) and the requirements of DECLG Circular P12/2014 and the EU Floods Directive. - For sites within Flood Zone A or B, a site specific Flood Risk Assessment will be required. - For sites within Flood Zone C, an examination of all potential sources of flooding, and consideration of climate change (flood risk screening assessment), will be required. In limited circumstances where the ‘Flood Risk Screening assessment’ identifies potential sources of flood risk, a site specific flood risk assessment may also be required. - All proposed development must consider the impact of surface water flood risks on drainage design through a Drainage Impact Assessment. The drainage design should ensure no increase in flood risk to the site, or the downstream catchment.*”

While Objective LI-GO-09 requires the provision of Sustainable Urban Drainage Systems (SuDS) and adequate storm water infrastructure for new developments.

Transport and Mobility

Table 12.6 sets out the maximum car parking standards which includes a maximum of 1 car parking space per 50sqm of industry floor space. 5% of these spaces should be set aside for disabled car parking. In addition, at least one electric vehicle recharge point should be provided.

Motorcycle parking should be provided at a rate of 1 space per 10 car parking spaces.

Table 12.9 sets out the minimum cycle parking standards and requires 1 long stay space and 1 short stay space per 200sqm industry floor space.

The Little Island Transportation Study was completed in 2018 and identified interventions to increase the sustainability of the area in terms of transport.

Objective LI-GO-05 supports the implementation of this study and Objective LI-GO-07 notes that all developments ‘shall contribute to improved pedestrian and cyclist connectivity and shall include proposals for the provision of improved pedestrian / cycle access routes, provision of new footpaths or improvement of existing footpaths and provision of facilities for cyclists, as appropriate’.

Objective LI-GO-08 requires the completion of a Mobility Management Plan (MMP) for developments with 50 employees or more.

Built and Cultural Heritage

Sites and Monuments Record

The Sites and Monuments Record (SMR) is an online database maintained by the National Monuments Service (NMS) of all known or suspected archaeological sites and monuments. The Historic Environment Viewer (HEV) is the National Monuments Service’s online interactive

map/search facility, providing access to all records stored on its national database of sites and monuments.

Objective HE 16-2 relates to the Protection of Archaeological Sites and Monuments and states the following:

“Secure the preservation (i.e. preservation in situ or in exceptional cases preservation by record) of all archaeological monuments and their setting included in the Sites and Monuments Record (SMR) (see www.archaeology.ie) and the Record of Monuments and Places (RMP) and of sites, features and objects of archaeological and historical interest generally.

In securing such preservation, the planning authority will have regard to the advice and recommendations of the Development Applications Unit of the Department of Housing, Local Government and Heritage as outlined in the Frameworks and Principles for the Protection of the Archaeological Heritage policy document or any changes to the policy within the lifetime of the Plan.”

Management of Monuments Within Development Sites

The HEV shows a Water Mill (CO075-052), a Church (CO075-020002), and a Graveyard (CO075-020001) within the application red line boundary.

The Water Mill is incorrectly mapped in the HEV and is not within the red line boundary of the application. There are no proposed within the church or graveyard.

Please see Chapter 14 – Archaeological and Cultural Heritage for further detail on the proposed management of these monuments.

Record of Protected Structures

There are 4 no. protected structures on Little Island: Wallingstown Tower House (RPS no 00491), Little Island Church (in ruins, RPS no 00495), the lodge (RPS no 00501) and Ditchley House (RPS no 00502).

The Little Island Church (RPS 495) is within the application red line boundary, on the lands zoned Green Infrastructure. The Tower House (RPS 491) is located to the east of the application site

Objective HE 16-14 outlines the following in relation to Protected Structures:

- a) *The identification of structures for inclusion in the Record will be based on criteria set out in the Architectural Heritage Protection Guidelines for Planning Authorities (2011).*
- b) *Extend the Record of Protected Structures in order to provide a comprehensive schedule for the protection of structures of special importance in the County during the lifetime of the Plan as resources allow.*
- c) *Seek the protection of all structures within the County, which are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest. In*

accordance with this objective, a Record of Protected Structures has been established and is set out in Volume Two Heritage and Amenity, Chapter 1 Record of Protected Structures.

