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ROCKVIEW FARM LOCAL AREA PLAN 2010 - 2016



Rockview Farm Local Area Plan

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1.0 INTRODUCTION

1.1 Purpose, Background and Planning Context

The purpose of this Local Area Plan is to provide a detailed framework that will guide the development of the lands at Rockview Farm, in a phased manner. The lands are located approximately 2.5 km south east of Dundalk town centre (see Figure 1.1 below).



Figure 1.1 Location of the plan lands

In terms of the planning policy context, this Plan is required, and directly informed, by policy, objectives and zoning in the Dundalk and Environs Development Plan 2009 (see Figure 1.2 and section 3.1). It has also been informed by:

- a brief prepared by the Council (December 2005), identifying issues, opportunities and constraints pertinent to the lands and their wider context;
- public consultation on an Issues Paper (22 May to 3 July 2006);

- consultation as a result of the need for Strategic Environmental Assessment of the Plan (21 June to 19 July 2006);
- review of national, regional and local guidance; and,
- studies and analysis of the Plan lands and their surroundings.

In accordance with legislative requirements, this Local Area Plan (LAP) is in compliance with the Dundalk and Environs Development Plan 2009. The LAP provides detail on how policy contained in the Development Plan should be applied in the context of the Rockview Farm lands.

Standards set out in the Dundalk and Environs Development Plan have therefore been reiterated, where appropriate. The development control standards in the Dundalk and Environs Development Plan 2009 will apply to the Rockview Farm Local Area Plan, except as otherwise stated in the LAP.

The vast majority of the lands are in single ownership i.e. Topfloor Properties Ltd. The extent of the Plan lands with respect to their landholding is shown in Figure 1.3 overleaf.

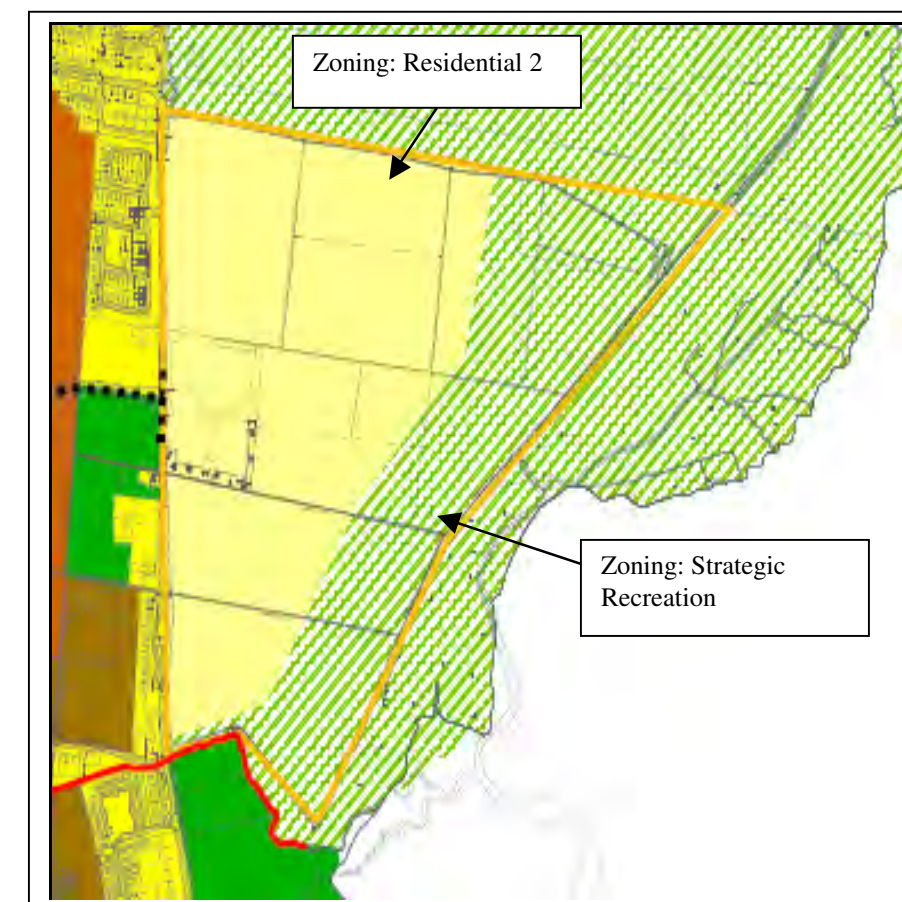


Figure 1.2 Dundalk and Environs Development Plan 2009 – 2015 zoning map (Map 1)

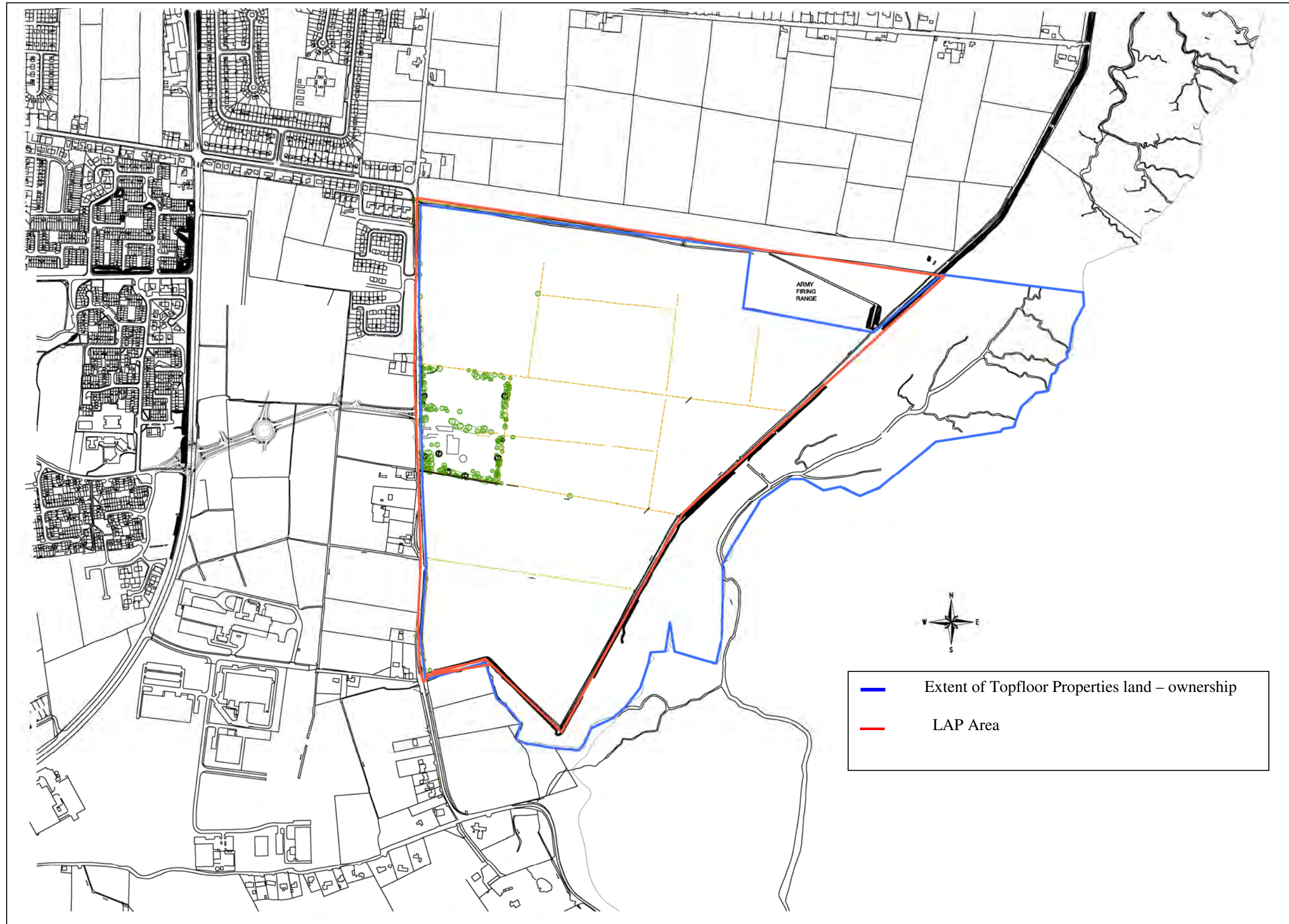


Figure 1.3 Extent of Local Area Plan and land in the ownership of Topfloor Properties Ltd.

2.0 ASSESSMENT OF THE PLAN LANDS

This chapter analyses issues and identifies opportunities presented by the Plan lands. The identification of these issues and opportunities was made possible by studies of the lands and their surroundings. The relevant reports are ‘Proposed Rockview Local Area Plan: *Environmental Baseline Studies* (Tobin Consulting Engineers and Stephen Ward Consultants, May 2006)’; ‘*Proposed Dundalk to Blackrock Coastal Walkway – Ornithological Assessment*’ (Biosphere Environmental Services, June 2007) and Addendum (Biosphere Environmental Services, October 2007); and, ‘*Appropriate Assessment of Proposed Coastal Walkway at Rockview Farm (Fauna and Flora of the coastal embankment)*’ (Tobin Consulting Engineers, April, 2007). The main constraints and opportunities are illustrated in Figure 2.1 at the end of this section.

Broadly, the lands may be described as being in agricultural use. Trees, hedgerows and drainage ditches delineate some 11 fields. A number of habitat types have been identified and these support a range of relatively common species of flora and fauna. At some time prior to 1655 the lands were drained and protected from the sea by the embankment that still protects the lands and indeed the wider coastline. As the lands are not within a designated area of archaeological potential, no invasive field work was undertaken. Nonetheless, in accordance with DOEHLG guidance, field studies were undertaken and research revealed that other work on locations *outside* the lands suggests that the wider area is rich in prehistoric and early Christian remains. Surveys of the Plan lands reveal a low mound in the north west, and this has been classified, for the purposes of this plan, as an ‘Area of Archaeological Potential’.

2.1 Issues

2.1.1 The Coastal Embankment And Flooding Risk

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 (see Figure 2.1 at the end of this section).

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.

Although no records of flooding of the lands themselves have been recorded, the continued presence and proper maintenance of the coastal protection barrier, especially in view of possible impacts from climate change and rising sea levels, is clearly of paramount importance to the development of the Plan lands. For this reason, the integrity of the embankment and potential for flooding was assessed by consultants who also reported on appropriate flood alleviation measures.

The main conclusions and recommendations of the Flood Risk Assessment report can be summarised as follows:

- The existing embankment needs to be strengthened to improve its condition and profile (height).

