

DRAFT ROCKVIEW FARM LOCAL AREA PLAN 2010 - 2016

STRATEGIC ENVIRONMENTAL ASSESSMENT – ENVIRONMENTAL REPORT



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1.0 INTRODUCTION AND BACKGROUND

1.1 Background

In September 2005, Stephen Ward Town Planning and Development Consultants Limited, in association with Van Dijk Architects, Tobin Consulting Engineers and TES Consulting Engineers were commissioned by Dundalk Town Council to prepare a Local Area Plan (LAP) for 84.34 ha of lands at Rockview Farm, lying 2.5km south east of Dundalk town centre. This arrangement was made under the provisions of Section 18(6) of the Planning and Development Act 2000, which allows local authorities to use suitably qualified persons to prepare Local Area Plans. The preparation of the draft LAP was therefore undertaken by the aforementioned consultants but carried out in accordance with a brief specified by the Town Council and under its direction.

In commissioning this work, Dundalk Town Council took the view that the nature and scale of development on the Plan lands could have a significant effect on the environment, and consequently requested that a Strategic Environmental Assessment (SEA) be undertaken as part of the Plan preparation process by the same consultants. Dundalk Town Council also directed this process.

This report documents the findings of the SEA process that was undertaken in conjunction with the Plan's preparation, and is presented for public inspection alongside the draft LAP.

1.2 SEA: The Directive and its Purpose

SEA is required by European Directive 2001/42/EC1 (hereafter referred to as 'the Directive') and applies to any plans and programmes which are subject to preparation and/or adoption by an authority at national, regional or local level or which are prepared by an authority for adoption through a legislative procedure by Parliament or Government, and which are required by legislative, regulatory or administrative provisions; and that are likely to have a significant effect on the environment.

SEA is a systematic method for evaluating the likely effects on the environment of proposed plans and programmes. Notably, it requires the consideration of alternative ways of achieving aims and objectives, and is undertaken as part of the process of preparing plans and programmes with the purpose of integrating any findings and thereby providing a higher level of protection for the environment. It is a requirement that the process and its findings be documented in an Environmental Report, and that this report, along with the plan or programme, be made available for public inspection.

According to the Directive, plans and programmes that are likely to have a significant effect on the environment are those:

*“That are prepared for agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning or land use and which set the framework for future development consent of projects listed in Annexes I and II to the Environmental Impact Assessment (EIA) Directive (Directive 85/337/EEC2); or
Those, in view of the likely effect on protected sites, have been determined to require an assessment under*

Article 6 or 7 of the Habitats Directive (92/43/EEC3).”

The Directive came into effect on 21st July 2004 and, for the purposes of town and country planning, it has been translated into practice in Ireland by the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (hereafter referred to as 'the Regulations'). The Regulations apply to a strategic level of the planning system whilst still allowing for the detailed assessment of projects likely to have significant environmental impacts by the process of Environmental Impact Assessment (EIA), which aims to avoid, minimise and mitigate the impacts of individual schemes.

A summary of the Directive's requirements regarding the content of an Environmental Report, which identifies the corresponding sections of this report, can be found in Appendix A.

2.0 METHODOLOGY

2.1 Information Gathering and Scoping

Working in conjunction with engineering and architectural consultants, Stephen Ward and Tobin Consulting Engineers were assigned the task of preparing this Environmental Report as part of the Plan preparation process.

Although some aspects of information gathering were undertaken in 2005 (see separate report titled 'Proposed Rockview Local Area Plan: Environmental Baseline Studies', 2006), and working papers for a draft Plan prepared in early 2005, the process began officially in late Spring of 2006, with the publication of an issues paper on the contents of the proposed LAP, and 'scoping' of the environmental issues likely to be associated with implementation of the LAP by consultation with a wide range of bodies, including statutory consultees for the purposes of SEA. In 2007, additional reports on flood risk and impacts on nature conservations designations in Dundalk Bay were commissioned.

Good practice examples in the preparation of Environmental Reports were sourced from the Environmental Protection Agency's website, and the authors of this report wish to acknowledge the Environmental Report for North Ballymun Draft Local Area Plan (August 2005), prepared by/on behalf of Fingal County Council, and the Environmental Report for the Greystones/Delgany Local Area Plan (2006), prepared by Aoife Cassidy and Associates on behalf of Wicklow County Council.

2.2 Environmental Themes and Protection Objectives

For the purposes of assessing the objectives of the LAP, the environmental subjects¹ that form the main body of this report are based on topics identified by Annex 1 of Directive 2001/42/EC. The environmental protection objectives that were used to assess the main elements of the Rockview LAP were drawn up with reference to guidance in the DEHLG publication, 'Implementation of SEA Directive (2001/42/EC): Assessment of the Effects of Certain Plans and Programmes on the Environment – Guidelines for Regional Authorities and Planning Authorities'. The environmental objectives can be found under the relevant chapter headings.

¹ Biodiversity (flora and fauna); soils; travel and transport; air quality; water quality and flood management; natural resources; landscape; human health & quality of life; and, cultural heritage.

2.3 Difficulties Encountered

In terms of difficulties encountered in the process of preparing the LAP and SEA, adequate and relevant material was not readily available regarding flood risk and preventative measures, and impacts on adjoining nature conservation designations. As noted above, it was necessary to commission reports by expert consultants on these matters. Reports from expert consultants on other matters such as ecology and archaeology were already available.

3.0 CONSIDERATION OF ALTERNATIVES

3.1 Alternatives

Article 5 of the SEA Directive requires that the process of assessment consider reasonable alternatives to the objectives and/or policies of the plan or programme. Since the framework for the Rockview LAP is set by the DEDP (see 2.1 above), the SEA process did not consider alternatives to residential and recreational uses. Rather, the final version of the Plan evolved out of consideration of *reasonable* alternative ways of delivering the following:

- density and layout of housing;
- the scale and location of an element of civic and commercial facilities within the residentially zoned area;
- potential routes for a section of the Council’s proposed coastal walkway running through the Strategic Recreational Area; and,
- options for flood prevention measures.

3.2 Residential Density

In considering alternatives, the assessment examined the potential housing and population yield, and the associated advantages and disadvantages that would arise from high, medium and low-density scenarios. For the purposes of this assessment, the ranges suggested for high, medium and low were devised having regard to advice in the Residential Density Guidelines for Local Authorities (1999), figures in the adopted Master Plan for North Drogheda Environs and schemes prepared for other, similar outer-suburban sites.

Density Range	Net Residential Development Area (Approx.)	Dwelling numbers /ha - Low	Dwelling numbers/ha - High	Ranges for dwelling yield on 41.40ha	Average dwelling yield on 41.40ha	Population based on occupancy of 3.05 per household ² (average dwelling yield)
High	41.40ha	51	75	2141 - 3105	2623	8000
Medium	41.40ha	33	50	1366 - 2070	1718	5240
Low	41.40ha	15	32	621 - 1325	973	2968

3.2.1 Discussion

Developing all the lands at high densities would obviously allow a more significant number of people to reside within approximately 2.5km of the existing town centre of Dundalk and thereby take advantage of existing infrastructure, facilities and amenities. At the same time, however, it implies high plot ratios and/or high buildings with potentially adverse implications for private and semi private space around buildings and amenity generally. Traffic generation would be in the region of 2098 movements at peak hours (based on 0.8 movements per dwelling).

Conversely, while development at low densities would minimise the potential for any adverse impacts, with some 778 vehicle movements at peak hours, a low density development does not represent the most efficient use of land with regard to use of existing infrastructure, facilities and amenities.

3.2.2 The Preferred Alternative

Bearing in mind that the lands are greenfield/outer suburban, development at **medium density** was considered to offer the best compromise between developing at high and low densities, although in order to achieve a mixed demographic profile and offer choice of housing type, the Plan proposes that this should be achieved by developing areas at lower, medium and higher densities across the residentially zoned lands. However, any proposals will need to be accompanied by a Traffic Impact Assessment and Environmental Impact Assessment to fully evaluate and mitigate any impacts.

3.3 Civic, Commercial And Community Facilities

Provision for civic and commercial uses within the Plan lands was not specified by zoning or policies in the Dundalk and Environs Development Plan, and such provision may require an amendment to the Development Plan. The assessment therefore considered i) creating a residential community without such facilities; and, ii) creation of a modest area containing a mixture of shops, services and community facilities. The team also considered where within the plan lands it should be located.

² The figure of 3.05 for household size is that contained in the Dundalk and Environs Development Plan 2003-2009. This figure is larger than the household size advised by the Economic and Social Research Unit, which indicates that household sizes will be 2.63 by 2011. A cautious approach has been taken in this SEA by using the larger figure of 3.05 persons per household to calculate outcomes that are based on higher, rather than lower, populations.

3.3.1 Discussion

The creation of a new community without civic and commercial facilities would undoubtedly encourage travel by car to shopping centres elsewhere. Conversely, inclusion of such facilities within the plan lands would allow people to meet their basic needs without leaving their own community by car. At the same time, there are no disadvantages to including civic and commercial facilities within the plan lands, providing the scale of provision does not lead to the facilities becoming an attraction for car borne shoppers from elsewhere.

3.3.2 Preferred Alternative:

The option that was selected for the plan was the inclusion of a *modest* element of civic and commercial facilities within the plan lands e.g. on an area of approximately 3.99ha. The location of these facilities could have been more central, but for aesthetic and orientation reasons, it was decided that the new village centre should be located on the footprint of the former Rockview farmstead. Equally, it was considered that it would be appropriate to locate housing amongst the civic and commercial facilities in order to provide passive supervision of public spaces in the evening and maximise land utility.

3.4 The Coastal Walkway

This Local Area Plan is obliged by policy RA6 of the Dundalk and Environs Development Plan 2009 to facilitate Dundalk Town Council's aspiration to provide a coastal walkway from Soldier's Point, Dundalk to Blackrock Village. Implementation of the walkway is the responsibility of the Council. Nevertheless, the Plan therefore proposes a circular walkway within the Strategic Recreational Area with the potential to form a section of the Council's coastal walkway.

Dundalk Bay is a designated Special Protection Area (SPA), a candidate Special Area of Conservation (cSAC), proposed Natural Heritage Area (pNHA), and an internationally important location for overwintering waterbirds, designated under the Ramsar Convention.

The implication of this legislation primarily concerns the potential for disturbance to birds from human activities, and the Council's proposal for a coastal walkway was identified as having the potential for such effects.

Consequently, the potential for significant adverse effects was assessed by consultants (recommended by the National Parks and Wildlife Service). The report is available separately and is entitled '*Proposed Dundalk to Blackrock Coastal Walkway – Ornithological Assessment*' (Biosphere Environmental Services, June 2007).