- d) Ensure the protection of all structures (or parts of structures) contained in the Record of Protected Structures.*
- e) Protect the curtilage and attendant grounds of all structures included in the Record of Protected Structures.*
- f) Ensure that development proposals are appropriate in terms of architectural treatment, character, scale and form to the existing protected structure and not detrimental to the special character and integrity of the protected structure and its setting.*
- g) Ensure high quality architectural design of all new developments relating to or which may impact on structures (and their settings) included in the Record of Protected Structures.*
- h) Promote and ensure best conservation practice through the use of specialist conservation professionals and craft persons.*
- i) In the event of a planning application being granted for development within the curtilage of a protected structure, that the repair of a protected structure is prioritised in the first instance i.e. the proposed works to the protected structure should occur, where appropriate, in the first phase of the development to prevent endangerment, abandonment and dereliction of the structure.*

Zoning and Land Use

The majority of the site is zoned 'Existing Mixed/ General Business/ Industrial Use' and the south-east corner of the site is zoned 'Green Infrastructure', as shown in the land use zoning map below.

The objective for the Existing Mixed/ General Business/ Industrial Use zoning is to:

'Facilitate development that supports in general the employment uses of the Existing Mixed/General Business/ Industrial Areas. Development that does not support, or threatens the vitality or integrity of the employment uses of these areas shall not be permitted.'

The development plan identifies appropriate uses for sites under this designation which includes general warehousing and high technology manufacturing plant.

The Green Infrastructure objective is a green conservation objective where the purpose is to generally retain appropriate areas for their landscape, amenity or nature conservation value.

Special Policy Objective LI-CG-04 also applies to this Green Infrastructure land, which seeks to protect wooded setting of tower house, church and graveyard.

