



Malachy Walsh and Partners
Engineering and Environmental Consultants



Belvelly Port Facility (Marino Point, Great Island, Cork)
Proposed Agricultural Fertiliser Facility and Additional Port Operational Uses
Environmental Impact Assessment Report (EIAR)



206955-22/12/2020-EIAR Volume 2 - Main Report Part 1 ()

Project No. 21082
December 2020





Volume 2: Environmental Impact Assessment Report (EIAR)

Proposed Agricultural Fertiliser Facility and
Additional Port Operational Use
Environmental Impact Assessment Report (EIAR)

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Volume 3 APPENDICES

**Proposed Agricultural Fertiliser Facility and Additional Port
Operational Use at the Belvelly Port Facility, Marino Point,
Co. Cork**

Environmental Impact Assessment Report (EIAR)

Project No. 21082

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1. INTRODUCTION

1.1 Introduction

Goulding Chemicals Limited and Belvelly Marino Development Company DAC (BMDC) wish to jointly submit a planning application to Cork County Council for the development of a new agricultural fertiliser blending and bagging facility and additional port operational use of the jetty to facilitate cargo vessels at the Belvelly Port Facility at Marino Point on Great Island, Co. Cork.

Belvelly Marino Development Company DAC (BMDC) acquired the former Irish Fertilisers Industries (IFI) site at Marino Point on Great Island, Co. Cork in 2017. Goulding Chemicals Limited has an agreement with BMDC to purchase 7.6 hectares of land within the Belvelly Port Facility site to be used for the relocation of their agricultural fertiliser facility from Centre Park Road in Cork City.

The proposed development consists of the following main elements at the Belvelly Port Facility:

1. The construction of a new agricultural fertiliser facility for use by Goulding Chemicals Limited; and
2. Additional port operational use of the jetty to facilitate cargo vessels.

BMDC applied for planning permission for demolition, site infrastructure and utility upgrade works at Belvelly Port Facility on the 22nd November 2019 (Planning Ref. 196783). Cork County Council gave notice of their intention to grant permission on 22nd July 2020. An appeal was made to An Bord Pleanála and a decision is currently pending. The proposed demolition, site infrastructure and utility upgrade works will be temporary in nature and will not overlap with the proposed operation of the fertiliser facility.

There will be some overlap between the demolition, site infrastructure and utility upgrade works and the construction phase of the agricultural fertiliser facility and the additional use of the jetty and these aspects are considered and cumulatively assessed in this EIAR.

Since 2017, BMDC have developed an overall masterplan for the future development of a range of potential industrial and port related activities at the site. Any future development proposals will be informed by the masterplan and will be subject to separate planning application processes and associated environmental assessment screenings or full assessments.

Malachy Walsh and Partners (MWP) have been engaged by Goulding Chemicals Limited and BMDC to produce an Environmental Impact Assessment Report (EIAR) for the proposed construction and operation of the fertiliser facility and the additional port operational use of the jetty to facilitate cargo vessels, in support of the planning application to Cork County Council.

This chapter of the EIAR introduces the project and describes the scope and methodology of the EIA process. The competencies of each of the contributors are provided along with an outline of the consultation process which was undertaken.

1.2 Background and Purpose of the EIAR

EIA is derived from European Communities Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment. The 85/337/EEC has been amended a number of times and then codified by Directive 2011/92/EU and this in turn has been amended by Directive 2014/52/EU. The main goal of the EIA Directive is to ensure that projects which are likely to have significant effects on the environment are subject to an assessment of their likely impacts. The EIA Directive applies to a wide range of defined public and private projects, which are defined in Annexes I and II to the Directive. The European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 transpose into Irish planning law the requirements of Directive 2014/52/EU.

Schedule 5 of the Planning and Development Regulations, 2001 (S.I. 600 of 2001), as amended, specifies the type and size of developments that require an Environmental Impact Assessment Report (EIAR) to be submitted as part of a planning application to the competent authority (Cork County Council).

An EIAR was previously prepared and submitted with the planning application for the demolition, site infrastructure and utility upgrade works at Belvelly Port Facility.

This proposed development does not fall within the class of development types requiring an EIA under Schedule 5 to the Planning and Development Regulations 2001, as amended. However, it is predicted that there will be an overlap between the construction phase of the demolition, site infrastructure and utility upgrade works and the development proposed within this application. Given the nature, size and location of the proposed development and the potential for cumulative impacts between the two proposed developments, the applicants have decided to forego EIA Screening in accordance with the Criteria set out in Schedule 7 of the Planning and Development Regulations and voluntarily undertake the preparation of a full EIAR for the proposed development.

EIA is a process for anticipating the effects on the environment caused by a development; the document produced as a result is termed the EIAR. Article 1(2)(g) of the 2014 EIA Directive (2014/52/EU) states that:

“environmental impact assessment” means 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."*

The EIAR is a presentation of the potential environmental impacts of the proposed development with a focus on significant impacts. This report is based on the data gathered during the assessment process. It applies accepted methodologies in determining if impacts will be significant and recommends mitigation measures to avoid or reduce impacts where possible.

1.3 Overview of the Proposed Development

The proposed development for the relocation of Goulding Chemicals Limited to the Belvelly Port Facility site consists of the following main elements:

- Importation by ship of bulk granular fertiliser at the existing jetty.
- A storage warehouse;
- A bagging and palletising facility;
- An office building to support customer service and weighbridge operations; and
- Outside paved storage area, weigh-bridges, access control and security facilities.

It is projected that the average number of ships using the existing jetty for importation of bulk granular fertiliser for the Goulding operations will be approximately 50 ships per year.

The proposed additional BMDC port operational use of the jetty to facilitate general dry cargo vessels at the Belvelly Port Facility.

- In addition to the shipping associated with Goulding's operations, it is expected that approximately 40 additional ships will berth at the jetty each year, carrying general cargo material.
- The cargo types proposed will include woodchip, machinery parts, deep sea maintenance and exploratory vessel engineering cargo and other miscellaneous dry cargo.
- The size and frequency of cargo vessels will be variable and will be subject to the various customers' needs. On average, ships will be berthed for 1 to 2 days to offload / load cargo but may be longer depending on cargo size and weather conditions.

1.4 Site Location

Marino Point is a small peninsula located on Great Island, County Cork. It is approximately 5 km north of Cobh, 5.5km south-west of Blackrock, Cork and 10km south-west of Cork City Centre. The eastern boundary is formed by the Cork-Cobh railway and the regional road from Cork to Cobh (R624). The site is bound by Cork Harbour to the north, south, and west (refer to **Figure 1.1**). Passage west is approximately 1km from the centre of the site on the opposite side of the harbour (west). Cobh Golf Club is located to the east, on the eastern side of the R624.

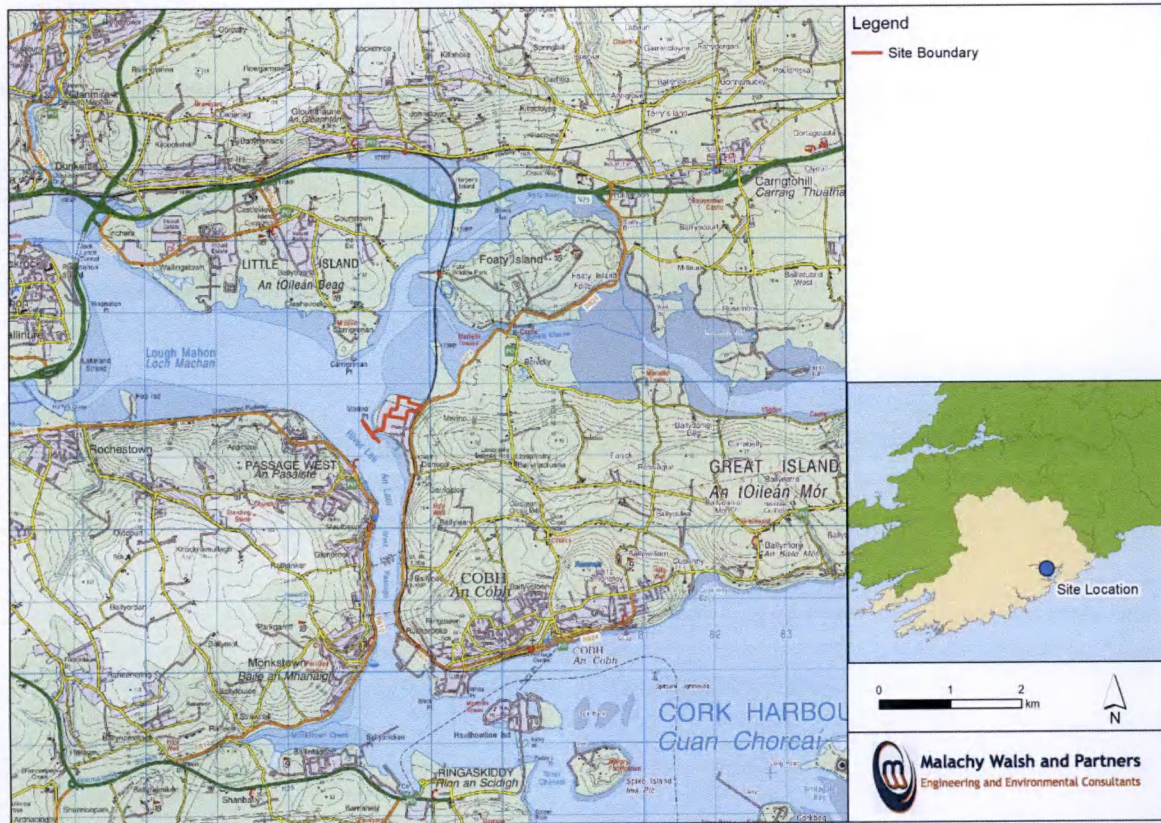


Figure 1.1 Belvelly Port Facility Site Location

1.5 Applicant and Application Area

The two applicants seeking joint planning permission to undertake the proposed development at the Belvelly Port Facility site are Belvelly Marino Development Company DAC (BMDC) and Goulding Chemicals Limited.

BMDC is a Public Private Partnership between Lanber Holdings and the Port of Cork Company. As outlined earlier, BMDC purchased Marino Point site in 2017 for future development of a range of potential industrial and port related activities.

Goulding Chemical Limited are a wholly owned subsidiary of Origin Enterprises plc. Origin provides a broad range of agricultural input services to the Irish market and abroad. Gouldings import, blend and distribute a complete range of fertilisers, trace element fertilisers, granulated lime and de-icing salt in Ireland. Gouldings have four existing facilities. These are located in Cork City (to be relocated to Belvelly Port Facility), Askeaton, New Ross and Ardee. Gouldings supplies mainline and customised blended products to suit local nutrient requirements from their existing facilities. The purpose of relocating the existing facility from the south docklands in Cork City is to allow for the redevelopment of the south docklands for mixed use development in accordance with the City Docks Local Area Plan (LAP) which is currently being prepared by Cork City Council. The relocation is also in keeping with the Cork County Development Plan and the Cork Area Strategic Plan which highlight the strategic potential of Marino Point for the development of Cork Harbour.

The planning application area includes a total area of 7.6 hectares consisting of the proposed Goulding's facility and the jetty. The Goulding's site area is 7.6 hectares and the jetty which serves the site measures approximately 240m x 20m with a shore access viaduct. The total area of the overall Belvelly Port Facility site is 46 ha. An area of 2.74 ha of the overall site area is currently leased and operated by MarinoChem Ltd. (formerly Dynea Ireland Ltd.) who was granted planning permission in 1995 for the construction of a facility at Marino Point.

MarinoChem Ltd. is located at the northwest of the site. Refer to **Figure 1.2** below. MarinoChem manufacture aminoplast resin adhesives for panel boards (MDF and chipboard) and the firelighter industry. They also supply technical grade urea solutions, formaldehyde, and are the largest bulk storage facility for methanol in the Republic of Ireland, supplying the substance in bulk and liquid forms to various industries via tankers and IBCs from the existing jetty at the site. The MarinoChem plant currently operates under an IPC licence issued by the Environmental Protection Agency (EPA) (Licence Number P0034-03). MarinoChem have continued to use the jetty to import raw material for use in their facility. Materials are imported to the MarinoChem facility over the jetty by pumping from tankers via a viaduct.

The Port of Cork Company currently use the jetty at the Belvelly Port Facility site to export dry cargo (wooden logs), for the importation of Methanol for MarinoChem, as a stand-by berth for Port work vessels, and to moor occasional vessels for lay-by or minor maintenance work.

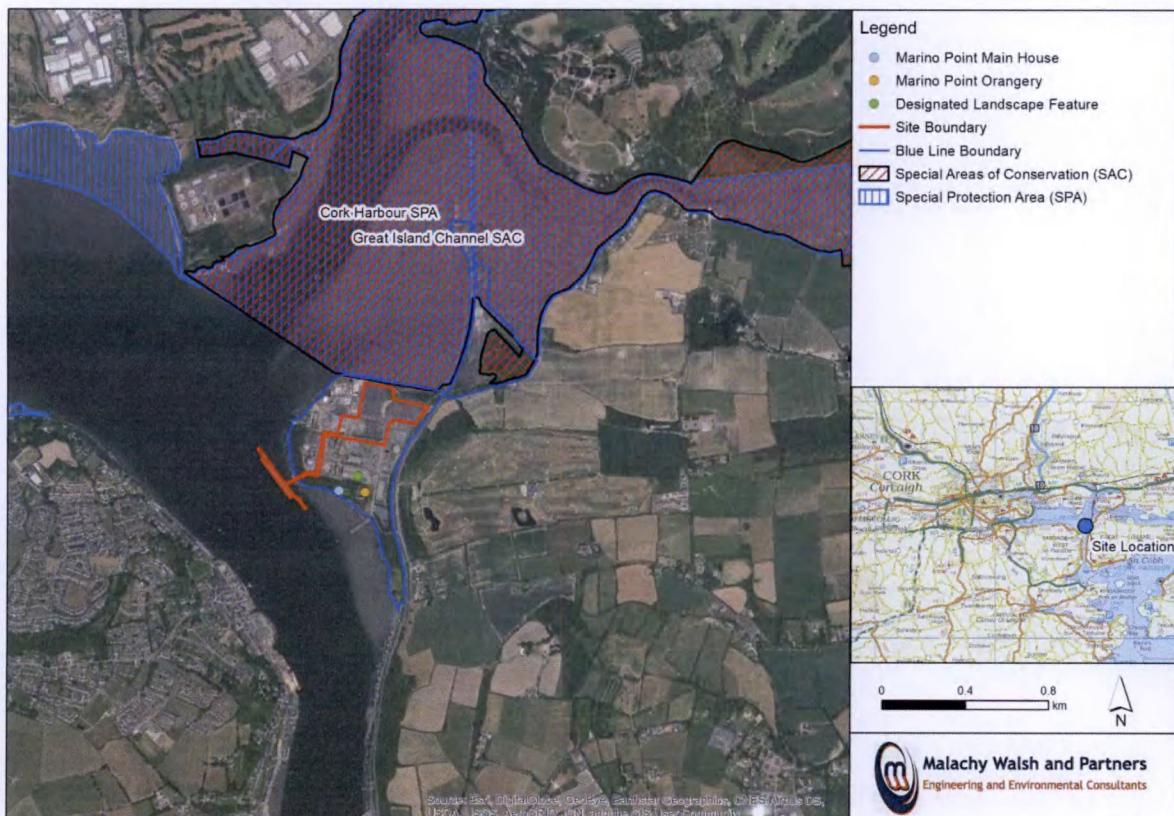


Figure 1.2 Belvelly Port Facility Planning Redline Boundary

BMDC acquired the development site from Irish Fertiliser Industries (IFI). IFI was granted planning permission from Cork County Council in 1974 to manufacture both ammonia and urea at Marino Point. IFI shut their fertiliser operations at Marino Point in 2002. Apart from MarinoChem Ltd. who has operated at the site since the mid-1990s, the site has since been largely derelict.