An Addendum Ornithological Report (Biosphere Environmental Services, October 2007) considered the impacts of the actual *construction of the walkway* on the SPA and concluded that, subject to safeguards concerning the timing and duration of works, it is feasible to construct a walkway without significant adverse effects on the SPA. The Addendum also considered the effects of *constructing the residential development and its subsequent occupation*. Again, the Addendum concluded that landfilling is unlikely to have any direct impacts on the birds of Dundalk Bay as regards disturbance. However, landfill material must be free of contaminants and the potential for changes to drainage patterns and volumes of surface run off will need to be evaluated at the detailed design stage. The report also concluded that with appropriate mitigation, (which can be considered in full at the detailed design stage) the

birds of Dundalk Bay will become habituated to additional light and noise levels generated by the occupation of the proposed development.

A separate assessment considered the potential for impacts on the flora and fauna of the embankment and adjacent to the SAC. This concluded that there are no rare or protected species of flora or fauna on the embankment. Alternative routes for the proposed costal walkway would have either no impacts or minor (albeit permanent) impacts on the embankment. However, there is potential for indirect effects on the cSAC if there is unrestricted public and vehicular access to the saltmarsh and mudflats. A number of mitigation measures, notably fencing with suitable materials, will therefore be necessary in order to prevent such access occurring. The full report referred to above is available separately and is entitled '*Appropriate Assessment of Proposed Coastal Walkway at Rockview Farm (Fauna and flora of the coastal embankment)*' (Tobin Consulting Engineers, April, 2007).

3.4.1 Discussion

The report considered potential impacts of the full coastal walkway and a circular walkway within the Strategic Recreational Area of the Local Area Plan lands, and considered different options for the position of the walkway with regard to the embankment. The alternatives concerning the route of the walkway within the Plan lands were: -

- walkway on top of the embankment (with the embankment raised to a height of 5.6mODM¹) and connecting to the Council's proposed coastal walkway;
- walkway stepped down from the top of the embankment (5.6mODM) on the landward side and **1.25m** below the top of the embankment, with planting to break up silhouettes of people, and connecting to the Council's proposed coastal walkway;
- walkway stepped down from top of embankment (5.6mODM) and **1.8m** below the top of the embankment and connecting to the Council's proposed coastal walkway; and,
- walkway lying on the eastern edge of the area zoned for residential development (e.g. on the west of the Strategic Recreational Area and some 200m west of the embankment) and connecting to the *Council's proposed coastal walkway*

In *general*, the report concluded there was potential for significant adverse impacts on waterbirds from users of a walkway under certain tidal conditions and by way of i) the physical presence of people on the embankment ii) people deviating from the walkway onto the salt marshes iii) uncontrolled dogs causing direct disturbance.

More specifically, the report concluded that options for a walkway on top of the embankment or stepped down from the crest on the landward side (items 1-3 above) all had the potential for potentially significant adverse effects without appropriate mitigation. *With* effective mitigation, the report concluded that a walkway could be

¹ The assessment by Biosphere Environmental Services is based on the figure of 5.6mODM as the recommended height for the coastal embankment in the original report by Royal Haskoning. The Royal Haskoning report was peer reviewed by Scott Wilson and the figure of 5.6mODM was subsequently changed to 6.0mODM in Royal Haskoning's final report. It was not deemed necessary to further amend reports by Biosphere Environmental Services to take account of this change in view of the fact that the main bird related issues are not connected with the actual height of the embankment.

constructed that would have minimal impact on birds and which would therefore be compatible with the requirements of the Special Protection Area designation. The recommended mitigation measures are described in section 6.5.3 below.

By contrast, the report concluded that a section of walkway within the Plan lands and situated some 200m west of the embankment (item 4 above) would not have any impacts on birds within Dundalk Bay.

Notwithstanding the above, the report recommended that further study of the existing physical conditions in the vicinity of the roost sites would be required *at the detailed planning application stage* to determine the exact position of the walkway and areas where the mitigation measures would need to be applied. Monitoring would also be required, and mitigation measures altered or expanded if appropriate.

3.4.2 Preferred Alternative

Although the principal of a walkway (subject to mitigation) has been established, in view of the need for further study, a preferred alternative for the position of the walkway within the Plan lands has not been determined at this stage. The exact position and route will be determined at the detailed design stage, in conjunction with the NPWS, its advisors and the Council.

3.5 Flood Prevention

The integrity of the embankment and potential for flooding was assessed by consultants who also reported on measures to avoid flooding of the Plan lands. The full flood risk assessment report is available separately and is entitled “Rockview Farm Flood Risk Assessment” (Royal Haskoning, 2007). That report was subject to a peer review by third party consultants appointed by Dundalk Town Council (Scott Wilson, February 2008). In general, the peer review concluded that the flood risk assessment work and methodologies used were appropriate and in keeping with best practice. However, a number of comments were made for further consideration. These were addressed and subsequently an addendum to the original report was produced in March 2008, which sets out the main changes.

3.5.1 Discussion

Royal Haskoning considered three alternatives for managing flood risk which included combinations of raising the height of the embankment, providing returns for the embankment to protect the flanks of the lands, and raising the ground levels of the Plan lands.

3.5.2 Preferred Alternative

To provide the most sustainable means of managing flood risk to the site without having a detrimental impact on the adjacent nature conservation designations, the report by Royal Haskoning, which was amended to take account of its Peer review, recommended the following combinations:

- Improve the main coastal defence by raising the embankment crest to 6.0mODM and armouring the front face and crest, and raise the development lands to 4.25mODM and 4.41mODM in residential areas and 3.5mODM in amenity areas. Property threshold levels should be at least 4.41mODM. Provide return embankments for the amenity lands at the north and south boundaries. (Option 2)

- Bermed embankment with a 4m wide crest and a 4m wide berm placed on the rear slope at 1.25m or 1.8m below the crest, depending on the location of bird roost sites. (Embankment 2)

4.0 THE CONTENT OF THE LOCAL AREA PLAN

4.1 Relationship with Existing Plans and Strategies

The LAP is required by the higher tier Dundalk and Environs Development Plan 2009-2015 (DEDP), which indicates:

- two main uses for the plan lands, namely, residential (subject to the provision of a public mains drainage scheme) and a Strategic Recreational area along the eastern part of the lands (DEDP, Map 1); and
- the need for developers to allocate 20m of space to facilitate the creation of a coastal walk between Soldier’s Point and Blackrock (Policy RA6).

Besides the above, the LAP was influenced by the content of the DEDP on other matters, such as childcare guidelines, the provision of open space, protection of archaeological heritage, protection of water quality, landscape protection, nature conservation, housing design, housing mix, car parking standards etc and as such it is also consistent with, amongst other documents, the Louth County Development Plan, Residential Density Guidelines For Local Authorities, Regional Planning Guidelines, and the National Spatial Strategy. Notably, the draft LAP has had regard to the EU Birds Directive (79/409/EEC) concerning the protection of birds associated with the designated sites in Dundalk Bay. The content of the LAP was also influenced by a brief provided by Dundalk Town Council to the consultants.

Relevant legislation, plans, strategies and guidance that influenced the LAP are identified in Appendix B.

4.2 The Plan Aim

The plan lands extend to some 84.34ha, of which 27.65ha are to be dedicated to a Strategic Recreational Area. The aim of the draft Plan is to create a Sustainable Community and Neighbourhood.

4.3 The Plan’s Objectives

The 12 objectives associated with the above aim are as follows:

Residential Areas

1. To provide a range of housing typologies that will allow for the creation of a diverse community in terms of its demographic profile, offer choice, and provide high standards of amenity.

Civic, Commercial and Community Facilities

2. To make provision for shops, services and facilities that will support the new community’s basic needs
3. To make provision for the community’s potential educational needs.

Recreation, Open Space and Landscaping

- 4. To provide a Strategic Recreational Area extending across some 33% of the total Plan area, incorporating playing pitches/fields, a club house with changing facilities, and a circular walkway with potential to form a link in the Council’s proposed coastal walkway.
- 5. To provide integrated areas of attractive open space for active and passive uses within lands zoned residential.
- 6. To ensure a high level of amenity for future residents and foster biodiversity.

Access and Movement

- 7. To provide internal roads with linkages to the surrounding network.
- 8. To provide pedestrian zones, footpaths, cycleways and routes/stops for buses. taking account of the need for linkages between the Plan lands and Dundalk Town and environs.

Infrastructure

- 9. To raise the Plan lands and safeguard them from potential flooding.
- 10. To provide public infrastructure and services for foul and fresh water, and surface water drainage.
- 11. To provide electricity, gas and telecommunications infrastructure.

Implementation

- 12. To provide a sequence of development that will ensure the timely delivery of facilities, services and the Strategic Recreational Area, and minimize disturbance to residents of the community throughout construction of the new community

A matrix assessment of the local area plan’s policies against environmental subjects is contained in Appendix C.

5.0 THE BASELINE ENVIRONMENT

This section provides a broad overview of the environmental characteristics of the plan lands and their immediate surroundings, existing problems and the likely evolution of the lands if the LAP were not to be implemented. Further details on aspects of the environment are provided under the relevant headings in subsequent chapters.

5.1 County Louth

Overall, County Louth contains an abundance of natural assets including marine, coastal, wetland, woodland, river and upland habitats that support a variety of plant and animal species (Environmental Assessment of the Louth County Development Plan 2009 – 2015, page 55).

5.2 The Plan lands

The Plan lands lie approximately 2.5ha south east of Dundalk. They comprise several fields in agricultural use, which slope gently to the southeast, and are defined by trees, hedgerows and drainage ditches. These ditches drain not only the plan lands but also lands to the west and north.

The footprint of the former Rockview Farm lies on the western edge of the land, adjoining Blackrock Road, and is surrounded by a mixed broadleaf woodland. A number of these trees are protected by Policy CH5 (TP40) in the Dundalk and Environs Development Plan 2009.

Within the boundary of the Plan lands and lying in the north-eastern corner, there is an army firing range approximately 5.66ha in area, which is accessed by a right of way from Blackrock Road. The firing range is used by the Aitken Military Barracks for exercises deploying small arms. The lands also include the coastal barrier on their eastern limit. Beyond this eastern limit lies Dundalk Bay, which is designated a Special Protection Area and a Special Area of Conservation under the Habitats and Birds Directives, a potential Natural Heritage Area (pNHA) and a Ramsar site.

The R172 Blackrock Road, which connects the town of Dundalk with the coast and Blackrock to the south, forms the western boundary. Beyond the R172 lies the Finnabair Industrial Park and the residential areas of Kingswood and ‘The Loakers’. Both of these areas lie within Dundalk’s town boundary. The southern and northern boundaries of the plan lands abut more land in agricultural use. Views of the Cooley Mountains from locations immediately north and south of the Plan lands are protected by the Dundalk and Environs Development Plan 2009-2015 (Policy CH4).

A field survey suggested that there may be an area of archaeological interest in the north west of the Plan lands.

