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NON-TECHNICAL SUMMARY OF ENVIRONMENTAL REPORT

Introduction

This is a non-technical summary of the Environmental Report for the Draft Local Area Plan (LAP) at Cherryhound.

The EU Directive 2001/42/EC on Strategic Environmental Assessment was passed into Irish Law by means of the Planning and Development (SEA) Regulations 2004 and Planning and Development (SEA) (Amendment) Regulations 2011.

The Directive requires all European Union member states to systematically evaluate the likely significant environmental effects of implementing certain plans or programmes before a decision is made to adopt the plan or programme.

Strategic Environmental Assessment (SEA) provides for more sustainable development through the methodical appraisal of policy options, considering alternative means of developing an area, by raising awareness of the environmental impacts of plans and the inclusion of quantifiable targets and indicators.

The Environmental Report documents the application of SEA to the LAP for Cherryhound. The purpose of the Non-Technical Summary is to ensure that the key issues and findings of the Environmental Report will be readily understood by decision-makers and by the general public.

Methodology

The Environmental Report describes the environmental assessment process as applied to the LAP. The main steps taken in the process involved the carrying out of a baseline study, the consideration of alternatives and the assessment of the environmental impacts of the objectives of the LAP.

The SEA process commenced in March 2011 and involves consultation with the relevant statutory agencies – Dept. of the Environment, Community and Local Government, Dept. of Communications, Marine and Natural Resources, Department of Arts, Heritage and Gaeltacht Affairs and the Environmental Protection Agency.

The methodology utilised consisted of a number of sequential steps summarised as follows:

1. Consideration of relevant plans and programmes at regional, national and international level.
2. Collation of baseline information.
3. Establishment of sustainable objectives, targets and indicators.
4. Consideration of alternatives.
5. Assessment of preferred option.
6. Identification of mitigation measures.
7. Identification of a monitoring programme.

Baseline Information

The baseline data collection stage involved research into environmental indicators. Some indicators were combined to avoid unnecessary duplication. These encompassed the following issues:

Population and Human Health, Biodiversity, Flora and Fauna, Soil, Water, Air Quality and Climate Factors, Material Assets, Cultural Heritage, Noise and Landscape.

Consideration of Alternatives

As part of the LAP preparation process a range of alternatives were considered for the development of Cherryhound and are detailed in the Environmental Report. Aside from the 'Do Nothing' Scenario, these are as follows:

Option 1:

This involves developing the lands with an emphasis on logistics as the primary employment use.

Option 2:

Development of the lands with an emphasis on high technology employment uses.

Option 3:

Development of the lands for a range of employment sectors

Each option was considered and assessed against the Sustainable Environmental Objectives to provide an insight into possible impacts.

Environmental Assessment of Preferred Option

Option 3 presented the most favourable scenario for the future development of the LAP lands at Cherryhound. This option was elaborated further and was subject to additional analysis to highlight any potential impacts on the environment. The objectives put forward under the LAP were then assessed against the Sustainable Environmental Objectives. This exercise illustrated that all of the objectives and principles identified in the LAP were found to have either positive or neutral impacts with minimum negative effect when assessed.

The exercise also provided an overview of where potential problems could result from the implementation of the preferred Option and allowed objectives to be reviewed where necessary. It highlighted the requirement for mitigation measures in relation to some of the objectives where negative impacts were identified.

Mitigation Measures

The SEA process indicated that a number of mitigation measures were required in order to ensure that the LAP provides for sustainable development. These measures include mitigation in the following areas:

- Population and Human Health
- Biodiversity
- Water
- Cultural Heritage/Archaeological
- Transportation
- Noise
- Landscape

Monitoring

Article 10 of the SEA Directive requires that monitoring be carried out in order to identify at an early stage any unforeseen adverse effects due to the implementation of the Plan.

In this context Fingal County Council had identified a monitoring programme for the lands at Cherryhound and it is intended to monitor the LAP after five years, following adoption of the plan.

Conclusion

The application of a Strategic Environmental Assessment to the LAP process has ensured that the Plan will provide the optimal strategic framework for the future sustainable development of the lands at Cherryhound.

1.0 INTRODUCTION

This is the Environmental Report of the Strategic Environmental Assessment (SEA) for the proposed Local Area Plan (LAP) for Cherryhound. The following report has been prepared to comply with the provisions of the SEA Regulations [the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I 435 of 2004), the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. 436 OF 2004)] and the Planning and Development (Strategic Environment Assessment) (Amendment) Regulations 2011 (SI 201 of 2011). The report has been prepared using Guidelines set out in the SEA Pack produced by the EPA. This report should be read in conjunction with the LAP and Appropriate Assessment. The documents listed below have informed the LAP preparation of specific policies and objectives for the subject lands.

- The National Development Plan (2007-2013)
- The National Spatial Strategy (2002-2020)
- Smarter Travel – A Sustainable Transport Future (2009)
- Transport 21 (2008)
- National Climate Change Strategy (2007-2012)
- Sustainable Development – A Strategy for Ireland (1997)
- The Regional Planning Guidelines for the Greater Dublin Area (2010-2022)
- Guidelines For Planning Authorities Retail Planning (2012)
- The National Recovery Plan (2011-2014)
- National Disability Authority's Building for Everyone Booklet 9 – Planning (2012)
- Local Area Plans – Public Consultation Draft of Guidelines for Planning Authorities (2012)
- Spatial Planning and National Roads (2012)
- The Greater Dublin Area Draft Transport Strategy (2011-2030).

1.1 Overview of the Subject Lands

Cherryhound now forms part of the North Blanchardstown Employment Catchment Area (20,000 employees CSO 2006). It is largely a rural area with some limited employment development in the southern section of the area. It is situated immediately north of Blanchardstown/Mulhuddart and its large employment catchment area. It is strategically important as the main area zoned for expansion of employment in Blanchardstown. It is also strategic in its location lying between the town and the M2 Motorway junction at Cherryhound that gives access to the national Motorway network as well as to Dublin Port and Dublin Airport. It contains a quarry that is currently not in use.

1.2 Strategic Environmental Assessment Requirement

The SEA Regulations transposed the *European Union Directive 2001/42/EC* (more commonly referred to as the Strategic Environmental Assessment (SEA) Directive) into Irish planning law. The SEA Directive and SEA Regulations require that Planning Authorities determine whether the implementation of land use plans, or modifications thereof, will be likely to have significant effects on the environment. This determination process is referred to as an Environmental Assessment and defined as:

"…the preparation of an environmental report, the carrying out of consultations, the taking into account of the environmental report and the results of the consultations in decision-making and the provision of information on the decision..."[1]

The Planning and Development (Strategic Environmental Assessment) Regulations, 2004 (S.I. 436 of 2004) as amended by the Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations 2011 specifically deal with the procedures for the assessment of the likely significant effects on the environment of certain plans and programmes prior to their adoption, with SEA being mandatory for:

- Regional Planning Guidelines
- City and Fingal Development Plan 2011-2017s
- Local Area Plans, with a population of 5,000 or more
- Planning Schemes in Strategic Development Zones (SDZ's).

Where a plan/ programme does not fall within the specific parameters stated above, a screening process must take place to determine whether the plan will result in significant environmental impacts, with reference to Schedule 2A of the Planning and Development Regulations 2004 (Annex 2 of the SEA Directive). Where it is determined that likely significant impacts on the environment will occur, an SEA is required.

Following the screening process and consultation with the prescribed bodies, Fingal County Council determined that the making of the proposed Local Area Plan would be subject to undertaking a Strategic Environmental Assessment (SEA) to assess the likely significant effects on the environment of implementing the LAP. It is anticipated that the working population level within the LAP area would exceed the mandatory SEA population threshold of 5,000 and therefore an SEA would be required. Traditionally, population was regarded as that recorded in the Census of Population and therefore a residential population. It has been decided on the precautionary principle that a large working population should be treated in a similar manner to a residential population. The 2011 amendment also amended the regulations to clarify population as also meaning a target population.

1.2.1 Requirement for the Local Area Plan and SEA

In the Fingal Development Plan 2011-2017, the LAP lands at Cherryhound are zoned 'GE' – General Employment uses with an objective to "provide opportunities for general enterprise and employment " and are also subject to an LAP.

The LAP will be prepared in accordance with the requirements of Sections 18-20 of the Planning and Development Act 2000, as amended, which sets out the provisions for the preparation of LAPs. No development can take place on these lands prior to the adoption of an LAP by Fingal County Council and development must comply with the provisions of the LAP.

The purpose of the Local Area Plan is to:-

1. Promote the lands for the development of general enterprise opportunities and employment generation.
2. Detail a development framework strategy for the lands that will
    - Programme the delivery of support infrastructure to enable the development of a phased mixed-use development.

[1] Directive 2001/42/EC, European Union, Article 2b, page 8, 2001, Planning and Development (Strategic Environmental Assessment) Regulations 2004, Article 5a, page 2, 2004

- Promote bio-diversity in the provision of parks, recreational open space and the landscape character.
- Promote Sustainable Urban Drainage Systems (SuDS) and water management
- Promote a high standard of design for commercial and industrial uses
- Conserve/integrate the archaeological heritage.
- Reinvent the quarry for possible future recreation/leisure use.
- Incorporate environmental considerations in particular those relating to mammals and any mitigation measures proposed.

The Fingal Development Plan 2011-2017 provides that LAP's will be prepared in co-operation with relevant stakeholders. Section 19 (1) (c) (ii) of the Planning and Development Act 2000 requires that a Local Area Plan shall be reviewed at least every six years after the making of the provision of the previous Local Area Plan. Accordingly, the Cherryhound Local Area Plan shall be reviewed every five years.

1.3 Purpose of the Environmental Report

Fingal County Council has determined that the making of the Local Area Plan will be subject to undertaking an SEA to assess the likely significant effects on the environment of its implementation. The SEA process comprises a number of distinct stages. The preparation of the Environmental Report, which is the principal document produced during the SEA process, is one of the most important of these stages. The Environmental Report presents the environmental assessment of the LAP involving the identification, where relevant and possible, of mitigation measures against significant effects on the environment of implementing the Plan.

Through the SEA process, the LAP will be assessed in order to evaluate the strategic environmental implications of developing employment and open space uses at the subject sites. The Environmental Report will outline the alternatives considered for the development of the lands. With regard to the different components of the environment, it is considered that there are a number of aspects of the environment that require detailed consideration and analysis within the Environmental Report.

Chapter 2 of this Report outlines the procedural methodology employed in undertaking a SEA for a Local Area Plan.

1.4 Appropriate Assessment for the Local Area Plan

An Appropriate Assessment is required under the EC Habitats Directive (92/43/EEC) for any plan or project likely to have significant effect on a Natura 2000 Site. European and National legislation places a collective obligation on Ireland and its citizens to maintain, at favourable conservation status, areas designated as Natura 2000 sites. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

The lands associated with the Cherryhound LAP do not form part of any natural heritage designations (SACs, SPAs or NHAs).

In conjunction with the SEA for Cherryhound, a full Appropriate Assessment Screening was carried out to ensure that the Plan would not adversely impact on the integrity of any Natura 2000 sites. The Appropriate Assessment Screening concluded that the LAP will not have significant adverse effect on the Natura 2000 Site.