The planning application boundary represents the development footprint and all lands required for the proposed development to be completed.

1.6 Methodology

The EIAR has been prepared in accordance with the requirements set out in the Planning and Development Act 2001 (as amended) and in Council Directive 2011/92/EU as amended by Directive 2014/52/EU (the EIA Directive). The Planning and Development Acts and Regulations 2000 to 2018 have been amended by the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (SI No. 296 of 2018) to take account of the requirements of the EIA Directive (Directive 2014/52/EU).

Annex IX of the EIA Directive and Schedule 6 of the European Union (Planning and Development) (Environmental Impact Assessment) (Regulations) 2019 specify the *information to be contained in EIAR*.

These requirements identify a range of prescribed environmental factors, the significant effects of which have been addressed in this EIAR. These include population and human health, biodiversity, land and soil, water, air and climate, noise, landscape, cultural heritage, risk of major accidents and disasters and material assets as well as the inter-relationship between the above topics.

The preparation of this EIAR was also undertaken in accordance with the following guidance:

- Department of Housing, Planning, Community and Local Government (2018) Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (August 2018);
- Department of Housing, Planning, Community and Local Government (2017) Transposition of 2014 EIA Directive (2014/52/EU) in the Land Use Planning and EPA Licencing Systems;
- Department of Housing, Planning, Community and Local Government (2017) Implementation of Directive 2014/52/EU on the effects of certain public and private projects on the environment (EIA Directive): Advice on the Administrative Provisions in Advance of Transposition;
- Environmental Protection Agency (2017) Revised Guidelines on the Information to be contained in Environmental Impact Assessment Reports (Draft August 2017);
- Environmental Protection Agency (2015) Advice Notes for Preparing Environmental Impact Statements Draft September 2015;
- Environmental Protection Agency (2003) Advice Notes on Current Practice in the Preparation of Environmental Impact Statements; and,

- Environmental Protection Agency (EPA) - '*Guidelines on information to be contained in an environmental impact statement, 2002*' and the EPA draft '*Guidelines on information to be contained in an environmental impact statement, 2017*'.

Scoping was carried out by the competent experts who have the appropriate expertise and relevant prior experience of the environmental topics (see **Section 1.10** for a list of the project study team).

Many members of the study team were also involved in the preparation of the Belvelly Port Facility Masterplan. All members of the team worked on the preparation of the EIAR for the site development works planning application (Planning Ref. 196783), and have good knowledge of the project location and the sensitivities likely to be present in the existing environment. The scoping process determined the content and extent of matters which should be covered in the environmental information to be submitted in the EIAR.

1.7 Consultation

As part of the scoping process, informal consultation was carried out with a number of relevant parties. Consultation through meetings, letters, email and telephone calls with various statutory and non-statutory consultees was undertaken during the EIA process. Pre-planning meetings were undertaken with the relevant Cork County Council departments. The aim of these initial meetings was to present the project and to receive initial feedback on any potential issues of relevance that should be addressed through the EIA process.

1.7.1 Statutory/ Non statutory Consultations

Written notifications were circulated to a number of identified stakeholders (both statutory and non-statutory consultees), which set out an overview of the project proposal. The notifications invited feedback from the consultees on any key issues and concerns which they consider should be addressed.

The feedback obtained from the consultation process and responses received from statutory and non-statutory stakeholders was taken on board and addressed in the relevant assessments during the preparation of this EIAR. All consultation responses and meeting outputs informed the final design of this project.

Pre-application consultation was undertaken with the Heritage and Ecology Officer of Cork County Council. Feedback and recommendations received from the Heritage and Ecology Officer of Cork County Council are summarised as follows:

Heritage and Ecology Officer, Cork County Council:

- Have regard to the further information request ecology items on Planning Application Ref. 19/6783 in completing and compiling this application.
- Ensure that any mitigation proposals to prevent disturbance to the breeding sites or resting places of protected species are detailed; and

- Provide details of all survey methodologies and details of all species surveys are presented in full.
- Where creation of alternative breeding habitat for any particular species is required, it would be expected that this would be put in place prior to commencement of works.
- Ensure that the impact assessment (in EIAR and NIS) will take account of all potential impacts on habitats and species. This should include potential impacts arising from both construction and the operational phases of the project and are likely to include:
 - potential disturbance related impacts to species (noise, light, visual disturbances);
 - potential for activities to give rise to habitat loss or damage;
 - potential for activities to give rise to negative impacts on water quality;
- Provide scientific evidence to support any impact assessment conclusions made, as well as any scientific information that can be provided in relation to the likely efficacy of mitigation proposed.
- Comprehensively address likely 'in combination' effects of the proposed project. To that end, consideration should be given to the current conservation condition of the relevant European sites, and should take account of all plans and projects with potential to act in combination with the proposed project (not just those with planning consent) on key ecological receptors.

Pre-application consultation was also undertaken with Traffic Infrastructure Ireland (TII). Feedback and recommendations received from TII are summarised as follows:

Have regard, *inter alia*, to the following;

- Consultations should be had with the relevant local authority/National Roads Design Office with regard to locations of existing and future national road schemes in the vicinity,
- TII would be specifically concerned as to potential significant impacts the development would have on the national road network (and junctions with national roads) in the proximity of the proposed development; N25, national road, and local/regional road junctions with the N25, in particular, N25 Junction 3 (Tullagreen) should be included in assessments. A recent An Bord Pleanála decision under An Bord Pleanála case ref. PL04 .303155 may be of assistance.
- The developer should assess visual impacts from existing national roads,
- The developer should have regard to any Environmental Impact Statement and all conditions and/or modifications imposed by An Bord Pleanála regarding road schemes in the area. The developer should in particular have regard to any potential cumulative impacts,
- The developer, in preparing EIAR, should have regard to TII Publications (formerly DMRB and the Manual of Contract Documents for Road Works),
- The developer, in preparing EIAR, should have regard to TII's Environmental Assessment and Construction Guidelines, including the *Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes* (National Roads Authority, 2006),
- The EIAR should consider the Environmental Noise Regulations 2006 (SI 140 of 2006) and, in particular, how the development will affect future action plans by the relevant competent authority. The developer may need to consider the incorporation of noise barriers to reduce noise impacts (see *Guidelines for the Treatment of Noise and Vibration in National Road Schemes* (1st Rev., National Roads Authority, 2004)),

- It would be important that, where appropriate, subject to meeting the appropriate thresholds and criteria and having regard to best practice, a Traffic and Transport Assessment (TTA) be carried out in accordance with relevant guidelines, noting traffic volumes attending the site and traffic routes to/from the site with reference to impacts on the national road network and junctions of lower category roads with national roads. TII's TTA Guidelines (2014) should be referred to in relation to proposed development with potential impacts on the national road network. The scheme promoter is also advised to have regard to Section 2.2 of the NRA/TII TTA Guidelines which addresses requirements for sub-threshold TTA,
- The designers are asked to consult TII Publications to determine whether a Road Safety Audit is required,
- In the interests of maintaining the safety and standard of the national road network, the EIAR should identify the methods/techniques proposed for any works traversing/in proximity to the national road network,
- In relation to haul route identification, the applicant/developer should clearly identify haul routes proposed and fully assess the network to be traversed. Separate structure approvals/permits and other licences may be required in connection with the proposed haul route and all structures on the haul route should be checked by the applicant/developer to confirm their capacity to accommodate any abnormal load proposed.

The list of bodies consulted is provided in **Appendix 1.1** in Volume 3 of this EIAR. A copy of the statutory and non-statutory notification document is provided in **Appendix 1.2** in Volume 3 of this EIAR and the responses received are also included in **Appendix 1.2** in Volume 3.

1.7.2 Public Consultation

It had been intended to hold public information meetings to discuss the project information with interested members of the public. In accordance with Government restrictions on public gatherings in response to the Covid-19 outbreak this was not possible.

In place of a public meeting, a project presentation was made available on-line to inform people of the proposed development and the planning application. A press notice informing the public of the on-line information was published in the following local newspapers: Cobh Edition, Great Island News, Carrigdown, East Cork journal and the Echo. Email notifications were also sent to local Councillors and community groups. The public had the opportunity to submit comments on the proposed application to the Project representatives. All public consultation feedback has been taken account of and any relevant feedback has been incorporated into the various chapters of the EIAR. A copy of the presentation made available as part of the public consultation exercise is provided in **Appendix 1.3** in Volume 3 of the EIAR.

1.8 Overview of the Structure of the EIAR

The EIAR is divided into three Volumes as follows:

- Volume 1: Non-Technical Summary
- Volume 2: Main Environmental Impact Assessment Report

- Volume 3: Appendices to the Main Environmental Impact Assessment Report

The detail of the three volumes of the EIAR is presented in the following sections.

1.8.1 Volume 1: Non-Technical Summary

The Non-Technical Summary provides an overview of the project and the EIAR in non-technical terms. The summary is presented similar to the grouped format structure which discusses each environmental topic separately.

1.8.2 Volume 2: Environmental Impact Assessment Report (EIAR)

The EIAR volume provides the detailed information on the proposed development and the relevant environmental topics, with technical and detailed investigations of the topic areas as appropriate. This volume is prepared in the grouped format structure as it allows specialist studies to be completed for environmental topics in chapters. This volume also includes an introductory chapter (**Chapter 1**), and a chapter on the description of the development (**Chapter 2**). The topic chapters describe the existing environment, the likely significant impacts and the recommended mitigation measures specific to the environmental topic. The inter-relationship between the topics has been outlined in the last chapter on the Interaction of the Foregoing (**Chapter 16**). This is followed by a summary of the overall environmental effects.

1.8.3 Volume 3: Appendices to the EIAR

The Appendices volume contains supporting documentation and information on the EIAR.

1.8.4 EIAR Topics and Chapters

The relevant environmental topics are considered within the EIAR chapters with regard to the EIA Directive (Directive 2014/52/EU) as follows:

- **Chapter 1** is an Introduction and contains the information typically included in the EIAR preamble.
- **Chapter 2** is a description of the development and construction methodology. It also examines other projects and plans considered during the assessment of cumulative impacts.
- The need for the Project and Alternatives considered are discussed in **Chapter 3**.
- Impacts on Population are addressed in **Chapter 4**, Population and Human Health.
- Flora and Fauna are assessed within **Chapter 5**, Biodiversity.
- Land and Soils, including geology are assessed in **Chapter 6**.
- Water is assessed in **Chapters 7 and 8**, Hydrology and Hydrogeology, respectively.
- Air Quality and Climate are assessed within **Chapter 9**.
- The Archaeological and Cultural Heritage impacts are assessed in **Chapter 10**.
- The landscape and visual effects are assessed in **Chapter 11**, Landscape.
- Material Assets are assessed in **Chapter 12**.
- Traffic and Transportation are assessed in **Chapter 13**.
- Noise and Vibration effects are assessed in **Chapter 14**.

- Risk of Major Accidents and Natural Disasters is assessed in **Chapter 15**.
- The interaction between the environmental topics is assessed in **Chapter 16**.
- A schedule of Environmental Mitigation Measures is provided in **Chapter 17**.

The pertinent information on the results of the assessment of the impacts is contained within the EIAR (**Volume 2**).

1.9 Technical Difficulties and Availability of Data

There were no major difficulties in obtaining baseline and other data during the course of the EIA process. It should be noted that the EIA process was undertaken during the Covid 19 pandemic. Where relevant, this has been taken into consideration for the assessments. It is worth noting that the 1:50000 and 1:25000 mapping used to generate many of the graphics in the EIAR, are the copyright of Ordnance Survey Ireland (OSI licence number EN0028912).

1.10 Study Team and Contributors to the EIAR

This EIAR has been prepared by a team of competent experts led by Malachy Walsh and Partners on behalf BMDC. The team of experts who have undertaken the environmental impact assessment and prepared the EIAR are presented below in **Table 1.1**.