- The development should be protected against flooding from tidal events with return periods of up to and including a 200 year event.
- An assessment of extreme tides at the site has resulted in the following design water levels
 - 200 year in 2007 – 3.76mODM
 - 200 year in 2100 – 4.26mODM
- The site is well protected by an extensive width of salt marsh that has in general been accreting over the last 30 years.
- The existing embankment can be considered to provide a standard of protection to the site of around 1 in 40 years, which is inadequate for the proposed development.

The flood alleviation options that were considered included the following: -

- Option 1 – Improve the main coastal defence by raising the embankment crest to 6.75mODM and armouring the front face. Provide additional return embankments to secure the site at the north and southern boundaries and along Blackrock Road to the Village.
- Option 2 – 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 between 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 3 – Improve the main coastal defence by raising the embankment crest to 5.0mODM and armouring the front, crest and rear slope and provide a secondary embankment to a level of 5.4mODM at the residential and amenity area interface. Provide return embankments at the north and south boundaries and along the Blackrock Road to the south.

Within each option two embankment profiles were considered, namely: -

- Embankment 1 – trapezoidal profile with 4m wide crest and berm between the rear toe and the drainage ditch.
- Embankment 2 – bermed embankment with 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.

To provide the most sustainable means of managing flood risk to the site without having a detrimental impact of the adjacent areas, the report recommended that Option 2 with Embankment 2 be implemented (see Figure 2.2 below). The provision of Embankment 2 within the recommended flood alleviation option provides the most robust flood defence structure and also the best foundation for the provision of the proposed coastal walkway/cycleway, by balancing the need for minimising disturbance to the SPA against maintaining the interaction of the potential users with the surrounding area.

The coastal embankment works, with integrated coastal walkway and cycleway, will be provided by the developer prior to the first occupation of any dwelling on site in order to avoid risk of subsequent damage to the structure (or efficiency of said embankment) at a later date.

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. The findings presented in this section of the LAP are in line with the recommendations set out in this addendum report.

The requirements and recommendations of the Peer Review Report will be implemented in full.

2.1.2 Nature Conservation Designations – Dundalk Bay

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 wetland location for overwintering waterfowl designated under the Ramsar Convention (see Fig 2.3 at end of section). The SPA is the single most important site for wading birds in Ireland and the third most important site for all waterbird species combined in Ireland.

The legislation that protects the SPA and cSAC - commonly known as ‘Natura 2000’ - offers the very highest levels of protection to habitats and species, and proposals that would have any “significant adverse impacts” on their conservation objectives must have an “over-riding public interest” of a social or economic nature and be “incapable” of being located elsewhere.

The implication of this legislation primarily concerns the potential for disturbance to birds from human activities, and the Council’s proposal for a coastal walkway¹ 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 conclusions and recommendations of the report are précised below:

¹ This Local Area Plan has been prepared having regard to 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. The Plan therefore proposes a circular walkway/cycleway within the Strategic Recreational Area with the potential to form a section of the Council’s coastal walkway. The report prepared by Biosphere Environmental Services assessed options for the full walkway and a circular walkway within the Strategic Recreational Area.

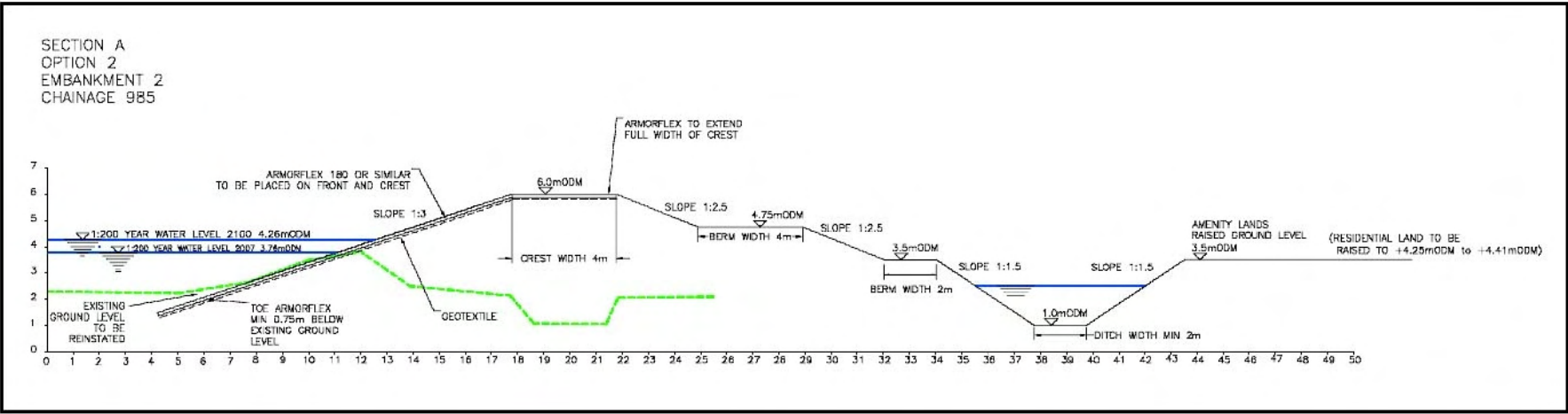


Figure 2.2 Recommended Land and Embankment levels, and Embankment Profile

Two important high tide roosts exist at the northern and southern parts of the salt marsh at Marsh South (see Figure 2.4). In general terms, there is potential for significant adverse impacts on waterbirds from users of a walkway under certain tidal conditions 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. However, with effective mitigation, the report concluded that a walkway could be constructed that would have minimal impact on birds and which would therefore be compatible with the requirements of the Special Protection Area designation. The mitigation measures for a section of walkway within the Plan lands should 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 to the proposed 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.

Further detailed study of the existing physical conditions in the vicinity of the roost sites will be required at the detailed design stage to determine

the exact areas where the above mitigation measures need to be implemented.

Monitoring of disturbance will also be required if the walkway is implemented, and mitigation measures altered or expanded if appropriate.

The main report is available separately and is entitled '*Proposed Dundalk to Blackrock Coastal Walkway – Ornithological Assessment*' (Biosphere Environmental Services, June 2007).

The conclusions and recommendations of the above report have been incorporated in this Local Area Plan (see also section 7.1.2).

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.

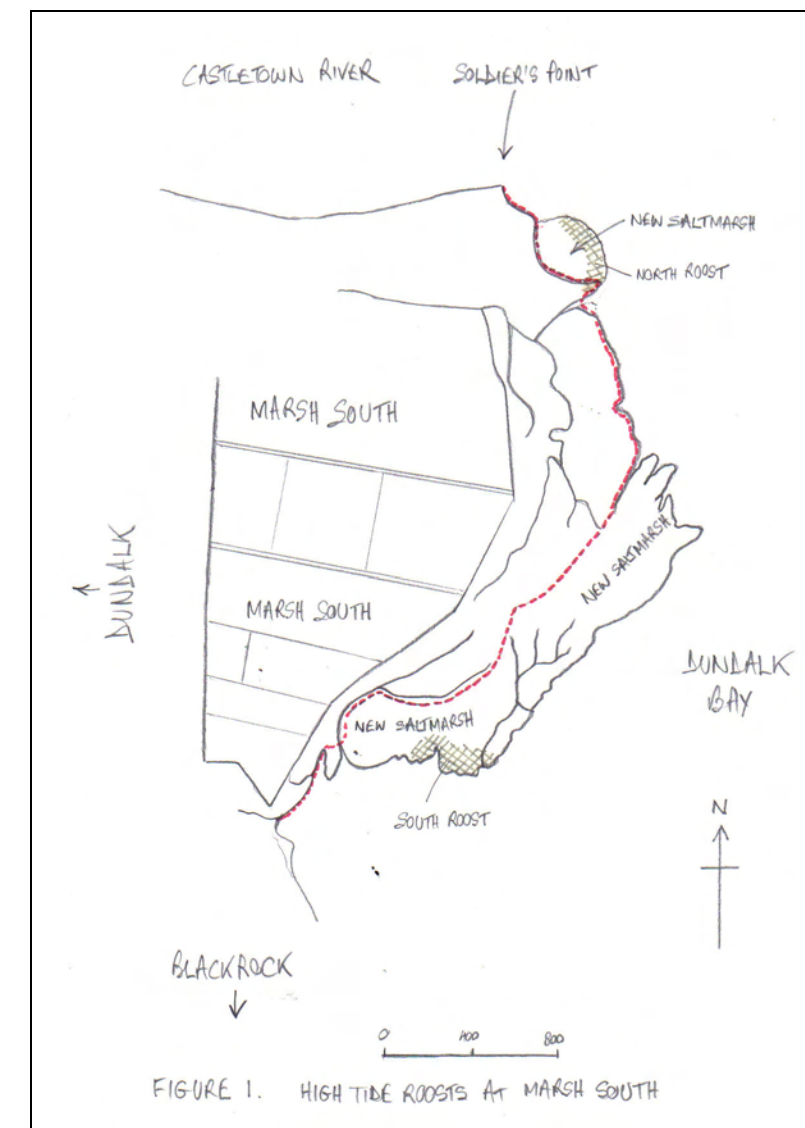


Figure 2.4 High Tide Roosting Sites for Waterbirds at Marsh South (Biosphere Environmental Services)

A separate assessment considered the potential for impacts on the flora and fauna of the embankment and adjacent to the SAC. The conclusions and recommendations of this study are précised below:

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).

2.1.3 Fauna and Flora on the Plan lands

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, including bats, birds and frogs, can be predicted on the basis of the habitats available (e.g. trees, hedgerows and watercourses). Species of flora on the lands are typical of farmland and hedgerows, and as such there are no rare or unusual species.

The Plan requires that landscaping proposals accompanying planning applications should contain details of planting with indigenous species.

2.1.4 Drainage Ditches Within The Plan Lands

The lands are reasonably well drained having a brown organic sandy clay with silt topsoil overlying a silty sandy subsoil. The drainage system comprises: a long back drain running parallel and inside the coastal defence embankment; a number of lateral drains that feed into the collector drain running west to east; and, a number of local field boundary drains that feed into these lateral drains. The back drain collects runoff and basewaterflow from not only the Plan lands but also from the upstream catchment area, and discharges these to the Dundalk tidal marshes via an outfall that is located beneath the flood embankment and which is located mid-way along the Plan area’s eastern boundary.

The channels vary from approximately 0.5m up to 3m wide, or slightly wider where the eastern most drain flows under the flood protection barrier and out of the lands. Water depth varies from approximately 10cm to 30cm. It is probable that the shallower drains dry out on a seasonal basis.