2.0 SEA METHODOLOGY

2.1 Introduction

The legislative requirement for making a Local Area Plan and the associated SEA process involves a number of stages. These are as follows:-

STAGE	ACTION IN SEA PROCESS
1	Screening the LAP to determine whether an SEA is required
2	Where an SEA is required, scope for the nature and detail of information to be contained within the Environmental Report.
3	Preparation of the Environmental Report.
4	Public consultation on the LAP and the Environmental Report.
5	The modification of the LAP, where appropriate, on the basis of the inputs from the consultation stage.
6	Decision-making on adopting the proposed LAP.
7	Following adoption of the LAP, preparation of the SEA Statement incorporating conditions for monitoring of the significant environmental effects.
8	Monitoring of the plan and preparation of a Monitoring Report

In addition to complying with the procedures set out in the relevant planning legislation, the methodology used in preparing this Environmental Report is in accordance with the Guidelines issued by the Department of the Environment, Heritage and Local Government in November 2004 entitled "*Implementation of SEA Directive (2001/42/EC): Assessment of the Effects of Certain Plans and Programmes on the Environment, Guidelines for Regional and Planning Authorities."*

2.2 Scoping Stage

The purpose of scoping is to determine the nature and level of detail of information to be included in the Environmental Report. The scoping process develops an understanding of the potential impact on the different aspects of the environment, if any, and ensures that the relevant environmental issues are highlighted and addressed appropriately in the Environmental Report. Scoping should also ensure that the Planning Authority remains focused upon the important issues when undertaking the environmental assessment.

2.2.1 Scoping Report prepared by Planning Department

Fingal County Council prepared a Scoping Report for the LAP in May 2011. It provided information on the location and nature of the subject sites; an overview of the current knowledge and methods of assessment and an initial assessment of the different components of the environment.

2.2.2 Submission from the Prescribed Bodies on the Scoping Report

The SEA Regulations require Planning Authorities to initiate consultation with the prescribed Environmental Authorities on the scope and level of detail to be included in the Environmental Report. The Environmental Authorities are the Environmental Protection Agency (EPA), the Department of the Environment, Community and Local Government (DoECLG), the Department of

Arts, Heritage and Gaeltacht Affairs (DoAHGA) and the Department of Communications, the Marine and Natural Resources (DoCMNR).

The Scoping Report and associated documentation was sent to the relevant Authorities on 1st June 2011

The recommendations received were as follows:

The Environmental Protection Agency responded on 1st July 2011 and included a copy of the SEA Pack. The Agency highlighted the importance of up-to-date data, consideration of GIS Systems, Appropriate Assessment, internal scoping meetings, consideration of reasonable and realistic alternatives, public consultation, the full range of likely significant effects, mitigation, monitoring and proper procedural process. The response highlighted the application of the Water Framework Directive particularly given the quality classifications with regard to the Tolka and Ward Rivers. Drinking water, waste water treatment, ground water protection, flood risk and water conservation were also highlighted. The integration of infrastructure, zoning and development was considered. Biodiversity, air, noise (with particular reference to the proximity of Dublin Airport), energy conservation/renewable energy, landscape character assessment, human health and quality of life, transportation, tourism, infrastructure planning, waste management were noted as subjects for consideration.

The Department of the Arts, Heritage and Gaeltacht Affairs and the Department of the Environment, Community and Local Government were merged in June 2011, as such their joint response was received on the 20th June 2011. The response acknowledges that the area has already been the subject of an archaeological survey indicating the presence of one recorded monument and other (unspecified) features of archaeological interest. It is advised that any potential impacts on these archaeological elements be carefully assessed either as part of an SEA screening process, if the local authority decide to conduct one, or as part of the LAP process. The Department has no further observations to offer on architectural heritage or natural heritage grounds.

The Department of the Communications, Energy and Natural Resources responded on the 24th June 2011. The response acknowledges that the LAP lands drain to both the River Ward and Tolka catchments/salmonid systems. It is advised that priority should be given for the protection and conservation of salmonid systems in the area.

In addition the IFI (Inland Fisheries Ireland) are to be contacted in relation to all works that may have an impact on surface waters. The disturbance of riparian habitats must be minimized. An undisturbed buffer zone between development area and river bank must be maximized, with a minimum of 10m as per GDSDS recommendations. Riparian vegetation must be retained in as natural a state as possible at all times. Watercourses must be maintained in their open natural state in order to prevent habitat loss; preserve and enhance biological diversity and aid in pollution detection.

Designation of lands adjacent to surface waters particularly salmonid systems as areas of open preservation allowing protection/enhancement of biological diversity while providing open space and recreational amenity for river users is recommended. The protection of habitats outside designated areas would benefit both aquatic and riparian features in the surrounding areas.

The implementation of a SuDS strategy is welcomed as an aid in flooding and pollution management. Climate change should be comprehensively considered and integrated into the final LAP.

Any development in the catchment of Ringsend WWTP must be consistent with the requirements of fisheries and other relevant legislation, in particular with a focus on water quality targets for the Tolka and Liffey Estuaries and adjacent waters.

The principles of sustainable development as set out in the National Sustainable Development Strategy should form the basis for development approaches. Infrastructural development should precede actual development at all times.

2.3 Sources of Baseline Information included in the Environmental Report

There is a range of information sources included in this Environmental Report that have been used to provide an insight into the different components of the environment and the potential effects of implementing the LAP.

Baseline data was collected based on the indicators described in the SEA Directive, namely population and human health, biodiversity, fauna, flora, soil, water, air, climate factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship of these factors. Some of the indicators were combined to avoid duplication and in some instances, indicators were combined where the environmental impacts of the plan are considered to be minimal to an indicator. Existing data sources were utilised where available, with additional primary studies also carried out. An Archaeological Survey and Assessment was prepared to enable the formulation of a more informed development strategy, as was an Ecological Survey and Assessment.

2.4 Layout of the Environmental Report

The layout of this Environmental Report follows the format recommended in the Guidelines on SEA prepared by the DoEHLG[2]. This is as follows:-

[2] *Implementation of SEA Directive (2001/42/EC): Assessment of the Effects of Certain Plans and Programmes on the Environment, Guidelines for Regional and Planning Authorities*, page 39, Dept of the Environment, Heritage and Local Government, November 2004.

TABLE 2.4.1

SEA GUIDELINES RECOMMENDED LAYOUT FOR AN ENVIRONMENTAL REPORT	LAYOUT FOR THIS ENVIRONMENTAL REPORT
i. Non-technical summary (may also be provided separately)	Non-technical Summary
ii. Introduction (brief description of the plan and the area; purpose of report)	1.0 Introduction
iii. SEA methodology (including authors, methods used, technical difficulties encountered, list of environmental authorities consulted, etc)	2.0 SEA methodology
iv. Relationship of the plan with other relevant plans and programmes	3.0 Relationship of the LAP with other relevant plans and programmes
v. Summary of the baseline environment	4.0 Characteristics of the Existing Environment
vi. SEA Objectives and indicators	5.0 SEA Objectives and indicators
vii. Assessment of alternatives and selection of preferred alternative	6.0 Consideration of Alternatives/ 7.0 Assessment of Preferred Alternative
viii. Incorporation of mitigation measures and assessment results into the plan	8.0 Mitigation Measures
ix. Monitoring proposals	9.0 Monitoring proposals

2.5 Difficulties Encountered

During the preparation of the Environmental Report, existing data was not always available at the appropriate scale for the LAP area, so a mix of local, county and regional baseline data has been used. Having determined the scope of the environmental report, there were deficiencies in information in relation to areas where significant environmental impacts were identified. This was largely overcome by the undertaking of primary studies in the areas of archaeology and ecology. Further studies may be required during the life-time of the plan, but this will be dealt with at the monitoring stage.

3.0 RELATIONSHIP OF THE LOCAL AREA PLAN WITH OTHER RELEVANT PLANS AND PROGRAMMES

A requirement of the legislation and guidance documents is to outline the relationship between the LAP and other relevant plans in the area. In this regard, this Chapter explores the relationship between the components of the LAP and a number of land use plans and relevant guidance documents including:-

- The National Spatial Strategy (2002-2020)
- The Regional Planning Guidelines for the Greater Dublin Area (2010-2022)
- A Platform for Change
- Transport 21
- Smarter Travel
- The Fingal Development Plan 2011-2017.

3.1 National Spatial Strategy

The National Spatial Strategy for Ireland 2002-2020 (NSS) issued in 2002 outlined the Government's vision for the future physical development of the country. The Development Strategy involved the determination of an urban hierarchy of gateways, hubs, country towns and a range of towns of different sizes.

3.2 Regional Planning Guidelines

The Regional Planning Guidelines for the Greater Dublin Area (2010-2022) provide a robust sustainable planning framework for the GDA within the context of the Planning and Development Act 2000 and the National Spatial Strategy 2002 -2020. They provide a medium to long-term strategic planning framework for the development of the Greater Dublin Area. The strategy laid down in the RPGs is based upon the implementation of the principles of the NSS, the earlier Strategic Planning Guidelines for the Greater Dublin Area, Smarter Travel and Transport 21. Sustainable growth is the key theme of the Guidelines in relation to economic growth in the Greater Dublin Area.

Blanchardstown is designated as a primary Economic Growth Town and a Metropolitan Consolidation Town. A Metropolitan Consolidation Town is defined as:-

"a town located close to Dublin City and functions as part of the Gateway. Such Towns should continue to be developed at a relatively large scale, as part of the consolidation of the Metropolitan Area and to continue to support key public transport corridors connecting these locations to the City, each other and the large growth towns in the hinterland. As key destinations (and interchange) points on public transport corridors and important locations for services, retail and economic activities, these Towns are important foci within the Metropolitan Area. They present opportunities for intensive development and activity and to focus growth around dynamic urban quarters within the fabric of the Gateway and for opportunities for employment and services proximate to high population densities. These towns should assess, specify and plan for the long term growth of these centres – up to 100,000 population to take place over a series of Development Plans, so that the planning of new infrastructure fully takes into account the long term

growth role of these centres, ensuring for the future the co-ordinated integration of all new services to serve future expansion.[3]"

The Guidelines recognise the Blanchardstown Institute of Technology which forms part of the emergent cluster of knowledge-based industries, given the number of IT related Companies existing in the area and provides the opportunity to build relationships between educational institutions, enterprise authorities and employers.

3.3 A Platform for change and Transport 21

Transport 21 is the Government's National Transport Investment programme for the period 2005-2016. Investment proposed covers the area of National Roads, Public Transport and Regional Airports.

A '*Platform for Change'* sets out the Dublin Transportation Office (D.T.O) strategy to improve transport accessibility and reduce congestion in the Greater Dublin Area up to 2016. This includes the delivery of QBC's, DART/Suburban rail and LUAS services, 'park and ride', National and other roads, traffic management & parking and cycle lanes. Demand management is crucial and an interdependent element of the strategy, which seeks to reduce the growth in the demand for travel, while maintaining economic progress. This requires inter-alia land use policies, which facilitate appropriate levels of development in the designated development centres in the Hinterland area. The provision of public bus transport is conditional on appropriate networks being put in place.