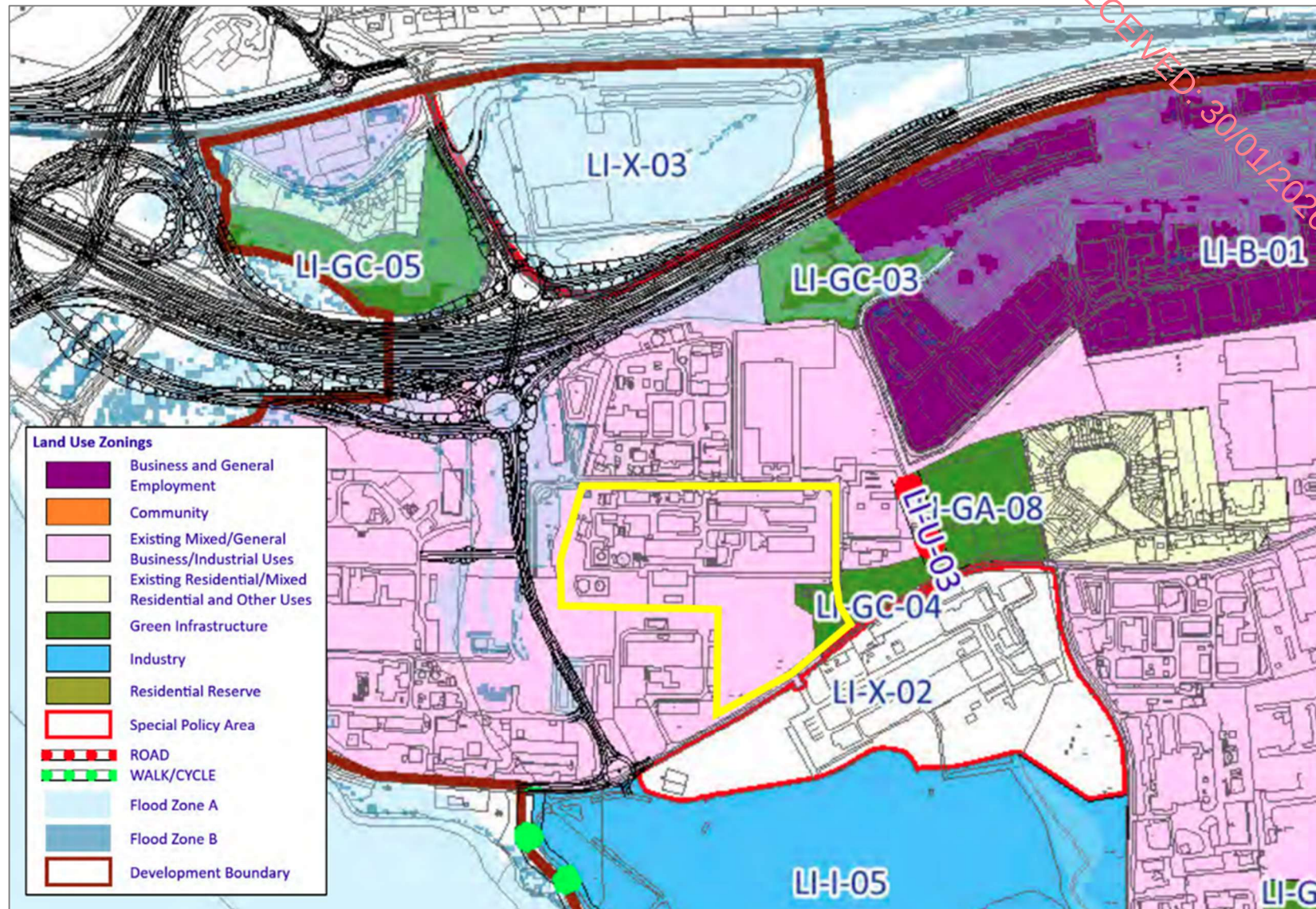


Figure 4-3 Land use zoning map (site outlined in yellow).

Landscape Character

Little Island lies within the City Harbour and Estuary Landscape Character Area, an area of very high landscape value and sensitivity. The Cork County Draft Landscape Strategy has suggested that this area is of national landscape importance.

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4.7 Relevant Planning History

4.7.1 Application Site

Table 4-1 outlines the relevant planning history of the application site.

Table 4-1 Planning history of application site.

Reference	Development	Decision Date	Decision
25/5753	Permission for modifications to the existing pharmaceutical facility and all ancillary site development works	Waiting for final grant	Grant
24/4648	Construction of an extension to the existing fire water retention pond and all associated site works.	19/07/2024	Grant
07/9492	Construction of 2m high coated chainlink fence with a personnel gateway giving access to the church (in ruins) and the adjoining burial ground	02/10/2007	Grant
06/9284	Construction of storage tank for storage of ammonium sulphate	26/10/2006	Grant
03/3507	Construction of two storey pharmaceutical building and assoc. works	15/10/2003	Grant
00/4725	Extension to Administration Building No. 2 for use as kitchen freezer room, dry store & office	31/10/2000	Grant
00/4668	Construction of laboratory building housing laboratories & related ancillary accommodation	31/10/2000	Grant
99/809	Construction of two storey locker/security building, alterations to vehicular entrance & provision of new entrance/exit	24/05/1999	Grant
96/2888	Extension to warehousing and site access roads	29/10/1996	Grant
91/2182	Extension to existing production and services facilities	22/10/1991	Grant
91/1293	Warehouse	26/07/1991	Grant
90/1041	Installation of transformer and construction of switch rooms	20/06/1990	Grant
90/603	Extension to Office reception area	03/05/1990	Grant
89/258	Expansion of warehouse and production building and construction of laboratory store	25/04/1989	Grant
85/1119	Construction of a bunded area for ammonium sulphate and construction of a sprinkler water storage tank and pumphouse	12/07/1985	Grant
84/89	Extension to production building and construction of covered storage area	18/04/1984	Grant
81/1667	Extension of in-process tank farm	06/08/1981	Grant
78/2245	Erection of a Factory	04/07/1978	Grant
78/777	Erection of a Factory	05/05/1978	Grant

4.8 Planning and Development Conclusion

A review of the Government Policy highlights strong and consistent support for appropriately located industrial and economic development within the Cork Metropolitan Area, and in particular at Little Island and within Cork Harbour. Government policy recognises these locations as strategically important economic drivers, capable of accommodating large-scale and high-value employment development.

Little Island is identified across regional and local policy as a key location for industrial and enterprise development. The Cork County Development Plan 2022–2028 designates Little Island as a Strategic Employment Location and Main Town within the Cobh Municipal District, recognising its capacity to accommodate large-scale industrial uses of national and international significance. Its position along the East Cork Growth Corridor, strategic access to the national road and rail network, and proximity to Cork City reinforce its suitability for continued employment-led development.

Policy objectives within the Development Plan, including Objectives EC 8-3 and LI-GO-06, specifically promote industrial development at Little Island while ensuring that such development is sensitively designed and managed to protect residential amenity, environmental quality and local heritage. The zoning of the subject lands for *'Existing Mixed/General Business/Industrial Use'* further support the principle of development. In this context, Little Island's role as an accessible and serviced employment location aligns with the spatial strategy of concentrating employment growth in appropriate and sustainable locations.

Cork Harbour is also recognised in Government policy as a unique and strategically significant asset. The Harbour's role in international trade, a centre for pharmaceutical, biopharmaceutical, and chemical industries, and a driver of foreign direct investment is acknowledged in the Cork MASP, LECP and Cork County Development Plan.