Summary of Plan Area Characteristics:

	Characteristics
Area	84.34ha
Land Use	• Agricultural (78.83ha) • Military firing range (5.66ha) • No public access
Habitats	• Arable Crops (BC1) • Improved Agricultural Grassland (GA1) • Hedgerows (WL1) • (Mixed) Broadleaved Woodland (WD1) including mature trees on Blackrock Road and around the Rockview farmstead. • Drainage Ditches (FW4)
Features	• 1 ‘Area of Potential Archaeological Interest’ in north-west of Plan area • 2 Protected Views (V8 and V10) lying on the northern boundary and beyond the southern boundary of the Plan lands
Facilities, services and infrastructure	• Un-surfaced track providing access to the military firing range. • System of drainage ditches delineating 11 field boundaries • Coastal protection barrier on eastern edge of lands • Access from the R172 Blackrock Road

5.3 Existing Environmental Issues/Problems

The lands are currently in agricultural use and there are no environmental problems. The following environmental issues arise can be ascribed to adjacent lands, Dundalk itself and/or its environs:

- There are occasionally flooding problems on adjacent lands, notably those just to the north of the Plan lands where the Coastal Protection Barrier has been breached. The issue of flood risk is fully explored in a separate report entitled “Rockview Farm Flood Risk Assessment” (Royal Haskoning, 2007). That report was subject to a peer review by third party consultants appointed by Dundalk Town Council (Scott Wilson, February 2008).
- There is traffic congestion in and around Dundalk with associated parking problems and implications for road infrastructure. This may be having an effect on quality of life for some residents. However, with the opening of the Dundalk Bypass, and other recent upgrades in the vicinity of the Plan lands, a significant reduction in traffic congestion has been realised.
- there is thought to be pressure on amenities due to the growth of the town.

5.4 Evolution of the Environment Without the Implementation of the Local Area Plan.

If the Plan lands were not developed as envisaged by the LAP, the c84.34ha site would continue to be farmed, with the likely implication that its value, such as it is, for habitats, species and landscape would remain largely unchanged.

Dundalk would continue to experience housing demand, leading to the need to develop sites for housing elsewhere, in and around the town. Without more information as to the nature and location of such new clusters of development, it is not possible to be specific about the likely effects on the environment, although inevitably there would be a range of negative and positive impacts.

Any as yet unknown archaeological interests would remain undisturbed. Similarly, there would be no implications for the natural or cultural resources of Dundalk and environs.

Traffic congestion and associated vehicle emissions in the town and environs might continue to grow as Dundalk grows economically and in terms of population size. However, such effects might be avoided or mitigated by the use of more sustainable modes of transportation and technology driven improvements.

Water quality of the plan area and town should remain good providing any new developments comply with standards and recognise constraints and issues concerning surface water treatment, foul drainage and provision of adequate and water supply. Localised flooding events on land to the north of the Plan lands might continue to occur intermittently if no intervening measures were put in place to reduce the risk.

Beyond Dundalk and its environs, the environment of the county is unlikely to be affected if the lands are not developed as envisaged by the LAP.

The scenario described above is, in effect, the ‘do-nothing’ alternative that this Report is required to identify and compare against other alternatives for the Plan lands.

6.0 BIODIVERSITY (FLORA AND FAUNA)

6.1 Introduction

The definition of biodiversity adopted by the United Nations Convention on Biological Diversity is "the variability among living organisms from all sources, including, 'inter alia', terrestrial, marine and other aquatic ecosystems, and the ecological complexes of which they are part: this includes diversity within species, between species and of ecosystems". Ireland is a signatory to this convention and it is as a result of this that Ireland's National Biodiversity Plan has been drawn up.

6.2 Environmental Protection Objectives

- Conserve and promote diversity of habitats and species where possible
- Avoid significant adverse effects on the integrity of nature conservation sites of European importance.

6.3 Baseline

No mammals were observed on the lands, although some evidence of their presence was noted (e.g. stoat burrows, otter scats, badger setts), and the presence of other species (e.g. birds and bats) can be predicted on the basis of the habitats available (e.g. trees, hedgerows and watercourses).

There are some 275 mature trees in total, including 192 in the vicinity of the former farmstead/on Blackrock Road. These are mainly beech, pine, birch, ash, sycamore, oak apple, and willow. Hedgerows also delineate some of the field margins. These habitats provide cover and foraging for mammals and birds.

The lands are located directly adjacent to Dundalk Bay, which is internationally important for overwintering waterfowl. It is designated as a Natural Heritage Area (NHA), Special Protection Area (SPA) and a candidate Special Area of Conservation (cSAC) (Site Code 000455). A waterfowl roost is located directly to the east and south of the site within the bay.

6.4 Change under the Do Nothing Scenario

The habitats and species on the plan lands and adjacent to them would remain unaffected.

6.5 Likely Significant Effects on the Environment

6.5.1 Overview

The development of the plan lands for residential and recreational uses will necessitate the permanent loss of some 84ha of fields and an unknown proportion of the trees and hedgerows that surround them. The streams, ditches and watercourses traversing the lands will be retained where possible. The ecological value of this land is generally low, being typical of farmland in the area, and hence the loss is relatively insignificant. Impacts on the SPA are discussed below under 6.5.2.3.

The habitat and species losses, such as they are, will be offset to some extent by Plan objectives and policies intended to create appropriately landscaped areas of open space on the residential zoned land (e.g. on 10% of the gross residential zoned area, consistent with the Dundalk & Environs Development Plan 2003, policy HC20).

6.5.2 Consideration of Alternatives

6.5.2.1 Housing Density

Alternatives for the density of residential development will make a slight, if any, difference to the impacts described above.

6.5.2.2 Civic and Commercial Elements

The inclusion of civic and commercial elements within residential areas will make no significant difference to the impacts described above.

6.5.2.3 Coastal Walkway

Biosphere Environmental Services assessed various options for the position of the coastal walkway – including a circular walkway within the plan lands. The alternatives are described in 3.4.1 above. An addendum report considered the effects of constructing the walkway. (Reports dated June and October 2007 refer.)

The report concluded that subject to mitigation measures to minimise disturbance caused by people and dogs, a walkway along the embankment would be feasible without adverse impacts on waterbirds in the SPA. The recommended mitigation measures are described below under 6.5.3. The report also concluded that there would be no adverse impacts arising from a walkway lying adjacent to the eastern edge of the area zoned for residential development. No adverse impacts were anticipated regarding construction of the walkway subject to mitigation measures.

Similarly, an assessment of the potential impacts on the flora and fauna of the embankment was undertaken by Tobin Consulting Engineers. This report concluded that, as there are no rare or protected species of flora or fauna on the embankment, alternative routes for the proposed coastal walkway would have either no impacts or very minor (albeit permanent) impacts on the embankment. However, it did highlight the potential for indirect effects on the cSAC if there was unrestricted public and vehicular access to the salt marsh and mudflats. A number of mitigation measures, notably fencing with suitable materials, were recommended in order to prevent such access occurring. The recommended measures are described in 6.5.3 below.

6.5.2.4 Flood Prevention

In terms of alternative flood prevention measures, consultants considered three alternatives. None of these will have significant adverse impacts on the flora and fauna of the embankment itself or the Plan lands. However, construction of the preferred alternative will require mitigating measures to avoid disturbance to birds on the adjoining designated SPA site and flora within the cSAC (see below).

6.5.3 Measures to Prevent, Offset and Reduce Any Adverse Effects

A range of measures will reduce, reduce and offset adverse impacts on the biodiversity of the plan lands and adjacent areas. Some measures are already expressed/illustrated in the Local Area Plan, such as the requirement for landscaping with indigenous species, whereas others can only be determined through the preparation of an Environmental Impact Statement at the detailed design stage and controlled through the development control mechanism. Measures identified as a result of the Plan preparation and SEA process are listed below:

Depending on further study at the detailed design stage, the mitigation measures for a section of walkway within

the Plan lands include:

- the construction of the walkway at the base of the landward side of the embankment, or at least stepped down from the crest of the embankment at 1.25 (Option 3A) or 1.8 m (Option 3B) variants, at the identified sensitive roost locations.
- construction of physical barriers (including sheep wire) at or near the base of the seaward side of the embankment in the vicinity of the southern bird roost to restrain people and dogs from walking onto the salt marsh, and *possibly* a water barrier on the landward side of the embankment in the vicinity of the southern bird roost to further discourage public access.
- the erection of formal/legal signage to inform the public about the importance and sensitivity of the adjoining SPA, SAC and pNHA.
- the erection of educational and interpretative panels explaining the importance of the adjoining SPA, SAC and pNHA.
- restrictions on working/construction practices and periods to avoid adverse impacts on birds as a result of works to raise the height of the embankment.

Mitigation measures to minimise adverse impacts on the embankment, cSAC and biodiversity of the lands include:

- Any scrub or vegetation removal should be carried out in the period September to February, i.e. outside of the bird-breeding season. (All birds and their nests are protected under the Irish Wildlife Acts)
- A pre-construction survey should be to ensure that no active badger setts have become established on the embankment or elsewhere on the lands.
- Provision of fencing to prevent public access onto the salt marsh habitats of the SAC. Vehicle access, including motorbikes, should also be prevented by providing appropriate fencing and gate measures at any points that provide access onto the walkway.
- Planting throughout the lands should be undertaken with indigenous species to provide habitat for species, such as bats
- Avoidance of culverting watercourses wherever possible and enhancement for nature conservation/aesthetic purposes

6.5.4 Monitoring

The National Parks and Wildlife Service will monitor the integrity of Dundalk Bay SPA, cSAC and pNHA during construction works and after the development is occupied. Any adverse effects on the SPA or cSAC will necessitate the alteration or expansion of mitigation measures recommended by the ornithological assessment.

6.5.5 Biodiversity Summary:

While the effects of implementing the Plan will inevitably mean some losses to biodiversity from the lands, new habitat creation will occur, and since the flora and fauna on the lands are not of special value, on balance the effects of the Plan on these particular areas are not considered to be significant and adverse. Regarding the likely effects on the adjacent SPA and cSAC, an initial assessment has confirmed that it should be possible to construct a coastal walkway through the lands without adverse impacts on these sites, subject to further study regarding mitigation measures at the detailed design stage. Working/operational practices will also need to be

designed to ensure that there are no significant adverse impacts on birds. Overall, therefore, the Plan is deemed to be broadly consistent with identified environmental protection objectives.

7.0 SOILS

7.1 Introduction

This section considers the impacts for soils. The mapping of data on soils and related information to inform environmental decision making is the responsibility of Teagasc.

Environmental Protection Objectives

- Maintain quality of soils.