3.3.1 Existing and Planned Transport Provision

Public Transport as existing consists of the Bus Eireann No. 105 service to Ratoath. There is also a Dublin Bus service to Tyrrelstown – the No. 40D, with a frequency of a forty buses in each direction on weekdays. Directly to the south in the vicinity of the employment lands, at Cruiserath, Ballycoolin and Mitchelstown, Dublin Bus services including nos. 236, 239 and 17A operate along the new Cruiserath-Ballycoolin road. Service no. 236 operates within the Blanchardstown area from the Town Centre to Ballycoolin. Route no. 239 operates from Lucan to Ballycoolin. Service no. 17A operates from Blanchardstown to Kilbarrack via Ballycoolin and Cappagh. The Urbus service links Castleknock to Swords, Monday to Fridays only (with a frequency of eight buses from Castleknock to Swords and a frequency of eleven buses from Swords to Castleknock). However, improved bus services are essential on appropriate networks to meet future travel demand. Current employment densities are low in the North Blanchardstown Employment Catchment Area due to the nature of the enterprises. Projecting the existing employment density into the future, the demand on public transport is likely to be directed to selected networks. At this point in time it is unknown whether a public bus service network would be viable on the planned strategic road link from the N3-M2

Tyrrelstown to Cherryhound Planned Strategic Road Link is the only means of serving the subject lands whose strategic assets include proximity to the motorway network. The Link Road is under construction and will be open Spring 2013. It will consist of a dual carriageway with a number of roundabouts, enabling access to zoned undeveloped lands on either side. The carriageway width is 7.5 metres wide, with cycle tracks of 1.75 metres and footpaths of 1.8 metres wide. Grass margins also feature. The full range of services is provided for in the road design – gas main, telecommunication industry, foul and surface water mains, ESB, telemetry and public lighting.

[3] Extract from *Regional Planning Guidelines for the Greater Dublin Area 2010-202*, page 93

Car and bicycle access within the subject lands - Car access will be facilitated by the development of service road networks from the new Link Road. All lands will therefore have excellent access to the Motorway System. The Council will promote a sustainable modal split between public transport, bicycles and private cars.

3.4 Smarter Travel, A Sustainable Transport Future, A New Transport Policy for Ireland 2009-2020

Smarter Travel, A Sustainable Transport Future', is the transport policy for Ireland for the period 2009-2020. The document recognises the vital importance of continued investment in transport to ensure an efficient economy and continued social development. The five key goals are (i) to reduce overall travel demand; (ii) to maximize the efficiency of the transport network; (iii) to reduce reliance on fossil fuels; (iv) to reduce transport emissions; and (v) to improve accessibility to transport and improve our quality of life.

3.5 Fingal Development Plan 2011-2017

The relationship of the LAP with the Fingal Development Plan 2011-2017 can be considered within the wider context of the existing zoning of the subject site and the surrounding land use zonings.

Zoning

The lands are zoned 'GE' - General Employment with an objective '*Provide opportunities for general enterprise and employment '*.

The Development Plan lists a number of Use Classes that are 'Permitted in Principle' in the area. They include the following;-

"Builders Providers/Yard., Civic Waste Facility, Enterprise Centre, Food, Drink and Flower Preparation/Processing, Fuel Depot/Fuel Storage, High Technology Manufacturing, Industry-General, Industry-Light, Logistics, Offices Ancillary to Permitted Use, Open Space, Petrol Station, Research and Development, Restaurant/Café (To serve the local working population only), Retail Local – less than 150 sq m nfa (To serve the local working population only), Road Transport Depot, Sustainable Energy Installation, Telecommunications Structures, Training Centre, Utility Installations, Vehicle Sales Outlet – Small Vehicles, Vehicle Sales Outlet- Large Vehicles, Vehicle Servicing/Maintenance Garage, Warehousing, Waster Disposal & Recovery Facility – (Excluding High Impact), Wholesale"

The Development Plan also states that:

Uses which are neither 'Permitted in Principle' nor 'Not Permitted' will be assessed in terms of their contribution towards the achievement of the Zoning Objective and Vision and their compliance and consistency with the policies and objectives of the Development Plan.

The subject lands also carry a specific objective to facilitate the provision of the planned strategic road network to serve the Greater Blanchardstown Area. The network, as planned, provides for the above mentioned new road link between the Tyrrelstown and the M2. This will run through the middle of the subject lands and will connect the Cherryhound intersection on the M2 (upgraded) to lands to the south and to the N3.

75% of the subject lands are within the Inner Airport Noise Zone. 25% of the subject lands are within the Outer Airport Noise Zone. 50% of the subject lands are within the Outer Public Safety Zone. The location of the area under one of the flight paths of Dublin Airport may necessitate noise insulation measures to be taken in the design of buildings. The Council in its scrutiny of development proposals will implement Government policy with regard to Public Safety Zones for Dublin Airport.

Local Objectives

The Development Plan provides for the following Local Objectives on the subject lands.

- No. 365 - Consider within the context of the LAP, the provision of a high quality mixed-use gateway development including hotel, office development and logistics uses.
- No. 368 - Ensure a high level of landscaping and tree planting along the route of the N2/N3 Link Road at Cherryhound/Killamonan in order to soften the visual effect of the 'GE' lands around it.
- No 380 - Ensure that the LAP for these employment-generating lands at Killamonan/ Cherryhound provide for the use of the south-western portion of the lands as a high quality landscaped buffer area between industrial/commercial buildings and the residential areas. Roadside hedges and existing trees, which are located along the south-western edge of the subject area and woods in the south-western area, will be protected where practicable.
- No. 381 - Provide for the extraction of aggregates at this location.
- No. 395 - Require a high level of landscaping and tree planting along the boundaries of these 'GE' lands at Cherryhound/Killamonan in order to soften the visual effect of the industrial/commercial buildings.

The Development Plan provides for the following Local Objective on the adjoining lands to the east.

- No. 377 Consider the long term use of these lands as part of the Killamonan/Cherryhound LAP process

Record of Protected Structures

One item is listed in the Record No. 676 cited as a Field System site and described as an 'Earthwork' at Goddamendy in the South of the LAP area.

The LAP will help strengthen and reinforce the existing Development Plan and its objectives.

4.0 CHARACTERISTICS OF THE EXISTING ENVIRONMENT

4.1 Introduction

In previous Chapters of this Environmental Report, information has been presented on the subject lands, including general descriptions and locational details. To best describe the characteristics of the existing, or receiving environment this Chapter has been organised into, and for the most part, corresponds with the different components of the environment identified in Paragraph (f) of Annex I of the SEA Directive and replicated in the same paragraph in Schedule 2b of the SEA Regulations.

The broad categories of the environment are as follows:-

i. Population and Human Health
ii. Biodiversity, Flora and Fauna
iii. Soil
iv. Water
v. Air Quality and Climatic Factors
vi. Material Assets
vii. Cultural Heritage – Architectural and Archaeological
viii. Landscape

4.1.1 Population , Human Health and Quality of Life

The LAP has a low residential population. The area is not co-terminus with the Census area divisions and the population was estimated by multiplying the number of residential units within the area by the current average occupancy rate as set out in the Housing Strategy for Fingal 2011-2017. This gave a total population of circa 48 persons (17 x 2.81).

The housing stock is characterised by bungalows or houses on individual sites. No further increase in the residential population is envisaged, given the employment zoning of the lands in the Fingal Development Plan.

Existing Environmental Issues

Some of the LAP lands, particularly in the southwest, are located in proximity to existing residential development. The LAP must have regard to these when deciding on design and landscaping to ensure that the existing population does not experience any unreasonable diminution in their quality of life from direct or indirect consequence from the implementation of the plan. A large section of the area is within the inner and outer noise zones and within the inner and outer public safety zones associated with air traffic to and from Dublin airport. There was some evidence of limited fly tipping however it can be anticipated that the change to an urban character will be accompanied by appropriate waste management measures.

4.1.2 Biodiversity, Flora and Fauna

No part of the Cherryhound LAP is covered by a conservation designation or a proposed designation. Neither is it proximate to any designated area.

The land within the Cherryhound LAP is dominated by intensively managed, agricultural lands used for arable crops as well as pasture. Habitats of some ecological significance include a number of copses and hedgerows.

An ecological survey was undertaken for the subject lands. The flora and fauna are typical of pastureland / cultivated agricultural land. Species of note are bats, badgers and yellow hammers. A bat survey was not carried out, given the time of year (Feb. 2011). The tree groupings make ideal bat roosts. The ecological report recommends the retention of tree groups, field boundaries and the habitat in the vicinity of the ESB substation. The LAP includes objectives in this regard. An Appropriate Assessment has also been carried out.

Existing Environmental Issues
These are confined to the use of herbicides and pesticides associated with agricultural use. The quarry is disused and screened so that issues of dust, noise and visual amenity do not arise at present.

4.1.3 Soil and Geology
AGEC undertook an assessment of the geology of the area in connection with the design of the Link Road on behalf of the consultants to the Council, O'Connor Sutton Cronin.

The Geological Survey of Ireland Sheet 13 indicates that the area to the north of Blanchardstown Mulhuddert is underlain by rock of the Lucan Formation, Rush Conglomerate Formation and the Tober Colleen Formation.

The Lucan formation consists of dark grey, well bedded, cherty, graded limestones and calcareous shales. The rush Conglomerate Formation consists of graded quartz and limestone-peeple conglomerate and lithic sandstones. The Tobber Colleen Formation consists of dark grey, calcareous, commonly bioturbated mudstone and subordinate thin micritic limestone

Bedrock is not exposed at surface at the sites but can be seen in the disused Quarry.

Existing Environmental Issues
There are no significant issues.

4.1.4 Water

Water Supply
Existing developed areas in the vicinity of the LAP Area are supplied with water from the low level reservoirs at Ballycoolen, boosted via the Cruiserath pumps. Lands within the LAP area above 64 MOD will be supplied by gravity from the Ballycoolen Water Tower. The subject lands will be served by the extension of a 300mm diameter distribution main to Tyrrellstown via the Tyrrellstown-Cherryhound Link Road. The expected delivery date is 2013 subject to the availability of funds.

Foul Drainage
The natural drainage for the LAP lands is in a southerly direction towards the Tolka Valley 9C sewer. The 9C sewer has limited capacity. It suffers greatly from the effects of infiltration causing it to exceed capacity during intense rainfall events. The sewer is further constrained at the Liffey Siphon at the Phoenix Park. Duplication of the sewer is estimated to cost circa €80 million. It is not included in the Department of the Environment, Heritage and Local Government Water Services Investment Programme (WSIP). Plans exist to refurbish the Liffey Siphon by 2013. Pending completion of the Ringsend wastewater treatment Plant Expansion (2014), no additional volumes can be accommodated in the interim. Beyond 2014, there is a requirement for a new Regional Wastewater Treatment Plant. This will be constructed in North Fingal with a likely completion date of 2020 (for the new plant, outfall and orbital sewer). As the subject lands are proposed for employment uses, the demand for foul sewage services are likely to be considerably

less than for housing development. However, until the duplicate 9C sewer is constructed, only limited development can take place in an initial phase of development to the north and the south of the subject LAP area.

Surface Water

A Sustainable Urban Drainage System (SuDS) as outlined in the Greater Dublin Strategic Drainage Study will be implemented in the LAP area. This will reduce surface water run-off, minimise the risk of any flooding in the LAP area and surrounding areas prevent pollution. Appendix 5 of the LAP Written Statement details the SuDS Strategy for the subject lands.

Groundwater / Flooding

The Council is responsible for the protection of all waters within its functional area including groundwater. The water table is high in LAP lands. Development proposals will be scrutinised to ensure suitable pollution control measures are adopted.

The Tolka Flood Study identified some Flooding risk on the Pinkeen Rivers. The Pinkeen Rivers are tributaries of the Tolka. Recent flood modeling suggests that in a 1:1000 year event, the floodplain would extend into an area south of the LAP although not into the area itself

Existing Environmental Issues

All water main layouts for the proposed development must be in accordance with Fingal County Council's Guidelines for Drinking Water Supply (Feb 2009).