Strategic policy objectives seek to promote the sustainable development of Cork Harbour as a key economic driver, while balancing growth with the protection of its internationally designated ecological assets, including Cork Harbour SPA and the Great Island Channel SAC. The Development Plan highlights the Harbour's substantial economic potential, including significant projected growth in GDP, employment and population, supported by targeted public infrastructure investment. Within this framework, Strategic Employment Locations such as Little Island are prioritised to accommodate enterprise growth and industrial development, reinforcing Cork Harbour's role within the economy of the Southern Region.

However, economic development is not supported in isolation, but within a robust framework of environmental protection, climate resilience and heritage conservation. The Cork County Development Plan integrates policies for biodiversity protection, Appropriate Assessment, flood risk management, sustainable drainage, sustainable transport and heritage protection to guide development. The policy framework in relation to Little Island and Cork Harbour therefore supports industrial and economic development that is well-designed, well-served, and subject to environmental assessment and mitigation, ensuring no adverse effects on designated habitats, landscape character or cultural heritage.

In conclusion, Government policy strongly supports the continued development of Little Island and Cork Harbour as strategic locations for industrial and economic growth. Little Island's established role as a Strategic Employment Area, combined with Cork Harbour's function as a nationally significant economic asset, provides a clear and robust policy basis for employment-led development in this location. When assessed against the planning policy framework, such development is consistent with the policy objectives and aligns with the overarching vision of County Cork as an *"attractive, competitive and sustainable place in which to live, work and do business"*.

5.0 POPULATION AND HUMAN HEALTH

5.1 Introduction

This chapter has been prepared by Sustech. It examines the impact of the proposed development on human beings and socio-economic factors including economic activity and health and safety considerations.

EPA guidance identifies issues which may be examined under assessment of impact on the human environment as being:

- Social Consideration (employment and population effects);
- Economic Activity (industry and employment);
- Land Use (damage to sensitive ecosystems and other adjacent land uses);
- Tourism; and
- Health and Safety (impacts on surrounding populations and employees).

Various impacts of the proposed development on human beings are also dealt with where relevant in the following chapters:

- Chapter 6 - Air Quality and Odour
- Chapter 7 - Noise and Vibration
- Chapter 8 - Water Quality and Aqueous Emissions
- Chapter 9 - Soils, Geology and Hydrogeology
- Chapter 10 - Biodiversity
- Chapter 11 - Landscape and Visual Impact Assessment
- Chapter 12 - Traffic and Transportation
- Chapter 13 - Material Assets
- Chapter 14 - Archaeological and Cultural Heritage
- Chapter 15 - Waste Management
- Chapter 16 - Climate
- Chapter 17 - Major Accidents and Hazards

This chapter relates to the socio-economic environment of Little Island, Co. Cork as well as more specifically, the immediate surroundings of the subject site.

It should be noted that the current facility has already had a positive impact in terms of local employment and stimulating economic activity with respect to the operational aspect of the facility.

5.2 Study Methodology

Analysis of the effect of the proposed development on the human environment is undertaken in compliance with the requirements of the published EPA Guidelines¹ and Advice² Notes.

A number of site visits to the subject site and its environs assisted in compiling information relevant to this chapter. Information on health and safety policy and procedures was provided by Cara Partners.

The EPA Guidelines require a consideration of the following major factors in the context of a proposed development:

- Employment
- Human Health (considered with reference to other headings such as water and air)
- Amenity (e.g. effects on amenity uses of a site or of other areas in the vicinity – may be addressed under the factor of Landscape)

An assessment of local residential receptors was also conducted.

The development context and land-use zoning of the site and environs are considered in detail in Chapter 4 – Planning and Development Context.

Information was sourced from relevant public bodies such as the Central Statistics Office and Cork County Council.

¹ EPA (2022) *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports*

² EPA (September 2015) *Advice Notes for Preparing Environmental Impact Statements – DRAFT*

5.3 Characteristics of the Existing and Proposed Development

A detailed description of the existing and proposed development is provided in Chapter 2 – Description of the Proposed Development.

5.3.1 Characteristics of the Existing Site

The existing Cara site is located within Cork city in the IDA Little Island Industrial Estate region. Co. Cork. The site is accessed via the R623 at the south of the site which is off the N25 road which runs from Cork City to Rosslare Harbour via Waterford.

The site is located to the east of Cork city and lies in close proximity to Lough Mahon which lies to the south of Little Island.