7.2 Baseline

The Subsoil Map produced by Teagasc for the area illustrates that approximately 90% of the Plan lands are classed as marine sands and gravels with the remaining 10% located near Rockview Farm classed as sandstone and shale till (i.e. clay). Environmental testing of soil samples taken as part of the environmental baseline study for the lands showed that no organochlorine pesticides were detected within the soil and background (i.e. normal) levels of heavy metals were present within the soil on site. As such the soil can be classed as a greenfield site.

7.3 Change under the Do Nothing Scenario

There is unlikely to be any significant change to the characteristics of the soils described above.

7.4 Likely Significant Effects on the Environment

7.4.1 Overview

The development of the lands implies the removal of topsoil, both from areas designated for residential development and from the Strategic Recreational Area. The loss of these soils is not considered significant because of their relative lack of value in agricultural terms.

7.4.2 Consideration of Alternatives

7.4.2.1 Housing Density

Alternative densities of development will make no significant difference to the effects described above, since site works will, realistically, affect the entire land area.

7.4.2.2 Civic and Commercial Elements

As above.

7.4.2.3 Coastal Walkway

Alternative routes for the coastal walkway will have no significant effects on soils.

7.4.2.4 Flood Prevention

Measures to prevent flooding will be of potential benefit to the soils that are replaced on the lands by ensuring that high tides coupled with storms cannot flood the lands and cause soil erosion.

7.5 Measures to Prevent, Offset and Reduce Any Adverse Effects

In view of the value of free draining soils, the developers should be encouraged to store the removed soils and re-use these for the creation of open spaces and the Strategic Recreational Area.

7.6 Monitoring

No monitoring necessary.

7.7 Soil Summary

On balance, the effects on soils are neutral, since soils removed from the lands are not of premium value and can potentially be stored and reused, or used on other developments.

8.0 TRAVEL AND TRANSPORT

8.1 Introduction

This section considers the impacts of the Plan on road network in the vicinity of the Plan lands and the implications for travel modes and patterns.

Environmental Protection Objectives

- Facilitate provision of public transport and promote usage
- Reduce the need for use of the private car
- Reduce non-essential trips by private car
- Increase / promote cycling and walking.

8.2 Baseline

The R172, Blackrock Road forms the western boundary to the lands with Finnabair Industrial Park and the residential area of Kingswood is located just beyond. A number of residential properties take direct and indirect access off the Blackrock Road. The road is well used and is reasonable in terms of its condition. There is a bus route between Dundalk and Blackrock.

8.3 Change under the Do Nothing Scenario

Traffic volumes on the Blackrock road may increase in coming years as the town of Dundalk grows and even if the Plan lands are not developed. However, the road system in the vicinity of the plan lands has recently been upgraded to include 2 links from the Blackrock road to the Inner Relief Road, and construction of the Redbarns Road has recently commenced. These improvements will accommodate any growth in traffic volumes over the coming years.

8.4 Likely Significant Effects on the Environment

8.4.1 Overview

The development of the plan lands implies the introduction of new traffic to Rock Road, both during the construction phase when heavy lorries can be expected to access the lands, and from the time of occupation. (Some indicative movement figures arising from the different density scenarios are provided under 8.4.2.1.) While recent upgrades (described above) can be expected to broadly manage this increase, a Traffic Impact Assessment would still be required to fully assess the scale of impacts and propose additional measures as necessary.

To manage traffic and any adverse effects on the environment, the Plan proposes three access/egress points that will reduce queuing to exit or enter the lands. The Plan is also designed to link up with a new roundabout opposite the Finnabair Industrial Estate, which will facilitate both traffic leaving the industrial estate and the plan lands. In order to reduce traffic volume further, the plan proposes bus routes, cycle lanes and safe pedestrian routes that will encourage people to leave cars at home.

8.4.2 Consideration of Alternatives

8.4.2.1 Housing Density

The following table sets out the indicative figures for vehicle movements at peak hours that would be generated by the three difference density scenarios:

Density of Development	Average dwelling yield on 41.40ha	Vehicle Movements at peak hours based on 0.8 movements per household
High	2623	2098
Medium	1718	1374
Low	973	778

8.4.2.2 Civic and Commercial elements

A large area of civic and commercial uses could become a significant attraction for car borne shoppers residing elsewhere, which could give rise to some congestion and parking issues. A smaller area might not be able to meet the basic needs of the community, obliging residents to travel elsewhere to gain access to shops, services and facilities. The plan therefore proposes civic and commercial uses on approximately 3.99ha of the plan lands in order to serve the basic needs of, primarily, the new community. This is a relatively modest development and for this reason it is unlikely to add significantly to traffic movements since most residents will be within 5 minutes walking distance of facilities.

8.4.2.3 Coastal Walkway

No significant impacts predicted.

8.4.2.4 Flood Prevention

No significant impacts predicted.

8.5 Measures to Prevent, Offset and Reduce Any Adverse Effects

The Council is in the process of implementing policies IN4 (concerning facilitations of infrastructure improvements in accordance with the Local Transport Strategy) which will support development of the plan lands and ensure safe and efficient traffic movements. The findings of a Traffic Impact Assessment and Environmental Impact Assessment will be relevant to further defining any potential impacts and proposing solutions.

8.6 Monitoring

Monitoring of traffic problems is a normal function of the Council’s Road Engineering Department and no new

monitoring measures are envisaged as being necessary.

8.7 Travel and Transport Summary

Increased traffic in the immediate vicinity of the Plan lands can be expected as a result of the development. However, improvements to the road network in the vicinity of the Plan lands (links to the Inner Relief Road from the Blackrock Road and upgrading of the Red Barns Road) are expected to largely accommodate increased vehicle movements in coming years. Nevertheless, a Traffic Impact Assessment will be required at the detailed stage to fully evaluate impacts and propose any additional improvements. Proposals in the Plan itself will encourage walking, cycling and use of public transport in order to reach workplaces, shops, services and facilities, thereby discouraging car use. On balance, therefore, it is considered that growth in traffic generated by the development of the lands can be managed and accommodated, subject to a Traffic Impact Assessment and Environmental Impact Assessment. The Plan is therefore broadly consistent with the identified environmental protective objectives.

9.0 AIR QUALITY

9.1 Introduction

This section considers the implications for air quality on the Plan lands and in the wider area of Dundalk. In general, Ireland does not have serious air quality problems, largely due to the cessation of coal burning in the ‘80s and ‘90s, according to the Environmental Protection Agency (EPA). The EPA also states that the biggest threat to air quality is from road traffic. Suites of EU Directives require monitoring, assessment and management of air quality.

Environmental Protection Objectives

- Minimise levels of pollutants such as CO2, SO2, NO2, O2, PM10, Pb, Benzene, etc (Target: maintain/improve air quality within Air Quality Index bands: Very Good, Good, and Fair, Air Quality Standards Regulations 2002):

9.2 Baseline

An analysis of air quality within the Plan lands has shown that concentrations of nitrogen dioxide, carbon monoxide, benzene, inhalable particulate (PM10), Total dust deposition and hydrogen sulphide are currently below significance criteria. Studies carried out by the EPA in the environs of Dundalk also indicate a Good quality of ambient air, with low levels of emissions from traffic emissions and industrial sources.

9.3 Change under the Do Nothing Scenario

In the absence of development local levels of emissions are likely to remain low. Elsewhere (in the town of Dundalk and environs) it is hard to predict whether levels will remain at low or increase with rising traffic volumes. What is unknown is the extent to which traffic volumes will increase, and whether legislation-driven technical improvements and increased use of public transport will offset any increase.

9.4 Likely Significant Effects on the Environment

9.4.1 Overview

In general terms, any effects on air quality are most likely to arise from vehicle movements since the lands uses themselves (housing and recreational) will not give rise to any significant emissions. However, the layout of uses,

design of the road network and incorporation of bus routes, footpaths and cycleways is intended to reduce use of the private car and vehicle movements, and to ensure that there is minimal congestion either within the plan lands or around the egress/access points. As such, no significant adverse impacts on air quality in and around the Plan lands are predicted.

9.4.2 Consideration of Alternatives

9.4.2.1 Housing Density

Regardless of the density of development, the proposed road layout will ensure smooth patterns of vehicle movement, avoiding queuing and congestion, either within the lands or at the access/egress points on Blackrock Road. It also includes provision for a bus route, footpaths and cycle lanes.

9.4.2.2 Civic and Commercial Elements

An element of civic and commercial development will not have any significant adverse effects on air quality.

9.4.2.3 Coastal Walkway

No anticipated effects on air quality from any alternative.

9.4.2.4 Flood Prevention

No anticipated effects on air quality from any alternative.

9.5 Measures to Prevent, Offset and Reduce Any Adverse Effects

A traffic impact Assessment and Environmental Impact Assessment will be required to accompany any proposals and this will have an important role in further defining any potential impacts and proposing solutions.

9.6 Monitoring

The EPA and local authorities will continue to measure air quality at specified air monitoring points in the vicinity of the lands and to report on the same periodically.

9.7 Air Quality Summary

Although development will introduce emissions to the air within the Plan lands primarily as a result of vehicle movements, it is not anticipated that there will be any significant adverse impacts on local air quality because the layout of uses, design of the road network and incorporation of bus routes, footpaths and cycleways is intended to reduce use of the private car and vehicle movements, and to ensure that there is minimal congestion either within the plan lands or around the egress/access points. The Plan is therefore broadly consistent with the identified environmental protection objectives.

10.0 WATER AND FLOOD MANAGEMENT

10.1 Introduction

This section considers likely implications arising from implementation of the plan for **water supply, foul water disposal, surface water management and flooding**. The overarching framework for national, regional and local policies on water and flooding is provided by European legislation, notably the Directive (80/778EEC) and associated Irish Regulations concerning drinking water quality, and the EU Water Framework Directive (2000/60/EC) and associated Regulations, which provide for the protection, improvement and sustainable use of

water across Europe. This Directive aims to enhance the status and prevent deterioration of aquatic ecosystems and associated wetlands, to achieve the requirement of all inland and coastal waters to achieve ‘good status’ by 2015. It is also an objective to promote the sustainable use of water, reduce pollution, and lessen floods and droughts.

10.2 Water Supply

Environmental Protection Objectives

- Maintain drinking water quality
- Protect and enhance the status of water systems
- Promote sustainable water use, avoiding drought by over consumption of water

10.2.1 Baseline

The urban area of Dundalk receives its water supply from the Cavan Hill Facility at Knockbridge in Co. Louth. At the plant, the raw water from the river is settled, filtered and disinfected before being fed into the town’s distribution system. Over 27,000 cubic meters of water are available daily from this facility. Dundalk currently uses 18Mld of a headworks capacity of 27Mld. DTC also has water abstraction rights for up to 36Mld so future constraints are unlikely as there is a facility to upgrade Cavan Hill when required. In the period 2000-2002, the water was described by the Environmental Protection Agency as “good”. Regarding microbiological parameters, its quality was described as “excellent”.