The Water Quality Directive became effective in 2000. The purpose is to prevent deterioration in the status of any waters and achieve (unless technically unfeasible) good status by 2015. The Tolka and its tributaries form part of a Waste Management Unit of 'Moderate Status'. The Pinkeen sub-catchment is rated as bad. All future development will be scrutinised to improving the status of this sub-catchment.

Development must be phased in line with the provision of water treatment infrastructure works as set out above. Existing houses are likely to be reliant on septic tanks, these should be drained in future by appropriate urban drainage systems

4.1.5 Air Quality and Climatic Factors

Cherryhound is seen as a "clean" area in terms of air quality by Fingal County Council and as a result, quality monitoring is not carried out for the area. There are five air quality monitoring stations located throughout Fingal - Blanchardstown, Balbriggan, Cloghran, Malahide and the Airport.

The climate of the general Fingal region is characterised by the passage of Atlantic low-pressure weather systems and associated frontal rain belts from the west during much of the winter period. Over the summer months, the influence of anticyclonic weather conditions will result in drier continental air, in particular when winds are from the east, intercepted by the passage of Atlantic frontal systems. Occasionally, the establishment of a high-pressure area over Ireland and Britain will result in calm conditions and during the winter months, these are characterised by clear skies and the formulation of low level temperature inversions with slack wind conditions at night-time.
Prolonged dry weather conditions are relatively infrequent but should continental air masses dominate over Ireland, a period of drought conditions may occur which could last up to 2 or 3 weeks.

Existing Environmental Issues

Air quality and climate issues have been determined to be more appropriately assessed at higher levels in the land use and environmental protection hierarchies and at a regional level by the EPA. As a result, they have not been taken into account when assessing the potential impacts of the LAP.

4.1.6 Material Assets

4.1.6.1 *Transport Infrastructure*

The LAP lands are located on the periphery of existing development in the North Blanchardstown Employment Catchment Area.

Public Transport as existing consists of the Bus Eireann No. 105 service to Ratoath. There is also a Dublin Bus service to Tyrrelstown – the No. 40D, with a frequency of a forty buses in each direction on weekdays. Directly to the south in the vicinity of the employment lands, at Cruiserath, Ballycoolin and Mitchelstown, Dublin Bus services including nos. 236, 239 and 17A operate along the new Cruiserath-Ballycoolin road. Service no. 236 operates within the Blanchardstown area from the Town Centre to Ballycoolin. Route no. 239 operates from Lucan to Ballycoolin. Service no. 17A operates from Blanchardstown to Kilbarrack via Ballycoolin and Cappagh. The Urbus service links Castleknock to Swords, Monday to Fridays only (with a frequency of eight buses from Castleknock to Swords and a frequency of eleven buses from Swords to Castleknock). However, improved bus services are essential on appropriate networks to meet future travel demand. The 2006 CSO revealed 20,000 jobs in the North Blanchardstown Employment Catchment Area, however, employment densities are low. Projecting the existing employment density into the future, the demand on public transport is likely to be directed to selected networks. At this point in time it is unknown whether a public bus service network would be viable on the planned strategic road link from the N3-M2.

Road Structure

Tyrrelstown to Cherryhound Planned Strategic Road Link is the only means of serving the subject lands whose strategic assets include proximity to the motorway network. The Link Road is under construction and will be open Spring 2013. This road is both a strategic link on the National road network and an internal Blanchardstown road network by-pass. It will consist of a dual carriageway with a number of roundabouts, enabling access to zoned undeveloped lands on either side. The carriageway width is 7.5 metres wide, with cycle tracks of 1.75 metres and footpaths of 1.8 metres wide. Grass margins also feature. The full range of services is provided for in the road design – gas main, telecommunication industry, foul and surface water mains, ESB, telemetry and public lighting.

Car access will be facilitated by the development of service road networks from the roundabouts on the new Link Road. All lands will therefore have excellent access to the Motorway System. Bicycle access will be facilitated by the Link road and pedestrian access between desire destinations should be considered.

The Council will promote an area wide mobility management plan. The objective of which is to have a sustainable modal split between public transport, bicycles and private cars.

Existing Environmental Issues

Aside from promoting a better modal split, the issues of cycling and pedestrian routes within the Plan area, as well as those linking the LAP lands to Blanchardstown requires consideration in the

LAP. This would not only link the new community to the existing, but would also increase the permeability of the LAP lands and could encourage an area-wide shift away from car usage.

4.1.6.2 *Power*

The area is traversed by power lines including 220KV and 110KV lines. Provision will be made in the Tyrrellstown/Cherryhound Link Road for suitable ducting/wayleaves to accommodate power services.

4.1.6.3 *Gas*

There is currently no major gas supply infrastructure within the LAP subject lands. There is a high pressure transmission pipeline to the east running parallel to both Kilshane Road and the eastern boundary . There is a distribution network in the Michelstown area to the southeast that serves the existing employment uses. Provision is made for a high-pressure gas main in the design of the Link Road to service the subject area, which in turn will necessitate a link to the existing main.

4.1.6.4 *Telecommunications including Broadband*

No telecommunication or broadband infrastructure of significance presently exists within the LAP lands. However the T50 Dublin broadband route skirts the southern edge of the LAP area and facilitates high quality broadband provision for enterprises in the area. Service providers will install appropriate infrastructure as development progresses. Extensive provision has been made in the design of the Tyrrelstown/Cherryhound Link Road for suitable ductwork to accommodate telecommunication services including broadband.

4.1.7 Cultural Heritage – Architectural and Archaeological

Archaeology

An archaeology survey and impact assessment has been carried out (Archer Heritage & Planning) (Desktop and Site Inspection). The excavation findings / discoveries recorded from the site survey work carried out for the planned Link Road (Tyrrelstown to Cherryhound) are of benefit. Two 'potential sites' are recorded in the vicinity of two tree groupings. The townland name of Killamonan may be indicative of a small Church. Field boundaries also suggest other areas of potential interest. In this regard, further archaeological investigation can be enabled at development pre-construction and construction phases in the future. The survey recommendations have been formulated into objectives in the LAP.

Built Heritage

A desktop study of the Record of Protected Structures and a field inspection of the lands were carried out. No structures of interest were identified, other than the single feature identified on the Record of Protected Structures that is essentially an archaeological feature.

Existing Environmental Issues

Although the archaeological remains appear limited from survey work carried out to date, the potential features identified all contribute to the character of the landscape of the area and every effort should be made to protect them from inappropriate development.

4.1.8 Noise

Development will not generate any significant additional noise in the environs even though the southern half of the subject lands are substantially within the outer airport noise zone. Planned land use is for low density employment based activity. All built form will incorporate appropriate noise insulation.

Public Safety Zone for Dublin Airport

The northern portion of the subject lands as defined by the 2003 Dublin Safety Zones Report is substantially within the Outer Public Safety Zone. This report was drawn up by ERM for the Department of Environment, Heritage and Local Government and the Department of Transport. However guidelines for their implementation have not yet been issued. Planned land use is for low density employment based activity which will comply with the population thresholds advocated.

Existing Environmental Issues

Huntstown Quarry is in the immediate environs and environmental emissions are regulated to minimise disturbance.

4.1.9 Landscape

The landscape is gently rolling. It is without features, with a typical pattern of enclosed fields with hedgerows. The groups of hedges/trees are visually / ecological important in the landscape. At field margins, there are some field drains. These flow north west to the Ward River Catchment or southwest to the Pinkeen River/Tolka Valley. The Lagan Quarry ceased operation in February 2011. It forms a major excavated land area at the eastern perimeter of the subject LAP lands. Mounding acts as a screening device. The lands are crossed by 220 kv and 110 kv lines to the north. There is an extensive large sub-station to the south of the lands. In the context of the planned employment uses, the lands do not underpin the Council's Heritage Strategy. Local Objective 377 requires the consideration of the long term use of these lands (to the east) as part of the Cherryhound LAP process

Existing Environmental Issues

The development of the LAP lands will result in the urbanisation of lands currently used for agriculture. However, these lands have been zoned for development and therefore efforts should be made in the LAP to respect the existing topography and nature of the LAP lands by retaining the tree copses or groupings and significant hedgerows.

5.0 SEA OBJECTIVES, TARGETS AND INDICATORS

5.1 Introduction

An accepted method to determine the environmental effects of a plan, is to devise environmental or SEA objectives for inclusion in the environmental report. A SEA objective is a statement of what is intended, usually specifying the desired direction of change. As the UK guidance on the SEA Directive prepared by the ODPM states:

"SEA objectives are a recognised way of considering the environmental effects of a plan or programme and comparing the effects of alternatives. They serve a different purpose from the objectives of the plan or programme, though they may in some cases overlap with them. SEA objectives are used to help show whether the objectives of the plan or programme are beneficial to the environment, to compare the environmental effects of alternatives, or to suggest improvements".[4]

As such, this Chapter presents the environmental objectives that have been identified for the environmental assessment process, against which the different LAP alternatives will be assessed.

The SEA objectives have been identified having regard to the baseline information, environmental issues that are apparent and to policies and objectives in place in other plans or national or European policy documents. Importantly, the selection of SEA objectives is required to be relevant to the context of the proposed LAP.

The SEA objectives used in this report take the form of a general statement referring to a general direction of change, which can be measured by an indicator and given specific targets. A target usually underpins an objective often having a time deadline that should be met. Indicators are measurements of variables over time, which are often used to measure or demonstrate the achievement of objectives. The objectives outlined in this section will be used for the initial assessment of the alternatives and then refined in Chapter 6, where the preferred alternative is chosen.

5.2 SEA Objectives and Indicators

Environmental objectives and corresponding indicators have been identified for each of the major components of the environment as presented in Chapter 4 having regard to the nature of the LAP. These are presented in Table 5.2.1 below.