Upgrading works in some of these ditches has improved flows and increased their capacity to attenuate surface water run off at times of high tide when the system is tide locked. Other ditches, notably those which service the northern portion of the site, would benefit from similar improvement.

Some of the larger drains have been dredged recently, including the drain running along the eastern boundary. Their banks were reinforced with a geotextile mat and reseeded to assist stabilisation. These drains have slow to moderate water flow. Other ditches on the lands tend to have little or no discernable water movement. Substrate along the drains generally comprises mud. Some of the drains contain marine shell debris, particularly the large drain running along the eastern boundary.

The majority of the drains on the lands have clear water. The drain along the eastern boundary has a muddy appearance in parts and is probably quite brackish. The drain is likely to be influenced by tidal movements. Short lengths of some drains are culverted to facilitate crossing points for agricultural machinery. The drain along the eastern boundary is culverted to the north of the site where it flows behind the military firing range.

The ditches that are described above are important to the drainage of not only the Plan lands but also a much wider catchment area, including the nearby Xerox site and as far west as the Dublin Road. It is critical, therefore, that their function is not impaired by development and, preferably, that it is improved where possible. The open ditches running

through the site shall be maintained, insofar as necessary and practical as open ditches, in accordance with the Greater Dublin Strategic Drainage Study, in order to maintain the existing flow regime and also to provide access for maintenance purposes.

Development proposals should safeguard these ditches from blockage during and after construction, and, where it is possible to retain them, incorporate proposals to enhance their aesthetic and nature conservation value.

The existing drainage system is shown on Fig. 2.1 at the end of this chapter.

Any proposals for existing drainage ditches must ensure that adequate safety measures are built in, so as not to adversely affect the safe use of the lands by residents or third parties, particularly as it is intended to raise ground levels, which may increase the relative depth of ditches.

Safety measures will include some or all of the following:

- Construction of a safety barrier, such as railings, to prevent easy access to open water;
- Side slopes of ditches to have a maximum gradient of 1:4; and,
- Construction of a removable boardwalk on top of open ditches.

2.1.5 The Military Firing Range

A Military Firing Range is located on the north-eastern corner of the site. This firing range is approximately 5.66 ha (13.99acres) in area and is used by military personnel from the Aitken Military Barracks on training exercises with small arms (i.e. pistol to rifle calibre). It is evident that small calibre fire arms are used at the army firing range during training exercises. This implies the need for design measures regarding the relationship between the range and sporting facilities and residential areas (see section 7.3).

2.1.6 Protected Views

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 to the north 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 direction of these views is shown on Figure 2.1.

The Private Right of Way running west-east along the north of the Plan lands should therefore be regarded as facilitating views to and from the coastal walkway. In addition, good views will be created within the development by creating 2 green routes along the alignment of two existing drainage ditches and creating a boulevard through the ‘village centre’. These will all run west to east and will create three ‘framed’ views through the lands from Blackrock Road to the coast and vice versa.

Regarding 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 (see also section 4.3.1).

2.1.7 Area of Potential Archaeological Interest

Although no invasive fieldwork has taken place on the Plan lands, desk and field studies were undertaken, which included an assessment of all relevant written records and surveys of both the Plan and surrounding lands. Relevant bodies were also consulted. This approach is in accordance with DOEHLG guidelines.

While the desk study did not highlight any known archaeological sites or features on the lands, the field inspection indicated that a low mound situated in the north west of the Plan lands should be classified as an Area of Potential Archaeological Interest. The Area will therefore be

safeguarded by making it part of the provision of Public Open Space within the lands (see Figure 2.1 at the end of this section).

2.2 Opportunities

The lands are not directly affected by any sensitive landscape designations nor do they contain any built features. Nonetheless, there are a number of positive attributes that present opportunities for incorporation into proposals.

2.2.1 Trees And Hedgerows

The footprint of the former farmstead and some fields within the plan lands are delineated by mature trees and hedgerows. 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. Policy CH5 of the Development Plan seeks the protection of important trees and groups of trees, and specifically TP40 (Appendix 6). In order to provide the basis of a strong, green structure for the plan lands, with both an aesthetic purpose and value as habitat for wildlife, unless in the interests of public safety e.g. safe channels for surface water, proper visibility at road junctions and proper road widths (in accordance with CH5), it will be an objective of this Plan to preserve trees and hedgerows within the plan lands, and especially mature trees around the former farmstead. Clearly, however, taking account of the need to raise ground levels and provide for safety, some trees will have to be removed. These will be replaced by semi-mature native tree species. The need to remove trees and hedgerows will be fully assessed at the planning application stage and in light of the need to undertake a tree survey, tree constraints plan and arboricultural implications assessment.

The preparation of planning applications should therefore be informed by a tree and hedgerow survey, undertaken by a suitably qualified individual/company, that identifies trees to be retained and incorporated into layout plans. This study should include measures to be incorporated

into the design and construction programme to ensure their subsequent survival. (See also comment under para. 7.2.2 below.)

Figure 2.1 in section 2 shows the positions of existing trees and hedgerows.

2.2.2 Green Routes

There are opportunities to create green routes by retaining the 2 main existing drainage channels. These green routes will provide opportunities for pedestrians and cyclists to cross residential zones, separate from vehicular traffic (see also section 9.5).

2.2.3 Gateways

Gateway sites are simply particular areas that, due to existing strong linkages or good potential linkages, allow for the integration of new and existing developments.

There are three potential gateways identified within the Local Area Plan lands with good potential access onto the existing Blackrock Road. These are as follows:

- From the access road located off the Blackrock Road to the north west of the site
- From the proposed village ‘boulevard’/‘street’
- From the access road located off Blackrock Road to the south west of the site (See Figure 9.1)

2.2.4 Views From Within The Plan Lands

An analysis of the plan lands suggests that there are opportunities to create views through the plan lands towards Dundalk Bay, taking advantage of the slight west-to-east slope of the land and using the 2 main drainage ditches to create green routes. Potential view paths are shown in Figure 2.1 overleaf.