Table 1.1 EIAR Contributors to the Project

NAME & QUALIFICATIONS	RELEVANT EXPERIENCE	COMPANY	CONTRIBUTION TO EIAR
Olivia Holmes B.Sc. M.Sc., CEng MIEI, MCIWEM, C.WEM	Olivia Holmes has twenty years' experience in Environmental Engineering focussing primarily on Environmental Impact Assessment (EIA), Appropriate Assessment (AA) and planning. She has led the preparation of a number of large-scale multi-disciplinary EIA projects and planning and other consent applications.	Malachy Walsh & Partners	Chapter 1 , Introduction Chapter 2 , Description of the Proposed Development Chapter 3 , Project Need and Alternatives Chapter 6 , Land and Soil Chapter 7 , Hydrology Chapter 12 , Material Assets Chapter 15 , Risk of Major Accidents and Disasters Chapter 16 , Interaction of the Foregoing Chapter 17 , Schedule of Environmental Mitigation Measures
Fergus Doyle B.A, M.Sc, AMIEnvSc	Fergus is an environmental scientist with Malachy Walsh and Partners and has experience working on a number of multi-disciplinary EIAR projects. Fergus has been a contributing author on a number of EIARs, Appropriate Assessment Reports, Natura Impact Statements and Ornithology Reports.		
Eimear Donoghue, B.A, M.Sc	Eimear is an environmental scientist with over two years' experience working in engineering consultancy. She has experience working on a number of multi-disciplinary EIA projects and has been a contributing author on a number of EIAs.		
Emer Sexton BSc MSc MSc H.Dip (ASIEEM)	Emer is a senior environmental and executive planning consultant with over 10 years of consultancy experience. Her experience to date has been primarily in the area of planning, Appropriate Assessment and Ecological Assessment. She has also co-ordinated and contributed to a number of EIA projects.	McCutcheon Halley Planning Consultants	Chapter 4 , Population and Human Health
Monica Kane BSc MSc	Monica is a Senior Environmental and Ecological Consultant with over 14 years consultancy experience. She is also an environmental impact assessment practitioner having managed and been a contributing author on a number of EIA and AA projects.	Malachy Walsh & Partners	Chapter 5 , Biodiversity
Shane Herlihy BA(Mod), MSc, MBA, PGeo, EurGeol	Shane Herlihy has 25 years hydrogeological and contaminated land experience specialising in industrial sites, brownfield regeneration, landfill development and groundwater dependent ecosystems in EIA, risk assessment, EPA licence compliance, due diligence and insurance risk engineering. He has been the lead hydrogeological consultant and expert witness for several landfill development projects during An Bord Pleanála planning enquiries.	Environmental Risk Solutions	Chapter 8 , Hydrogeology

NAME & QUALIFICATIONS	RELEVANT EXPERIENCE	COMPANY	CONTRIBUTION TO EIAR
Musetta O'Leary B.A, M.A	Musetta has fifteen years' experience in all aspects of archaeological consultancy. She has co-ordinated and written the Cultural Heritage section of a large number of diverse EIAR projects ranging from infrastructure, energy, commercial and residential. Her involvement extends through all aspects of the planning process from constraint study and site appraisal, EIAR cultural heritage chapter compilation to oral hearings.	Lane Purcell Archaeology	Chapter 10, Archaeology and Cultural Heritage
Avril Purcell B.A, M.A, MIAI	Avril Purcell has worked as a licensed consulting archaeologist for over 20 years. She has managed and coordinated a number of major archaeological excavation projects and cultural heritage assessments. Her involvement in projects often extends from pre-planning assessment through to implementation of mitigation including archaeological excavation.		
Deirdre Black BA MA	Deirdre has over 20 years' experience of managing the landscape and visual aspects of constraints studies, site selection, mitigation and the landscape and visual impact assessment of industrial, transport and power infrastructure in a wide variety of landscape types.	Deirdre Black Associates	Chapter 11, Landscape and Visual
Damian Brosnan BSc MSc MIOA MIEI	Damian has 23 years' acoustic experience, formerly as a Noise Officer with Cork County Council, and in consultancy. He has an MSc in Acoustics, is secretary of the Irish Branch of the Institute of Acoustics, and is a founding member of the Association of Acoustic Consultants of Ireland.	Damian Brosnan Acoustics	Chapter 14, Noise and Vibration
Seamus Quigley BE, CEng, MIEI, CIHT	Seamus has extensive experience in Transport planning and traffic engineering projects including traffic impact assessments, traffic management studies, Feasibility Studies and Road Safety Audits. Seamus has extensive experience in Transport planning and traffic engineering projects including traffic impact assessments, traffic management studies, Feasibility Studies and Road Safety Audits.	Malachy Walsh & Partners	Chapter 13, Traffic and Transportation
Mícheál Fogarty BE, MEng, PhD	Mícheál is a Senior Air Quality Specialist. He has completed air quality projects assessing the impacts of odour, dust and other air contaminants for mining, agricultural, municipal, industrial and regulatory clients. His assessments have been used as part of Development Approvals, Transitional Environmental Programs, Environmental Impact Assessments and Expert Witness Processes. Micheal specialises in air and odour impact assessment .He has utilised a range of numerical meteorological and dispersion modelling in odour assessments including CALMET/CALPUFF, TAPM, AUSPLUME, SCREEN, ADMS and ISCST3.	Katestone Global	Chapter 9 Air and Climate

1.11 References

Department of Housing, Planning, Community and Local Government (2018) *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (August 2018)*;

Department of Housing, Planning, Community and Local Government (2017) *Transposition of 2014 EIA Directive (2014/52/EU) in the Land Use Planning and EPA Licencing Systems*;

Department of Housing, Planning, Community and Local Government (2017) *Implementation of Directive 2014/52/EU on the effects of certain public and private projects on the environment (EIA Directive): Advice on the Administrative Provisions in Advance of Transposition*;

Environmental Protection Agency (2017) *Revised Guidelines on the Information to be contained in Environmental Impact Assessment Reports (Draft August 2017)*;

Environmental Protection Agency (2015) *Advice Notes for Preparing Environmental Impact Statements Draft September 2015*;

Environmental Protection Agency (2003) *Advice Notes on Current Practice in the Preparation of Environmental Impact Statements*;

Environmental Protection Agency (EPA) (2017) - *Guidelines on information to be contained in an environmental impact statement, 2002'* and the EPA draft '*Guidelines on information to be contained in an environmental impact statement, 2017*;

2. DESCRIPTION OF THE PROPOSED DEVELOPMENT

2.1 Introduction

This chapter of the Environmental Impact Assessment Report (EIAR) sets out the main components of the proposed agricultural fertiliser facility and additional port operational use of the jetty to facilitate cargo vessels at the Belvelly Port Facility in Marino Point on Great Island in County Cork. The purpose of this chapter is to provide an appropriate level of detail on the proposed development to present a basis for the EIAR. Its aim is to clearly outline and describe the objectives, scope and overall proposed execution of the project, while also providing details of the various stages of the project including construction, operation and maintenance.

2.2 Summary of the Proposed Development

The proposed development at the Belvelly Port Facility will consist of the following main elements:

- The construction and operation of an agricultural fertiliser blending and bagging facility which facilitates the relocation of Goulding Chemicals Limited from Cork City to the Belvelly Port Facility. The proposed facility will consist of:
 - a storage warehouse;
 - a bagging and palletising facility;
 - an office building to support customer service and weighbridge operations;
 - external storage bays with associated circulation space, weigh-bridges, access control and security facilities; and
 - importation of raw materials at the existing jetty.

The primary use of the proposed fertiliser facility will be for bagging and blending of dry bulk materials for storage and distribution. All finished fertiliser product will be distributed from the facility by road.

- Additional BMDC port operational use of the jetty to facilitate general dry cargo vessels at the Belvelly Port Facility, including the relocation of vessels displaced from the Cork City Quays. The additional cargo types proposed will include woodchip, machinery parts, deep sea maintenance and exploratory vessel engineering cargo, and other miscellaneous dry cargo. Approximately 40 additional port related cargo ships will berth at the jetty each year. The size and frequency of cargo vessels will be variable and subject to the various customers' needs. On average, ships will be berthed for 1 to 2 days to offload / load cargo but may be longer depending on cargo size and weather conditions.

2.3 Background to Application and Policy Context

2.3.1 *Goulding Chemicals Limited*

Goulding Chemicals Limited manufacture and distribute a complete range of Nitrogen, Phosphorus, Potassium (NPK) fertilisers, trace element fertilisers and granulated lime in Ireland. They supply mainline and customised blended products to suit local nutrient requirements from their four

production facilities in Askeaton, County Limerick; Cork City; New Ross, County Wexford and Maydown, County Derry (NI). The Belvelly Port Facility site has been selected as a suitable location for the relocation of Goulding's Cork facility due to the many advantages the site has to offer. Such advantages include the existing operational jetty, the strategic location of the site outside Cork city and the zoning status of Marino Point as an industrial site.

The relocation of Goulding's from the city centre is in keeping with the Cork County Development Plan and the Cork Area Strategic Plan. These documents outline plans to utilise the strategic potential of Marino Point for the development of Cork Harbour. The relocation of Gouldings from the city centre will also provide the opportunity for mixed use development at the south docklands area, in accordance with the City Docks Local Area Plan (LAP) which is currently being developed by Cork County Council.

The facility will have an average of 17 operational employees on site at any one time, with a maximum of 30 at peak times. Peak production takes place in the early spring.

2.3.2 Belvelly Marino Development Co. DAC (BMDC)

As outlined in **Chapter 1 Introduction**, the former Irish Fertiliser Industries (IFI) site at Marino Point was acquired by Belvelly Marino Development Co. DAC (BMDC) in 2017. BMDC is a Public Private Partnership between Lanber Holdings and the Port of Cork Company (POCC). BMDC acquired the land with a view to redeveloping the site in line with the existing port-related industrial zoning objective for Marino Point. Since 2017, BMDC have developed an overall master plan for the site, referred to herein as the Belvelly Port Facility. BMDC now wish to obtain planning permission for the additional use of the existing jetty for general dry cargo vessels.

2.4 Existing Environment

2.4.1 Site and Project Context

As discussed in **Chapter 1 Introduction**, the Belvelly Port Facility is located in Marino Point, which is a small peninsula on the northwest of Great Island, to the east of Cork City. The site is bound by Lough Mahon, which forms part of the greater Cork Harbour, to the north, west and south. Passage West which lies to the west of the site on the opposite side of the harbour is approximately 1km from the centre of the site. The immediate surrounding area is lightly populated, while Passage West currently has a population of approximately 6,000 people. The northern coastal boundary of the site is adjacent to intertidal mudflats and sandflats. The eastern boundary of the site is formed by the Cork to Cobh railway and R624 Cork-Cobh regional road. The nearest significant town on the same side of the harbour is Cobh which lies approximately 5km south-east of the site. The site is located at Irish Grid Reference W 177535 E, 069595 N on Great Island in Greater Cork Harbour. **Figure 2.1** below shows the Belvelly Port Facility site relative to the greater Cork Harbour area.

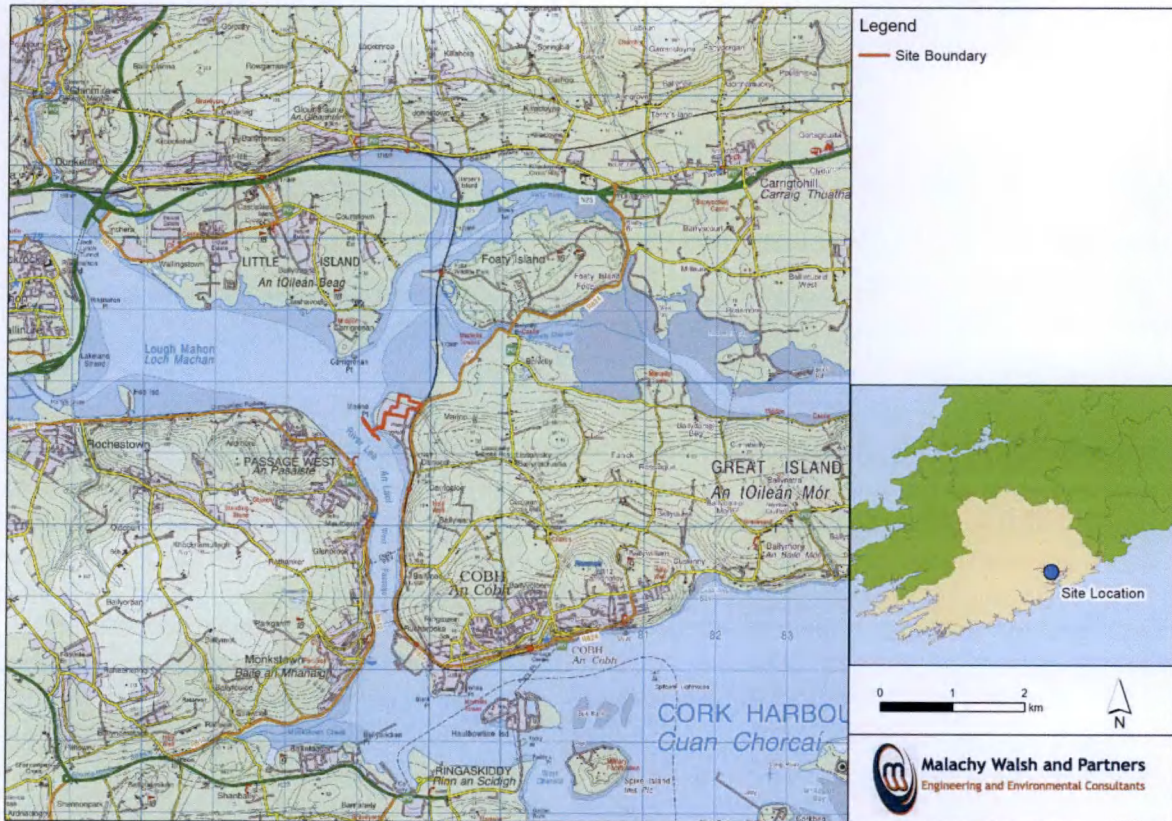


Figure 2.1 Site location

2.4.2 Site Description

The ownership area of the Belvelly Port Facility site covers approximately 46 hectares and is indicated by the blue line on **Figure 2.2**. The area within the planning boundary is approximately 7.6 hectares and indicated by the red line. The site is predominantly flat situated adjacent to the waters of Cork Harbour. The northern blue line boundary is adjacent to intertidal mudflats and sandflats which form part of the Natura 2000 network; the Great Island Channel SAC (001058) and the Cork Harbour SPA (004030). The Cork Harbour SPA is designated for the protection of wintering waterbirds and extends to the east and west from the north of the site. The Great Island Channel SAC extends partially into the site, at the north-eastern periphery. This SAC is designated for mudflats and sandflats not covered by seawater at low tide, in addition to Atlantic salt meadows (*Glauco-Puccinellietalia maritima*).

There are three Recorded Monuments located in the southern end of the site, approximately 400m away from the proposed works. These monuments include Marino House (RMP CO075-13); an Orangery (RMP CO075-076) and a Landscape Feature (RMP CO075-027). Marino House and the Orangery are not included on the Record of Protected structures but are listed as NIAH buildings of regional importance.

BMDC applied for planning permission for demolition, site infrastructure and utility upgrade works at Belvelly Port Facility on the 22nd November 2019 (Planning Ref. 196783). Cork County Council gave notice of their intention to grant permission on 22nd July 2020. An appeal was made to An Bord Pleanála and a decision is currently pending.