[4] *A Practical Guide to the Strategic Environmental Assessment Directive*, Offices of Deputy Prime Minister, September 2005, page 28

Table 5.2.1: SEA Objectives, Targets and Indicators

SEA OBJECTIVES	TARGETS	INDICATORS
Population and Human Health		
PO1: Improve peoples quality of life through the provision of a wide range of employment and enterprise development complemented with good quality recreational facilities.	o Provide a wide range of employment opportunities o Provide high quality developments in accordance with the Urban Design Principles set out in the LAP o Provide high quality recreational environment	o Good quality design, setting and finishes, showing a range of scale and employment types o Number of new open spaces and recreational facilities made available to the working population and public following development of the Plan lands.
PO2: Ensure the provision of good quality open space and maximise opportunities to link these spaces	o Provide areas of open space to serve new development o Provide a series of pocket parks, linked by pedestrian routes throughout the Plan lands	o Amount in ha. of Class 1 open space and pocket parks made available to the public following development of the Plan lands.
PO3: Ensure integration of development into the existing employment area to the south.	o Sympathetic development at appropriate densities	o Development is in accordance with the density and urban design objectives set out in the LAP
PO4: Safeguard humans within Dublin Airport Safety Zones	Appropriate:- o Population and densities o Building heights	o Development in accordance with land use density, urban design objectives
PO5: Create safe Public Realm	o Encourage animated spaces	o Low personal crime rate
Biodiversity, Flora and Fauna		
BO1: Maintain and enhance the diversity of habitats and protected species, promote and maximise the opportunities for the creation of biodiversity.	o Incorporate biodiversity in landscape and building design o No loss of important habitats or species during the life span of the LAP	o Number of approved landscape plans o Identified occurrence of flora and fauna species o Increase/decrease in habitat diversity

SEA OBJECTIVES	TARGETS	INDICATORS
Transport		
TO1: To provide road access from the new development to Blanchardstown and the National Motorway network	o Opening of the link Road and LAP road network o Opening of pedestrian and cycle links.	o Link road plus network together with pedestrian and cycle routes made available for use within the lifetime of the adopted LAP.
TO2: Minimise the impact of traffic on the new employment environment	o Ensure permeability	o Ease of movement following the development of the Plan lands. Good modal split between private cars, cycles and pedestrians
TO3: Improve pedestrian access and permeability throughout the LAP lands	o Provide safe and attractive pedestrian routes around the LAP lands	o Increase in number of pedestrian walkways/routes are made available to the public following development of the Plan lands.
Water		
WO1: Ensure that any new development is adequately serviced by foul drainage infrastructure	o Phase developments in line with provision of foul treatment infrastructure	o Development commenced on a phase basis as foul drainage infrastructure is available.
WO2: Prevent pollution and contamination of water courses, as a result of ground water run-off	o No contamination or pollution of water courses as a result of development o Provide surface water attenuation areas and incorporate these as a design feature	o Analysis of water indicates compliance with standards o Comparison of water quality testing on water courses shows an improvement or at least no change in water quality.
Air Quality, Waste and Climate Factors		
AO1: Promote sustainable energy and Waste Management Plans	o Development to comply with Fingal Standards on Sustainable Development and EU Directive 2002/91/EC and ensure application of waste management policy and adequate infrastructure.	o Percentage number of new buildings since development of the LAP lands that comply with Fingal Standards on Sustainable Design (60% above EU Directive 2002/91/EC standards)

SEA OBJECTIVES	TARGETS	INDICATORS
Cultural Heritage/ Architectural and Archaeological		
CO1: To protect all recorded archaeological sites from inappropriate development	o Recorded archaeological sites to be appropriately / adequately protected from development	o Development within the LAP lands is in line with DoEHLG recommendations
CO2: Ensure the appropriate treatment of previously unknown archaeological sites or features that are under threat from development	o Ensure that potential unknown sites are protected from inappropriate development o Adequate investigation of identified potential archaeological sites is undertaken prior to development.	o Development within the LAP lands is in line with DoEHLG recommendations o Number of identified potential archaeological sites investigated
CO3: Promote high quality design to ensure that new buildings contribute positively to the built environment of the area.	o New development to be in line with the urban design principles outlined in the LAP	o The design and setting of new developments to incorporate design features outlined in the LAP
Noise		
NO1: Minimise noise impacts from aircraft	o New development proposals to include suitable noise insulation Measures	o Developments include noise insulation
Landscape		
L01: Ensure that new development integrates and respects the natural form and character of the landscape	o Design of new developments to be sympathetic and appropriate to its surroundings o Provide for the protection of existing tree groupings and significant hedgerows	o Appropriate scale and densities permitted, ensuring appropriate transition between rural boundaries and existing development. o Limited visual impact from power lines

6.0 CONSIDERATION OF ALTERNATIVES

6.1 Introduction

In this Chapter, the alternative development proposals undergo an environmental assessment by being tested for compatibility with the SEA objectives presented.

In the following sub sections, a "Do Nothing scenario" is considered and three alternative options, one where the emphasis is on logistics development, another on hi-tech employment uses and a third that provides for a wide range of employment uses.

The environmental assessment consists of each alternative development scenario being assessed against the SEA objectives to identify any potential effect or impact on different aspects or components of the environment. The assessment is presented in matrix form with an associated explanatory text. The potential impacts for each alternative is determined as being significant or insignificant and, where identified as being significant, as having either a positive or an adverse effect. The assessment of the impacts is both qualitative and quantitative and is based on experience to date and consultation with relevant professionals within the Planning Authority and in relevant agencies.

The key for the potential effects used in the matrices is as follows:-

+ Significant Positive Impact
X Significant Negative Impact
O No Relationship/ Insignificant (*positive or negative*) Impact

Following the environmental assessment of the three alternative development scenarios, the preferred alternative will be selected and described in greater detail. Then a further assessment of the chosen alternative, including the identification of any significant impacts of implementing this alternative on the different components of the environment will be outlined.

6.2 "Do Nothing" Alternative

In the Fingal Development Plan 2011-2017, the Local Area Plan lands at Cherryhound are zoned GE General Employment "P*rovide opportunities for general enterprise and employment* ". Fingal County Council is required to prepare a Local Area Plan for these lands and in doing so, in accordance with the requirements of Sections 18-20 of the Planning and Development Act 2000. Development cannot take place within these areas prior to the adoption of a LAP by Fingal County Council. As the LAP is required by the provision of the Development Plan a 'Do Nothing' scenario is not a reasonable alternative and would not be in keeping with the principle of the proper planning and sustainable development of the area.

6.3 Matrix 1: Option 1

Option 1: Emphasis on Logistics

Option 1 considers the alternative where employment would be based primarily on logistics use. The planning argument in favour of this use is the proximity of the lands to the Motorway system with the ready access to Dublin Port and Airport, as well as the large population workforce available within the Blanchardstown area.

Matrix 1, Option 1 shows the result of a comparison against the SEA objectives.

MATRIX 1; OPTION 1

SEA Objectives Impacts	Impacts
Population and Human Health	
PO1 - Improve peoples quality of life through the provision of a wide range of employment and enterprise development complemented with good quality recreational facilities.	X
PO2 - Ensure the provision of high quality open spaces and maximise opportunities to link these spaces	+
PO3 - Facilitate integration of development into the existing employment area to the south through sustainable growth	X
PO4- Safeguard humans within Dublin Airport Safety Zones	+
PO5-Create safe public realm	X
Biodiversity, Flora and Fauna	
BO1 - Maintain and enhance the diversity of habitats and protected species, promote and maximise the opportunities for the creation of biodiversity	0
Transport	
TO1 – Provide road access from new development and to Blanchardstown and the Motorway network	+
T02 - Minimise the impact of traffic in the area as a result of development	+
TO3 - Improve pedestrian access and permeability throughout the LAP lands	+
Water	
W01 – Ensure that any new development is adequately serviced by foul drainage infrastructure	+
WO2 - Prevent pollution and contamination of water courses as a result of ground water run-off	+
Air Quality, Waste and Climatic Factors	
AO1 - Promote sustainable energy, / Waste Management	0
Cultural Heritage – Architectural / Archaeological	
CO1 - To protect all known archaeological sites from inappropriate development that would adversely affect the site or setting	+
CO2 - Ensure the appropriate treatment of previously unknown archaeological sites or features that are under threat from development	+
CO3 - Promote high quality design to ensure that new buildings contribute positively to the built environment	0
Noise	
NO1 – Minimise noise impacts from aircraft	+
Landscape	
LO1 - Ensure that new development integrates and respects the natural form and character of the landscape	X

In terms of environmental impact, this alternative would not provide for high quality employment development. It would primarily cater for low and semi-skilled employment. It would not provide a range or opportunities across the spectrum of highly skilled and educated operatives to unskilled employees. Working population levels would be relatively low. This would not provide sufficient level of activity to create a self-policing and safe environment. HGV concentrations are likely. Consequently the density of working population may not support the provision of other service facilities in what is a very large employment zone. The logistics use would be appropriate within an air safety and noise zone given its low working population density.

6.4 Matrix 2 – Option 2

Option 2: Emphasis on High-Tech Employment

The area is proximate to Blanchardstown Institute of Technology and many high-tech industries. The subject lands would complement and form a natural extension of these industries. The concentration would enable conbined opportunities for symbiotic relationships.

MATRIX 2: OPTION 2

SEA Objectives Impacts	Impacts
Population and Human Health	
PO1 - Improve peoples quality of life through the provision of a wide range of employment and enterprise development complemented with good quality recreational facilities.	0
PO2 - Ensure the provision of high quality open spaces and maximise opportunities to link these spaces	+
PO3 - Facilitate integration of development into the existing employment area to the south through sustainable growth PO4- Safeguard humans within Dublin Airport Safety Zones PO5-Create safe public realm	+ 0 0
Biodiversity, Flora and Fauna	
BO1 - Maintain and enhance the diversity of habitats and protected species, promote and maximise the opportunities for the creation of biodiversity	0
Transport	
TO1 – Provide road access from new development and to Blanchardstown and the Motorway network	+
T02 - Minimise the impact of traffic in the area as a result of development	0
TO3 - Improve pedestrian access and permeability	+

	throughout the LAP lands	
	Water	
	W01 – Ensure that any new development is adequately serviced by foul drainage infrastructure	+
	WO2 - Prevent pollution and contamination of water courses as a result of ground water run-off	+
	Air Quality, Waste and Climatic Factors	
	AO1 - Promote sustainable energy /Waste Management	+

	Cultural Heritage – Architectural / Archaeological	
	CO1 – To protect all known archaeological sites from inappropriate development that would adversely affect the site or setting	+
	CO2 – Ensure the appropriate treatment of previously unknown archaeological sites or features that are under threat from development	+
	CO3 – Promote high quality design to ensure that new buildings contribute positively to the built environment	0
	Noise	
	NO1 – Minimise noise impacts from aircraft	X
	Landscape	
	LO1 – Ensure that new development integrates and respects the natural form and character of the landscape.	X

In terms of environmental impact, this alternative concentrates jobs in the highly skilled sector and not the lower-skilled sector. Many of the companies involved in the sector are foreign direct investors. They are subject to significant external changes that can adversely impact locally. They locate on large sites with large stand-alone buildings. Because of the requisite competency skill base recruitment can result in employees living considerable distances. In addition, shift work is normal. Car dependency is high.

6.5 Matrix 3 – Option 3

Option 3: Mixed Employment Sectors

Option 3 is concentrations of mixtures of different services i.e. logistics, high-tech, own-door units, local retail, professional services and hotel.

MATRIX 3: OPTION 3

SEA Objectives Impacts	Impacts
Population and Human Health	
PO1 – Improve peoples quality of life through the provision of a wide range of employment and enterprise development complemented with good quality recreational facilities.	+
PO2 – Ensure the provision of high quality open spaces and maximize opportunities to link these spaces	+
PO3 – Facilitate integration of development into the existing employment area to the south through sustainable growth PO4- Safeguard humans within Dublin Airport Safety Zones PO5- Create safe Public Realm	+ 0 0
Biodiversity, Flora and Fauna	
BO1 – Maintain and enhance the diversity of habitats and protected species, promote and maximize the opportunities for the creation of biodiversity	0

Transport	
TO1 – Provide road access from new development and to Blanchardstown and the Motorway network	+
T02 - Minimise the impact of traffic in the area as a result of development	0
TO3 - Improve pedestrian access and permeability throughout the LAP lands	+
Water	
W01 – Ensure that any new development is adequately serviced by foul drainage infrastructure	+
WO2 - Prevent pollution and contamination of water courses as a result of ground water run-off	+
Air Quality, Waste and Climatic Factors	
AO1 - Promote sustainable energy/Waste Management	+
Cultural Heritage – Architectural / Archaeological	
CO1 - To protect all known archaeological sites from inappropriate development that would adversely affect the site or setting	+
CO2 - Ensure the appropriate treatment of previously unknown archaeological sites or features that are under threat from development	+
CO3 - Promote high quality design to ensure that new buildings contribute positively to the built environment	+
Noise	
NO1 – Minimise noise impacts from aircraft	X
Landscape	
LO1 - Ensure that new development integrates and respects the natural form and character of the landscape	+

Option 3 is the preferred option. It enables a range of employment opportunity and skills. In addition the built environment will have distinctive character areas. The synergy of mixed employment uses should mitigate the impacts of a sudden loss of a large employer.