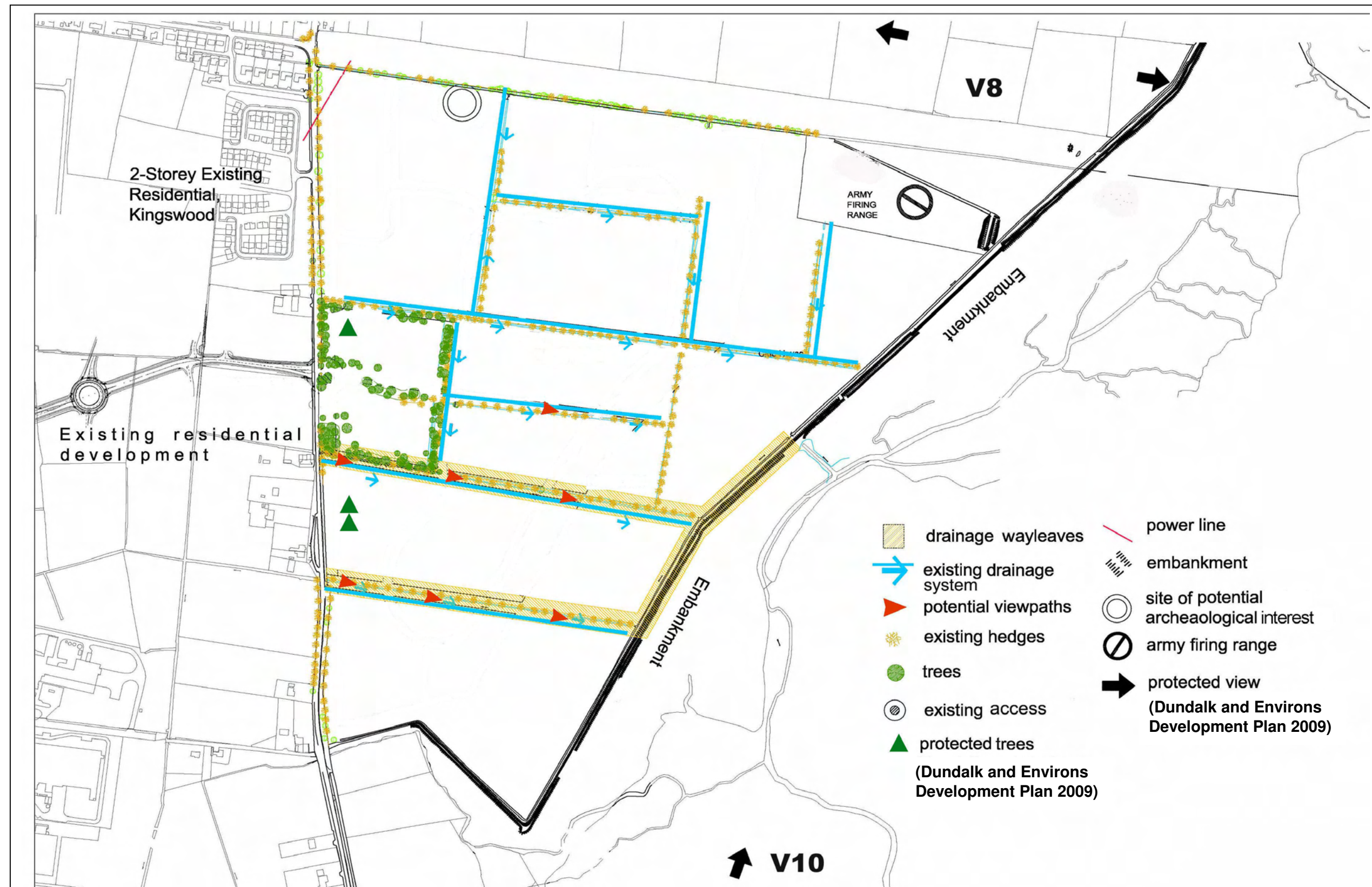


Figure 2.1 Environmental Issues and Opportunities

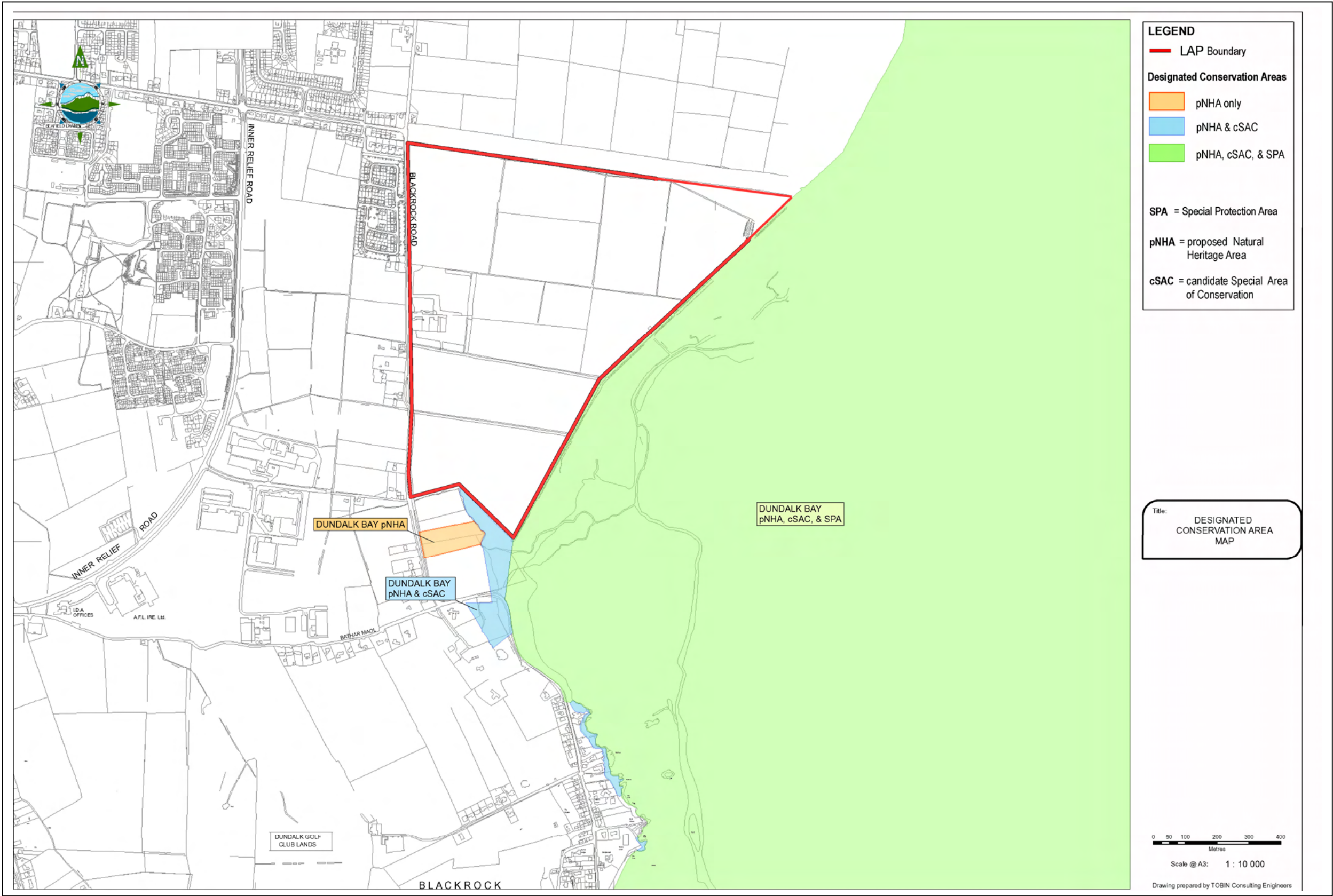


Figure 2.3 Extent of Designated Areas – Dundalk Bay SPA, cSAC and pNHA

3.0 THE AIM AND OBJECTIVES OF THE LOCAL AREA PLAN

3.1 Planning Context

According to Section 19 (2) of the Planning and Development Act 2000 (as amended), a Local Area Plan should be consistent with the objectives of the Development Plan and should “*consist of a written statement and a plan or plans indicating the objectives in such detail as may be determined by the planning authority for the proper planning and sustainable development of the area to which it applies, including detail on community facilities and amenities and on standards for the design of developments and structures*”.

Map 1 of the Dundalk and Environs Development Plan 2009 contains a notation in the Map Legend as follows: “Boundary of Proposed Local Area Plan (Rockview Farm LAP)”. The LAP lands are affected by two zoning objectives as follows – Zoning Objective ‘RES 2’ – “*To provide for new residential communities and supporting facilities subject to the availability of services*”; and Zoning Objective ‘SR’ – “*To provide for recreational facilities that would have a minimal impact on the existing ecological makeup of the area and protect the openness of the land*” (Dundalk and Environs Development Plan 2009, page 23 and Map 1).

Regarding the Strategic Recreational Area, the Development Plan states: “*The Council will seek to protect the defined area shown on Map 1A/B as a future location for both public and private recreational and amenity uses. The Council will protect and encourage existing agricultural uses. The future comprehensive development of the area must be encouraged to provide an integrated network of recreational, leisure and amenity uses with the area and any development proposals, which would prejudice this future comprehensive development for amenity or open space will be resisted.*”

Beyond those noted above, the Dundalk and Environs Development Plan contains no other specific zoning objectives for the Plan lands. However policy (RA6) is relevant as it aims to “*open up access along the coastline for recreation and amenity purposes subject to the protection of designated Natura 2000 sites and Ramsar sites and ensure where necessary that any proposed development is subject to an Appropriate Assessment screening as required under the Habitats Directive*” (Policy RA6, Dundalk and Environs Development Plan 2009, page 128). Lastly, Policy CH5 seeks the preservation of trees on the Blackrock Road.

The above zoning, specific objectives and policies, together with the Local Area Plan brief and information gathered through consultation and assessment of the Plan lands, has informed the development of an overarching aim and associated objectives to form the basis of this Plan.

3.2 The Aim - Creating A Sustainable Community and Neighbourhood

The aim of the plan is to create a sustainable community and neighbourhood, and a Strategic Recreational Area. This means creating a high quality urban place, juxtaposed with the Strategic Recreational Area, that embodies the principles of good urban design, high standards of built design, energy efficiency, safety and ease of movement, and sustainability in all other respects.

3.3 The Objectives

The twelve objectives that flow from the above aim are listed below:

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 clubhouse with changing facilities and parking, 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 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

The overarching aim and its associated objectives form the basis of sections 4.0 – 11.0. Further objectives stemming from the above twelve are set out in the relevant sections of the Plan.

4.0 CREATING A SUSTAINABLE COMMUNITY & NEIGHBOURHOOD

4.1 Introduction

The creation of a new residential area that is an attractive place in which to work and live, and at the same time is sustainable in terms of its use of natural resources and assets, is the primary aim of this Plan. The main challenges in achieving the above aim therefore concern:

- **Location and Layout of Land Uses** - locating land uses in such a way that they relate well to each other, create a sense of place and encourage residents to walk to shops, services and facilities
- **Legibility, Distinctiveness and Diversity** - creating an interesting and distinctive appearance for built development so that residents and indeed the wider community have a sense of pride in the new area;
- **Landscape Features** – safeguarding natural assets which are of value in their own right, lend character to and enhance enjoyment of the area, and are essential to its ecological well-being; and,
- **Energy Efficiency** – fostering energy efficiency through the orientation and design of all buildings.

This section outlines how the Plan addresses these challenges and provides guidance for developers regarding the design of their detailed proposals.

4.2 Location and Layout of Land Uses

Zoning in the Dundalk and Environs Development Plan 2009 dictates that the Strategic Recreational Area will lie on the eastern side of the plan lands and that the remainder of the lands will provide for residential use, with an appropriate element of civic and commercial uses. The layout of uses within the lands zoned for residential development has been devised

with a view to creating a village centre for the new community and a series of connected neighbourhoods. Depending on quantum, the creation of the Village Centre may require the Dundalk and Environs Development Plan to be varied. The layout of the *main* uses (not including local open space/play areas) is shown in Figure 4.1 below, whilst areas allocated to the various uses are specified in Table 4.1.

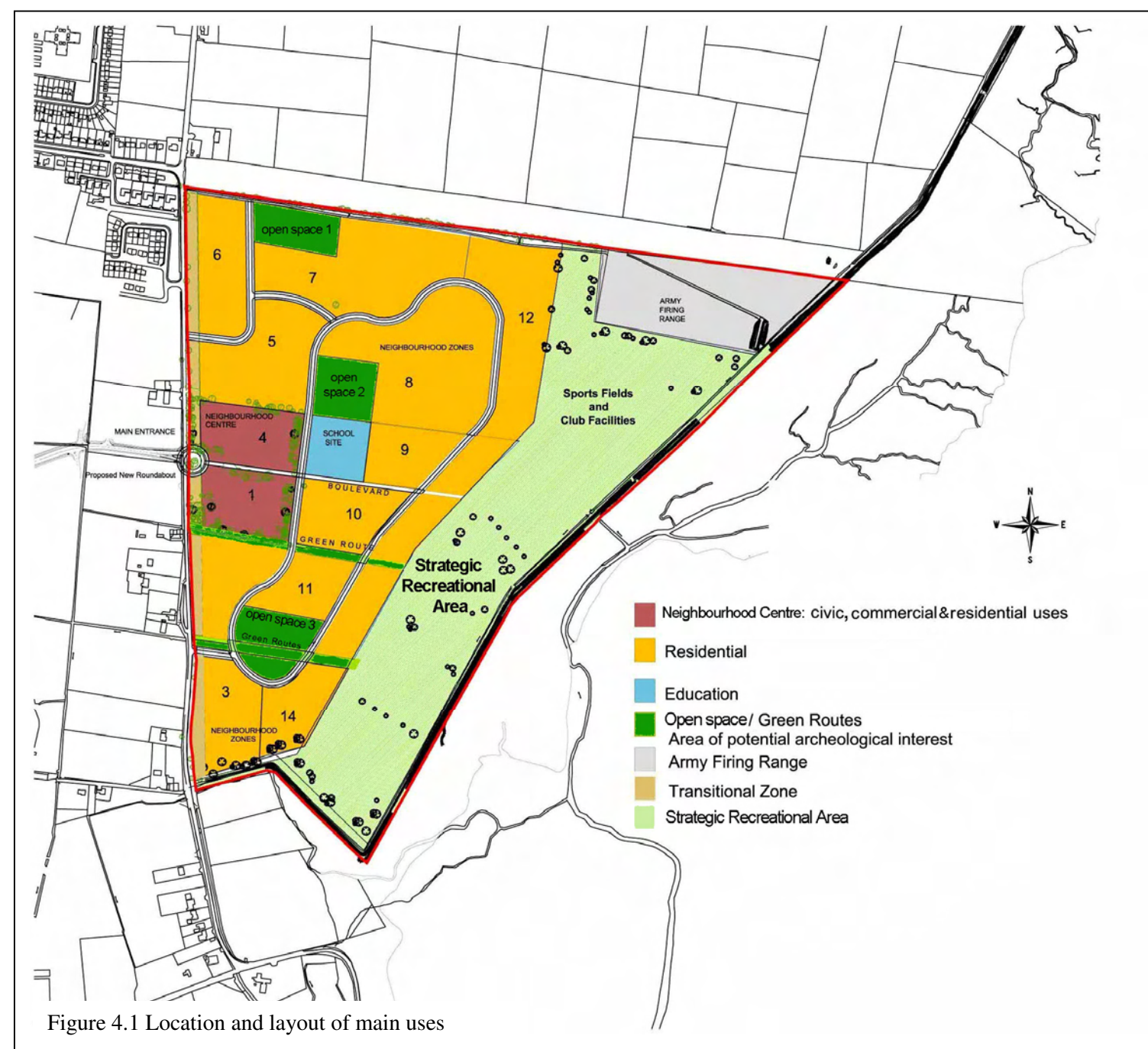


Figure 4.1 Location and layout of main uses

The total area of the Plan lands is 84.34ha (208.30 acres) and the quantum for each land use are illustrated in Table 4.1 below.