10.2.2 Change under the Do Nothing Scenario

The supply of water is currently ample. Quality of supply should remain constant.

10.2.3 Likely Significant Effects on the Environment

10.2.3.1 Overview

The new development will obtain its water from the Cavan Hill facility and there will be no adverse impact on this supply, regardless of the density of development – see discussion below on housing density alternatives.

10.2.3.2 Consideration of Alternatives

- Housing Density

The effects on water supply (Based on 200l/hd/day, EPA Loading Data Sheet) arising from the different population scenarios (discussed in section 3.2) are shown below:

Density of Development (developing all lands at stated density)	Average Dwelling Yield on 41.40ha	Average population based on occupancy of 3.05 per household	Water usage (M3/day)	Effect on Cavan Hill Facility)
High	2623	8000	1600	Within capacity
Medium	1718	5240	1048	Within capacity
Low	973	2968	594	Within capacity

- **Civic and Commercial Elements**

Figures used to calculate water usage for residential uses include an element of civic and commercial uses and such uses are therefore reflected in the Table above.

- **Coastal Walkway**

No effects on water abstraction.

- **Flood prevention**

No impacts on water abstraction.

10.2.4 Measures to Prevent, Offset and Reduce Any Adverse Effects

Water supply in the long term must be conserved, especially in view of changing weather patterns which may result in periods of drought, with adverse impacts on water tables/aquifers and the wider environment. Development control and building regulations should therefore ensure that developers/house builders fit new homes with water saving devices and fittings.

10.2.5 Monitoring

The Local Authority will monitor water usage by water metering on housing estates.

10.2.6 Water Supply Summary:

An adequate water supply is available from a suitable source, and there will be no significant adverse impacts upon this source arising from the development at medium density, as proposed by the Plan. The Plan is therefore consistent with the identified environmental protection objectives. However, in view of the potential effects of climate change, appropriate water conservation measures must be designed into new homes in order to reduce water consumption.

10.3 Foul Water Disposal

Environmental Protection Objectives

- Avoid pollution of water systems

10.3.1 Baseline

A new sewerage treatment plant was completed and commissioned at Soldier’s Point in 2001. It is currently providing the town with a modern efficient treatment facility. It was designed for a Phase 1 capacity of 10772 kg/d BOD, and a DWF of 18088 cu.m/d.³ Allowing for current demands on capacity there is a Phase 1 spare capacity (as built) of 978kg/d BOD or 16,000pe.

10.3.2 Change under the Do Nothing Scenario

The capacity at the treatment plant is currently ample, although with other developments occurring the spare capacity will inevitably decrease.

³ DWF signifies Dry Weather Flow

10.3.3 Likely Significant Effects on the Environment

10.3.3.1 Overview

The new development will discharge foul water to the sewerage treatment plant at Soldier’s Point and there will be no adverse impact on this facility, regardless of the density of development – see discussion below on alternatives.

10.3.3.2 Consideration of Alternatives

- **Housing Density**

The effects on the Waste Water Treatment Plant at Soldier’s Point (Based on 200l/hd/day, EPA Loading Data Sheet) and arising from the different population scenarios (see 3.2 above) are shown below:

Density of Development	Average dwelling yield on 41.40ha	Population, based on occupancy of 3.05 persons per household	Output from development (m3/day)	Effect on Waste Water Treatment Plant
High	2623	8000	1600	Within capacity
Medium	1718	5240	1048	Within capacity
Low	973	2968	594	Within capacity

- **Civic and Commercial Elements**

Figures used to calculate foul water outputs for residential uses include civic and commercial uses and they are therefore reflected in the Table above.

- **Coastal Walkway**

No impacts on capacity.

- **Flood prevention**

No impacts on capacity.

10.3.4 Measures to Prevent, Offset and Reduce Any Adverse Effects

No significant adverse impacts upon the treatment plant’s capacity are predicted and therefore no measures are required.

10.3.5 Monitoring

The Local Authority will monitor operation and maintenance of the relevant infrastructure.

10.3.6 Foul Water Summary

Adequate capacity is available at the Soldier’s Point Waste Water Treatment Plant, and there will be no significant adverse impacts upon this resource as a result of developing at medium density as proposed by the

Plan. *The Plan is therefore consistent with the identified environmental protection objectives.*

10.4 Surface Water

Environmental Protection Objectives

- Avoid pollution of water systems
- Maintain function of drainage system

10.4.1 Baseline

The lands are reasonably well drained having brown, organic, sandy-silty topsoil overlying dark grey sand subsoil. The drainage system comprises (i) a long back drain running parallel and inside the coastal defence embankment, (ii) a number of lateral drains that feed into the collector drain, running west to east and (iii) a number of local field boundary drains that feed into these lateral drains. A number of the collector drains running west to east commence upstream of the site providing drainage relief to approximately 100ha of land west of the public road (including the Finnabair Retail Park on the inner Relief Road). The back drain system collects runoff and baseflow waters from the lands and from the upstream contributing catchment area (west of the Blackrock Road). It discharges these waters to the Dundalk tidal marshes via an outfall beneath the flood embankment, which is located mid-way along the Plan land's eastern boundary. This outfall is fitted with Tideflex valves to prevent backflow from the sea at times of high tide.

Surface water quality samples were collected on the western side of Blackrock Road at the 2 main land drains flowing from east to west through the site and one down gradient, at the outfall. All results were below their respective Parametric Values (and Human Consumption MAC values where no Parametric Values were available) with the exception of the total coliform and faecal coliform results for all surface water samples. The low levels of ammonia, nitrate and nitrite in conjunction with the presence of coliforms suggest that the surface water flowing through the site is slightly contaminated by a nitrogen-rich type pollutant such as agricultural fertiliser or slurry. It is possible that this contamination could have taken place within a rural area to the west and hydraulically up gradient of the site.

10.4.2 Change under the Do Nothing Scenario

The drainage of the lands and the areas lying beyond should continue functioning as it does now, assuming that drainage ditches are properly maintained. The quality of water in the ditches may remain the same, decline or improve, depending on the incidence of polluting events upstream.

10.4.3 Likely Significant Effects on the Environment

10.4.3.1 Overview

Surface water run-off patterns will change as a result of the replacement of fields with hard surfacing and roofs, placing extra demands on the drainage ditches traversing the lands, especially during periods of heavy rainfall. The quality of water in the run-off can also be expected to contain a range of contaminants, such as petroleum chemicals. However, measures proposed by the plan will ensure that these waters will be maintained at pre-development levels (see 10.4.4).

10.4.3.2 Consideration of Alternatives

- **Housing Density**

Alternatives for the density of development may make some small differences to the volume and patterns of run-off. However, these will be managed by the proposed mitigation measures.

- **Civic and Commercial Elements**

The inclusion of civic and commercial uses will make no difference to the impacts described above.

- **Coastal Walkway**

No impacts predicted

- **Flood Prevention**

Maintaining the proper function of, and quality of water within, the drainage ditches of the Plan lands was a design consideration in each of the options considered for flood prevention, and as such none of them would have a significant adverse impact on the system. While the preferred alternative involves raising ground levels, it is nonetheless consistent with the objectives of maintaining water quality in the drains and maintaining their function.

10.4.4 Measures to Prevent, Offset and Reduce Any Adverse Effects:

Mitigation measures proposed by the plan to manage run-off include the fitting of petrol interceptors and the creation of an attenuation area within the Strategic Recreational Area. The development control stage must also ensure that proposals include Sustainable Urban Drainage Systems (SUDS). An Environmental Impact Assessment will be required to accompany any proposals and this will have an important role in further defining any potential impacts and proposing solutions.

10.4.5 Monitoring

The Local Authority will monitor operation and maintenance of the relevant infrastructure.

10.4.6 Surface Water Summary

Development on the lands will give rise to changed patterns and volumes of run-off reaching the existing drainage system. However, contaminants in the run-off will be intercepted by petrol receptors to ensure that the quality of discharge is maintained at pre-development levels. An attenuation area within the SRA will also assist in maintaining discharge to pre-development levels, as will the incorporation of SUDS in development proposals. The Plan is therefore broadly consistent with the identified environmental protection objectives.

10.5 Flood Prevention

Environmental Protection Objectives

- Reduce flood risk.

10.5.1 Baseline

The Plan lands are protected from the sea by coastal defences comprising earthen embankments/ramparts with a variable crest height that is, on average, 3.8m ODM and 4.1m ODM. This embankment extends along the full length of the lands' eastern boundary and northwards towards the Blackwater River, south of Soldiers Point. Consequently, the embankment affords protection to the lands' eastern and northern boundaries.

The embankment on the Plan area's southern boundary terminates at its intersection with the Blackrock Road. The Blackrock Road at this location is relatively low-lying at 2.9 to 3.0m ODM and periodically floods as a result of high tides combined with storm surges. The area's west boundary, where it adjoins the Blackrock Road, is unprotected over its 1100m length except for the height of the road itself, which varies between 2.9 and 3.2m ODM. The highest tide in the area occurred on the 1st February 2002 and anecdotal evidence places that level for Dundalk at between 3.36 and 3.65mODM which exceeds these road levels.

10.5.2 Change under the Do Nothing Scenario

While climate change is expected to exacerbate problems for low lying lands in the future, it is still possible that an extreme event could flood the Plan lands in the near future, notwithstanding that there was a flood event in 2002 and the return period is 100 years. Flooding could also occur with a less extreme event if the condition of the embankment continues to deteriorate. Therefore, if nothing is changed, the Plan lands are at some risk of flooding.

Properties along Blackrock Road are at risk now, due to the level of the road at the southern extremity of the Plan lands. The risk for these properties, which currently have no good protection, the risk will increase due to climate change.

10.5.3 Likely Effects on the Environment

10.5.3.1 Overview

The intention of incorporating flood management measures into the Plan is to reduce flood risk and therefore the intended effects are entirely positive for future residents, their homes and infrastructure.

10.5.3.2 Consideration of Alternatives

○ Housing Density

Developing at alternative densities would have no impacts on management of flood risk.

○ Civic and Commercial Elements

Incorporating an element of civic and commercial uses would have no impacts on management of flood risk.

○ Coastal Walkway

The development of a coastal walkway has no implications for flood management. Conversely, however, the improvement of the embankment allows for the development of a safe, coastal walkway.

○ Flood prevention

Three options for flood risk management were considered, with the conclusion that the provision of Embankment 2 within the recommended Option 2 (see 3.5.2 above) provided the most robust flood defence structure for the Plan

lands and also the best foundation for the provision of the proposed coastal walk. However, Option 2 will not reduce the risk for properties on Blackrock Road because no embankment along the road is planned.

10.5.4 Measures to Prevent, Offset and Reduce Any Adverse Effects

None envisaged as being necessary.