The existing c. 8.6 Ha site can be considered generally as comprising of industrial buildings including large factory buildings and associated hardstanding, ancillary facilities etc.

The site process generally comprises of solvent-based extraction of target compounds and employs c. 100 employees that operate 24/7 in shift cycles.

The site is regulated by the EPA under IEL P0017-02 and this IEL will be reviewed subject to the grant of planning permission.

The surrounding environment generally comprises commercial, industrial and utility premises for a varying range of services including:

- Viatris Little Island carparking (to the west)
- Viatris Little Island (to the north)
- Pressure Hydraulics & Controls (to the northeast)
- Castleview 110 kV substation (to the east)
- Intelligent Security Solutions (to the east)
- EPark Little Island (data centre business park on former Mitsui Denman site to south)
- Dosco (to the south)
- BASF Ireland (to the southwest)

Wallingstown Castle (CO075-021 PS00491) is located c. 50m from the east boundary of the site.

There are no immediate adjoining neighbouring residential development with the nearest residential dwelling c. 300m to the east of the site situated within the St. Lappins Place.

The planning history of the site is detailed further in Chapter 4 – Planning and Development Context.

5.3.2 Characteristics of the Proposed Development

The proposed development comprises various elements to be developed on a phased basis over a period of ten years. A proposed site layout drawing is presented in Drg. Ref. 5340-PLA-XXX-DR-DJF-AR-0010.

1. **Unit 1 Production Building** – Construction of a replacement, multi-storey Unit 1 Production building approx. 34m L x 23m W x 26m H (approx. 3,000m²).
2. **In Process Tank Farm Bund** – Modifications to the existing 'In Process Tank Farm' bund and ancillary plant and services related to same including pipe racks.
3. **Laboratory Gas Bottle Store** – Construction of a new Laboratory Gas Bottle Store approx. 4m L x 2m W x 4m H and ancillary plant and services related to same including pipe racks.
4. **Regenerative Thermal Oxidiser** – Provision of a new Regenerative Thermal Oxidiser, associated exhaust stack (approx. 10mAGL) and ancillary plant and services related to same including pipe racks.
5. **Process Cooling** – Provision of 1no. process cooling tower (approx. 5mAGL) to be installed to provide additional cooling for manufacturing processes and ancillary plant and services related to same including pipe racks.
6. **Combined Heat and Power Plant and Heat Recovery System** – addition of a new natural-gas fired containerised combined heat and power (CHP) plant (approx. 6 MW_{TH} Total Rated Thermal Input) and associated containerised waste heat boiler system with exhaust stack approx. 13mAGL and ancillary plant, kiosks and services related to same including pipe racks.
7. **Ethanol Storage Tank** – addition of a new ethanol storage tank (2.4m diameter x 7m H) in existing solvent tank farm bund and ancillary plant and services related to same including pipe racks.
8. **Car Park** – extension to existing car park including associated lighting to provide a net increase of additional 67no. permanent car parking spaces.
9. **Wastewater Treatment Plant (WWTP) Control and Blower Building** - Single storey building associated with WWTP expansion, approx. 11m L x 10m W x 4m H (approx. 90m²); and ancillary plant and services related to same including pipe racks.
10. **WWTP Chemical storage tanks and bund** – new concrete base and bund (approx. 45m²) with tanks approx. 3.5m H and ancillary plant and services related to same including pipe racks.
11. **WWTP Inlet works** – new screens, tanks up to approx. 9m H and ancillary plant and services related to same including pipe racks

12. **WWTP Dissolved Air Flotation tank** – new tank approx. 5m L x 2m W x 4m H and ancillary plant and services related to same including pipe racks.
13. **Site Works** – All associated site services, site development works and landscaping to facilitate the proposed development.

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5.4 Receiving Environment

5.4.1 Population

The nearest significant population cluster to the existing site is Cork City, the centre of which is located approximately 6.4 km to the west of the current site.

The 2022 census indicated that the population of Cork City and Suburbs was 222,526.

Using the old settlement boundaries, the population of Cork City and Suburbs in 2016 was recorded as 208,669.

Given the location of the site and its industrial nature, there are a limited number of potential sensitive residential receptors located in the vicinity of the existing site. The majority of the nearest population settlement to the existing site is located c. 300m east of the site in Saint Lappin's Place which comprises of a small housing estate.

The nearest childcare/early years facilities registered on Pobal³ is Gate Childcare located c. 800m to the northeast of the site in Eastgate.