6.6 Selection of Preferred Option

A summary of the scoring/rating of each of the development alternatives against the SEA objectives is provided in Table 6.6.1 below. The scores were compared against each other. Option 3 is the preferred option.

Table 6.6.1 - Scoring / Rating of Development Alternatives

Alternative Development Scenario	Significant Positive Impact +	Significant Negative Impact X	No Relationship / Insignificant (*positive or negative*) Impact	Total net positive impacts
Option 1	11	4	3	7
Option 2	10	2	6	8
Option 3	13	1	4	12

Mixed employment and enterprise sectors offer the optimum return for the development of lands at Cherryhound.

6.7 Preferred Option 3 – Mixed Employment and Enterprise Development

The provisions of the LAP incorporate specific objectives to include measures to maximise the environmental value/contribution of in situ landscape features.

The LAP sees the retention of major tree groupings and hedgerows as structuring elements as well as the location of buffer landscaping strips between the LAP lands and the residential lands to the south-west. The tree copses represent the areas of ecological value and are co-terminus with the areas of archaeological interest, so that the habitat and the archaeology will be protected. A public park is located at one of the tree groupings and open spaces at the others. A series of linking pedestrian routes are located between the green areas and potential desire line targets, so that there can be pedestrian and cycling green routes linking places within the area and providing permeability. These measures will also assist in integrating the development into the landscape.

Provision for public transport is dependent on a Blanchardstown Transport Network Framework being put in place. The LAP indicates possible locations for bus stops.

Cycleways are included along all major roads to encourage a more sustainable modal split. Logistic use is located close to the Motorway junction (M2) to avoid unnecessary movement through the area. Development is phased in tandem with the ongoing provision of infrastructure services. The application of SuDS in the area will ensure that water run-off and flooding does not become an environmental issue.

7.0 ASSESSMENT OF PREFERRED ALTERNATIVE

This chapter assesses the potential impacts of the preferred option on the environment. The different components of the environment are assessed to determine whether implementing the LAP would have likely significant effects on the environment. Chapter 2 has referred to the Scoping Report and the responses from the prescribed environmental bodies.

7.1 Population and Human Health

As a consequence of the development build-out the biggest impact on the receiving environment would be the increase in working population. It is likely to be in the order of 9,000 persons and has the capacity to double these figures.

The objectives of the LAP underpin the delivery of a quality working environment with the provision of interconnecting open spaces leading to a public park. A small civic space is provided at the retail/services area.

A network of roads and pedestrian paths will connect the public park/open spaces to the local retail/service facilities.

Character areas will be delivered through the mechanism of design. This will assist identity and place-making.

The delivery of the LAP objectives will ensure the creation of a positive new environment. The mixed employment development, satisfactorily phased and integrated, will not have long-term negative impacts on the receiving environment.

7.2 Biodiversity, Flora and Fauna

A significant impact on the ecological value of the area as a result of construction and development is the direct loss of habitat within the LAP lands and the loss of agricultural land. The loss of habitat is likely to result in a decline of countryside wildlife species. However, it can be anticipated that the landscaping of the area will introduce a more diverse habitat in terms of flora and fauna.

Measures to minimise and mitigate the impacts of the LAP will be discussed in Chapter 8 of this report.

7.3 Water

Water supply network connections will be available from the Link Road (N3-M2).

A Water Management and Conservation Plan will ensure that limits are placed on unnecessary water usage, leaks and excessive consumption. Measures will also apply such as rainwater harvesting and grey water recycling. SUDs will also apply.

7.4 Cultural Heritage, Architectural and Archaeological

Archaeological monuments, sites, features and finds are a crucial component of our heritage resource. The archaeological survey and assessment identified potential archaeological sites. Having regard to the substantial surface area of the LAP lands and evidence from excavations carried out in relation to the proposed Link Road, small isolated archaeological deposits or features could still survive. The possibility of encountering archaeological remains cannot be fully eliminated.

Mitigation measures to avoid/minimise these potential impacts will be outlined in Chapter 8 of this report.

7.5 Transportation

The N3-M2 Link Road will be operational Spring 2013. This road runs through the middle of the LAP lands in a north-south direction. The road will open up the LAP lands for development. The road will act as a high profile development corridor. The Link Road incorporates a number of junctions from which feeder transport networks can be put in place.

7.6 Noise

Noise from aircraft is an environmental issue in the area. The nature of the land use, which will involve use primarily in daytime and suitable insulation measures, will mitigate its impact. More densely occupied enterprises can be located primarily to the south, away from the Public Outer Noise Zone.

7.7 Landscape

The development of these lands will deliver a new environment. The objectives of the LAP underpin opportunities for new employment/new enterprise which will support measures fro landscape.

7.8 Air Quality/Waste

The new working population will increase traffic and emissions in the area. Construction activity will also give rise to temporary dust emissions. Waste will be generated in the construction phase and in the operational stage.

7.9 Assessment of the LAP Objectives

As discussed in Chapter 6 above, Option 3, 'Mixed Employment Sectors' was selected on the basis of compatibility with environmental objectives.

The objectives put forward as part of the LAP were tested for compatibility with the Strategic Environmental Objectives. Matrix 4 below records positive, negative, uncertain and neutral impacts which will assist in formulating any mitigation measures.

The LAP also contains 51objectives, these objectives were assessed against Sustainable Environmental Objectives and were found to be compatible (Matrix 4).

MATRIX 4 – EVALUATION OF THE LAP OBJECTIVES

	Objectives	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**BO1**	**TO1**	**TO2**	**TO3**	**WO1**	**WO2**	**AO1**	**CO1**	**CO2**	**CO3**	**NO1**	**LO1**
CA1	Seek to develop as wide a range of uses as is possible within the permitted land uses	+	+	+	O	O	O	O	O	O	O	O	O	O	O	+	O	O
CA2	Provide for a service centre to facilitate local working population needs	+	O	+	O	O	O	O	+	+	O	O	O	O	O	+	O	O
CA3	Seek the provision of 'GE' uses and uses permitted under LO 365 at the Gateway Area	+	O	+	O	O	O	+	O	+	O	O	O	O	O	+	O	O
CA4	Provide for open amenity space to cater for the needs of those employed in the area	+	+	+	+	O	+	O	O	+	O	+	+	+	+	O	O	O
CA5	Provide boundary treatment and buffers adjacent to residential properties	+	+	O	O	+	+	O	O	O	O	O	O	O	O	O	+	O
CA6	Seek to reinvent permitted land uses in the quarry area	+	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
CA7	Provide opportunities to signal particular uses and buildings of landmark quality at selected nodes	+	O	O	O	+	O	O	O	O	O	O	O	O	O	+	O	+
MO1	Seek the creation of an efficient, functional and safe system for all vehicles, cyclists and pedestrians	+	O	+	O	+	O	+	+	+	O	O	X	O	O	O	O	O
MO2	Require development of the area to be consistent with the mobility/transport policies/objectives of the current Fingal Development Plan	+	O	+	O	+	O	+	+	+	O	O	X	O	O	O	O	O
MO3	Encourage an incremental modal split in favour of public transport, cycling and walking as opposed to use of private motorcars	+	+	+	O	+	O	+	+	+	O	O	+	O	O	O	O	O
MO4	Provide for sheltered bicycle parking at key locations and at new employment buildings	+	+	+	O	O	O	O	+	O	O	O	+	O	O	O	O	O
MO5	Provide for Bus Stops at Optimal Locations	+	O	+	O	O	O	+	+	+	O	O	+	O	O	O	O	O
MO6	Provide for a linked cycle network	+	+	+	O	O	O	+	+	O	O	O	+	O	O	O	O	O
MO7	Require high quality landscaping/screening to car parking areas	+	+	O	O	O	+	O	+	O	O	+	O	O	O	O	+	O
MO8	Require all roads to be of a design and standard to accommodate HGV's	+	O	+	O	+	O	+	+	O	O	O	X	O	O	O	O	O
	Objectives	**P**	**P**	**P**	**P**	**P**	**B**	**T**	**T**	**T**	**W**	**W**	**A**	**C**	**C**	**C**	**N**	**L**

		O1	O2	O3	O4	O5	O1	O1	O2	O3	O1	O2	O1	O1	O2	O3	O1	O1
M09	Locate higher density employment uses close to public transport	+	O	O	O	O	O	O	+	+	O	O	O	O	O	O	O	O
M010	Provide access to the RU lands to the south east of the LAP lands, identified by Local Objective 377	O	O	+	O	O	O	O	O	+	O	O	O	O	O	O	O	O
M011	The delivery of offices and hotel in the Gateway Area shall only be permitted where the commensurate level of public transport is being provided to serve such uses.	+	+	+	O	O	O	O	+	O	O	O	O	O	O	O	O	O
PI1	Progress the provision of Local Authority services in the area to meet the development needs	+	O	+	O	O	O	O	O	O	+	+	O	O	O	O	O	O
PI2	Seek the provision of services by the main utility suppliers	+	O	+	O	O	O	O	O	O	O	O	O	O	O	O	O	O
PI3	Support the provision of 110kV electrical sub-stations at suitable sites throughout the LAP lands where required	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
OS1	Require the development of 10% of the lands as open space	+	+	+	+	O	+	O	O	O	O	+	+	+	+	+	+	O
OS2	Require the retention of all significant trees and hedgerows in good and fair condition and provide for wildlife corridors	+	+	+	+	O	+	O	O	O	O	+	+	+	+	+	+	O
OS3	Seek the creation of new open spaces based around existing tree groups and heritage features for passive and some limited active recreation	+	+	+	+	O	+	O	O	O	O	+	+	+	+	+	+	O
OS4	Require significant tree planting to create a buffer zone at the boundaries of the LAP with a particular focus between existing housing/areas zoned for residential development and areas zoned for employment use	+	+	+	+	O	+	O	O	O	O	+	+	+	+	+	+	O
OS5	Seek the development of a network of landscaped routes throughout the area linking new nodes of activity, linking to surrounding areas and providing attractive recreational walking and cycling routes	+	+	+	O	O	+	+	+	+	O	O	+	O	O	O	+	O
OS6	Require high standards in the public realm in terms of landscaping, lighting, signage and street furniture	+	+	O	O	O	O	O	O	O	O	O	O	O	O	+	+	+
OS7	Ensure that private sites are landscaped to a high standard to compliment the public realm	+	+	O	O	O	O	O	O	O	O	O	+	O	O	+	+	O
OS8	Provide a play area at the Gateway/Cherryhound junction where deemed appropriate having regard to particular uses proposed.	+	+	O	O	O	O	O	O	+	O	O	+	O	O	+	O	O
OS9	Provide for open amenity space to cater for the needs of those employed in the area. The open space provision should involve overlapping green infrastructure uses to include biodiversity, sustainable water management and archaeology.	+	+	+	+	+	+	O	O	+	O	+	O	O	O	O	+	O
HO1	Require the retention of all major tree groupings and hedgerows to preserve their value as habitats and wildlife corridors	+	+	+	O	O	+	O	O	O	O	O	+	+	+	+	+	O
HO2	Require ecological assessments to be carried out as part of planning applications, where warranted.	+	+	+	O	O	+	O	O	O	O	O	+	O	O	O	O	O