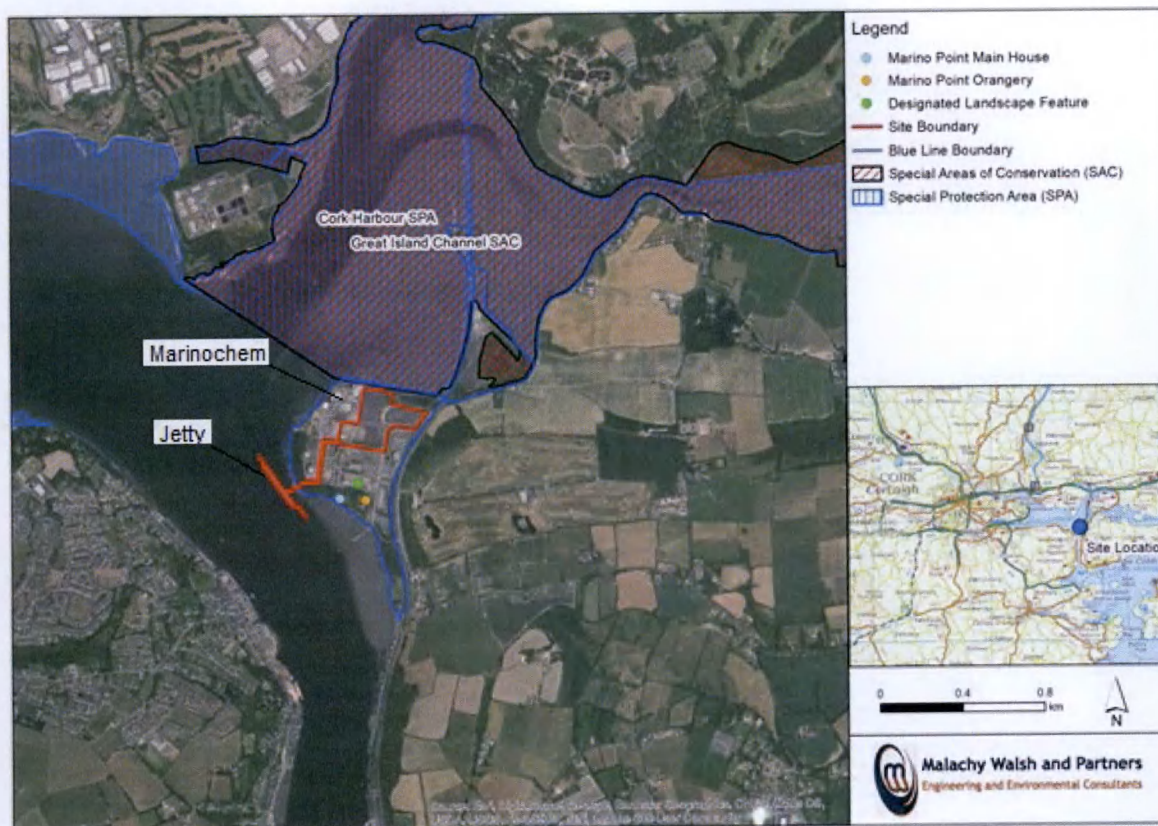


Figure 2.2 Site Context

2.4.3 Existing Activities

There is currently one active industrial facility located in the north-western corner of the main site which is owned by Marinochem Limited (formerly Dynea Ireland Limited). Refer to **Figure 2.2**. Materials are imported to the Marinochem facility over the jetty located off the western side of the main site by pumping from tankers via a viaduct. The Port of Cork Company also use the jetty to export dry cargo (wooden logs), as a lay-by berth for Port work vessels and to moor occasional vessels for safe harbour or minor maintenance work.

Similar to a number of industries in County Cork, the Belvelly Port Facility site is subject to provisions of the Seveso Directive 2012/18/EU. This Directive is the main EU legislation dealing specifically with the control of on-shore major accident hazards involving dangerous substances. It is aimed at improving the safety of sites containing large quantities of dangerous substances. The Marinochem site is classified as an Upper Tier Seveso Site due to the presence of quantities of listed dangerous substances, including methanol and formaldehyde. It has a 1km consultation distance and, as such, covers the whole of the Belvelly Port Facility site. As a result, any proposed development on the site will be subject to consultation with the Health and Safety Authority (HSA).

2.4.4 Site History

Marino Point has a long and well established industrial history. The historic 6" OSI maps (1837 – 1842) from the early nineteenth century indicate the extent of the land bank at Marino Point at that time. **Figure 2.3** below shows the area to the north of the main site had not been reclaimed at this time.



Figure 2.3 Historic map with overlay of planning boundary

The northern end of the peninsula was reclaimed post 1938 and currently contains the operational Marinochem facility, redundant carparking areas and the lagoon at the northeast corner.

The site has been historically used for docking ships and the loading/unloading of cargo since the 1970s. Planning permission was granted to Nítrigin Éireann Teoranta (N.E.T.) in 1975. The site then passed to Irish Fertilisers Industries (IFI) who obtained planning permission in 1987 to manufacture ammonia and urea. The existing jetty at the site was constructed under these planning provisions.

IFI was operational for 15 years and was involved in the production of ammonia, urea and liquid carbon dioxide. Prior to this, the plant was operated by Nítrigin Éireann Teoranta (NET) who were similarly involved in the production of ammonia and urea. The plant ceased operation in 2002. IFI operated under an Integrated Pollution Control (IPC) Licence issued by the EPA in 1996 (reference number P0028-01). IFI ceased operations in 2002 and the IPC Licence was subsequently transferred to Mr. Brian Moran, Mr. Tom Coughlan and Mr. Hugh O'Regan in 2006.

Environmental closure and monitoring obligations associated with the Licence continued following the cessation of IFI's activities and subsequent to the Licence transfer. In 2017, an Independent Closure Audit (ICA) was prepared and submitted to the EPA. The Agency subsequently conducted an Exit Audit (EPA Site Visit Report reference number SV12559), which concluded:

"The Exit Audit reviewed progress in relation to the items specified in the Residuals and Remediation Plan, IFI [in liquidation] 2003 and the Transfer of Licence & Financial Provisions Report, PM Group October 2005. The Agency determines that all remediation works have been completed and that the remediation objectives have been achieved in compliance with the IPC licence as detailed in the ICA report, and accepts the report as a reliable statement of the current status of the site".

A letter was received from the EPA on 21st October 2019 stating that the licence has ceased to have effect and that the Agency is satisfied that the remediation of the site has been completed to the required standard. Refer to the attached letter in **Appendix 2.1**.

Since 2002, the site has been used primarily by Marinochem for the manufacturing of their product and for the loading and unloading of cargo at the jetty.

2.5 Characteristics of the Proposed Project

The proposed agricultural mixing and bagging fertiliser facility and additional port operational use of the jetty to facilitate general dry bulk cargo vessels are summarised in **Section 2.2**, above and described in further detail as follows.

2.6 Description of Proposed Works

2.6.1 Construction Phase

2.6.1.1 Proposed Agricultural Fertiliser Facility

The design and construction of the proposed agricultural fertiliser facility 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 the competent authority, Irish standards, or Irish standard codes of practices and will also reflect best engineering practice. The proposed facility will be located in the northern end of the Belvelly Port Facility in an area that is currently open hardstanding. Refer to **Figure 2.4**, below for proposed layout. Full details of the proposed facility are provided in the Planning drawings.

The construction phase of the project will take place over an estimated 12 -18 month period. This includes an estimated four months overlap with the proposed demolition and site infrastructure works due to take place across the site (Planning Ref. 19/06783). It is envisaged that the work will commence in October 2021 and will be fully complete by December 2022, subject to the necessary statutory approvals. It is expected that a maximum of 40 people will work on the project during construction.

The final details on how construction will be undertaken will be a decision for the appointed contractor(s). It is 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. 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.

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

2.6.1.1.1 Overview of Site Mobilisation

Following the commencement of the proposed construction works, the appointed contractor will mobilise at the site. This will involve:

- Set up of the construction site enclosure. A perimeter fence will be erected around the construction site.
- Protective Hoarding will be adapted and altered to facilitate this as the works progresses.
- Set up the construction compound, including the site office, canteen and welfare facilities.
- Set up the material storage areas and waste management area.

The site will be arranged and made secure by fencing and hoarding, as appropriate. Access into the construction area will only be permitted to those personnel who are authorised to do so.

A temporary construction compound will be established within the red line boundary of the proposed development site. The area of the construction site compound will be defined and enclosed by protective hoarding and will accommodate contractor personnel and visitor parking, porta cabins for site offices, WC and welfare facilities, storage containers and material lay down areas. The compound will be removed upon completion of the works.

2.6.1.1.2 Earthworks

The extent of excavations required will be limited given the suitability of existing ground levels and hardstand surface.

Excavations to a depth of 1-3m below ground level (BGL) will be required in certain areas as part of the proposed development for the installation of the necessary services (i.e. drains, fibre etc.). Given the ground conditions, piled foundations will be required for the proposed buildings. Continuous Flight Auger (CFA) piles will be installed for the Raw Material Store and Workshop Area and Packaging Building and the smaller Security / Administration Building.

As there will be excavations to facilitate the development construction, discharges to surface water and groundwater will need to be managed to ensure significant effects do not arise. Refer to the CEMP (**Appendix 2.2**) contained in Volume 3 of this EIAR for full details of surface water management.

Small volumes of rock excavation will be required; however this will be limited to isolated areas.

2.6.1.1.3 Building Construction

The construction of the Raw Material Store and the Packing and Bag Store buildings will commence with the laying of the foundations for the buildings and equipment. Standard steel and reinforced

concrete works will be required. Cladding and roof construction will then commence. Internal roads and site fencing will be completed once the main construction is completed. No landscaping is proposed for the proposed development.

Services such as water and power (mobile generators) will be required during the construction phase of the works proposed.

The primary construction materials will include reinforced concrete, structural steel, structural blockwork, internal structures, pipework / utilities, piling and mechanical / electrical equipment, signage, etc. It is not considered that there will be a significant use of these resources during these works. Surplus construction materials which are not required for use on site will be reused, recovered or disposed off-site. An appropriate waste collection permit holder will be used for removal of wastes from site. All by products and wastes removed from site will be reused, recovered or disposed of in accordance with the Waste Management Act, 1996, as amended.

2.6.1.1.4 Surface water drainage

A surface water drainage network will be installed on the Gouldings site which will feed into the existing surface water drainage network north of the site (as proposed under planning application Ref 19/6783). The surface water will pass a monitoring point before it leaves the Gouldings site and if any exceedances are detected, the water will be diverted to a dedicated surface water attenuation/fire water retention tank where it will be held until safe to discharge. If for any reason the surface water discharge does not meet the discharge standards as set down by Cork County Council then it will be collected and removed off site to a licensed facility for licensed contractor.

Delivery trucks will park in a controlled area which will drain via a Class 1 full retention interceptor to the surface water network.

2.6.1.1.5 Fire Water Retention

The proposed facility will include the installation of a fire water retention tank on the Gouldings site. The site will be split into two zones, each of which drain separately to the retention tank. Zone 1 will cover the buildings and the yard area in the proximity of the buildings. Zone 2 will cover the majority of the storage yard areas. Water will be discharged as normal and diverted to the retention tank in the event of a fire.

The tank will be an above ground tank, which will be glass lined steel tank. Surface water will be pumped into tank and will discharge under gravity.

2.6.1.1.6 Electricity and telecommunications

An electrical connection from the proposed agricultural fertiliser facility will be made to underground ducting in the roadway connecting to a new 10kV electrical supply on the Belvelly Port Facility site (as proposed under planning application Ref 19/6783). An electrical substation will be installed within the Gouldings facility.

The proposed telecommunications for Gouldings will connect into the proposed Telecom network being provided as part of the proposed roads and infrastructure project.

2.6.1.1.7 Site Lighting

The proposed development has a combination of light fittings to provide the required lux levels throughout the fertilizer facility. These range between building wall mounted units, 6m high column lights for the carpark and 3 No. High 25m high mast lights located within the storage yard areas. Refer to the Proposed Lighting layout drawing contained in the planning application.

2.6.1.1.8 Construction Staff Numbers and Working Hours

There will be a maximum of approximately 40 construction staff working on the site. Site personnel will travel to site prior to 8.00 a.m. and depart from site from 6.00 p.m. The proposed hours for the movement of HGVs on and off the site are 9.00 a.m. to 4.00 p.m., Monday to Friday, and 8.00 a.m. to 5.00 p.m. on Saturdays. These hours are proposed to avoid coinciding with the existing weekday morning and evening peak traffic periods on the R624 and surrounding road network.

As part of the construction management plan for the project, all aspects of the development works including working hours and phasing will be agreed at the outset with the project and construction management team. A strategy will be agreed and consultation with all relevant stakeholders will be undertaken. Gouldings / the Main Contractor will liaise with neighbours and keep all surrounding neighbours and communities involved throughout the construction period. A designated contact person will be in charge of dealing with any potential concerns or issues which may arise from neighbours or stakeholders.

2.6.1.2 Additional Operational Port Use

There will be no construction works associated with the additional port operational use of the jetty to facilitate dry bulk cargo.



Figure 2.4 Proposed site layout

2.6.2 Construction Management

2.6.2.1 Construction and Environmental Management Plan (CEMP)

Construction activities can affect the amenity value of an area and cause potential adverse environmental effects. A Construction and Environmental Management Plan (CEMP) describes how activities undertaken during the construction phase of a development will be managed in order to avoid or mitigate against any potential negative environmental impacts on site. It provides a commitment to mitigation and follow-up monitoring and reduces the risk of pollution and improves the sustainable management of resources. The environmental commitments of the proposed development will be managed through the CEMP and will need to be secured in contract documentation and arrangements for construction and later development stages, so that it can be ensured they are implemented. Although the CEMP mainly address the construction phase, it can also be continued through to the commissioning, operation and decommissioning stages. An Environmental Manager with appropriate experience will be appointed for the duration of the construction phase to ensure that the CEMP is successfully implemented. The preliminary CEMP for the project is provided in **Appendix 2.2** of Volume 3 to this EIAR.

2.6.2.2 Construction Safety

All work on site will be carried out in compliance with the Health and Safety Act 2005, the Health and Safety (Construction) Regulations 2013 and all relevant Legislation and Work Practice to ensure that the construction areas, site environs, public roads and footpaths remain safe for all users. As required by the Safety, Health and Welfare at Work (Construction) Regulations 2013, a Construction Health and Safety Plan will be prepared which will address health and safety issues from the design stages through to the completion of the construction and maintenance phases. This plan will be reviewed as the development progresses. The contents of the Health and Safety Plan will comply with the requirements of the Regulations developed by the Contractor to address all aspects of the construction activities. It is also essential that work operations, working hours are in accordance with the agreed schedule and that noise, control of dust and environmental control are within the permitted limits.

2.6.2.3 Traffic Management

The impact of the construction generated traffic on the local road network during the construction of the proposed development is assessed in **Chapter 13 Traffic and Transportation**, and mitigation measures are proposed where necessary.

The appointed contractor will be required to develop a Construction Stage Traffic Management Plan in advance of commencing the works on site. This Plan will need to comply with this EIAR and with any specific requirements of Cork County Council which may need to be implemented during the construction phase, including potential monitoring and reporting requirements. This Plan will be submitted to and agreed with Cork County Council prior to beginning construction.