Land Usage	Area (Hectares)
Strategic Recreational Area	27.65ha/68.32acres
Reserved School Site	1.2/2.96acres
(Net) Residential Area (including areas of public open space)	41.40ha/102.26acres
Village Centre (civic & commercial uses)	3.99ha/9.85acres
Roads (inc. internal loop route/distributor road and Private Right of Way)	5.27ha/13.01acres
2 Green Routes	1.1ha/2.72acres
Military Firing Range	5.66ha/13.99acres
Total	86.27ha/213.11acres

Table 4.1 Land uses within Local Area Plan lands. **Note:** Figures are *not* additive because there is overlap between the civic and commercial and residential uses in the village centre (see also table 5.1).

The neighbourhoods will be served by a network of roads and green routes that facilitate safe and efficient movements within the new development for pedestrians, cyclists and cars. These are discussed in more detail in section 9.0. Development proposals for neighbourhoods within the Plan lands should therefore ensure that the layout and size of blocks of development are such that pedestrians are encouraged to walk from their homes to the village centre or the Strategic Recreational Area and other areas of open space. Equally, proposals for neighbourhoods abutting the Strategic Recreational Area should be accessed by cul-de-sacs, avoiding the use of a distributor road that could become a physical and psychological barrier between the residential lands and the amenity area.

The new centre of the proposed development – the ‘Village Centre’ - will be positioned on the site of the existing farmstead, and will be accessed from the Blackrock Road via a roundabout. In this location it will be accessible to most residents within a five minute walk, and will create a sense of place and arrival. Figure 4.2 below illustrates a five minute walking time from the village centre.

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.



Figure 4.2 Walking times

4.3 Legibility, Distinctiveness and Diversity

4.3.1 Building Height and Landmark Buildings

In order to create visual interest and legibility, building heights should vary throughout the Plan lands, but always with regard to the slope of the land and desirability of creating vistas through the lands towards the sea. Buildings will generally be 2 and 3 storeys in height with opportunities for roof space at setback. In certain locations opportunities may arise for buildings of several storeys, although these taller buildings should be restricted to use as landmarks at appropriate locations, such as: the village centre; junctions of main streets; end of vistas; important street corners; junctions with large open spaces; edges of public squares; and, gateway locations. Plate 4.1 below illustrates the principle of varying heights in order to enhance legibility and visual interest. More specific guidance is contained in Section 8.0 – Character Areas.



Plate 4.1 Mixed two and three storey housing illustrating visual interest created by varied roof heights and different household types

4.3.2 Building Layout

Development proposals shall adhere to the principles set out in section 6.6.1 of the Dundalk and Environs Development Plan 2009 e.g.: to -

- Incorporate user friendly designs into new residential layouts;
- Proposals should have layout which provide for and facilitate all forms of movement based on desire lines in order to create permeability;
- Design streets as places where people live, rather than roads;
- Focus units onto the street and create active frontages; and
- Incorporate traffic calming measures into the design and layout of developments.

(Orientation of development in accordance with sustainable development concepts e.g. making best use of solar gain, is discussed in more detail below under section 4.5.)

Plate 4.2 below illustrates the concept of passive supervision of a green space within a residential area.



Plate 4.2 Housing overlooking open space

In addition, the layout of uses should:

- separate pedestrians and cyclists from cars wherever possible and prioritise pedestrians/bicycles at key junctions and in the village centre;

- introduce visual interest by staggering building lines; and
- ensure passive supervision of green spaces, green routes, footpaths and cycleways

4.3.3 Building Style and Finishes

Building styles should reflect the best of traditional buildings found in Dundalk, Blackrock or other parts of County Louth, introduce good modern designs, or combine both. Within neighbourhood blocks, variety should be introduced by changing the balance and mix of materials, colours of brick and render, roof pitches, proportions and building details. More specific guidance is contained in Section 8.0 – Character Areas.

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.

4.4 Resource Efficiency

According to guidance promoted by Sustainable Energy Ireland (SEI)², the optimum orientation for buildings in order to maximise solar gain is on a north-south axis, with a variation of approximately 30 degrees. Proposals for development should wherever possible seek to take advantage of the site and orientate dwellings accordingly. Figures 4.3 and 4.4 illustrate a climatic study of the lands and orientation for maximum solar gain, respectively.

² The Passive Solar Estate

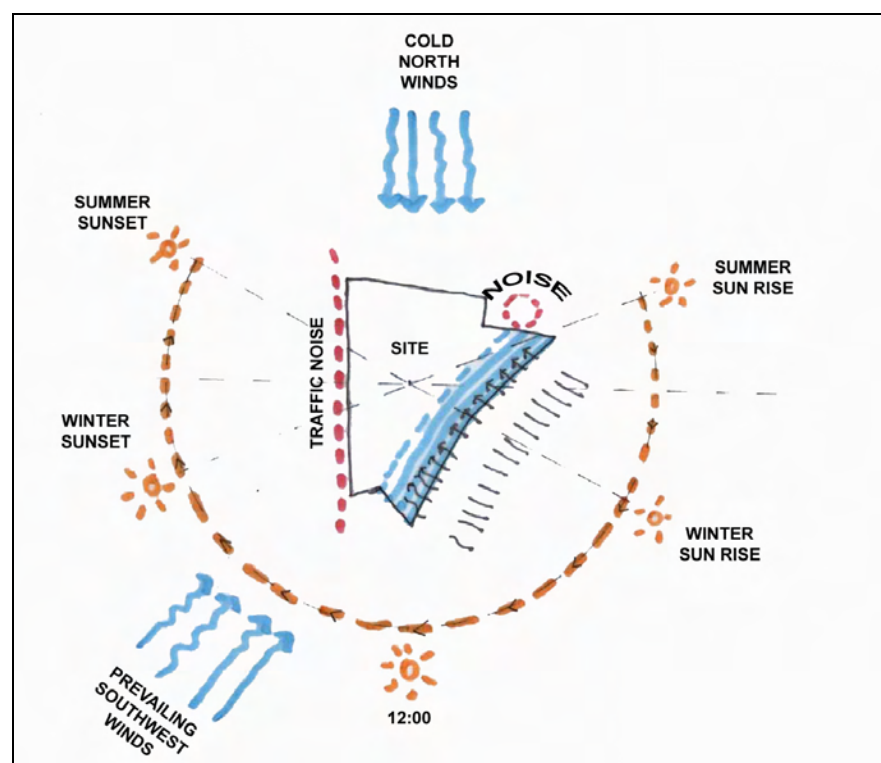


Figure 4.3 Climatic study of plan lands, showing sun path

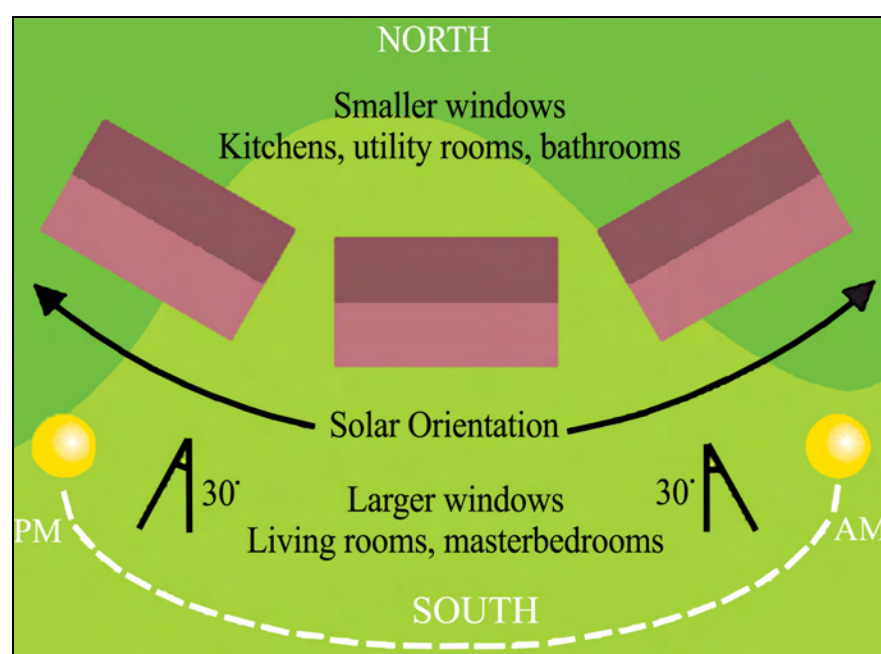


Figure 4.4 Solar orientation of buildings for maximum solar gain
(Source: Site Layout And Building Design. Woking Borough Council, England)

Building design can significantly increase solar gain and reduce heat loss. Proposals for both public and private buildings should therefore take into account the position of most-used rooms with respect to the sun and the size of windows.

Overshadowing can reduce the amount of solar gain to dwellings and proposals for development should demonstrate that appropriate separation distances have been provided. Trees can affect solar gain by creating shadows and landscaping proposals should take care to use appropriate species in proximity to buildings (see figure 4.4).

At the same time, the use of appropriate species can help to minimize heat loss and create micro-climates around buildings, and thus,

- shelterbelts should be orientated to the south west of development and distanced 3-4 times their mature height from south-facing elevations;
- trees that will grow above the shadow line should be deciduous as they allow sunlight to pass through when at a low angle in winter and provide beneficial shading in summer; and,
- small scale tree and shrub planting should be used to provide privacy for ground floor south-facing living room windows.