HO3	Preserve zones of archaeological potential in the form of suitably sized open space around the identified features to preserve possible sub-surface features and present them in a suitable manner	+	+	O	O	O	O	O	O	+	O	O	+	+	+	O	O	O
	Objectives	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**BO1**	**TO1**	**TO2**	**TO3**	**WO1**	**WO2**	**AO1**	**CO1**	**CO2**	**CO3**	**NO1**	**LO1**
HO4	Ensure that development within the vicinity of the feature is designed and sited appropriately, so that it does not detract from the setting or the zone of archaeological potential	+	+	O	O	O	O	O	O	O	O	O	O	+	+	+	O	+
HO5	Present the features in an appropriate sensitive manner including interpretive signage	+	+	O	O	O	O	O	O	O	O	O	O	+	+	+	O	O
HO6	Require historic place names to be used in the naming of areas/roads within the LAP	+	O	O	O	O	O	O	O	O	O	O	O	+	+	O	O	+
HO7	Require a geophysical survey to be undertaken across the LAP lands in order to aid the detection of sub-surface archaeological remains	O	+	O	O	O	+	O	O	O	O	O	O	+	+	O	O	O
HO8	Preserve tree-rings as green space utilising a 30 meter exclusion zone to ensure their protection	+	+	O	+	+	+	O	O	+	O	+	O	O	O	O	+	O
HO9	Require test trenching across the LAP lands at locations to be agreed with the Planning Authority. Trenches will be targeted on areas adjacent to the 6 known archaeological sites, at the 4 areas of archaeological potential and any areas of potential identified by the geophysical survey, in order to define their nature and extent	O	+	O	O	O	+	O	O	O	O	O	O	+	+	O	O	O
SO1	Require the application of sustainable design principles to the layout, buildings and drainage in the LAP area	+	O	+	O	+	O	O	+	+	+	+	O	O	O	+	+	+
SO2	Ensure buildings are designed to maximise their sustainability and use of alternative energy sources	+	O	O	+	O	O	O	O	O	O	O	+	O	O	+	+	+
SO3	The SuDS Strategy shall be adhered to in all development	+	+	O	O	O	+	O	O	O	O	+	O	O	O	O	O	O
UD1	Ensure that the built environment responds to its context	+	O	O	+	+	+	O	O	O	O	O	O	+	+	+	O	+
UD2	The development area is well connected to neighbouring areas	+	+	+	O	+	O	+	O	+	O	O	O	O	O	+	O	O
UD3	A good mix of uses is achieved	+	O	O	+	+	O	O	O	O	O	O	O	O	O	+	O	O
UD4	An efficient use of land is achieved	+	+	+	+	+	O	+	+	+	O	O	O	O	O	+	O	O
UD5	Distinct areas are created having a unique sense of place	+	+	O	O	+	+	O	O	+	O	O	O	+	+	+	O	+
UD6	A high quality safe public realm is created	+	+	O	O	+	+	+	+	+	O	O	O	+	+	+	O	O
UD7	Buildings are designed to cope with change	+	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	+

UD8	Sufficient and suitable attractive amenity space is provided for the working population	+	+	O	+	+	+	O	O	O	O	+	+	+	+	O	+	O
UD9	Parking will be secure and attractive	+	+	O	O	+	O	O	+	O	O	O	O	O	O	O	O	+
	Objectives	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**BO1**	**TO1**	**TO2**	**TO3**	**WO1**	**WO2**	**AO1**	**CO1**	**CO2**	**CO3**	**NO1**	**LO1**
UD10	Architectural and landscape design is of the highest quality	+	+	O	O	+	O	O	O	O	O	O	O	+	+	+	O	+
UD11	Development to comply with the design standards for business parks and industrial areas contained within Appendix 4, Fingal Development Plan 2011-2017	+	+	+	O	+	+	O	+	+	O	+	O	+	+	+	O	+

+ Positive

X Negative

O Uncertain or Neutral

7.10 Cumulative Effects

The cumulative effects on the environment are not considered to be negative provided appropriate mitigation measures are taken in respect of the individual headings.

8.0 MITIGATION MEASURES

8.1 Mitigation Measures Incorporated

Mitigation measures are envisaged to prevent, reduce and as fully as possible offset any significant adverse impacts on the environment of implementing the LAP. The mitigation measures identified during the SEA and plan making process have been integrated into the LAP.

8.2 Mitigation Measures Proposed

In Chapter 7, any significant impacts of implementing the LAP on the different components of the environment were identified.

8.2.1 Population and Human Health

Development of the plan lands must take place on a phased basis to ensure the needs of the working communities are met in tandem with development. It is an objective of the LAP that development of the plan lands shall take place over a 15 year period, to be broken down as follows:-

Phase 1:	Includes all land to the south and east of the M2/N3 Link Road and the Gateway Area. This initial phase includes those areas adjacent to the existing employment lands located to the south
Phase 2:	Includes all remaining land to the west of the M2/N3 Link Road (see Map No. 8 and Section 6.1 of the LAP).

In addition, Urban Design Guidelines have been incorporated into the plan to seek ensure a high standard of development. The plan also aims to promote a wide employment choice in terms of the nature of the employment sectors that will be developed and to ensure the development of a balanced working community structure within the expanding area of Cherryhound.

Given the location of the northern part of the lands under an outer Public Safety Zone, this area should be developed in substantial part for lower occupancy uses such a logistics and warehousing.

8.2.2 Biodiversity

To minimise the impact on the Biodiversity value of the lands of the proposed developments within the LAP area, the following measures are proposed:

Ecological features such as the remaining tree groupings and important hedgerow copses shall be incorporated in the green space without impacting upon these habitats. By including these features

in the open space, these habitats can be protected and further enhanced for wildlife by Fingal County Council. Any development and boundary treatment should be set back at least 10m from the tree groupings and hedgerows.

It is recommended that the open space provision in the area be linked by green corridors to ensure that wildlife can migrate to and from the different open spaces. The key ecological features should be included in this green corridor. Such a connection is not only beneficial for wildlife, but it also allows local residents to walk and cycle through the new development along green routes.

- Planting schemes within the development should take into account the native species already in the area. Preference should be given to the planting of Hawthorn, Blackthorn and Ash. Other useful species for wildlife include Birch, Holly, Alder, Willow, Guelder Rose and Dog Rose. Ideally the above species would be planted in small copses, rather than in lines within new developments.

- Develop ponds and reedbeds as part of the SuDS in the new employment developments. These ponds and reedbeds filter, clean and store the surface water run-off and provide valuable wetland habitat for species such as frogs, otters, bats and various wetland birds. The filtered and cleaned water from the ponds and reedbeds can discharge into local watercourses. It is important that drainage and SUDS design be combined with the design of the open spaces to ensure that the ponds and wetland are appropriately sited within the development.

8.2.3 Water

Foul Drainage

It is an objective of the LAP that development shall take place on a phased basis in tandem with the provision of appropriate treatment infrastructure.

Water Supply

In order to limit unnecessary water usage, leaks and excessive consumption, the LAP states that a Water Management and Conservation Plan detailing how best practice in water conservation shall be applied in respect of the proposed development to include both water mains and internal plumbing, must be prepared for the development of these lands. This plan should consider incorporating conservation measures such as rainwater harvesting and grey water recycling.

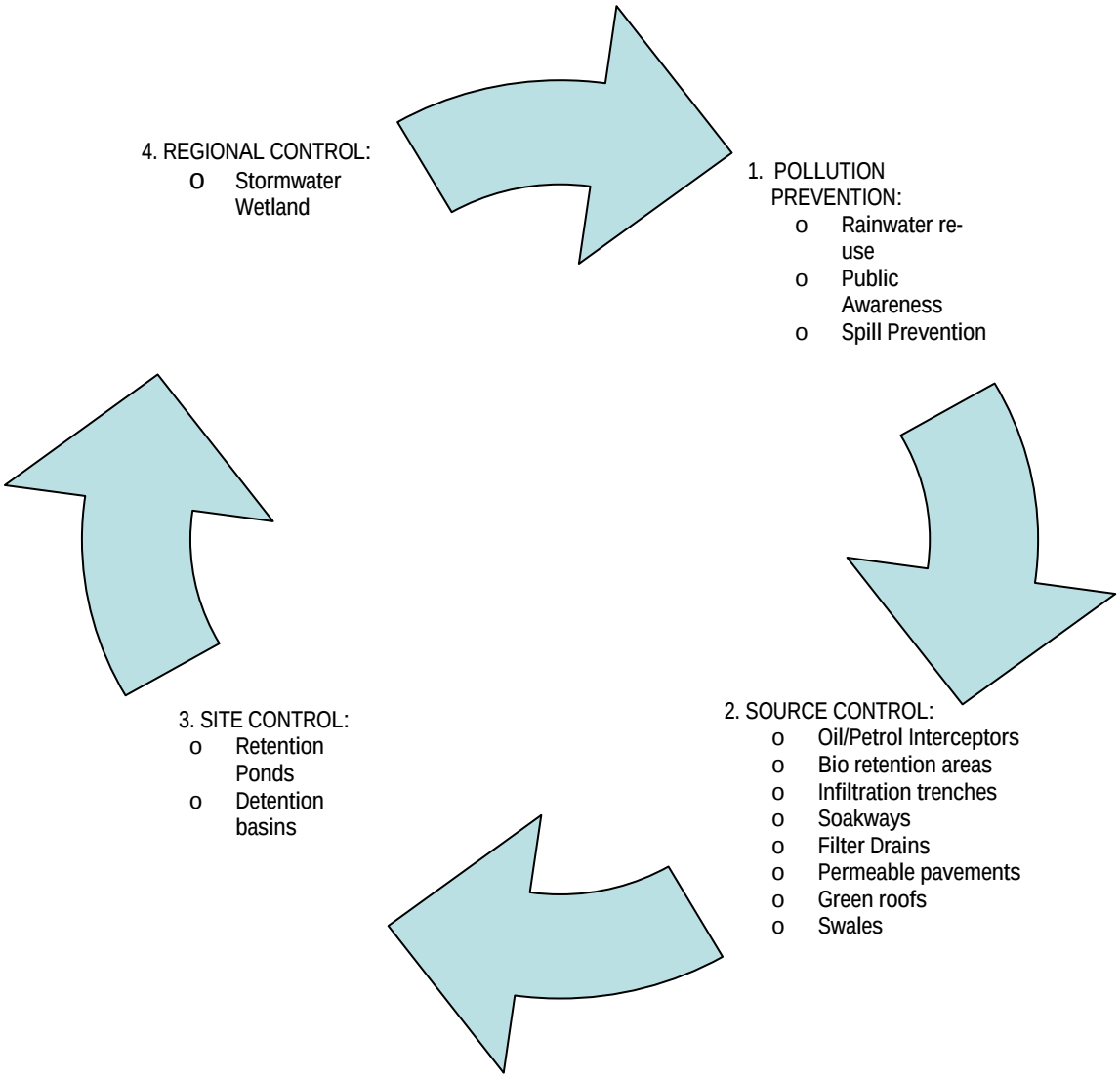
The water main layout for the proposed development must be in accordance with Fingal County Council's Guidelines for Drinking Water Supply .

Surface Water

It is now recognised that the traditional approach to stormwater management whereby stormwater originating on site is conveyed through sewers unattenuated to the nearest watercourse or sea outfall, has negative consequences for persons and properties downstream. The solution to this issue is to provide for more natural drainage that mimics the Hydrological cycle. Appendix 5 of the LAP Written Statement details the SuDS Strategy for the subject lands.