2.6.3 Operational Phase

2.6.3.1 Proposed Agricultural Fertiliser Facility

A description of the operational phase of the proposed agricultural fertiliser facility is as follows:

- Raw material will be shipped to the existing jetty at the Belvelly Port Facility. An average of approximately 1 ship per week, carrying approximately 3,000 tonnes of raw material will dock at the jetty each week.
- Two mobile LH 60 Material Handling Machine cranes will be installed on the jetty for use in offloading. The raw material will be offloaded using the mobile LH 60 cranes which will have clamshell grab attachments. Offloading will only take place during dry weather and will take approximately 12 hours. Ships cannot be unloaded during periods of wet weather, and as such may be required to remain docked until suitable weather allows all raw materials to be unloaded. The cranes will utilise a semi-closed clamshell grab with spill plates to avoid wind-borne loss of material.
- The grab will be lowered fully into a mobile hopper and the material discharged.
- The raw material will then be discharged into covered and sealed trailers and transported along internal roads to the proposed mixing and bagging facility via a weighbridge and placed in bays. Up to 4 tractors will operate on-site;
- Raw material will not be discharged during wet, unfavourable weather conditions.
- Environmental controls will be implemented at the jetty, including the operation of a road sweeper during unloading activities, and the installation of rubber mats over the gullies and drains at the jetty. The road sweeper will be in continual use either on the site of the proposed development, or at the jetty during unloading activities. The rubber mats will be stored at the jetty. A new jetty drainage system will be installed as per Planning Ref. 19/06783.
- The raw material and other various components will be added to a mixer, in the specific quantities required to achieve the desired fertiliser product;
- A coating oil will be sprayed into the mixing reactor to aid the mixing process;
- When the mixing process is complete, the product will be conveyed to the bag store area and packaged;
- These bags will then be stockpiled on pallets, wrapped and transported by forklift to external storage bays. These bags will be collected by trucks as required and distributed nationwide by road.

The proposed development site will be a lower - tier Seveso site, and will be required to comply with any regulations associated with this designation.

No process water will be produced during facility operations. Foul drainage will be routed to a new centralised wastewater treatment plant as per Planning Ref. 19/06783.

2.6.3.1.1 Use of Raw Materials and Fuels

The agricultural fertiliser facility will require an average importation of 120,000 tonnes of raw materials, with a maximum upper limit of 150,000 tonnes per annum. All shipped materials will be imported in granular pellet form. Approximately 20 to 25 different types of raw materials will be

imported, including Urea, Calcium Ammonium Nitrate, Potash and Diammonium Phosphate. Trace materials such as boron, zinc, manganese, magnesium, copper and selenium will be imported by road for use as trace material in finished products.

A specialised coating oil blend is added to the blend during the mixing process. The maximum quantity of oil which will be imported is approximately 500m³ per annum. This oil will be imported by road tanker and stored on site in a bunded storage tank.

Approximately 30,000 litres of diesel will be imported by road to fuel forklifts and loaders. Diesel will be stored in a 1,500 litre on-site diesel tank within a bunded area on the north side of the fertiliser building.

A small boiler will operate in the facility, requiring the importation and storage of heating oil.

2.6.3.1.2 Types and Quantities of Finished Product

Gouldings supply a huge variety of finished products. All products are a variation of blends containing Urea, Calcium Ammonium Nitrate, Potash and Diammonium Phosphate. These materials make up the bulk of the finished product with certain trace materials and additives being added to different products. The quantity of finished product is similar to the quantity of raw materials used.

2.6.3.1.3 Operational Waste Management

Plastic packaging will be the main operational waste produced by the proposed fertiliser facility, with approximately 150 tonnes generated per annum. All plastic packaging waste is segregated, baled and collected for recycling by approved waste management collectors. Approximately 100 tonnes of timber pallet waste will be produced per annum. Domestic waste from staff canteen etc. will be collected by a licensed waste contractor. Further detail on waste management is provided in **Chapter 12 Material Assets**.

2.6.3.1.4 Foul Waste Water Management

Foul drainage from the proposed agricultural fertiliser facility will be routed to the new centralised wastewater treatment plant in the southern part of the overall site as per Planning Ref. 19/06783. There will be no process wastewater generated from the fertiliser facility.

2.6.3.1.5 Hours of Operation

The facility will operate all year-round, with working times varying depending on market demand. Normal hours of operation are 7.00 a.m. to 5.00 p.m. Monday to Friday. During peak demand, which is typically between February and April, fertiliser mixing and bagging operations will occur between 7.00 a.m. and 12.00 midnight, and HGV distribution of finished fertiliser product from the facility by road will occur between 7.00 a.m. to 7.00 p.m. Monday to Saturday.

2.6.3.1.6 Water and Electricity Usage

There is no requirement for water in the fertiliser mixing and bagging process. Water is required only for canteen and toilet facilities, using approximately 900 litres per/day.

Electricity will be used to drive various plant machinery, such as conveyors, hoppers and bagging machinery. The facility will have an installed capacity of approximately 300Kva with approximately 350,000 kWhrs consumed per annum.

2.6.3.2 Additional Use of the Existing Jetty

2.6.3.2.1 Cargo Vessels

The jetty at the Belvelly Port Facility site is currently used to export dry cargo (wooden logs), the importation of Methanol for MarinoChem, as a stand-by berth for Port work vessels, and to moor occasional vessels for lay-by or minor maintenance work. The proposed additional port operational use of the jetty will consist of servicing other cargo vessels, which will include the relocation of vessels displaced from the Cork City Quays. The additional cargo types proposed will include woodchip, machinery parts, deep sea maintenance and exploratory vessel engineering cargo, and other miscellaneous dry cargo.

Approximately 40 additional port related cargo ships will berth at the jetty each year. The size and frequency of cargo vessels will be variable and subject to the various customers' needs. On average, ships will be berthed for 1 to 2 days to offload / load cargo but may be longer depending on cargo size and weather conditions.

2.6.3.2.2 Jetty Handling Procedures

Materials will be handled in a manner that minimises emissions from operations on-site as far as practicable. Awareness training of site personnel on the importance of adherence to the handling procedures will be conducted. Dust control procedures will be in place during all handling procedures, with additional mitigation measures implemented during unfavourable weather conditions.

Dry and break bulk material will be imported and exported using cargo vessels and will be offloaded and loaded at the jetty.

The following procedures will be employed for the importation of bulk cargo handling:

- Two LH60 Material Handling Machines cranes and hoppers will be installed on the jetty. Pre-checks and unloading sequence will be undertaken and agreed prior to discharge.
- Truck drivers will take particular care to park in a central position under the hopper chute.
- Cranes will utilise clamshell grabs with spill plates installed to unload the cargo from the vessel. Grabs will be lowered fully into the hopper before opening to discharge cargo.
- Cargo is then released into the back of trucks via the hopper.
- Once trucks are loaded, cargo is transported along the site's internal roads to the exit gate for dispatch to receiving facilities off-site.
- Road sweepers and manual sweeping will be employed as required.

The procedures for the export of bulk cargo will be the reverse of that described above.

The following procedures will be employed for the importation of general cargo handling e.g. timber logs, woodchip:

- Two LH60 Material Handling Machines will be used to unload the cargo from cargo vessels.
- Once the ships are unloaded, wood debris will be swept up by mechanical means and removed for waste disposal.

It is also proposed to export general cargo from the jetty. The following procedures will be employed for the exportation of dry bulk cargo handling: e.g. Timber logs, woodchip.

- Dry bulk cargo (logs or similar) will be transported to the facility in the weeks prior to the arrival of the vessel and stored in a designated laydown area.
- The logs will then be loaded onto the vessel over a period of two days using two no. LH60 Material Handling Machines cranes (or similar) on the jetty.
- Pre-checks and loading sequence will be undertaken and agreed prior to all loading/unloading operations. All loading/unloading of cargo on the jetty will adhere to the operational management plan.
- The material handling machines will utilise 360 degree grab attachments to load the cargo onto the vessel. The material handling machine will lower the cargo into the hull of the vessel before opening the grab to release the cargo. This process will be repeated until all of the cargo has been loaded.
- Road sweepers and manual sweeping will be undertaken on a continual basis as required throughout the loading/unloading procedure.
- Once the vessel is fully loaded, the jetty will then be fully swept of any debris and any waste collected and sent to the appropriate waste facility.

The following procedures will be employed for the importation of other general cargo:

- All other cargo will either be bagged, crated or loose project cargo. This cargo could be both imported and exported from the site.
- In the case of importation, this cargo will be lifted off onto the jetty via a mobile crane or the ships own Hi-Ab crane. Cargo will then be loaded onto curtain sided or flatbed trucks via a forklift or crane.

In the event of such cargo being exported, the reverse will occur.

2.6.3.2.3 Hours of Operation

For the additional use of the existing jetty, bulk cargo loading and unloading operations will generally be carried out during the period 7.00 to 19.00, Monday to Saturday, although there may be the rare occasions where loading/unloading may need to take place outside these times for operational and safety reasons. Port related HGV traffic will generally operate 8.00 a.m. to 6.00 p.m., Monday to Saturday. There will be no operations on Sundays, or Bank Holidays.

2.7 References

Environmental Protection Agency (1996) *Integrated Pollution Control (IPC) Licence issued by the (reference number P0028-01)*.

3. PROJECT NEED AND ALTERNATIVES

3.1 Introduction

This chapter of the EIAR explains the need for the overall joint application by Goulding Chemicals Ltd. and Belvelly Marino Development Company (BMDC), for the development of a new agricultural fertiliser facility and additional port operational uses to facilitate cargo vessels at the Belvelly Port Facility. The main viable alternatives examined and considered during the project design process are outlined, as well as the reasons for Goulding's and BMDC choosing the proposed development location.

3.2 Need for the Proposed Development

3.2.1 Introduction

Following acquisition of the Marino Point site, BMDC developed an overall masterplan for the site, referred to as the Belvelly Port Facility. This masterplan is in line with the existing port-related industrial zoning objective for Marino Point and is key to facilitating the expansion and transfer of Port facilities from the Cork City Docklands and is part of the long term vision for the Port of Cork and BMDC.

The proposed development of the agricultural fertiliser facility at the Belvelly Port Facility and the additional use of the jetty to facilitate cargo vessels are potential site uses identified in the Belvelly Port Facility masterplan.

3.2.2 Proposed Agricultural Fertiliser Facility

The development of the proposed agricultural fertiliser blending and bagging facility at the Belvelly Port Facility is to facilitate the relocation of the existing Goulding's facility from the south docklands in Cork City. This relocation is in line with the objectives of the Cork City Development Plan and the Cork Area Strategic Plan 2001 – 2020 to develop the Marino Point site for industrial and port related uses. Furthermore the relocation will allow for the redevelopment of the south docklands for mixed use development in accordance with the City Docks Local Area Plan (LAP). The LAP is currently being prepared by Cork City Council. Origin Enterprises have conditionally agreed the sale of their 31 acre site in the city. The proposed relocation would therefore allow for the redevelopment of the city site for residential and commercial enterprises. The relocation will also include the transfer of the ships that currently deliver the Gouldings bulk granular fertiliser materials to the City Quays to the Marino Point jetty.

In addition, the existing Goulding's site in Cork City has limited space for the storage of product. The proposed relocation to Marino Point will allow for the development of a modern, up-to-date facility with adequate storage space. The existing operational jetty at the Belvelly Port Facility will also allow Gouldings to import raw materials by sea directly to the facility.

3.2.3 Additional Port Operational Use to Facilitate Cargo Vessels

The additional use of the jetty to facilitate cargo vessels will provide an alternative berth to the city quays and will complement the Deep Water Berth at Ringaskiddy. It delivers on the Port of Cork objective to move from the city quays (river port) to the lower harbour (deep sea port) to facilitate current and future global shipping trends. It will facilitate the relocation of the Goulding's cargo downstream from Cork City quays which in turn will free up the city quays for future expansion and development. It will also provide a berth in the lower harbour for other vessels with various dry bulk and break bulk cargo.

The objective to relocate Port related activities out of Cork city to Marino Point is supported by national, regional and local policies and plans, further details of which are provided below.

3.2.4 Relevant European, National and Local Policy

The European, national and local policy that underpins the Belvelly Port Facility masterplan and the proposed development is described below.

3.2.4.1 European Union Policy

The European Commission adopted an initiative on 23 May 2013 aimed at improving port operations and onward transport connections at the 329 key seaports which belong to the trans-European transport network. The Port of Cork has been designated as a Core Port within the North Sea-Mediterranean Trans European Network-Transport (TEN-T) Corridor which gives the port a status as a critical link between Europe and globally. The proposed development helps meet the objectives of the Core Port status.

3.2.4.2 National Policy

The National Ports Policy (NPP) was published in 2013, with a core objective to “facilitate a competitive and effective market for maritime transport services”. The NPP categorises the Irish ports sector into Ports of National Significance (Tier 1), Ports of National Significance (Tier 2) and Ports of Regional Significance. The Port of Cork has been identified in the NPP as a Tier 1 Port of National Significance. The continued commercial development of the Port of Cork is one of the strategic objectives of the NPP, as a Tier 1 port and a Ten-T (European Union Trans European Network-Transport) core port.

The National Planning Framework (NPF) was launched in 2018 and is the Government's strategic plan for “shaping the future growth and development of our country out to the year 2040”. The NPF recognises that Ireland benefits from naturally occurring deep water at ports in the south and south west, and Irish ports play an important role as enablers of economic growth. Implementation of the NPF will “evolve in parallel with the EU Directive requirement to develop a national maritime spatial plan by 2021”. The NPF is supported by National Policy Objectives that are key to achieving the targets and goals of the NPF within its lifetime.

The following objective relates to national ports;

National Policy Objective 40 OBJ *Ensure that the strategic development requirements of Tier 1 and Tier 2 Ports, ports of regional significance and smaller harbours are addressed as part of Regional Spatial and Economic Strategies, metropolitan area and city/county development plans, to ensure the effective growth and sustainable development of the city regions and regional and rural areas.*

The South West Regional Planning Guidelines (RPGs) 2010 – 2022 describes the Port of Cork as a “key element of the regional economy and infrastructure and offers a wide range of shipping services to worldwide destinations”. The RPGs recognise the requirement to identify an appropriate location with deep water for enhanced port facilities within Cork Harbour to accommodate increasing traffic and to help secure the redevelopment of the City Docklands.

One of the key issues for the RPGs is “*The proposed sustainable relocation and expansion of the Port of Cork facilities is required to facilitate both the growth in port activity and the redevelopment of the Cork Docklands to its full potential*”. The Regional Transport and Infrastructure Strategy which forms part of the RPGs identifies Cork Harbour, as the largest port outside Dublin, and “*contributes greatly to the overall economic wellbeing of the south west Region, particularly in the manufacturing, commercial, industrial and tourism sectors*”.