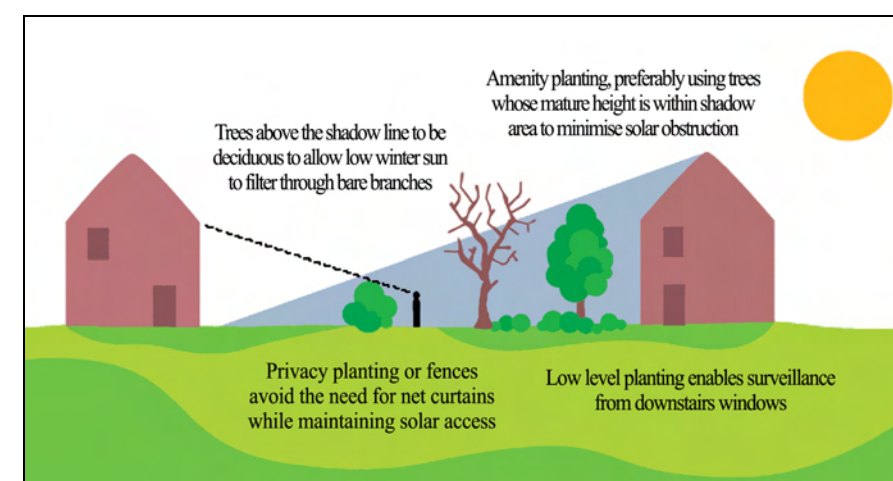


Figure 4.4 Landscaping to permit solar gain

(Source: Site Layout And Building Design. Woking Borough Council, England)

Further guidance on this and other aspects of home energy/resource conservation can be found on the website of Sustainable Energy Ireland (www.sei.ie).

SUS 3: Proposals for development of both residential and civic and commercial and 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.

5.0 RESIDENTIAL AREAS

Objective: 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.

In order to achieve the above objective, the plan proposes that a range of housing types be developed across the plan lands at varying densities. This section discusses the proposed densities and anticipated yields and the relevant development control standards that will be applied to all planning applications, while Section 8.0 describes the proposed residential development in terms of three distinct character areas.

5.1 Density and Residential Yield

The DOEHLG’s guidance, Sustainable residential Development in Urban Areas (Draft, February 2008) reflects guidance in the 1999 Residential Density Guidelines for Planning Authorities, which recommended that on outer suburban or greenfield sites, such as the Rockview Farm lands, residential densities between 35 and 50 dwelling per hectare net (14 – 20 per acre) should be encouraged. Development at densities less than 20 dwellings per hectare (8 per acre) should generally be discouraged, particularly on sites in excess of 0.5 hectares.

An average range of 35 – 50 per/ha across the plan lands is proposed by developing a combination of densities. This approach will help to create a community that is representative of the population as a whole, contributes to variety and choice of house types and tenure, and makes efficient use of land. To achieve this combination, the following ranges are proposed:

	Density Range (Dwellings per Hectare)
High	51 – 75
Medium	33 – 50
Low	15 – 32

This provides an average density of 42 dwellings per hectare.

The estimated residential development area of the plan lands is calculated by subtracting the areas of: the Strategic Recreational Area (27.65ha/68.32acres), the military firing range (5.66ha/13.98acres); school site (1.2ha/2.96acres); 2 drainage wayleaves (1.1ha/2.72acres); the ‘transitional strip’ alongside Blackrock Road (2.06ha/5.08acres); internal loop route/local collector road¹ (5.27ha/13.01acres) from the total area of the plan lands (84.34ha/208.41 acres) to provide a figure of 41.40ha/102.26acres.

Taking into account the need to achieve an average density of 35 – 50 dwellings per hectare and the options for how this can be achieved, the net residential area has been zoned into areas of low, medium and higher density. Lower density areas are situated away from the village centre. Higher residential densities are proposed in and around the area defined as the village centre (zones 1, 4, 9 and 10 on Figure 5.1) where higher numbers of the population can easily take advantage of shops, facilities and public transport connections.

Figure 5.1 at the end of this chapter illustrates the density zoning of the plan lands, while Table 5.1 shows indicative residential yields from developing the low, medium and higher density areas at the lower and upper ends of their ranges.

Notwithstanding the above, the density ranges, dwelling yields and populations set out in this Plan are indicative and have been generated in order to inform calculations concerning adequate infrastructure, civic/community facilities and educational provision.

¹ This figure also includes the Private Right of Way. Although the internal loop route/local collector road has been subtracted to inform the calculation of a net residential area, in practice a proportion of this road can be expected to have some residential and/or civic & commercial frontage.

The densities, dwelling yields and population figures are not, therefore, targets or objectives to be achieved.

AREA	USE	DENSITY RANGE*	NET AREA (hectares)	DWELLING RANGE (Lower)	(Higher)	Average number of dwellings
1	Village Centre* (mixed use)	High	1.97	100	148	124
2	Residential	Medium	1.7	56	85	70.5
3	Residential	Low	2.09	31	67	49
4	Village Centre* (mixed use)	High	2.02	103	151	127
5	Residential	Medium	3.35	110	167	138.5
6	Residential	Medium	2.31	76	115	95.5
7	Residential	Low	6.0	90	192	141.5
8	Residential	Medium	7.12	235	356	295.5
9	Residential	High	1.54	78	115	96.5
10	Residential	High	1.96	100	147	123.5
11	Residential	Medium	2.79	92	139	115.5
12	Residential	Medium	4.65	153	232	192.5
13	Residential	Medium	0.94	31	47	39
14	Residential	Medium	1.7	56	85	70.5
15	Residential	Medium	1.26	42	63	52.5
	Totals		41.40	1353	2109	1731

Table 5.1 Proposed density mix and indicative yields

* Although the village centre zones will be developed at high density, in practice, some of the land in the quantum will be developed with civic and commercial uses, potentially reducing the residential yield.

5.2 Housing Mix and Social/Affordable Housing

The housing mix and social and affordable housing provision within the plan lands will reflect the requirements of the Dundalk & Environs Development Plan 2009 and Louth County Housing Strategy (2007). It will be an objective to secure the housing mix and social and affordable provision within each Character Area and across the totality of the Plan lands. The required provision for housing under the adopted strategy is:

Private Dwelling Mix

Not less than 21%	1/2 bed (and not greater than 15% of the 21% will be 1 bed)
Not less than 35%	3 bed
Not less than 14%	4+ bed

(These figures are based on household formations as per the CSO figures for County Louth. Herein, 21% of households have 1 person, 35% of households have 3 and 4 persons, whilst 14% of households have 5 or more persons).

Social and Affordable Housing Mix

- HSP 1 Requires that 20% of all private residential development on lands zoned residential or mixed uses (where residential is included) be provided for social and affordable housing under the provisions of Part V of the Planning and Development Act 2000 (as amended).
- HSP2 Requires that an appropriate housing mix in accordance with the following be provided in each new private residential development:

Not less than 21%	1/2 bed (and not greater than 15% of the 21% will be 1 bed)
Not less than 35%	3 bed
Not less than 14%	4+ bed

In both the above cases, the Housing Strategy indicates that there is flexibility in certain circumstance (pages 31 and 33 of the Housing Strategy refer).

5.3 Dwelling Size and Type

The range of house types that will be acceptable within the plans lands includes houses, town houses, duplex units and apartments. The Council will control the mixture of house types and sizes through individual planning applications. Whatever the nature and size, adequate and discreet provision must be made around the outside of residences for the storage of waste and recycling containers. Apartment sizes shall adhere to the DOEHLG Guidance (Sustainable Urban Housing: Design Standards for Apartments), as may be amended or incorporated into the Dundalk and Environs Development Plan.

5.4 Car Parking Standards

Residential developments should enable people to park their cars within easy and safe walking distance of their homes. However, expanses of parked cars must not dominate residential areas. Options for provision of car-parking therefore include:

- grouped parking behind building lines;
- parking within courtyards of apartment blocks;
- basement level or multi-storey parking;
- shared on-street and communal parking; and/or,
- individual in-curtilage parking.

Where parking provision is at surface level, it must be screened or punctuated by attractive, year-round-interest landscaping.

Proposals should ensure that parking areas are safe for people to use by creating passive supervision arrangements with residential or public buildings, and/or providing lighting. Parking courts, especially unlit ones, as backland to development will not normally be acceptable.

The level of car parking provision will be consistent with standards in the Dundalk and Environs Development Plan 2009, namely:

Land Use	Car Parking Requirement (spaces per unit)
Dwelling	2
Apartment	2

(Consideration will be given to a relaxation of car park standards within a holistic eco-neighbourhood proposal).

5.5 Private Open Space and Boundary Treatments

The standard of private open space provision will be consistent with the Dundalk and Environs Development Plan 2009 (Table 6.4 and Policy HC 19) and latest guidance from the DOEHLG concerning design standards for apartments, and will provide each dwelling with private space in the form of a garden, patio or balcony. In certain cases it may be acceptable to combine private and semi-private space say, for example, in the form of courtyards. The design, planting and arrangements for maintenance must, however, be of the highest standards.

In all cases, the design and layout of private open space must have regard to solar orientation, privacy and overlooking concerns, and a useful relationship to the main living rooms of each dwelling. Figure 5.2 and associated Plate 5.2 illustrate one possible interpretation of this advice. In this example, housing is pushed to the north of the plot allowing a sunny and open garden, facing to the south. A combination of garden walls, hedges and screens are arranged to create privacy and to shelter the outdoor spaces from the wind (www.malcolmfraser.co.uk)



Figure 5.2 The Drum, Housing Development in Bo'ness Scotland



Plate 5.2 The Drum, Housing Development in Bo'ness Scotland

Boundary treatments should create a sense of enclosure, foster ownership, and be of adequate height e.g. approximately 1.8 metres when enclosing rear gardens. In terms of construction materials, boundary

treatments should be rendered concrete block, brick walls or timber fencing. More formal treatments, such as railings and/or planting will be appropriate to the front of dwellings, with the aim of creating both a sense of unity and visual interest on the street frontage. One possible interpretation of this advice is illustrated by Plate 5.3.



Plate 5.3 Planting and railings used to define front of dwellings, creating unity and visual interest. (The Village, Caterham-on-the-Hill, England, www.buildingforlife.org)

RES 1: Across the plan lands as a whole (excluding the Strategic Recreational Area), 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 Dundalk & Environs 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.