10.5.5 Monitoring

The Local Authority and Department of Communications, Marine and Natural Resources will monitor performance of the embankment.

10.5.6 Flood Prevention Summary

The intended effects of flood prevention measures are entirely positive for the protection of future residents, their homes and infrastructure. The Plan is therefore consistent with the identified environmental protection objective.

11.0. NATURAL RESOURCES

11.1 Introduction

This section considers effects on the use of natural resources including, for the purposes of this report, energy (home heating/power and fossil fuels) and aggregates (sand, gravel and rock). A wide range of legislative and policy instruments at both European and national levels govern this wide-ranging and complex subject. Broadly, the thrust of these is aimed at combating climate change and reducing use of non-renewable natural resources.

Environmental Protection Objectives

- Reduce consumption of fossil fuels;
- Facilitate reuse/recycling of materials;
- Minimize consumption of non-renewable natural resources, such as sand, gravel and rock deposits;
- Reduce heat loss from buildings;
- Reduce energy input to construction/development; and
- Increase direct solar gain.

11.2 Baseline

Not applicable.

11.3 Change under the Do Nothing Scenario

Not applicable.

11.4 Likely Significant Effects on the Environment

11.4.1 Overview

Construction of roads and homes inevitably requires the use of aggregates and consumption of energy. Similarly, the occupation of housing inevitably implies energy use and consumption of other materials. These effects, and the consequent impacts on the wider environment, will occur wherever housing is built and cannot be avoided. However, the scale and significance of these effects can be reduced to some degree by a range of measures. For example, as a result of the SEA process and the identification of high energy consumption by housing, the Plan was

amended to include policies encouraging housing to be orientated for maximum solar gain, thereby reducing the need for home heating, and planting to create micro-environments around houses and thereby reduce heat loss. Similarly, recycling of household materials is to be encouraged by the provision of a Bring Centre within the Civic and Commercial Area.

11.4.2 Consideration of Alternatives

11.4.2.1 Housing Density

Arguably, building at higher densities is a more efficient use of energy and aggregates, and therefore medium density - including a mix of detached, semi-detached, terraced and apartment dwellings - offers a good compromise, bearing in mind the implications arising from higher densities for other aspects of the environment, such as residential amenity.

11.4.2.2 Civic and Commercial Elements

No significant effects anticipated.

11.4.2.3 Coastal Walkway

No significant effects anticipated.

11.4.2.4 Flood Prevention

Any of the three options considered for flood prevention would have positive effects, in that they are intended to safeguard natural resources within the proposed development. However, the preferred alternative (see 3.5) offered the most robust solution.

11.5 Measures to Prevent, Offset and Reduce Any Adverse Effects

The Plan encourages orientation for maximum solar gain and a bring centre and it is essential that these and other measures to reduce home energy requirements are secured through development control. Ideally, developers should be encouraged to source recycled aggregates locally. An Environmental Impact Assessment will be required to accompany any proposals and this will have an important role in further defining any potential impacts and proposing solutions.

11.6 Monitoring

Monitoring of home energy use will be achieved indirectly through the implementation of EU Directive on the Energy Performance of Buildings (EPBD) and the requirement for all buildings to have a Building Energy Rating. The local authority will monitor levels of household recycling by liaising with the companies responsible for collecting from Bring Centres.

11.7 Natural Resources Summary

Construction of roads and homes, and their occupation, inevitably requires the use of aggregates, energy and other materials. These effects, and the consequent impacts on the wider environment, will occur wherever housing is built and cannot be avoided. However, the Plan incorporates policies that will reduce the scale and significance of these effects to some degree. Equally, flood prevention measures will safeguard natural resources used within the new development. The Plan is therefore broadly consistent with the identified environmental protection objectives.

12.0 LANDSCAPE

12.1 Introduction

This section considers impacts on the landscape.

Environmental Protection Objectives

- Minimize landscape and visual impacts.
- Protect scenic views
- Retain existing green features where possible.

12.2 Baseline

Land use in the general area particularly to the east of the Red Barns Road and Blackrock Road is largely agricultural, with increasing residential, commercial and industrial development and amenity use to the west, north and south of the site. The lands are generally flat with ground levels ranging from a high point of 3.19m (Malin Head OD) on the northwestern corner of the site to 1.5m AOD at the southeastern boundary of the site. The topography of the land slopes from a northwest to southeast direction. The lands are bounded on their eastern side by a coastal protection barrier 4.2m ODM metres at its highest points, and extending along the full length of the lands and beyond. This effectively separates the lands from the salt marsh. In terms of landscape features, there are no built structures, but there are trees and hedgerows surrounding the former footprint of the Rockview farmhouse and fields (see description under Biodiversity, above). The Dundalk and Environs Development Plan 2009-2015 identifies 2 views in the vicinity of the Plan lands that are to be protected - V8 and V10 (chapter 8, Table 8.1, Map 2). V8 lies north of the northern boundary of the Plan lands and looks inwards and outwards towards Dundalk Bay, while V10 is at Blackrock and looks north towards the Cooley mountains and outwards towards Dundalk Bay.

The Cooley Mountains to the north and northwest of the lands provide the most significant landscape features in terms of a point of reference and orientation. Residential areas in Blackrock and residences to the west of the site currently enjoy a clear and uninterrupted view of the mountains.

12.3 Change under the Do Nothing Scenario

The landscape described above is unlikely to change at all if the lands are not developed, although the condition of Rockview Farm House is likely to deteriorate further.

12.4 Likely Significant Effects on the Environment

12.4.1 Overview

The character of the lands will change permanently from an agricultural landscape on the edge of a suburban area, to a suburban landscape, and views of the Cooley Mountains from the existing residential areas on the west of the Blackrock Road will be restricted to some extent by the proposed development. However, these views are *not* protected views.

Regarding Protected View V10 (at Blackrock), this looks north to the Cooley Mountains across the eastern border of the Plan lands. Since all of the residential and civic/commercial development is set back from the coast by some 200 metres west of the embankment, this view will not be obstructed by any development

A temporary adverse visual impact will inevitably arise during the construction of the development, associated with the presence of assorted site huts, fencing, hoardings and construction cranes. This is unavoidable.

The development creation of an attractive, high quality development set in significant areas of well landscaped open space can be regarded as a significant positive impact.

12.4.2 Consideration of Alternatives

12.4.2.1 Housing Density

The density of development will make a difference of the character of lands. High density implies high plot ratios and/or high buildings with potentially adverse implications for visual amenity. Lower densities allow for a more open development, permitting views through the lands to the sea beyond and allowing larger areas of private and semi-private open space, which potentially add greenery to the development. However, the low-density option is not an efficient use of land, services and infrastructure. On balance, therefore, the medium density option offers the best compromise taking into account other effects discussed in this report.

12.4.2.2 Civic and Commercial Elements

The civic and commercial element, which is to be located on the footprint of the now demolished Rockview Farm (which lay adjacent to Blackrock Road) is a significant positive impact, as it will provide for well-designed and attractive public buildings, forming a focus for the development and creating a sense of place.

12.4.2.3 Coastal Walkway

All three options for the position of the coastal walkway on the embankment will facilitate views of the Strategic Recreational Area and, with mitigation concerning disturbance to birds, two options may also allow some limited views of the foreshore and sea. The creation of a coastal walkway is therefore regarded as being a positive impact in terms of facilitating views of the landscape.

12.4.2.4 Flood Prevention

- Option 1 – raises the embankment crest to 6.75mODM and armours the front face, and provides return embankments to secure the site at the north and southern boundaries and along Blackrock Road to the Village. Visual impacts associated with this option would be minimised by use of appropriate mitigating measures including choice of materials and colours for the embankment.
- Option 2 – raises the embankment crest to 6.0mODM, with armouring to the front, crest and rear slope, raises the development lands to 4.25mODM – 4.41,ODM in residential areas and 3.5mODM in amenity areas, and provides return embankments for the amenity lands at the north and south boundaries. These impacts can be minimised by appropriate mitigating measures including graduation of lands adjoining Blackrock Road, design of vistas, tree planting on Blackrock Road and choice of materials and colours for the embankment.
- Option 3 – raises the embankment crest to 5.0mODM, with armouring to the front, crest and rear slope, provides a secondary embankment to a level of 5.4mODM at the residential and amenity area interface, and provides return embankments at the north and south boundaries and along the Blackrock Road to the

south. Visual impacts associated with this option could be minimised by use of appropriate mitigating measures, including choice of materials and colours for the embankment.

It is acknowledged that the preferred alternative (Option 2), could have potentially negative impacts without appropriate mitigation. This option is preferred because, with mitigation, it offers the most robust solution overall, and achieves the appropriate balance between development of zoned lands, provision of recreational facilities and the need for flood prevention measures.

12.5 Measures to Prevent, Offset, Reduce Significant Adverse Effects

The two proposed green routes, the boulevard, and the Private Right of Way are important components of the Plan that will facilitate views through the lands and offset some of the effects of raising ground levels and developing the lands. Equally, the profile of the lands, where they abut Blackrock Road, should be graded to minimise effects. The design of proposals must ensure a good relationship between proposed new buildings and existing residences. Where possible, proposals should retain mature trees and hedgerows that make a positive contribution to the landscape, while landscaping proposals must include planting with indigenous species to replace losses arising from development. An Environmental Impact Assessment will be required to accompany any proposals and this will have an important role in further defining any potential impacts and proposing solutions.

12.6 Monitoring

None considered necessary.

12.7 Landscape Summary

The landscape will change from being agricultural to developed and there may be some adverse impacts on views of the Cooley Mountains from residences facing Blackrock Road (although these are not protected views). The provision of 2 green routes through the lands should reduce these impacts to some extent. Other mitigation measures to be sought at the design stage include grading of the lands where they abut the Blackrock Road and careful design of new buildings to ensure a positive relationship with existing residences. The introduction of the coastal walkway and the new village centre are regarded as being positive impacts. Unavoidable, short-term adverse impacts are envisaged as construction takes place. As such, there will be a mix of positive and negative impacts on the landscape.

13.0. HUMAN HEALTH & QUALITY OF LIFE

13.1 Introduction

This section considers human health which, for the purposes of this report, concerns adverse effects from noise (any source), and other matters which contribute to or detract from quality of life, including the quality of the built and natural environment, opportunities for active and passive recreation, safety, and access to services and facilities.