Objective RTS-06 of the RPGs directly supports the expansion of the Port and the relocation of Port facilities;

“It is an objective to support the sustainable expansion of the Port of Cork in line with the targeted economic growth of the region. As part of the programme of growth, it will be important for the Port of Cork to relocate its activities from the Cork City Docklands to suitable sustainable locations within Cork Harbour. Once the Port of Cork has resolved the issues of transport facilities to serve the port in the future, the local authorities will examine the potential of the possible locations and where appropriate protect the most suitable for future port development in their development and local area plans”.

Cork 2050 – Realising the Full Potential

“Cork 2050 – Realising the Full Potential”, is a joint submission made by Cork City and County Councils to the NPF in 2017. The submission outlines an evidence driven strategy to maximise the potential of Cork as a driver of international growth. The plan identifies the Port of Cork as a key infrastructural asset. The plan references the Docklands as an area with significant redevelopment potential.

The proposed development complies with the objectives of the National Ports Policy and the National Planning Framework.

3.2.4.3 Local Planning Policy

One of the strategic aims for the Belvelly Port Facility project is to follow the plans set out in the local development plans for the area as outlined in the Cork County Development Plan and the Cork Area Strategic Plan. Both documents outline plans to further develop the unique Cork Harbour site at Marino Point as part of an effort to reintroduce businesses and industries to the area.

The Cork County Development Plan (CDP) 2014-2020, Cork Area Strategic Plan 2001-2020, Cobh Municipal District Local Area Plan 2015, and Port of Cork Strategic Development Plan Review 2010 include a number of policies, proposals and objectives of relevance to Port of Cork and Marino Point.

The Cork CDP identifies Cobh, including Marino Point, as one of a number of principal employment locations within the Cork Gateway, where the overall strategy includes the advance provision of infrastructure, and provides a choice of sites for large, medium and small-scale enterprise/business and industrial uses. The CDP makes provisions for Marino Point under the following headings.

Paragraph 6.6.3 states that:

“Ringaskiddy Port and the Marino Point site will play an important role in the redevelopment of the Cork City docklands by providing for the relocation and development of industrial uses and major port facilities”.

Paragraph 6.6.5 states that:

“Cork County Council is committed to the relocation of port facilities to Ringaskiddy and Marino Point”

Objective EE 6-2: Cork Harbour of the CDP – part (c) states that it is an objective to: “Protect lands for port related development at Marino Point”.

Section 14.4 of the CDP describes Marino Point as a brownfield site, following the closure of the IFI facility. In relation to this, Objective ZU 4-1 states that: *“It is an objective of the development plan to recognise the development potential of brownfield sites in both urban and rural areas and their contribution to a more sustainable pattern of development”*

The Cobh Municipal District Local Area Plan (LAP) 2017 identifies Marino Point as a “strategic” site as it is one of a limited number of locations in the Greater Cork Area which can accommodate large employment projects. With regard to employment within the Cobh municipal district, Marino Point is identified as having an Employment Land Supply of 46ha for “port related development” (Section 2.5, Table 2.4 of the LAP). Section 3.2.25 of the LAP also states that *“Under the current Local Area Plan Marino Point is identified as an ‘Other Location’ and is subject to a Special Policy Area zoning objective to facilitate the development of the area for port-related industrial development”.*

The Cork Area Strategic Plan 2001-2020 (CASP) provided a non-statutory framework for the strategic planning in Cork City; the metropolitan area of Cork County and the Ring Towns. CASP was updated in 2008. The CASP Update identified the presence of an economically viable and readily accessible sea port as a key strength of the CASP area. In relation to Marino Point the CASP Update noted that there was potential to develop the former IFI site for high density mixed uses, but that given the existing infrastructure and presence of a Seveso use, that the site may be more suited to industrial or port related uses.

The Port of Cork Strategic Development Plan Review (2010) examined *“the future development of the cargo handling capacity of the Port of Cork”*, and projected that by 2030 the Port of Cork could be expected to be handling trade volumes in the order of *“380,000TEU unitized cargo, 38850 Ro-Ro units, 1.8 million tonnes bulk cargo and 7 million tonnes bulk liquids”*. The Review recommended that the

Port of Cork would have to provide additional port infrastructure, in order to *“deliver on its role to support and contribute to the competitiveness of the regional economy and to deliver on its commitment to its customers”*. The 2010 Review recommended *“Additional Bulk/General Cargo facilities at Marino Point and Bulk Liquids handling and storage facilities at Marino Point”*.

The Cork Area Strategic Plan (CASP) seeks to have Marino Point included as one of six sites suitable for future port use (CASP, 2001-2010).

The Regional and Spatial and Economic Strategy (RSES) for the Southern Region which came into effect on 31st January 2020 has identified Marino Point as a Strategic Employment Location and a strategic marine sector facility. The RSES notes that *“the redevelopment of the docklands is strongly linked to the relocation of Port activities from the city and development of new Port of Cork facilities in Ringaskiddy, the construction of the M28 Cork to Ringaskiddy and facilities at Marino Point.”* The RSES also refers to Marino Point being an *‘economic enabler for Cobh’*. The report makes reference to the sites employment opportunities and its opportunity to optimise deep water wharf facilities and utilities connections for port/marine industry related activity.

The proposed development complies with the Cork CDP and all the above mentioned local plans and strategies.

Cork City Development Plan 2015 - 2021

The Cork City Development Plan 2015 – 2021 outlines Cork City Council’s policies for the development of Cork City to 2021. The plan outlines the potential of the Cork city South Docks area for supporting mixed use development. It outlines how the relocation of the Port of Cork operations and the Seveso site from this location is essential for the development of essential infrastructures such as bridge and road access, education, cultural and social/community uses in this location.

The proposed development including the relocation of Gouldings, which is a Seveso facility meets the objectives of the Cork City Development Plan.

Cork Metropolitan Area Transport Strategy

The Cork Metropolitan Area Transport Strategy (CMATS) has been developed by the National Transport Authority (NTA) in collaboration with TII, Cork City Council and Cork County Council. CMATS represents a coordinated land use and transport strategy for the Cork Metropolitan Area to cover the period up to 2040. CMATS states that the R624 (Cobh Road to Marino Point) *“will require safeguarding in its function and form”* to *“facilitate existing and future port related uses”* (Reference: CMATS page 90).

3.3 Site Selection

3.3.1 Proposed Agricultural Fertiliser Facility

The Belvelly Port Facility is considered a viable site for the relocation of Goulding’s city operations for the following reasons:

1. The Belvelly Port Facility site facilitates the relocation of the Goulding's operation from Cork city, as discussed earlier.
2. The Belvelly Port Facility provides a level serviced site with adequate open space for storage.
3. The main advantage from a safety point of view is that Gouldings, as a COMAH site, would be moving from being in close proximity to a populated city centre area to an industrialised location.
4. The existence of natural deep waters and an operational jetty provides the opportunity for raw fertiliser materials to be imported in close proximity to the blending and bagging facility.
5. Marino Point is zoned for industrial use activity.
6. The proximity of the site to an existing rail network provides a possible opportunity for the future use of freight rail transport.

3.3.2 Additional Port Operational Uses to Facilitate General dry bulk and break bulk Cargo Vessels

The Port of Cork Company currently use the jetty at the Belvelly Port Facility site to export dry cargo (wooden logs), for the importation of Methanol for MarinoChem, as a stand-by berth for Port work vessels, and to moor occasional vessels for lay-by or minor maintenance work. The proposed Belvelly Port Facility is considered a viable site for the additional use of the jetty to facilitate cargo vessels for the following reasons:

1. Marino Point provides a suitable alternative berth to the city quays, which is in line with the Port of Cork's overall masterplan for relocating from the city quays to the lower harbour.
2. The depth of the water channel and the width of the river Lee at the Cork City Quays and Tivoli cannot cater for future global shipping needs. The existing operational jetty provides a natural 10m draft and a 230m long berth which will cater for these future Global shipping needs.
3. The relocation will provide for improved efficiency of Port operations. It will provide a travel time saving and vessel movements will no longer be restricted by tides.
4. This is in line with current global shipping trends which aims to reduce emissions and promote more environmentally friendly practices.
5. The required move away from the city quays which is in line with various national and local planning policies, will require the provision of alternative berthing facilities for various vessels/cargos in the lower harbour.
6. Marino Point has the capacity to accommodate various cargoes such as woodchip, machinery parts, deep sea maintenance & exploratory vessel engineering cargo, project cargo / breakbulk, berths for laid-up vessels and other miscellaneous dry cargo that would normally be catered for in the city quays.

3.4 Alternatives considered

3.4.1 Alternative sites

The relocation of industrial facilities from the Cork City Docklands to the Belvelly Port Facility site is supported by objectives of both the Cork County Development Plan 2014-2020 and the Regional and Spatial and Economic Strategy (RSES) 2020. Taking account of these supporting policy objectives and

the suitability of site conditions, the Belvelly Port Facility was the only site considered for the development of the proposed new agricultural fertiliser facility.

The Port of Cork currently utilise the Ringaskiddy Deep Water Berth for bulk cargo, but this is currently operating near to full capacity. As such it is not suitable for additional cargo without further development. There is also a development underway at Ringaskiddy for a new Cork Container Terminal (CCT). This development will allow for the relocation of the existing Tivoli CCT to Ringaskiddy, but will not have capacity to cater for break bulk and bulk cargo. Ringaskiddy is therefore not a suitable site for the proposed additional port use of the jetty.

The additional use of the jetty at the Belvelly Port Facility will supplement the existing facilities available to the Port of Cork for the importation and exportation of materials.

3.4.2 Alternative layouts

The development of Goulding's proposed agricultural fertiliser facility has been subject to a detailed and iterative planning process to identify the optimum use and layout of the site. The preferred development site footprint was chosen which has no existing buildings and has a level and hardstand surface. The proposed final layout plan is provided in **Appendix 2.2**.

The consideration of an alternative layout is not relevant to the proposed additional port operational uses to facilitate cargo vessels as there is no proposed change to the current jetty structure.

3.5 Do Nothing Scenario

3.5.1 Proposed Agricultural Fertiliser Facility

A do-nothing scenario would hamper the redevelopment of the city docklands for mixed-use development. The like-for-like relocation of the existing Cork city Goulding facility will provide space to facilitate the redevelopment of the Cork city docklands. The requirements for such redevelopment are ingrained in the Cork City Development Plan 2015 – 2021 as outlined in **Section 3.2.2**, above.

3.5.2 Additional Port Uses

A do-nothing scenario would fail to develop the significant potential use of the Belvelly Port Facility and its unique resource of deep-water facilities, in keeping with the Tier 1 port status of the Port of Cork. By not relocating the port facilities from Cork city to Marino Point, the Project Ireland 2040 plans regarding the Cork City Docklands development and Tivoli development would be jeopardised.

Furthermore, a do-nothing scenario would hamper the Port of Cork's objective to move the port from the river Lee to the sea. It would jeopardise future cargo imports and exports at Cork Harbour, due in part to the increase in vessel size. This in turn would jeopardize the potential for growth in the local economy.

3.6 References

Cork County Council and Cork City Council (2001) *Cork Area Strategic Plan (CASP) (2001-2020)*

Cobh Municipal District- County Cork Local Area Plans (2015)

Cork County Council (2014) *Cork County Development Plan (CDP) 2014-2020*

Cork City Council and Cork County Council (2001) *Cork Area Strategic Plan (CASP) 2001-2020*

Cork County Council (2017) *Cobh Municipal District Local Area Plan 2017*

Department of Transport, Tourism and Sport (2013) *National Ports Policy (NPP)*

Department of Housing Planning and Local Government (2018) *National Planning Framework (NPF)*

Port of Cork Company (2010) *Port of Cork Strategic Development Plan Review 2010*

Southern Regional Assembly (2018) *Draft Regional Spatial & Economic Strategy for the South Region.*

4. POPULATION AND HUMAN HEALTH

4.1 Introduction

This chapter assesses the impacts of the proposed development on human beings and those impacts that are not already covered by other chapters of the EIAR, such as health and safety, social considerations, economic activity, local amenity and land-use.

Other environmental assessments undertaken as part of this EIAR that have potential to have impact on Population and Human Health include **Noise and Vibration (Chapter 14)**; **Air Quality and Climate (Chapter 9)**; **Traffic and Transportation (Chapter 13)**; **Landscape and Visual Resource (Chapter 11)**; **Land and Soils (Chapter 6)**, **Hydrology (Chapter 7)** and **Hydrogeology (Chapter 8)**.

4.1.1 Proposed Development

A full description of the proposed development is provided in **Chapter 2 Description of the Proposed Development**. In summary, the proposed development at the Belvelly Port Facility will consist of the following main elements:

- The construction and operation of an agricultural fertiliser facility which facilitates the relocation of Goulding Chemicals Limited from Cork City to the Belvelly Port Facility. The proposed agricultural facility will consist of:
 - Importation by ship of bulk granular fertiliser at the existing jetty.
 - A storage warehouse;
 - A bagging and palletising facility;
 - An office building to support customer service and weighbridge operations; and
 - Outside paved storage area, weigh-bridges, access control and security facilities.

It is projected that the average number of ships using the existing jetty for importation of bulk granular fertiliser for the Goulding operations will be approximately 50 ships per year.

The primary use of the proposed fertiliser facility will be for bagging and blending of dry bulk materials for storage and distribution. All finished fertiliser product will be distributed from the facility by road.

- Additional BMDC port operational use of the jetty to facilitate general dry cargo vessels at the Belvelly Port Facility including the relocation of vessels displaced from the Cork City Quays. The additional cargo types proposed will include woodchip, machinery parts, deep sea maintenance and exploratory vessel engineering cargo, and other miscellaneous dry cargo. Approximately 40 additional port related cargo ships will berth at the jetty each year. The size and frequency of cargo vessels will be variable and subject to the various customers' needs. On average, ships will be berthed for 1 to 2 days to offload / load cargo but may be longer depending on cargo size and weather conditions.

4.1.2 Scope of Assessment

This chapter has been prepared pursuant to Schedule 6 of the Planning and Development Regulations 2001 (as amended). Section 2 of Schedule 6 sets out the additional information relevant to the specific

characteristics of the project required, which includes a description of the likely significant effects on the environment of the proposed development resulting from, among other things;

(IV) the risks to human health, cultural heritage or the environment (for example due to accidents or disasters)

The Study Area for the assessment of potential impacts on Population and Human Health is described in **Section 4.3** and includes the rural and urban areas of Cobh, and the urban areas of Passage West and Monkstown. A number of key receptors have been identified as follows;

- Staff and visitors to MarinoChem;
- Users of the R624 road;
- Residents of the settlements of Passage West/Monkstown;
- Residents of the rural and urban areas of Cobh;
- Residential development in proximity to the Marino Point site, including Carrigaloe, located approximately 700 m to the south, and Belvelly Village located approximately 1 km to the north-east of the site boundary
- Customers and staff of Cobh Golf Club; and
- Customers and staff of Fota Wildlife Park, Fota House and Gardens and Fota Resort and Golf Club.