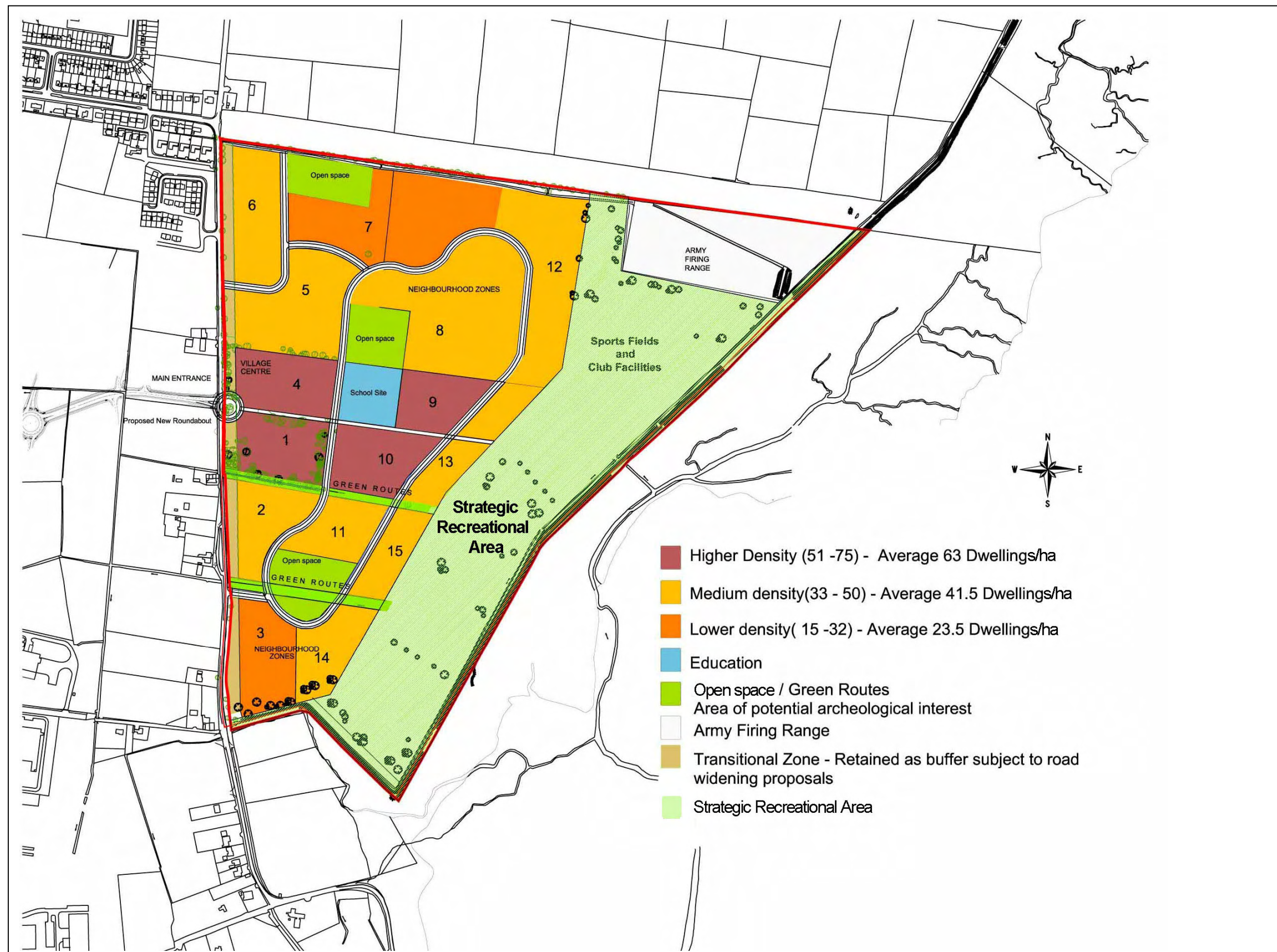


Figure 5.1 Proposed density mix

6.0 CIVIC, COMMERCIAL AND COMMUNITY FACILITIES

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

Having regard to the extent of the Plan lands, the likely number of dwellings that will be created and eventual population, it is considered appropriate to provide for the creation of a range of shops, services and facilities to serve the new community’s basic needs. Such provision will reduce the need for residents to travel to commercial centres elsewhere, and therefore reduce reliance on the private car and ensure that members of the community without cars are not disadvantaged. All uses will be subject to detailed planning considerations and may require a future amendment to the Dundalk and Environs Development Plan 2009 if they are to be accommodated.

The civic, commercial and community uses will form part of Character Area 1, which is discussed in Section 8.0.

6.1 Shops, Services, Facilities and Community Buildings
An area of approximately 3.99ha (9.85 acres) centred on the former farm complex will become the ‘Village Centre’. Civic and commercial uses might include (but not exclusively) a creche, community centre, medical/health centre, public house, coffee shop, restaurant, pharmacy, convenience store, unit shops and post office. The exact mix of uses will be determined at the planning application stage but the neighbourhood shopping quantum will be a maximum of 1000sqm (net). Higher density residential development in the form of apartments and duplex housing

will also be acceptable in and around the Village Centre. Opportunities will also arise for landmark buildings.

6.2 Childcare Facilities

The Dundalk and Environs Development Plan 2009 indicates that a minimum of one childcare facility with a capacity for 20 children be provided per 75 dwellings on new housing areas, unless there are mitigating reasons not to do so (in accordance with Policy HC 28 of the Dundalk and Environs Development Plan 2009 and the Louth Childcare Strategy). Whilst there are some facilities in the vicinity that could accommodate children from the new community, appropriate provision will be made within the plan lands. This will be fully in accordance with the Guidelines noted above i.e. 20 child spaces per 75 households unless otherwise agreed with the Planning Authority and the Louth Childcare Committee.

6.3 Education Facilities

The Department of Education stipulates that classroom sizes should accommodate 25 children, with a requirement for 24 classrooms per school. Assuming that the house-hold size is 2.63 by the year 2011 (as advised by the Economic and Social Research Institute), and that the average number of dwellings is approximately 1731, then the population of the plan lands will be approximately 4551, and therefore the number of children at primary school age will be 500 (equivalent to 11.3% of the population, according to Department of Education advice). Allowing for 25 children per classroom, this would result in a requirement for 20 classrooms, which in turn implies the need for 1 primary school.

A site of 1.2 ha (2.96 acres), which is the size required for a primary school of 24 classrooms will therefore be reserved in Character Area 1 (see Figure 5.1).

6.4 Car and Bicycle Parking Standards

As in residential areas, expanses of parked cars should not dominate the civic and commercial area/village centre. Developers will therefore be expected to work together to develop creative solutions for the provision of parking. For example, it may be acceptable to provide parking collectively e.g. using the principle of shared use, or to provide multi-storey parking, subject to high design standards. Any surface level parking must be screened by attractive, year-round-interest landscaping. Proposals for parking and landscaping should take into account the need for parking areas to be safe by creating passive supervision arrangements with public or residential buildings, and providing lighting.

The level of car parking provision will be consistent with standards in the Dundalk and Environs Development Plan 2009, namely:

Land Use	Car Parking Requirement (Area 2)
Retail	1 per 20 sq.m
Bar/Disco / Dancehalls (of public space)	1 per 5 sq.m
Restaurant / function room (of public space)	1 per 10 sq.m
Banks / Financial Institutions	1 per 20 sq.m
Schools	1 per classroom
Clinic’s /Doctor’s Surgery	3 per consulting room

Bicycle parking standards according to the Dundalk and Environs Development Plan 2009 are set out overleaf, while Plates 6.1-6.3 overleaf illustrates examples of secure cycle parking.

Land Use	Bicycle Parking Requirement
Retail	Greater of 1 secure space per 10 employees or 1 per 200 sq.m (GFA)
Bar/ Disco / Dancehall	Greater of 1 secure space per 10 employees or 1 per 200 sq.m (GFA)
Restaurant/ Function Room	Greater of 1 secure space per 10 employees or 1 per 200 sq.m (GFA)
Banks / Financial institution	Greater of 1 secure space per 10 employees or 1 per 250 sq.m (GFA)
Schools	1 secure space per 10 teachers and students
Clinic and Group Medical Practices	Greater of 1 secure space per 10 seats or 1 per 200 sq.m (GFA)

CIV 1: Civic and commercial development centred on the former Rockview farmstead will become the new village centre and shall provide an appropriate range of shops, services and facilities to support the new community, in compliance with the Dundalk and Environs Development Plan 2009. Childcare spaces will be provided in accordance with the Dundalk and Environs Development Plan 2009, 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.

CIV 2: An area of 1.2ha (2.96acres) will be reserved adjacent to the Village Centre (in Character Area 1) for the provision of a primary school.



Figure 6.1 – 6.3 Well designed and conveniently located bicycle parking facilities

7.0 RECREATION, OPEN SPACE AND LANDSCAPING

Objectives:

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

As indicated in section 3.1, the Dundalk and Environs Development Plan 2009 requires the provision of a Strategic Recreational Area along the eastern part of the lands, and requires that it provide for public and private recreational and amenity uses. This provision is to be distinct from provision of open space within the residential zoned lands. The Development Plan also contains a policy (RA 6) *“to open up access along the coastline for recreation and amenity purposes and a requirement that any development along the Castletown River is offset by 20 metres from the waters edge or high water mark and provide for cycle and pedestrian paths”* (Policy RA 6, Dundalk and Environs Development Plan 2009, page 128). Since the Plan lands encompass a military firing range, the layout and design of uses must also take account of the potential for noise disturbance and safety issues.

7.1 The Strategic Recreational Area

The Strategic Recreational Area measures 27.65ha (33% of the Plan lands) and lies on the east side of the Plan lands. It's main elements will comprise sports fields, changing facilities and associated car-parking; an

attenuation area; and, footpaths and a circular walkway, which will have the potential to form a link in the Council's proposed coastal walkway.

Proposals for the design and layout of the Strategic Recreational Area must also include landscaping; educational and interpretative signs concerning the importance and sensitivity of the habitats and species to be found on the coastline; and, measures to restrict access by the public and unleashed dogs onto the mudflats beyond the embankment. Attenuation areas within the Strategic Recreational Area shall not be regarded as useable open space.

7.1.1 Sports Fields and Associated Facilities

Provision for formal recreational activities will include 6 no. sports fields and a clubhouse with changing rooms, showers, toilet facilities, meeting rooms and associated car-parking provision. The clubhouse shall be single-storey, with, perhaps, useable areas in the roof-space. These sports fields and the clubhouse are intended for use by private sporting clubs in Dundalk.

7.1.2 The Circular Walkway and Cycleway

A circular walkway, with capacity for cyclists, will be created within the Strategic Recreational Area. Broadly, this walkway/cycleway will run around the perimeter of the Strategic Recreational Area and will have a potential connection (to the east of the Military Firing Range) with the Council's proposed coastal walkway. The position and design of this walkway/cycleway will be determined at the detailed design stage and will be guided by the report prepared by Biosphere Environmental Services (see section 2.1.2) and also with the Flood Risk assessment report by Royal Haskoning (see section 2.1.1). The approximate position of this walkway/cycleway is illustrated in Figure 9.1 (Movement and Connectivity).