Environmental Protection Objectives

- Minimize effects on people of noise
- Create distinctive living environments with a high quality of design
- Ensure community safety

- Ensure physical access to services and facilities within Dundalk
- provide access to quality greenspace for recreation and relaxation
- Ensure access to basic shops, services and facilities

13.1 Baseline

Land use in the area is mainly agricultural and residential. There is some light industry and retail development in areas to the west of the Plan lands, and a Department of Defence Firing Range in the northeast of the lands. The nearest noise sensitive properties are located to the west of the site, including Kingswood housing estate and individual dwellings on the Blackrock Road. At greater distances from the site there are residential dwellings on Shore Road, and housing estates on the lower Avenue Road/Red Barnes Road. A baseline noise survey carried out in 2004 concluded that, in spite of the presence of the Army Firing Range, the noise levels are typical of an urban environment close to a roadway. In terms of quality of life, residents fronting directly onto the Blackrock Road experience some disturbance from traffic. In the immediate vicinity of the Plan lands there is no nearby convenience store for basic provisions and no area of public open space. There is no public access to the Plan lands.

13.2 Change under the Do Nothing Scenario

In the absence of development on the Plan lands, it is anticipated that: -

- noise levels in the area would remain largely unchanged.
- public access to/through the Plan lands would not be created unless the Council were to advance its proposals for a coastal walkway
- residents on Blackrock Road and the Loakers Estate would continue to travel by car to destinations elsewhere to gain access to shops, services and facilities.

13.4 Likely Significant Effects on the Environment

13.4.1 Overview

Construction works inevitably imply some disturbance in the form of noise for the duration of the construction period. However, occupation of the houses will not give rise to any significant adverse impacts on existing dwellings in terms of noise. Thus, while some short to medium term adverse impacts on quality of life can be expected for existing residents, and also for residents occupying the first phases of the development, these are the unavoidable consequences of developing on zoned land in an urban area and are therefore not considered to be significant.

At the same time, the Plan has been designed to provide a good quality of life for its residents and these measures will also have some benefits for existing residents both on the Blackrock Road and further away. For example, the provision of a Strategic Recreational Area is clearly a positive impact for the population of Dundalk as a whole. Similarly, objectives and policies in the Plan will provide for -

- civic and commercial uses to meet basic needs;
- adequate areas of open spaces for active and passive recreation;
- safe and convenient footpaths and cycleways;
- infrastructure to accommodate public transport;
- layouts to ensure passive supervision of footpaths, cycleways and open spaces; and,

- high quality layouts and designs of new buildings.

All of these will ensure a high quality of life for residents of the new community, and also benefit existing residents in the vicinity, and are therefore consistent with the objectives noted above. The effects of the Plan are therefore on balance very positive for human health and quality of life.

13.4.2 Consideration of Alternatives

13.4.2.1 Housing Density

Development at medium density was considered to offer the best compromise, taking into account other effects on the environment, especially in terms of providing adequate levels of private and semi private space around dwellings appropriate to outer suburban lands.

13.4.2.2 Civic and Commercial Elements

The provision of civic and commercial uses was assessed as being essential to quality of life for residents, enabling them to meet basic needs without having to drive elsewhere.

13.4.2.3 Coastal Walkway

The Coastal Walkway, if implemented by the Council, will eventually run through the Plan lands. In the meantime, the Plan proposes to develop a circular walkway within the Strategic Recreational Area that can be linked to the Council's walkway when the occasion arises. The provision of this circular walkway is, in itself, a positive impact, providing opportunities for exercise and enjoyment of the environment. The various options for its position with regard to the embankment little significant difference to this assessment of its benefits.

13.4.2.4 Flood Prevention

All three of the flood prevention options that were considered were intended to safeguard people and their homes from flooding. The preferred alternative – combining ground level increases and an increased height of embankment (see 3.5.2) - was selected because it offered the highest level of protection for people and their homes.

13.5 Measures to Prevent, Offset, Reduce Significant Adverse Effects

A construction management plan, including identification of haulage routes, should be agreed with the Local Authority prior to the commencement of development. An Environmental Impact Assessment will be required to accompany any proposals and this will have an important role in further defining any potential impacts and proposing solutions.

13.6 Monitoring

The Local Authority should monitor the construction of the development and agree appropriate changes to operational practices with developers in the event that significant disturbance to residents is arising.

13.7 Human Health and Quality of Life Summary

Some adverse impacts on quality of life can be expected for existing residents and also for residents occupying early phases of the development as a result of inevitable noise and disturbance during the construction period. However, on balance the Plan will have very positive effects not only for residents of the new housing but also for residents further a-field, notably in terms of the provision of safe cycling and walking routes, the Strategic

Recreational Area and other areas of open space, and the introduction of shops, services and facilities to an area where there are currently none. The Plan is therefore consistent with the identified environmental protection objectives.

14.0 CULTURAL HERITAGE

14.1 Introduction

This section considers potential impacts on architectural and archaeological interests.

Environmental Protection Objectives

- Safeguard important architectural buildings/structures and archaeological remains

14.2 Baseline

Information gathered to inform a baseline report concluded that the only structure on the lands, Rockview Farm House and its outbuildings, which was in ruins, had no architectural merit and as such it has been demolished. However, there is a low mound of archaeological interest in the north west of the Plan lands (termed an Area of Potential Archaeological Interest due to its proximity to Souterrain sites lying on the north of - and outside - the Plan lands).

14.3 Change under the Do Nothing Scenario

Continued agricultural use of the land is unlikely to affect the low mound in the north west of the lands.

14.4 Likely Significant Effects on the Environment

14.4.1 Overview

The layout of the residential area has been deliberately designed in order to avoid development on or in close proximity to the Area of Potential Archaeological Interest. However, there be as yet unknown archaeological remains and therefore a watching brief should be undertaken during construction.

14.4.2 Consideration of Alternatives

14.4.2.1 Housing Density

The different alternatives for housing density have no effects on the Area of Potential Archaeological Interest so long as the Area is safeguarded.

14.4.2.2 Civic and Commercial Elements

The different alternatives for civic and commercial elements have no effects on the Area of Potential Archaeological Interest.

14.4.2.3 Coastal Walkway

The different alternatives for positioning of the coastal walkway have no effects on the Area of Potential Archaeological Interest.

14.4.2.4 Flood Prevention

The different measures for flood prevention will have no significant implications for the Area of Potential Archaeological Interest subject to sensitive working practices in the vicinity of the Area.

14.5 Measures to Prevent, Offset, Reduce Significant Adverse Effects

The Area of Potential Archaeological Interest will be incorporated into public open space and will be fenced off during construction. A watching brief should be undertaken during construction on other parts of the lands.

14.6 Monitoring

None considered necessary.

14.7 Cultural Heritage Summary

There is only one possible feature of archaeological interest on the Plan lands and the layout of residential areas has been designed to ensure that it will not be disturbed. As such, there will be no significant adverse impacts on the ‘known’ cultural heritage. However, it is recommended that a watching brief be undertaken during construction in order to safeguard any as yet unknown archaeological remains.

15.0 NON TECHNICAL SUMMARY

15.0 Introduction

Dundalk Town Council took the view that the nature and scale of development on the Rockview Farm Local Area Plan lands could have a significant effect on the environment, and consequently requested that a Strategic Environmental Assessment (SEA) be undertaken as part of the Plan preparation process.

SEA is a systematic method for evaluating the likely effects on the environment of proposed plans and programmes, and requires that the process of assessment consider reasonable alternatives to the objectives and/or policies of the plan or programme. The SEA process therefore considered the potential significant impacts of the Local Area Plan’s 11 objectives, and reasonable alternative ways of delivering/achieving: -

- the density and layout of housing;
- the scale and location of an element of civic and commercial facilities within the residentially zoned area;
- potential routes for a section of the Council’s proposed coastal walkway running through the Strategic Recreational Area; and,
- flood prevention measures.

The 11 objectives and the above alternatives were assessed against environmental subjects (based on topics identified by Annex 1 of Directive 2001/42/EC), and environmental protection objectives drawn up with reference to guidance in the DEHLG publication, ‘*Implementation of SEA Directive (2001/42/EC): Assessment of the Effects of Certain Plans and Programmes on the Environment – Guidelines for Regional Authorities and Planning Authorities*’.

15.1 The Likely Significant Impacts on the Environment

15.1.1 Biodiversity

While the effects of implementing the Plan will inevitably mean some losses to biodiversity from the lands, new

habitat creation will occur, and since the flora and fauna on the lands are not of special value, on balance the effects of the Plan on these particular areas are not considered to be significant and adverse. Regarding the likely effects on the adjacent SPA and cSAC, an initial assessment has confirmed that it should be possible to construct a coastal walkway through the lands without adverse impacts on these sites, subject to further study regarding mitigation measures at the detailed design stage. Working/operational practices will also need to be designed to ensure that there are no significant adverse impacts on birds. Overall, therefore, the Plan is deemed to be broadly consistent with identified environmental protection objectives.

15.1.2 Soil

On balance, the effects on soils are neutral, since soils removed from the lands are not of premium value and can potentially be stored and reused, or used on other developments.

15.1.3 Travel and Transport

Increased traffic in the immediate vicinity of the Plan lands can be expected as a result of the development. However, improvements to the road network in the vicinity of the Plan lands (links to the Inner Relief Road from the Blackrock Road and upgrading of the Red Barns Road) are expected to largely accommodate increased vehicle movements in coming years. Nevertheless, a Traffic Impact Assessment will be required at the detailed stage to fully evaluate impacts and propose any additional improvements. Proposals in the Plan itself will encourage walking, cycling and use of public transport in order to reach workplaces, shops, services and facilities, thereby discouraging car use. On balance, therefore, it is considered that growth in traffic generated by the development of the lands can be managed and accommodated, subject to a Traffic Impact Assessment and Environmental Impact Assessment. The Plan is therefore broadly consistent with the identified environmental protective objectives.

15.1.4 Air Quality

Although development will introduce emissions to the air within the Plan lands primarily as a result of vehicle movements, it is not anticipated that there will be any significant adverse impacts on local air quality because the layout of uses, design of the road network and incorporation of bus routes, footpaths and cycleways is intended to reduce use of the private car and vehicle movements, and to ensure that there is minimal congestion either within the plan lands or around the egress/access points. The Plan is therefore broadly consistent with the identified environmental protection objectives.

15.1.5 Water And Flood Management

Water Supply

An adequate water supply is available from a suitable source, and there will be no significant adverse impacts upon this source arising from the development at medium density, as proposed by the Plan. The Plan is therefore consistent with the identified environmental protection objectives. However, in view of the potential effects of climate change, appropriate water conservation measures must be designed into new homes in order to reduce water consumption.

Foul Water

Adequate capacity is available at the Soldier's Point Waste Water Treatment Plant, and there will be no significant adverse impacts upon this resource as a result of developing at medium density as proposed by

the Plan. The Plan is therefore consistent with the identified environmental protection objectives.

Surface Water

Development on the lands will give rise to changed patterns and volumes of run-off reaching the existing drainage system. However, contaminants in the run-off will be intercepted by petrol receptors to ensure that the quality of discharge is maintained at pre-development levels. An attenuation area within the SRA will also assist in maintaining discharge to pre-development levels, as will the incorporation of SUDS in development proposals. The Plan is therefore broadly consistent with the identified environmental protection objectives.