The nearest school to the site is Little Island National School located c. 600m to the east of the site.

The various noise, air and visual impact modelling has been conducted having due regard to the sensitivity and proximal location of these receptors to the site and is detailed in the relevant chapters of the EIAR.

5.4.2 Amenity and Tourism

The Little Island Sports complex is situated c. 200m to the east of the site.

Further east lies Cork Golf Club c. 800m from the site.

Other amenity features include the Carrigrennan Loop walk which lies in Carrigrennan on Little Island c. 5 km southeast of the existing site.

Visitors to these amenities include workers in Little Island, residents from Cork and surrounding counties as well as tourists travelling from further afield.

It is not anticipated that the proposed development will have any measurable impact on the amenity and tourism aspects in the vicinity of the site.

A detailed description of relevant national, regional and local planning policies is provided in the Planning Report accompanying the Application and Chapter 4 'Planning and Development Context' of this EIAR.

³ www.pobal.ie

5.4.3 Employment

Cork is the second largest metropolitan area in the country and accounts for almost one fifth of the population of the Southern Region.

The economy of Cork County is diverse in its make-up with many strengths including in the areas of agriculture, marine, food production, tourism, services, energy and in technology based manufacturing in sectors such as electronics, pharmaceuticals and medical devices.

According to Census 2022, there were 264,423 people at work in Cork (comprising 103,249 in Cork City Council and 161,174 in Cork County Council).

The CCDP 2022 also notes that the Southern Region saw an overall increase in jobs of c. 7% between 2011 and 2016 with Cork County itself seeing a 9.5% increase in the same period.

The Cork County Development Plan 2022 (CCDP) indicated that the total number of jobs in Little Island (at time of drafting) was estimated at 7,955.

Little Island is one of four no. Strategic Employment Locations located within the Cork Harbour area.

Given the significant economic role of Cork Harbour nationally, there is extremely strong support for the continued development and support of the Cork Harbour Economy within the CCDP 2022.

5.4.4 Human Health and Safety

It is the policy of Cara Partners to conduct its business responsibly and in a manner designed to protect the health and safety of its employees, customers, the public and the environment. As a member of the community in which Cara Partners operates, it is conscious of the effects of proposed operations on the environment – neighbours, land, water, air and noise.

Cara Partners is committed to providing a safe and healthy workplace for employees in a manner that is harmonious with the local community and ensuring continuing improvement and preventing pollution.

The site itself is not an Establishment as defined under the Control of the Major Accidents Hazards (COMAH) Regulations 2015 (as amended), however a number of listed establishments are located in the vicinity as follows:

- Upper Tier Establishment
 - BASF Ireland (c. 200m to the southwest)
- Lower Tier Establishment
 - Viatris Little Island aka Upjohn Manufacturing Ireland (across the road to the north of the site)
 - Janssen Pharmaceuticals (c. 350m to the east)
 - BOC Gases (c. 500m to the southeast)

Additional human health and safety considerations are considered in Chapter 17 'Major Accidents and Hazards'.

Under their Environmental and Health and Safety Policies (see Appendix 5-A), Cara Partners is committed to ensuring a safe and healthy workplace for our customers, employees, contractors, and the community in which they operate.

The proposed development at the site will continue to be subject to the provisions of an Industrial Emissions Licence (IEL) which is administered by the EPA. Following the submission of the planning application for the proposed development to Cork County Council, an application for a review of the existing IEL will be submitted to the EPA.

5.5 Potential Impact of the Proposed Development

5.5.1 Impacts on Development and Zoning

5.5.1.1 Construction Phase

No economic activity will be displaced through the construction phase of the proposed development. There will be no severance, rights of way loss or conflicts with other sites during this phase.

5.5.1.2 Operational Phase

As described in more detail in Chapter 4, it is the policy of Cork County Council to support and facilitate the economic development of the county in accordance with the economic development strategy of the CCDP and the Cork LECP 2024 across a range of sectors.

The operation of the proposed development will generally reflect the existing operations in terms of pharmaceutical manufacturing. It will incur no severance, rights of way loss or conflicts with other sites. The operational phase of the proposed development will have no long-term significant adverse impacts on pre-existing zoning at this site or neighbouring land-uses or zoning.

5.5.2 Impacts on Population

The potential construction and operational phase impacts on local residences and businesses associated with the proposed development will relate mainly to traffic, noise, water quality, air quality, odour and visual impacts all of which are detailed in the relevant chapters in the EIAR as outlined in section 5.1.