4.1.3 Methodology

This chapter has been prepared having regard to the following guidelines:

- Guidelines for Planning Authorities and An Bord Pleanála in carrying out Environmental Impact Assessment (Department of Housing, Planning and Local Government, August 2018)
- Revised draft Guidelines on the Information to be Contained in Environmental Impact assessment Reports (Environmental Protection Agency (EPA), draft August 2017); and
- Advice Notes for Preparing Environmental Impact Statements (EPA, draft September 2015).

The Draft Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, 2017) state that:

‘..in an EIAR, the assessment of impacts on population and human health should refer to the assessments of those factors under which human health effects might occur, as addressed elsewhere in the EIAR e.g. under the environmental factors of air, water, soil etc.’

Recital 22 to the EIA Directive provides that *“In order to ensure a high level of protection of the environment and human health, screening procedures and environmental impact assessments should take account of the impact of the whole project in question, including, where relevant, its subsurface and underground, during the construction, operational and, where relevant, demolition phases”*.

The EPA advice notes (EPA, 2015) recommend considering the following issues when assessing the potential impacts and effects of a proposed development on Population and Human Health;

- **Economic Activity** likely to lead to projects - will the development stimulate additional development and/or reduce economic activity, and if either, what type, how much and where?
- **Social Consideration** - will the development change the intensity of patterns and types of activity and land use?
- **Land-use** - will there be severance, loss of rights of way or amenities, conflicts, or other changes likely to ultimately alter the character and use of the surroundings?
- **Tourism** – will the development affect the tourism profile of the area?
- **Health** – have the vectors through which human health impacts could be caused been assessed, including adequate consideration of inter relationships between those assessments.

The assessment of the likely significant effects of the proposed development on population and human health was conducted by reviewing the current socio-economic environment of the environs of the Belvelly Port Facility. This included site visits and visual assessments of the proposed site and the surrounding area, as well as an analysis of aerial photography and Ordnance Survey (OS) mapping.

Demographic trends were analysed at state, county, and local level, with the latter comprising the Electoral Divisions where the Belvelly Port Facility is located or those in closest proximity. Information was gathered with respect to the demographic and employment characteristics of the resident population within the study area sourced from 2011 and 2016 Census data. The data included information on population, structure, age profile, travel patterns and employment. A desktop analysis of the following documents and websites was also prepared;

- Cork County Development Plan (CPD) 2014 – 2020 (as varied) www.corkcoco.ie
- Cork City Development Plan 2015 – 2021 (as varied)
- Cobh Municipal District Local Area Plan (LAP) 2017
- Central Statistics Office (CSO) www.cso.ie;
- Port of Cork www.portofcork.ie

Consultations with statutory bodies were also used to ensure that environmental issues, including socio-economic, recreational and amenity issues relating to the proposed development were addressed. Further information on the consultation process and responses received is provided in **Appendix 1.1** and **Appendix 1.2**.

4.1.4 Statement on Limitations and Difficulties Encountered

No difficulties were encountered during the preparation of this chapter. Information was accessed from published sources and surveys were completed without any restrictions, seasonal or otherwise.

4.2 Competency of Assessor

This chapter was prepared by Emer Sexton (BSc Earth Science, MSc Ecology, MPlan Planning and Sustainable Development, HDip GIS) of McCutcheon Halley Planning Consultancy. She has worked with multi-disciplinary teams on a number of projects and has provided input to a variety of development projects that require both environmental and ecological assessment of potential impacts. Full details of Emer's qualifications and experience are provided in **Chapter 1 Introduction**.

4.3 Existing Environment

4.3.1 Site Location and Description

The Belvelly Port Facility is located at Marino Point, which is a small peninsula on the north-west side of Great Island, east of Cork City. Marino Point is bounded by Cork Harbour to the north, west and south and is approximately 1.0 km from Passage West which lies to the west of the centre of the site on the opposite side of the harbour. The immediate surrounding area is lightly populated while the urban areas of Passage West, Monkstown and Glenbrook are located across the harbour to the west. The northern boundary of the site is adjacent to intertidal mudflats and sandflats. The total site area of the Belvelly Port Facility is approximately 48 ha, with approximately 2.74 ha of the site leased by MarinoChem Ltd, located at the north-western corner of the site. The area within the redline planning boundary is approximately 7.6 hectares.

The eastern boundary of the Belvelly Port Facility is formed by the Cork to Cobh railway and the R624 Cork-Cobh regional road. The nearest significant town on the same side of the harbour is Cobh which lies approximately 5km south-east of the site. Belvelly Village is located approximately 1 km to the north-east, at Belvelly Bridge. Carrigaloe, which comprises a ribbon development of a number of detached residential properties is located along the R624, to the south of the main entrance to the Belvelly Port Facility.

There is a historic rail siding in the north-east corner, north of the road bridge, and a jetty located at the south of the site.

The landscape character of the study area is described in **Chapter 11 Landscape and Visual Resource**. The entire study area is described as “High Value Landscape” in the Cork County Development Plan 2014 – 2020.

The Great Island Channel Special Area of Conservation (SAC) (001058) lies adjacent to the main Belvelly Port Facility on its northern shore. The SAC encompasses the eastern part of the northern annexe which supports a small area of wetland, and is designated for habitats such as mudflats and saltmarsh. Similarly, Cork Harbour SPA lies adjacent to Belvelly Port Facility on its northern shore and the land parcel in the northeast on its north-eastern shore. All work will take place outside of the SPA. Cork Harbour SPA is designated for the protection of wintering waterbirds. The SAC and SPA overlap on the intertidal mudflats.

There are three Recorded Monuments at the Belvelly Port Facility; Marino House (RMP CO075-13); the Orangery (RMP CO075-076), and associated Landscape Feature (RMP CO075-027). These monuments are located in the southern end of the site. No works will take place within the curtilage of the recorded monuments. Marino House and the Orangery are also listed as NIAH building of regional importance, but they are not included on the Record of Protected structures.

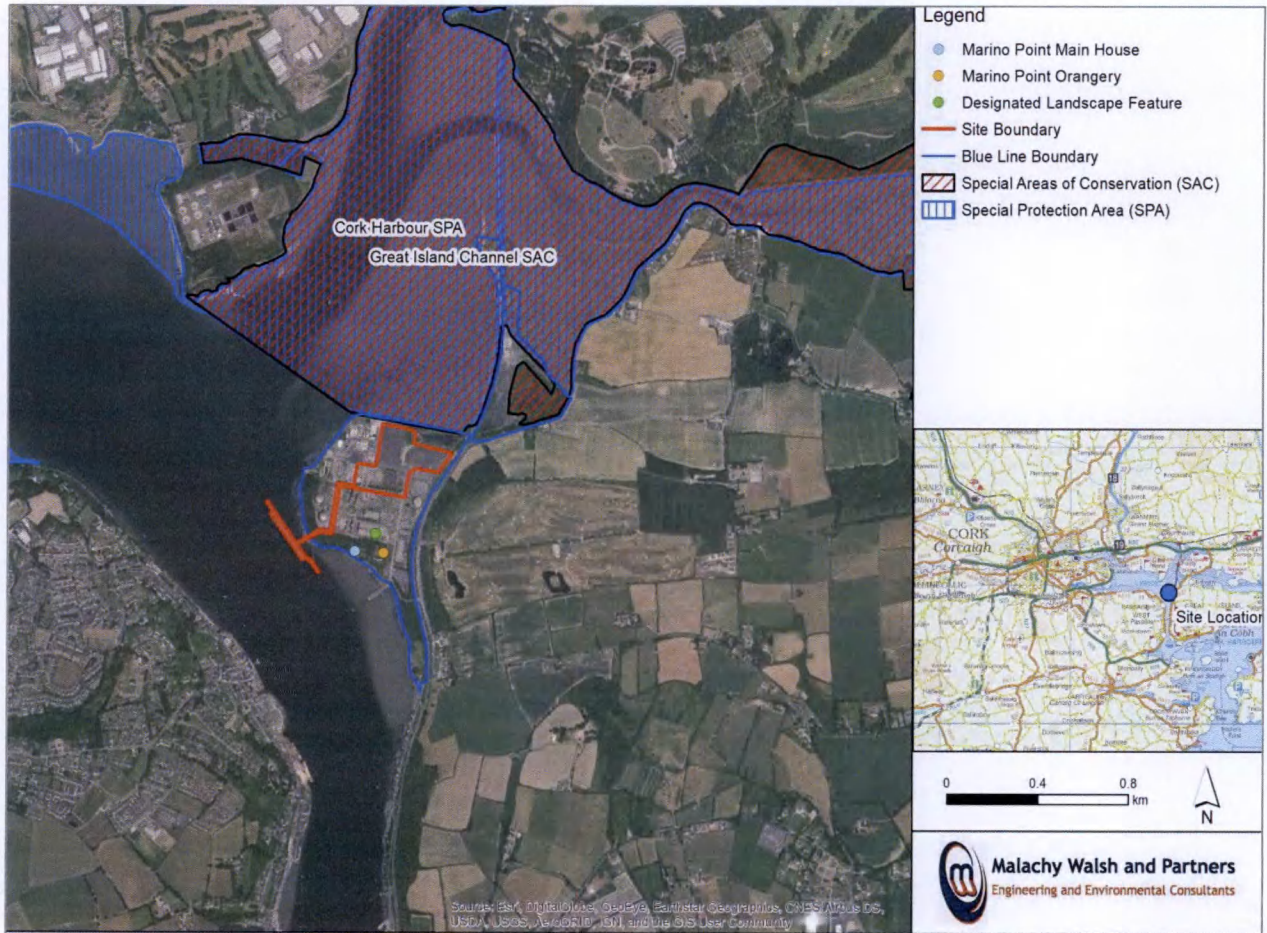


Figure 4.1 Site Context

Marino Point is located within the Cobh Municipal District and is subject to a Special Policy Area zoning objective (X-01) under the Cobh Municipal District Local Area Plan 2017 (Cobh LAP). The X-01 Objective facilitates the development of the area for port-related industrial development, subject to the following provisions:

- *Development will be confined to the existing reclaimed area and to activities which are port-related, or which use the existing industrial installations. Any new berthing / unloading facilities would be limited.*
- *A detailed Traffic Impact Assessment is required prior to any development to assess the impact on the existing road network.*
- *Improved road access between the N25 and Cobh subject to full ecological assessment.*
- *Existing recorded monuments on site shall be protected.*
- *In permitting development, regard shall be had to mitigating potential adverse impacts, particularly for the adjacent residential settlement of Passage west.*
- *Marino Point is located immediately adjacent to the Great Island Channel SAC and Cork Harbour SPA. Development in this location will only be permitted where it is shown that it is compatible with the requirements of the Habitats and Birds Directive and with the protection of these sites.*

The zoning objective also notes that parts of the site are at risk of flooding and any development proposals will normally be accompanied by a flood risk assessment.

A planning application for site development works at the Belvelly Port Facility was submitted in November 2019 to Cork County Council (Planning Ref: 19/6783), as described in **Chapter 1 Introduction**. An EIAR and NIS were prepared in support of that application. The proposed site development works includes demolition, site infrastructure improvements, and utility upgrade works to stabilise the existing site and to provide capacity for future industrial development proposals at the Belvelly Port Facility, Marino Point, Cobh.

4.3.1.1 Existing activities

There is currently one active industrial facility located in the north-west corner of the main site which is owned by MarinoChem Limited (formerly Dynea Ireland Limited - refer to **Chapter 2, Project Description**). Materials are imported to the MarinoChem facility over the jetty located off the western side of the main site by pumping from tankers via a viaduct. The Port of Cork Company also use the jetty to export dry cargo (wooden logs), as a stand-by berth for Port work vessels, and to moor occasional vessels for lay-by or minor maintenance work.

Similar to a number of industries in County Cork, the Belvelly Port Facility site is subject to provisions of the Seveso Directive 2012/18/EU. This Directive is the main EU legislation dealing specifically with the control of on-shore major accident hazards involving dangerous substances. It is aimed at improving the safety of sites containing large quantities of dangerous substances. The MarinoChem site is classified as an Upper Tier Seveso Site due to the presence of quantities of listed dangerous substances, including methanol and formaldehyde. It has a 1km consultation distance and, as such, covers the whole of the Belvelly Port Facility site. As a result, any proposed development on the site will be subject to consultation with the Health and Safety Authority (HSA).

4.3.2 Population & Settlement Patterns

The recently-published National Planning Framework (NPF) 2040 envisages that Cork will become the fastest-growing city region in Ireland with a projected 50% to 60% increase of its population in the period up to 2040.

The Regional Spatial and Economic Strategy (RSES) for the Southern Region which came into effect in January 2020 identifies that the Southern Region is the second most populated Regional Assembly area and that all 10 local authority areas within the region have experienced growth at varying levels since 2006. Population projections anticipate large increases in the 15-24 year (+26%), 45-64 year (+14%) and 65+ year (+56%) age groups between 2016 and 2031. The 0-14 year and 25-44 year age groups are projected to decrease by approximately 14%.

The immediate hinterland of the Belvelly Port Facility in terms of potential socio-economic impacts includes the rural and urban areas of Cobh, Passage West, and Monkstown. Marino Point lies within the Cobh Rural Electoral Division (ED) which encompasses Belvelly Village and Carrigaloe, Great Island, Spike Island, Haulbowline Island, Fota Wildlife Park to the north, as well as part of Cobh Town. The most recent population data available (the 2016 Census) for this ED identified a population of 8,353, indicating an increase of approximately 11% from the 2011 Census of population (7,534). The land uses within the Cobh Rural ED are primarily agricultural, and the bulk of this population density is provided by the suburbs of Cobh town.

Passage West/Monkstown lies within Monkstown Urban Electoral Division (ED). The population of this ED was 5,219 in 2016, an increase of approximately 2% from 5,122 in 2011. The population of the Cobh Urban ED was 6,500 in 2011, which increased by 0.3% to 6,525 in 2016.



Figure 4.2 Electoral Divisions in proximity to the Belvelly Port Facility

The areas of highest population density in closest proximity to the Belvelly Port Facility are the urban areas of Passage West/Monkstown, circa 0.6 km directly across the harbour, and Cobh, directly to the south of Marino Point (**Figure 4.1**). The Ballincollig Carrigaline Municipal District Local Area Plan

(Ballincollig Carrigaline LAP) describes the area of Passage West/Monkstown as a series of linked Lower Harbour commuter settlements comprising Passage West, Monkstown, and Glenbrook. The Central Statistics Office (CSO) considers these urban areas as a single settlement for the purposes of analysing settlement population and trends (refer to **Figure 4.3** for the settlement boundaries as defined by the 2016 Census).