Flood Prevention

The intended effects of flood prevention measures are entirely positive for the protection of future residents, their homes and infrastructure. The Plan is therefore consistent with the identified environmental protection objective.

15.1.6 Natural Resources

Construction of roads and homes, and their occupation, inevitably requires the use of aggregates, energy and other materials. These effects, and the consequent impacts on the wider environment, will occur wherever housing is built and cannot be avoided. However, the Plan incorporates policies that will reduce the scale and significance of these effects to some degree. Equally, flood prevention measures will safeguard natural resources used within the new development. The Plan is therefore broadly consistent with the identified environmental protection objectives.

15.1.7 Landscape

The landscape will change from being agricultural to developed and there may be some adverse impacts on views of the Cooley Mountains from residences facing Blackrock Road (although these are not protected views). The creation of 2 green routes and a boulevard through the lands, plus the retention of the Private Right of Way, should reduce these impacts to some extent. Other mitigation measures to be sought at the design stage include grading of the lands where they abut the Blackrock Road and careful design of new buildings to ensure a positive relationship with existing residences. The introduction of the coastal walkway and the new village centre are regarded as being positive impacts. Unavoidable, short-term adverse impacts are envisaged as construction takes place. As such, there will be a mix of positive and negative impacts on the landscape.

15.1.8 Human Health and Quality of Life

Some adverse impacts on quality of life can be expected for existing residents and also for residents occupying early phases of the development as a result of inevitable noise and disturbance during the construction period. However, on balance the Plan will have very positive effects not only for residents of the new housing but also for residents further a-field, notably in terms of the provision of safe cycling and walking routes, the Strategic Recreational Area and other areas of open space, and the introduction of shops, services and facilities to an area where there are currently none. The Plan is therefore consistent with the identified environmental protection objectives.

15.1.9 Cultural Heritage

There is only one possible feature of archaeological interest on the Plan lands and the layout of residential areas has

been designed to ensure that it will not be disturbed. As such, there will be no significant adverse impacts on the 'known' cultural heritage. However, it is recommended that a watching brief be undertaken during construction in order to safeguard any as yet unknown archaeological remains.

15.2 Measures to Prevent, Offset, Reduce Significant Adverse Effects

The Plan layout has been designed to minimise any adverse effects on the environment. The Plan also contains policies requiring that proposals contain measures to reduce any adverse impacts. An Environmental Impact Assessment and a Traffic Impact Assessment will be required to accompany any proposals and these will have an important role in further defining impacts and proposing solutions.

15.3 Monitoring

Most of the monitoring of impacts will be undertaken as a normal function of the Local Authority (e.g. traffic issues, water usage, disposal and flooding). Monitoring the impacts on the adjacent SPA and cSAC arising from the use of a coastal walkway through the lands, and the functioning of the flood prevention measures, will involve the NPWS, Council and the Department of Communications, Marine and Natural Resources.

APPENDIX A: EUROPEAN DIRECTIVE 2001/42/EC1 - CONTENT OF ENVIRONMENTAL REPORTS

In accordance with the requirements of the SEA Directive and guidance produced by the Environmental Protection Agency⁴, this report contains the following information:

- an outline of the contents, main objectives of the plan or programme and relationship with any other relevant plans and programmes (*section 3 and Appendix B*);
- the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme (*section 5, and 6-14*);
- the environmental characteristics of the areas likely to be significantly affected (*section 5, and 6-14*);
- any existing environmental problems that are relevant to the plan or programme, including, in particular, those relating to any areas of a particular environmental importance, such as areas designated under the Birds and Habitats Directives (*section 5*);
- environmental protection objectives, established at international, European or national level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during the preparation of the plan (*sections 6 -14*);
- the likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the inter-relationship between the above factors (*sections 6- 14*);
- measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment caused by implementing the plan or programme (*sections 6 - 14*);
- an outline of the reasons for selecting the alternatives dealt with and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know how) encountered in compiling the required information (*section 3*);
- a description of the measures envisaged concerning monitoring (*sections 6 - 14*); and
- a non-technical summary of the information provided under the above headings (*section 15*).

⁴ Development of Strategic Environmental Assessment (SEA) Methodologies for Plans and Programmes in Ireland

APPENDIX B: PLANNING POLICY AND LEGISLATIVE CONTEXT

The National, Regional and Local Planning Context

- National Development Plan (NDP) (2000-2006);
- National Spatial Strategy (NSS) (2002-2020);
- Sustainable Development: A Strategy for Ireland (1997);
- National Heritage Plan (2002);
- The National Biodiversity Plan (NBP) (2002);
- Residential Density Guidelines for Planning Authorities (1999);
- Childcare Facilities: Guidelines for Planning Authorities (2001);
- Landscape and Landscape Assessment-Consultation Draft Guidelines for Planning Authorities (2000);
- Traffic Management Guidelines (DOELG, DOT, DTO) (2005);
- Louth County Council Development Plan;
- Dundalk 2000 and beyond – A Vision for Economic Development (1998); and,
- Dundalk and Environs Development Plan 2009-2015 (DEDP).

EU Environmental Protection Legislation

EU Habitats Directive (92/43/EEC)

The Directive, known as the "Habitats Directive", is proposed to help preserve biodiversity in the EU. It aims to define a common framework for the conservation of wild plants and animals and habitats. All Member States must take all reasonable steps to guarantee the conservation of habitats in special areas of conservation, and to avoid their deterioration

Member states must:

- Encourage the management of features of the landscape which are essential for the migration, dispersal and genetic exchange of wild species;
- Establish systems of strict protection for those animal and plant species which are particularly threatened (Annex IV) and study the desirability of reintroducing those species in their territory; and
- Prohibit the use of non-selective methods of taking, capturing or killing certain animal and plant species (Annex V).

EU Birds Directive (79/409/EEC)

This Directive seeks to protect, manage and regulate all bird species naturally living in the wild within the EU territory. It also aims to regulate the exploitation of these species. It is an objective to conserve, maintain or restore the biotopes and habitats of all bird species. The Member States must encourage and research activities conducive to the protection, management and exploitation of the bird species covered by the Directives.

EU Water Framework Directive (2000/60/EC)

The Directive provides a clear framework for the protection, improvement and sustainable use of water across Europe. It aims to enhance the status and prevent deterioration of aquatic ecosystems and associated wetlands, to achieve the requirement of all inland and coastal waters to achieve 'good status' by 2015. It is an objective to promote the sustainable use of water, reduce pollution, and lessen floods and droughts.

European Convention on the Protection of Archaeological Heritage (1992)

Ireland ratified the European Valetta Convention in 1997. The basic principle which underlies the Convention is that archaeological heritage is being threatened by major planning schemes and the need to protect archaeological heritage should be reflected in town and country planning and cultural development policies. The Directive's objectives are that an archaeologist be involved in the drawing up of plans and involved in the process of development.

European Landscape Convention (2000)

The aim of the European Landscape Convention is to encourage public authorities to adopt policies and measures at all levels for the protection, management and planning of landscapes. The types of action range from strict conservation to improvement measures. All types of landscapes are considered.

APPENDIX C: MATRIX ASSESSMENT OF THE LOCAL AREA PLAN’S POLICIES AGAINST ENVIRONMENTAL SUBJECTS

Introduction

The following Table summarises the predicted effects of the *policies* that stem from the LAP’s Aim and 12 objectives on 9 environmental ‘subjects’ (based on topics identified by Annex 1 of Directive 2001/42/EC).

Symbols Representing Predicted Effects

- √ Beneficial
- X Some adverse
- O Neutral
- √X Mixed
- ? Uncertain

Environmental Subjects

1. Biodiversity
2. Soil
3. Travel & Transport
4. Air Quality
5. Water & Flood Management
6. Natural Resources
7. Landscape
8. Human Health & Quality Of Life
9. Cultural Heritage

AIM/OBJECTIVES	POLICIES	1	2	3	4	5	6	7	8	9
AIM: Creating a Sustainable Neighbourhood and Community	SUS 1: The layout of uses and associated roads and green routes proposed by this Plan have been devised to create a village centre with a series of connected neighbourhoods, and to facilitate safe and efficient movements within the new development for pedestrians, cyclists and cars. Development proposals must respect this objective.	O	O	√	O	O	O	O	√	O
	SUS 2: Development proposals must create visual interest and legibility by varying the height of buildings, whilst having regard to the topography of the lands and desirability of creating views through the lands towards the sea. The layout of development shall be consistent with principles set out in the Dundalk and Environs Development Plan and in this Plan. Building style should reflect the best of more traditional buildings in the County, introduce good quality modern designs, or combine both. Finishes should provide variety in terms of balance and mix of materials, colours, roof pitches, proportions and details.	O	O	O	O	O	O	√	√	O
	SUS 3: Proposals for development of both residential and civic and commercial areas must take advantage of opportunities for solar gain and reduction of heat loss through the orientation and design of buildings, separation distances and use of appropriate landscaping.	O	O	O	O	O	√	O	O	O
Residential Areas - objectives										
1. To provide a range of housing typologies that will allow for the creation of a diverse community in terms of its demographic profile, offer choice, and provide high standards of amenity.	RES 1: Across the plan lands as a whole, it is a target that development achieves a density of between 35 and 50 dwellings per ha. The mix of housing, including social and affordable housing, shall comply with the Louth County Development Plan 2009 and County Louth Housing Strategy 2007, and shall be provided within each Character Area and across the lands as a whole. Similarly, provision of car parking and private open space shall comply with Development Plan standards. Grouped or shared car parking shall be designed with safety, convenience and amenity in mind, while the provision of private open space shall have regard to solar orientation, privacy, utility, visual interest and a sense of unity.	O	?	√X	O	O	X	O	√	O
Civic, Commercial and Community Facilities - objectives										
2. To make provision for shops, services and facilities that will support the new community’s basic needs	CIV 1: Civic and commercial development centred on the former Rockview farmstead will become the new village centre and shall provide a range of shops, services and facilities to support the new community, in compliance with the Dundalk and Environs Development Plan 2009 as may be amended or replaced. Childcare spaces will be provided in accordance with the Childcare Provision Guidelines 2000 unless otherwise agreed with the Planning Authority and the Louth Childcare Committee. Car and bicycle parking will be required at a level consistent with Dundalk and Environs Development Plan 2009 standards, and subject to high design standards.	O	O	√	O	O	O	O	√	O
3.To make provision for the community’s potential educational needs.	CIV 2: An area of 1.2ha (2.96acres) will be reserved adjacent to the Village Centre (within in Character Area 1) for the provision of a primary school. It will be reserved for a period of time to be agreed between the developer, Local Authority and service provider.	O	O	√	O	O	O	O	√	O
Recreation, Open Space and Landscaping - objectives										

Rockview Farm Local Area Plan

[illegible]