5.5.2.1 Construction Phase

During peak construction activity, it is anticipated that there will be up to 350 – 450 construction staff employed onsite. It is anticipated that a significant number of this workforce will be employed from local areas. Accordingly, it is envisaged that impacts from the construction of the proposed development will be imperceptible in terms of any change in population and land use.

5.5.2.2 Operational Phase

There is a proposed increase in employment onsite from the current baseline of c. 100 to c. 140 – 150 employees total with a variety of shift patterns in place. It is anticipated that a number of this workforce will be employed from local areas.

Given the proposed numbers involved, it is envisaged that the impacts from the proposed development will be imperceptible in terms of any change in population and land use.

5.5.3 Impacts on Employment

5.5.3.1 Construction Phase

The construction phase will take place over a ten-year period and will be sequenced in order to keep the existing facility operating in a safe and efficient manner.

Over this period of construction, there will be a direct positive temporary impact in terms of creating employment for approximately 350 – 450 construction staff during peak periods. It is anticipated that a significant number of this workforce will be employed from local areas.

The construction phase will also benefit both the skilled and unskilled labour force with a knock-on effect to building suppliers and other professional services suppliers.

5.5.3.2 Operational Phase

There will be no long-term operational negative impacts on employment associated with the proposed development. There will be long-term direct positive impact on employment in terms of securing existing employment and creating additional employment opportunities for up to c. 150 staff total and indirectly supporting related employment during the operational phase.

5.5.4 Impacts on Human Health and Safety

The impacts on human health from an air quality, noise, water and traffic perspectives are considered in other chapters in this EIAR.

The impacts on human health and safety related to major accidents and hazards are specifically considered in Chapter 17.

5.5.4.1 Construction Phase

During the construction phase, issues in relation to health and safety will relate solely to onsite works. The health and safety procedures/protocols adopted will be carried out in accordance with current national and EU Regulations and supervised by appropriately qualified and experienced managers. All applicable third-party safety guidelines will also be considered.

5.5.4.2 Operational Phase

It is the policy of Cara Partners to conduct business in a responsible way and in a manner designed to protect the health and safety of employees, customers, the public and the environment.

The development has been designed to maximise containment, minimise the potential for accidental spillages and provide collection systems in the event of incidents.

Fire and smoke prevention, detection and suppression measures will be incorporated into the detailed design of the proposed development. Appropriate fire certification processes will be completed.

In addition, Cara Partners has a Site Emergency Plan in place which sets out information on employees' responsibilities, as well as fire, evacuation and emergency procedures for the existing site and will be updated to account for the proposed development.

Along with existing healthy workplace measures a new Slí na Sláinte walking route is proposed within the existing woodland to the southeast of the site which will be aligned with the relevant elements of the *Slí@Work* programme managed by the Irish Heart Foundation.

5.5.5 Impacts on Amenities and Tourism

5.5.5.1 Construction Phase

There may be greater use of local amenities and tourism facilities during the construction phase by contractors but the construction of the proposed development will not affect the tourism profile of the area.

5.5.5.2 Operational Phase

There are no predicted negative impacts on local amenities and tourism arising from the operational phase. The proximity of potential sensitive receptors are addressed in other relevant chapters in the EIAR.

5.6 Do Nothing Scenario

The 'Do Nothing' scenario would mean that the existing business would continue as is with the current risk profile as discussed in Chapter 3 – Examination of Alternatives. Employment levels would be expected to remain as-is for the existing operation noting that the long-term viability of the site may become vulnerable if corporate objectives require increased flexibility in processing capacity which cannot be met with the current operational configuration and without the proposed development.

5.7 Mitigation Measures

In the event of closure or significant production cutbacks, Cara Partners will actively endeavour to assist the employees in seeking alternative employment through measures such as career advice, campaigning of similar viable industries and liaison with relevant state agencies.

Aside from the measures outlined within this and other chapters of the EIAR, which relate to pollution prevention, traffic management, environmental protection and ensuring human health and safety, no additional remedial measures are considered necessary, as the proposed development is expected to have an overall positive long-term economic and social impact on the existing community and environs and is in full compliance with development strategies and strategic planning guidelines for the area.

5.8 Predicted Impact of the Proposed Development

As the potential impact of the proposed development is considered positive, and no mitigation measures are necessary, the predicted impact will be the same as those discussed previously.

5.8.1 Cumulative Impact

The overall predicted cumulative impact of the proposed development and other planned developments is long-term and positive, because of the overall benefits of the proposed development, which have been described above.