New development as part of the plan will be required to formulate an integrated Stormwater Management Plan encapsulating the water quantity, quality, amenity and habitat enhancement aspects of natural drainage. The systems which address the above aspects are termed Sustainable Urban Drainage Systems (SuDS). A number of different SuDS devices should be utilised in series to form a treatment train. A treatment train approach incorporates pollution prevention, source, site and regional controls offering protection from flooding, pollution, loss of amenity and habitat. The various stages of treatment and types of control which may be used are indicated in Figure 8.2.3 below. It should be noted that the SuDS philosophy is a relatively new one and the list of SuDS devices in Fig 8.2.3 is not exhaustive. As this philosophy progresses, further innovative SuDS solutions will no doubt be found.

Figure 8.2.3: Storm Water Treatment Train



It should be acknowledged that no information regarding ground conditions, meteorological conditions and the layout of units, roads and services have been fully explored or determined in this estimation. Without an accurate determination of this information and the above variables, an accurate assessment cannot be made. A more in-depth assessment will be carried out at the planning application stage.

Discharge to surface water:

- Surface drains should carry only uncontaminated rainwater from roofs and clean yard surfaces to a watercourse
- Discharge to streams, watercourses or soakways must receive permission from Water Services Department
- The discharge of trade effluent and untreated discharges to surface water requires a Trade Effluent Discharge Licence
- Any discharge of silty water is only permitted to the foul sewer and not to surface waters in accordance with a Trade Effluent Discharge Licence issued under Section 16 of the Local Government (Water Pollution) Act 1977 and 1990
- Water contamination detergents, disinfectants, degreasers or any other cleaning agent must not enter the surface water drains
- No discharge of dangerous substances such as mercury, lead, cadmium, chromium, chlorofluorocarbons, polychlorinated biphenyls, polychlorinated napthalenes and borminated flame retardants to be made into any watercourse, groundwater or surface water sewer

Discharge to sewer:

- The discharge of trade effluent to the foul sewer requires a Trade Effluent Discharge Licence

General:

- Suitably sized oil and petrol interceptors are required for all discharges from large car parks, access roads and hard surfaced areas
- Suitable measures should be taken to minimise the risk of spillages during construction and operation phases. All areas containing oil tanks and chemical storage areas must be suitably bunded.

8.2.4 Cultural Heritage- Archaeological

Archaeological monitoring of topsoil removal is advisable in relation to any development proposed within the LAP lands and will be included as a condition of any grant of planning permission. A licensed Archaeologist will ultimately be required to monitor all groundworks and/or topsoil stripping; during both the site preparatory and construction stages of development and especially in the areas that were identified in the Archaeological Survey. Monitoring will be carried out under licence from the Department of Arts Heritage and Gaeltacht Affairs, and will ensure the full recognition of, and the proper excavation and recording of all archaeological soils, features, finds and deposits which may be disturbed below the ground surface. The LAP Written Statement, Section 4.6.3 Heritage Objectives, sets out eleven objectives which the planning authority will require compliance with in all planning applications for development proposals.

The National Monuments Legislation (1930–94) states that, in the event of the discovery of archaeological finds or remains during the archaeological monitoring programme, the Department of the Arts, Heritage and Gaeltacht Affairs and the National Museum of Ireland should be notified immediately. Should archaeological material be identified; a suitable mitigation strategy must be agreed with the Department, which could include a requirement for full archaeological excavation or for preservation in-situ. The developer should make provision to allow for, and to fund, the necessary archaeological excavation works that may be needed on the site during the site preparation and construction phases of development. The recommendations above shall be incorporated into the LAP.

8.2.5 Transportation

A number of objectives have been included in the LAP with the aim of reducing the impact of the traffic on the areas as a result of development.

8.2.6 Noise

Given the location of the lands under flight paths and associated noise, suitable noise insulation measures must be incorporated into the design of buildings to ensure that noise does not become either a nuisance or health issue. Special attention should be paid to hotel bedroom design in this respect. Noise from building operations will be temporary and suitable limitations can be applied by condition at planning application stage.

8.2.7 Landscape

Having regard to the transitional nature of the plan lands, the LAP includes objectives to mitigate the impact of development on the visual amenity of the area, in terms of building heights, densities and retention of the ecological heritage Furthermore, it is an objective in the LAP to provide advanced strategic screen planting, using native shrub and tree species, along the exposed boundaries of the plan lands with neighbouring residential areas. This will create new habitat corridors to replace any hedgerows removed in the development area and will help to soften the visual impact and promote the visual integration of new development with the landscape. Screening in sensitive locations will be required to mitigate the negative visual impact of existing power lines.

8.2.8 Air Quality, Waste and Climate

Mitigation measures will include dust minimization plans during construction. It is anticipated that vehicle emission standards will continue to improve and that legislative balancing in favour of more fuel efficient vehicles will continue to improve air quality. Waste infrastructure with appropriate capacity will be planned for the area and waste management plans will be required in the assessment of all planning applications.

9.0 MONITORING PROPOSALS

9.1 Purpose of Monitoring

The SEA Directive requires that the significant environmental effects of the implementation of plans and programmes are monitored. This environmental report puts forward proposals for the monitoring of the LAP, with 5 year reviews.

Monitoring is based around the indicators, which were chosen earlier in the process. These indicators allow quantitative measures of trends of progress over time relating to the SEOs used in the evaluation. Focus is given to the indicators which are relevant to the likely significant environmental effects of implementing the LAP and existing monitoring arrangements are used in order to monitor the selected indicators where possible. Each indicator to be monitored is accompanied by the relevant target(s) which were identified with regard to the relevant legislation.

Monitoring enables, at an early stage, the identification of unforeseen adverse effects and the undertaking of appropriate remedial action. In addition to this, monitoring can also play an important role in assessing whether the LAP is achieving its environmental objectives and targets and whether the proposed mitigation measures are being implemented.

9.2 Monitoring Proposals

The monitoring programme for the implementation of the LAP is outlined in Table 9.1 below .

Table 9.2.1: MONITORING PROGRAMME

Environment	Monitoring Objectives and Indicators	When?	By Whom	Source / Method of Monitoring
Population and Human Health	*Improve peoples' quality of life through the provision of high quality development and recreational environments* o Good quality design, setting and finishes, showing a mix of unit types o Amount (in sq.m.) of open spaces and recreational facilities available to the public following adoption of the LAP	This will be addressed during the lifetime of the Plan. 5 Year Review	FCC Planning Dept FCC Planning Dept/Parks Division	Planning applications. Open space and recreational facilities survey of the lands to be carried out at the monitoring stage.
	Ensure the provision of high quality open space and maximize opportunities to link these spaces o Amount in ha. of Class 1 open space and pocket parks made available to the public following development of the plan lands.	5 Year Review	FCC Planning Dept	Open space and recreational facilities survey of the lands to be carried out at the monitoring stage
	Facilitate integration of development into the existing employment area through sustainable growth o Development is in accordance with the density and urban design objectives set out in the LAP	5 Year Review	FCC Planning Dept	Planning Applications
Biodiversity	*Maintain and enhance the diversity of habitats and protected species* o Number of approved applications with	5 Year Review	FCC Planning Dept	Planning Applications

	landscape plans/conditions. o Loss of any hedgerows/linear planting, particularly those of ecological importance	At planning application and planning consent stage.	FCC Planning Dept/Parks Division	Comparison to baseline Ecological Survey
Environment	Monitoring Objectives and Indicators	When?	By Whom	Source / Method of Monitoring
Transport	*To provide access from the new development to the Blanchardstown and National Motorway Network* o LAP road network, together with pedestrian and cycle routes made available for use within the lifetime of the adopted plan	5 Year Review	FCC Planning Dept/Transport Dept	Pedestrian and cycle route survey to be carried out at the monitoring stage
	Minimise the impact of traffic on the new employment environment. o *Number of traffic calming and traffic management measures implemented by the study following adoption of the LAP.*	5 Year Review	FCC Planning Dept/Transport Dept	Traffic counts to be carried out at the monitoring stage
	Improve pedestrian access and permeability throughout the LAP lands o Amount (in sq m) of pedestrian walkways / routes are made available to the public following development of the plan lands.	5 Year Review	FCC Planning Dept/Transport Dept	Walkway survey to be carried out at review stage
Water	*Ensure that any new development is adequately served by foul drainage infrastructure* o Development	5 Year Review	FCC Water	Monitoring

	commences when foul drainage infrastructure is available		Services/Planning Dept	progress and provision of infrastructural proposals
	Prevent pollution and contamination	5 Year Review	FCC Water Services/Planning Dept	Improvement/no disimprovement of water quality as tested prior to the commencement development

Environment	Monitoring Objectives and Indicators	When?	By Whom	Source / Method of Monitoring
Cultural Heritage – Architectural and Archaeological	*To protect all recorded archaeological sites from inappropriate development that would adversely affect the site or setting* o Ensure all known archaeological sites are protected from inappropriate development	4 Year Review	FCC Planning Dept/Conservation Office. The planning Dept will ensure at planning application and planning consent stage that the necessary consultation takes place with the DoEHLG. The DoEHLG will ensure monitoring takes place at site clearance stage	Planning Applications Query
	Ensure the appropriate treatment of previously unknown archaeological sites or features that are under threat from development o Number of identified potential archaeological sites investigated	5 Year Review	FCC Planning Dept/Conservation Office.	Planning Applications Query
	Promote high quality design to ensure that new buildings contribute positively to the built environment of Cherryhound o New developments show features outlined in the LAP in their design and setting	5 Year Review	FCC Planning Dept	Planning applications
	To ensure the appropriate /adequate protection of Protected Structures and their			

	setting within the LAP o Appropriate scale and density used on site, balance between urban and rural boundary and existing development	5 Year Review	FCC Planning Dept	Planning applications
Environment	Monitoring Objectives and Indicators	When?	By Whom	Source / Method of Monitoring
Noise	*To ensure aircraft noise does not impact on quality of life*	5 Year Review	FCC Planning Dept	Planning applications
Landscape	*To ensure that new development integrates and respects the form and character of the landscape and creates areas of distinctiveness*	5 Year Review	FCC Planning Dept	Planning applications
Air Quality/Waste	*To ensure good air quality and waste management*	5 Year Review	FCC Planning Dept	Planning Applications

10.0 CONCLUSION AND RECOMMENDATION

The methodology employed in undertaking this SEA for the LAP at Cherryhound has been in accordance with the relevant planning legislation and guidance issued by the DoEHLG. Through the SEA process, the LAP has been assessed in order to evaluate the environmental implications of developing the land.

The SEA process has comprised a number of distinct stages, one of the most important of which has been the preparation of this Environmental Report. The Environmental Report, which is the principal document produced during the SEA process, presents information on the LAP and the subject sites, on the proposed LAP's context with other relevant plans and on baseline information for the different categories within the receiving environment.

In the environmental assessment, three alternative development scenarios, including the LAP itself, were assessed. The environmental assessment consisted of each alternative development scenario being assessed against the SEA objectives to identify any potential significant effect or impact on the different categories of the environment.

Following the environmental assessment of the alternative scenarios, the preferred alternative, the LAP, was selected. A further assessment of the LAP was undertaken to identify any significant effects or impacts on the environment from implementing the LAP. Importantly, mitigation measures have been formalised to ameliorate any negative impacts and finally appropriate monitoring proposals have been developed to monitor the significant effects and also the relevant mitigation measures.

It is proposed to monitor the effects of the LAP at least every 5 years following adoption of the plan.