Figure 4.3 Settlement boundaries in proximity to the Belvelly Port Facility

The 2016 Census identified that the settlement of Passage West/Monkstown had a population of 5,843, and had increased by c. 1% from 5,790 in 2011. However, following the 2011 Census, the settlement boundary was redrawn, which makes direct comparisons between 2011 and 2016 difficult. The Ballincollig Carrigaline LAP identifies that this settlement should achieve a population target of 6,965 by 2022, representing an increase of c. 12.4% from the population identified during the 2016 Census.

The Cobh LAP identifies Cobh as a Main Settlement and a Metropolitan Town in the overall Cork CDP Plan (2014). The CSO identified that the population of the settlement of Cobh was 12,800 (12,347 in 2011 Census; however again, as the settlement boundary has changed a direct comparison is difficult). The Cobh LAP identifies a target of 14,543 by 2022 (an increase of 13.6%).

The age cohorts and population structure of the EDs within the Study area are included in **Table 4.1** below. Figures for Cork City, the state, and Cork County are also provided to allow for comparison.

Table 4.1 Age cohorts and population structure of the EDs within the Study area

Area	Age 0-4	Age 5-11	Age 12-18	Age 19-34	Age 35-64	Aged 65+	Total Population
State	331,515	484,368	435,913	990,618	1,881,884	637,567	4,761,865
As *percentage of total population	6.9%	10.2%	9.2%	20.8%	40%	13.4%	n/a
Cork County	31,337	46,583	39,969	74,664	170,524	54,116	417,211
As percentage of total population	7.5%	11.2%	9.6%	17.9%	41%	12.9%	n/a
Cork City	6,305	8,270	8,661	37,932	44,762	19,727	125,657
As percentage of total population	5.0%	6.6%	6.8%	30.1%	36%	15.7%	n/a
Cobh Rural ED	744	1,127	829	1,687	3,318	648	8,353
As percentage of total population	8.9%	13.5%	9.9%	20.2%	39.7%	7.8%	n/a
Cobh Urban ED	356	598	597	1,240	2,665	1,069	6,525
As percentage of total population	5.5%	9.2%	9.2%	19%	40.8%	16.4%	n/a
Monkstown Urban ED	401	592	497	967	2,151	611	5,219
As percentage of total population	7.7%	11.3%	9.5%	18.5%	41.2%	11.7%	n/a

4.3.3 Economic Activities

Employment

The employment hierarchy set out in the Cork CDP 2014 identifies Cobh, including Marino Point, as one of the principal employment locations within the Cork Metropolitan Area, where the overall strategy includes the advance provision of infrastructure, and provide a choice of sites for large, medium and small-scale enterprise/business and industrial uses.

Both Cobh and Passage West are identified as Metropolitan Towns, which are critical population growth, employment and service centres.

The Ballincollig Carrigaline LAP 2017 identifies that significant growth is planned for Passage West. The settlement is described as an important residential area, as it provides an important residential

alternative to Cork City and environs. This is also due to its scenic landscape setting overlooking Cork Harbour. Monkstown is a significant centre for water based activities, including Monkstown Bay Club. The cross river ferry from Glenbrook to Carrigaloe is an important amenity, providing access to Great Island and East Cork.

The Cobh LAP identifies Marino Point as a “strategic” site as it is one of a limited number of locations in the Greater Cork Area which can accommodate large employment projects. With regard to employment within the Cobh municipal district, Marino Point is identified as having an Employment Land Supply of 46 ha for “port related development” (Cobh LAP, Table 2.2 Section 2.5), and is listed as an “Other Location”, defined as “areas which may not form a significant part of the settlement network, but perform important functions with regard to specific uses e.g. Fota Island, Haulbowline Island and Spike Island” (Cobh LAP, Table 2.1, Section 2.3).

Labour Force

The CSO releases quarterly publications on labour force (Labour Force Survey LFS)¹ estimates for the state (Table 4.2). The most recent release published by the CSO is for Q3 2020, based on data which has been compiled during the Covid-19 crisis (Fig 4.4). The figures show an increase in unemployment (age cohort 15 – 64 years), with the greater rates of decrease in employment in specific sectors; Accommodation and Food Services (-16.1% or -28,600), Administration and Support Services (-13.4% or -14,600) and the Other NACE Activities (-10.7% or -12,800) which includes Arts, sports, entertainment and cultural activities. Covid 19-related negative impacts on the economy and in particular on these sectors is anticipated to continue in the short to medium term.

Labour Force Survey (LFS)		
Quarter 3 2020		
Indicator	Standard LFS Methodology (ILO) Q3 2020	COVID-19 Adjusted Estimates September 2020 (end of Q3 2020)
Employed persons aged 15 years and over	2,295,200	2,078,058
Employment rate for those aged 15-64 years	67.7%	61.0%
Unemployed persons aged 15-74 years	174,700	394,538
Unemployment rate for those aged 15-74 years	7.1%	15.9%
In labour force	2,469,800	-
Not in labour force	1,514,300	-

Table 4.2 Labour Force Survey Q3 2020

¹ <https://www.cso.ie/en/releasesandpublications/er/lfs/labourforcesurvey/lfsquarter32020/>

The Population and Labour Force Projections 2017 – 2051 Report² released by the CSO in 2018 identifies that Ireland’s population is projected to grow substantially by 2051, from 4.74 million in April 2016 to 6.69 million by 2051. Population growth will be influenced by inward migration and fertility, but even with low inward migration and declining fertility, the report anticipates that Ireland’s population should reach 5.58 million in 2051.

When compared with figures for the state, the labour force participation rate for Cork County is marginally higher, which may be representative of the growth and expansion of the pharmaceutical industry in areas such as Ringaskiddy and Little Island.

Table 4.3 Population and Labour Force Projections 2018

Area	Factor	2011	2016
State	Labour Force Participation Rate (%)	61.9%	61.4%
	Unemployment Rate (Rate)	19%	12.9%
Cork City	Labour Force Participation Rate (%)	54.4%	55.2%
	Unemployment Rate (Rate)	22.2%	15%
Cork County	Labour Force Participation Rate (%)	62.7%	61.6%
	Unemployment Rate (Rate)	14.8%	9.2%

The CSO defines “working age” as the 15-64 age cohort. **Table 4.4** provides the CSO figures for 2016 for the working age cohort for the Study area as identified in **Section 4.1.2**. Figures for Cork City, the State and Cork County have also been provided to allow a comparison.

An examination of the CSO figures for 2016 shows that the Cobh Urban ED has a higher number of people of working age when compared with figures for Cork County and City. This may be reflective of both the proximity of Cobh to centres of employment such as Ringaskiddy, Little Island and Cork City, and its attractiveness as a commuter town, with a greater availability and choice of housing than in smaller settlements such as Passage West. Accommodation in Cobh is also available at a lower cost than in Cork City.

Table 4.4 Working age cohorts (based on 2016 Census Results)

Area	Ages 0-14	Ages 15-64	Aged 65+	Total Population
State	1,251,796	3,117,746	637,567	4,761,865
As percentage of total population	26.29%	65.5%	13.4%	n/a
Cork County	95,591	267,504	54,116	417,211
As percentage of total population	23%	64.1%	12.9%	n/a
Cork City	17,940	8,7990	19,727	125,657

² <https://www.cso.ie/en/releasesandpublications/ep/p-plfp/populationandlabourforceprojections2017-2051/>

Area	Ages 0-14	Ages 15-64	Aged 65+	Total Population
As percentage of total population	14.3%	70%	15.7%	n/a
Cobh Rural ED	2259	5446	648	8353
As percentage of total population	27%	65%	7.8%	n/a
Cobh Urban ED	1,209	4,247	1,069	6,525
As percentage of total population	18.5%	65%	16.4%	n/a
Monkstown Urban ED	1,210	3,398	611	5,219
As percentage of total population	23.2%	65.1%	11.7%	n/a

The attractiveness of Cobh as a commuter town for workers can also be inferred from **Table 4.5** which provides a comparison between the number of commuters living in Cobh with numbers in Cork City, County and the State as a whole based on journey time to work, school or college. The results show that a slightly higher proportion of respondents in the Monkstown Urban, Cobh Rural and Cobh Urban EDs have a journey time of between half an hour and 1 hour, indicating a high number of commuters travelling from these locations to places of work or for education purposes. This corresponds with the figures for means of travel to work, school or college as presented in **Table 4.6**.

Table 4.5 Journey times for population within the study area. Journey times for Cork City and County and the State are also provided for comparison (based on 2016 Census results)

Journey time to work, school or college	CSO Area					
	Cobh Urban	Cobh Rural	Monkstown Urban	Cork County	Cork City	State
Under 15 mins	32.2%	34.2%	26.3%	33.6%	32.1%	32.3%
1/4 hour - under 1/2 hour	24.5%	24.3%	32.8%	29.4%	38.3%	28.8%
1/2 hour - under 3/4 hour	22.6%	24.3%	25.3%	19.2%	15.5%	17.3%
3/4 hour - under 1 hour	7.1%	5.7%	6.5%	6.0%	2.8%	5.9%
1 hour - under 1 1/2 hours	4.6%	4.1%	3.4%	4.8%	2.1%	6.0%
1 1/2 hours and over	2.2%	1.8%	1.3%	1.4%	0.8%	2.3%
Not stated	6.8%	5.6%	4.3%	5.7%	8.5%	7.4%

Similarly, **Table 4.6** provides data on the means of travel to work, school or college for the catchment area. The proportion of respondents from the Cobh Rural ED who travel by car either as passengers or as drivers is comparable to the proportion for Cork County as a whole, indicating a significant commuting population located in Cobh. The proportion of people who travel from Cobh Urban ED is slightly higher than the state average. It is also notable that 8.4% of respondents take the train from Cobh to work, school or college, which suggests that the train service offers a viable transport alternative to residents in both the Cobh Urban and Cobh Rural EDs. This figure is significantly higher than the figure of 2.7% for the State.

The analysis of work and commuting patterns provides useful information on the potential reliance on the R624 as a connection between residents of Cobh and centres of education and employment located elsewhere. Approximately 70% of residents in Cobh Rural and 60 % in Cobh Urban travel in a vehicle (car, van or other). This is less than for Cork County (75%), and may reflect the availability of other modes of transport for Cobh residents. It is unlikely that all road users will make use of the R624, as the L2989 provides an alternative route between Cobh and Belvelly Bridge.

Table 4.6 Means of travel to work, school or college (based on 2016 Census results)

Means of Travel	State	Cork County	Cork City	Cobh Rural	Cobh Urban	Monkstown Urban
On foot	13.9%	8.7%	29.2%	15.6%	22.0%	6.5%
Bicycle	2.7%	0.6%	3.5%	0.5%	0.7%	1.1%
Bus minibus or coach	10.2%	7.3%	10.4%	3.0%	2.6%	6.4%
Train DART or LUAS	2.7%	0.7%	0.4%	4.3%	8.4%	0.1%
Motorcycle or scooter	0.3%	0.2%	0.3%	0.2%	0.3%	0.5%
Car driver	39.3%	46.4%	32.0%	45.5%	40.4%	51.0%
Car passenger	18.6%	23.0%	14.8%	22.5%	16.1%	26.4%
Van	4.2%	4.9%	2.2%	2.8%	2.1%	3.0%
Other (incl. lorry)	0.4%	0.5%	0.1%	0.6%	0.9%	0.4%
Work mainly at or from home	3.1%	4.3%	1.5%	1.5%	2.1%	2.5%
Not stated	4.5%	3.2%	5.5%	3.4%	4.3%	2.1%

4.3.4 Land-use and Amenity

The site is located within the Belvelly Port Facility which is an established industrial site. MarinoChem Limited (formerly Dynea Ireland Limited) is currently the only industrial facility operating at the site. There is also a small scale port activity at the site associated with the exportation of logs, which are exported from the site via the jetty using a small crane and grab. The logs are unloaded, laid down and subsequently repackaged in varying load sizes for distribution. The jetty has also been used as a lay-by berth, for various vessels and Port work vessels. Vessels such as cargo vessels, ferries, and deep-sea work vessels have been berthed there for various reasons.

The MarinoChem plant is located at the north-western corner of the Belvelly Port Facility. The company manufactures aminoplast resin adhesives for the panel board (MDF and chipboard) and firelighter industries. The plant currently operates under an IPC licence issued by the EPA. Materials are imported to the Plant over the quay by pumping from tankers. Facilities are located at the existing jetty, with main pipes connecting the Plant to the jetty via a viaduct. Materials are also regularly imported by road to the MarinoChem Plant.

The rest of the site is currently vacant. Land use surrounding the Belvelly Port Facility is varied, however the primary land use within Cobh Rural ED is agriculture. Cobh Golf Club is located on a site of approximately 50 hectares to the east of Marino Point, on an elevated site. The Golf Club was established in 2006, and provides an important amenity for the local community. The entrance to the Club is off the R624, approximately 0.25 km to the north of the entrance to Marino Point.

Fota Wildlife Park, which forms part of Fota Island Resort, is located approximately 500 m to the north of the Belvelly Port Facility. The main entrance to Fota Wildlife Park is located just north of Belvelly Bridge, approximately 2.6 km to the north of the main entrance.

Carrigrennan Wastewater Treatment Plant, which serves Cork City, is located directly across the harbour from the Belvelly Port Facility, approximately 600 m from the boundary. There are also a number of detached houses located at the east side of the R624, approximately 0.25 km to the south of the main entrance to Marino Point.

Carrigaloe Station is located approximately 670 metres south of the main entrance to the Belvelly Port Facility. There is a footway along the west side of the R624, south of its Íarnród Éireann bridge. Cobh is served by the Cobh/Cork Connect bus service, with up to 24 services per day, six days per week. The stops on the service include a bus stop and shelter on the R624 west side at Carrigaloe Port, approximately 1.4 kilometres south of the Belvelly Port Facility. The Passage West Ferry on Lough Mahon is operated between Carrigaloe Port and Glenbrook Port, by Cross River Ferries, from 6.30 a.m. to 9.30 p.m. daily, with average crossing times of five minutes. Refer to **Figure 4.5** below for land uses in the vicinity of the site.



Figure 4.5 Land uses in proximity to the Belvelly Port Facility.

4.3.5 Roads and Access

The Belvelly Port Facility site is accessed at two points from the R624 main Cork-Cobh road. In addition, there are two rail overbridges. The southern entrance will continue to be the main access point into the site for all road vehicles. The access from the entrance at the north end of the site is not deemed suitable for heavy volumes of traffic and will be used as an emergency access point once upgraded (refer to **Chapter 2 Description of the Proposed Development** and **Chapter 13 Traffic and Transportation** for further details).