5.8.2 Residual Impact

The overall residual impact of the scheme on the human environment is anticipated to be slight positive, due to the benefit of continuing to secure long-term investment in the existing business and in supporting environment-related infrastructure.

5.9 Monitoring

Continual monitoring of emissions from the proposed development will be carried out as required. No further monitoring, as applicable to socio-economic impacts, is considered necessary.

Cara Partners will continue to monitor comments and feedback from the local community and will continue to liaise with the local community with respect to any concerns or comments they may have.

Appendix 5-A

Cara Partners Environmental Policy

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Environmental Policy Statement for Cara Partners

Cara Partners manufactures Active Pharmaceutical Ingredients (API) using chemical extraction and drying processes and is located in Little Island, Co. Cork.

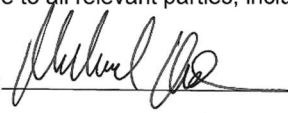
The Senior management of Cara Partners is committed to the protection of the environment by managing environmental matters as an integral part of our business. It is our policy to utilise appropriate environmental controls and systems to achieve a high standard of environmental compliance throughout our operation, with specific emphasis on our relevant emissions as under our IE License P0017-02.

We strive to achieve environmental excellence in every aspect of our business through continuous development and improving the efficiency of our operations to minimise resource and material consumption, in addition to waste and emissions generation. We are committed to maintaining our environmental systems which will manage our environmental impact to the natural environment.

Cara Partners is committed to complying with the applicable legislation, regulations and any other relevant requirements. We aim to achieve this by implementing systems, programmes and procedures to reduce the risk of environmental impact and to responsibly consume resources such as energy, water and material.

In order to reach our environmental goals of sustainable performance and continuous improvement, Cara Partners generates environment objectives and targets each year which are reviewed on an annual basis. Together with our EPA licence these objectives and targets help us establish the framework for implementing our environmental policy.

This environmental policy is communicated to all employees and contractors to create awareness and understanding of environmental responsibilities, and to support the objectives and targets set by Cara Partners. This policy is made available to all relevant parties, including stakeholders and neighbours.

Signed: 

Date: 23/01/25.

Michael Kirk

Site Lead

Cara Partners Health and Safety Policy

RECEIVED: 30/01/2026

RECEIVED: 30/01/2026

Health & Safety Policy

Cara Partners is a pharmaceutical company involved in the manufacture of Ginkgo Biloba extract using natural and chemical ingredients. We are committed to providing a healthy and safe work environment and producing a safe product. The company recognizes its legal responsibilities and is committed to complying with all applicable regulations and legislation, including:

- Safety Health and Welfare at Work Act – 2005.
- Safety Health and Welfare at Work (General Application) Regulations 2007.

Cara Partners also acknowledges its other legal and moral obligations, including all corporate standards and guidelines, and is committed to ensuring the Safety, Health and Welfare of its employees while at work. In addition, the company has been assessed and certified as meeting the requirements of ISO 45001:2018 and is committed to maintaining this standard

The Company believes that Health & Safety is a value associated with its every priority and that tasks / operational activities can be executed without injury or loss. Chemicals and chemical related emergencies are specific hazards related to the company which must be effectively managed. Cara Partners is committed to preventing injury and ill health, and to continual improvement in its OH&S management and OH&S performance. Cara Partners consistently applies the hierarchy of control and the general principles of prevention to ensure that the most effective and collective safety measures are prioritized.

The Site Lead, through his management team will ensure:

- A safe working environment.
- That all operating exposures which may result in injuries are safeguarded.
- A competent workforce where safety is an integral part of their work and where each employee accepts responsibility for his/her own safety, health and welfare and that of any other person who may be affected by his/her acts or omissions while at work.
- A co-operative, participative and consultative approach to safety.
- The communication of this Policy to all persons working under the control of the company. This will be achieved through the induction process.

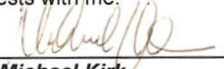
Achieving and maintaining our total safety culture is through a continuous improvement programme involving all employees in a team based approach with the company Environment, Health & Safety Manager as coach. This programme is based on annually formulated and reviewed OH&S objectives and targets.

The Site Lead will ensure a comprehensive Health & Safety audit is carried out annually, with appropriate remedial actions.

The safety statement will be revised as changes occur and periodically evaluated at set intervals. The safety statement will be communicated to all employees.

The board of directors are fully committed to this policy, and I accept that, the ultimate responsibility rests with me.

Signed:


Michael Kirk
Site Lead

Date:

23/04/24.