7.2 Attractive and Useful Areas of Open Space

7.2.1 Open Space Quantums and Typologies

Section 6.7.3 (pages 110-112) of the Dundalk and Environs Development Plan 2009 states that proposed developments should provide spaces for both 'active' and 'passive' recreation and that public open spaces should not be less than 200 sq.m. in area and no edge or boundary shall be less than 10 metres in length. The Development Plan also provides general guidance on what forms of open space areas should be provided:

- Informal kick-about areas;
- Playgrounds for a specific age group, i.e. 'LEAPS' and 'NEAPS';
- Circuit training facilities;
- Formal playing fields;
- Village greens in larger developments;
- Landscaped gardens;
- Small parks or natural parkland accommodating native flora and fauna;
- Seating and rest areas;
- Pave areas should be designed using sustainable urban drainage principles.

Table 6.5 of the Development Plan also provides the following standards that should apply to the provision of playing facilities and pitches within residential areas:

No. of dwellings	Minimum quantity & type of multi-use sports facilities required
100-199	Children’s play area within designated open space.
200-499	One juvenile playing pitch sized up to GAA/Soccer pitch size.
500-599	One full sized pitch sized to GAA/Soccer pitch size.
600-999	One full sized pitch to GAA/Soccer dimensions and a training area.
1000+	At least two full sized pitches and a training area.

The standards set out in this LAP exceed those contained in the Development Plan.

The total area of the Plan lands is 84.34ha and the gross residential zoned area is 51.03ha. The difference between these figures includes the Strategic Recreational Area (27.65ha) and Military Firing Range (5.66ha).

Section 6.7.3 of the Development Plan (page 111) states: “Where the site includes an area which is zoned for recreation and amenity purposes in the plan, applicants may be permitted to provide up to 10% public open space within the area so zoned”.

The Plan goes on to state: “where residential developments are in close proximity to public parks or other natural amenities or in the town centre, a relaxation of the above standards may be permitted” (page 112).

In light of the extensive recreational area to be provided (27.65 ha) the LAP proposes that 10% of the residentially zoned area (5.1 ha) will be

provided by way of public open space within the residentially zoned land (in addition to 27.65 ha to be provided in the Strategic Recreation area).

While the level of open space provision accords with the statutory development plan, in the absence of guidance in the Plan on open space hierarchies, the hierarchy/typology and distribution of open spaces is based on the ‘Six Acre Standard’², published by the National Playing Fields Association (also known as Fields in Trust). The hierarchy/typology of provision in the residential lands will therefore be as follows:

	Total Quantum	NPFA (FIT) Typology & Individual Quantums	
		Equipped Play Areas (comprising LAPs, LEAPs, NEAPs) and including informal play space (ha).	Play Space For Outdoor Sport (ha)
NPFA Standard (per 1000 capita)	2.4ha	0.8	1.6
Rockview provision	5.1 ha	1.7	3.4

It should be emphasised that the 2 green routes will be encompassed by the ‘Equipped Play Areas and Informal Play Space’ typology, while the Area of Potential Archaeological Interest will be encompassed by the ‘Play Space For Outdoor Sport’ typology. The design of the green routes will therefore take full account of *both* the need for safety *and* the facilitation of drainage, and design solutions *must be agreed* with

² The ‘Six Acre Standard’ (2001) recommends a minimum standard for play space of 2.4 hectares (6 acres) per 1000 population within which 1.6ha will provide for formal sports (including pitches, greens, courts, athletic facilities and pitch and putt golf courses) while 0.8ha shall provide for children’s Equipped Play Areas and informal open space (e.g. space without equipment). Equipped Play Areas should take the form of: Local Areas for Play (LAP); Local Equipped Areas of Play (LEAP); and, Neighbourhood Equipped Areas for Play (NEAP). The provision of these types of play space will be informed by NPFA (FIT) guidance, which is summarised in Appendix 2 of this Plan.

Dundalk Town Council. In the event that an acceptable design solution cannot be offered to Dundalk Town Council, suitable alternative locations for play areas within the remaining lands must be found.

The approximate locations of (3) larger areas for outdoor sport are illustrated in Figure 7.1. These three areas are equitably distributed across the lands and are readily accessible by cycle and foot, as well as by car. One such space is adjacent to, and hence accessible via, a green route. Another is located beside the reserved primary school site, where it will be readily accessible from the school and the higher density residential area that surrounds it. In this position, the sports provision will have optimum value to the population. The third area is situated in the north of the plan lands where it also accessible by cycle, foot and car. These spaces can contain facilities such as pitches, greens, courts and athletic facilities, the details of which will be provided at the planning application stage.

Regarding Equipped Play Areas, the NPFA (Fields in Trust) advises that, as a general design principle “*the selection of sites for children’s play areas must be an integral part of the design process....It is important, as part of that process, to consider the pattern of streets, paths and open spaces from a child’s perspective*” (para. 4.34, Six Acre Standard, NPFA, 2001). Such areas therefore cannot be shown in this Local Area Plan, since clearly their nature, dimensions and location can only be determined as part of the detailed design of schemes.

The design of play spaces within the residential development will therefore be informed by the NPFA (FIT) guidance, which is summarised in Appendix 2. Thus, for example, all neighbourhoods will have Local Areas of Play measuring approximately 100sqm within a 1minute walk from homes (see Figure 7.2 and also Plate 9.4 in Section 9). Local Equipped Areas of Play and Neighbourhood Equipped Play Areas will also be dispersed throughout the residential lands. There may, according

to NPFA guidance, be opportunities to provide combined facilities, where radial/straight line distances overlap. There are a number of advantages to this, including a reduction in land take (para. 4.58, Six Acre Standard, 2001). Such spaces may also, for example, be located in the 2 green routes, which will enjoy passive supervision from adjacent housing and clear separation from vehicular movements, making them ideal for all kinds of children's play.

The precise dimensions, function and location of *all* spaces will be determined at the detailed planning application stage. This approach accords with NPFA guidelines as described above. The developers will be responsible for the management of public open spaces within the lands zoned for residential development, until such times as they are taken in charge by Dundalk Town Council.

Provision for sport and recreation within the Strategic Recreational Area will include 6 no. playing fields/pitches and a circular walkway/cycleway, which will be designed to facilitate walkers, joggers and cyclists. The management of the 6 playing fields/pitches in the Strategic Recreational Area will be the responsibility of the relevant sporting clubs. Management of the remainder of the Strategic Recreational Area will be the responsibility of the developers until such time as it is taken in charge by Dundalk Town Council.



Figure 7.1 Approximate locations of three areas for outdoor sport



Figure 7.2 Artists impression of a LAP (Six Acre Standard, NPFA, 2001)

7.2.2 Landscaping

In order to create an attractive setting in which to live, habitat for flora and fauna, and usable recreational spaces for people of all ages and abilities to enjoy, hard and soft landscaping details must be an *integral part* of the design of development proposals. Such details must therefore

be submitted with planning applications. (Some examples of landscaping are shown in plates 7.1-7.4.)

Except where some of the space is specifically proposed to be used as a kick-about area, large, featureless expanses of grass without planting will not be acceptable. Proposals for incidental and larger areas of open space should therefore contain planting proposals for a variety of trees and shrubs. A survey² of existing trees and hedgerows will identify suitable specimens to be retained and this shall inform the preparation of landscaping details in planning applications (see also para. 2.2.1 above). Planting with indigenous species should be used to augment and extend retained hedgerows and tree groups, and thereby reinforce their use as habitats for wildlife, and the character of the plan lands. A suitable range of species for landscaping within the Strategic Recreational Area will therefore include: Alder (*Alnus glutinosa*); Ash (*Fraxinus excelsior*); Birch (*Betula pubescens*); Hazel (*Corylus avellana*); Willow (*Salix*); Pedunculate Oak (*Quercus robur*); Irish Ivy (*Hedera helix hibernica*); Holly (*Ilex aquifolium*); and, Spotted Nettle (*Lamium variegatum*), or similar.

Elsewhere, for example in semi-private courtyards, it may be appropriate to introduce more formal or ornamental planting.

² The survey shall be carried out by a qualified arboriculturist and will record information concerning the quality and value of existing trees and hedgerows and their location to within 1 metre. Other details shall include: species type; tag number; height in metres; stem diameter; spread; and, age class/condition/life expectancy. The survey shall also include a Tree Constraints Plan (TCP) in accordance with BS5837:2005, and an Arboricultural Implications Assessment (AIA). This information will inform the decisions of Dundalk Town Council in determining planning applications.



Plate 7.1 Open space should be broken up and sub-divided with attractive landscaping and a variety of materials (Dartry, Dublin).



Plate 7.3 Ornamental landscaping in courtyard semi-private space including; planting to create privacy in seating, water feature to act a focal point (Temple Bar, Dublin)



Plate 7.2 Open space in a high residential density development. Note use of trees and shrubs to break up open space and enhance biodiversity in what might otherwise be a featureless expanse of grassland. (Java Island, Amsterdam)



Plate 7.4 Passive supervision of internal courtyard space through balconies and windows (Temple Bar Dublin)

7.3 The Military Firing Range

The Firing Range measures approximately 5.66 ha and is located in the northeast of the Plan lands. The Firing Range lands were purchased by the Department of Defence in 1992. Prior to this the Firing Range was operated by the Department of Defence under a rental agreement with the landowners. The Military enjoys the use of a Private Right of Way, running along the northern edge of the Plan lands, which gives access from Blackrock Road to the Firing Range. This access is safeguarded by the Plan.

In view of the potential for disturbance and safety issues, the Firing Range must be separated from the Strategic Recreational Area on its south and west sides, and housing further to the west, by means of a landscaped buffer or berm along the entire length of the shared boundary. An acoustic barrier within this buffer zone may also be required in order to reduce the potential for noise nuisance generated by the Firing Range.

At present no perimeter fencing exists around the Firing Range and this affords unrestricted access to it from the Plan lands. Security type fencing to prevent trespass will therefore be a requirement, amongst other design measures, to separate the Range from residential lands on their shared boundary.

REC 1: Proposals for the development of the Strategic Recreational Area must provide for both formal and informal recreational activities, including 6 no. playing fields/pitches with associated club house and parking, footpaths connecting to the residential areas, and a circular walkway/cycleway, with potential to connect to the Council's proposed Coastal Walkway. Legal, educational and interpretative signage concerning the importance and sensitivity of the adjoining SPA, cSAC and pNHA, and measures to prevent the public and unleashed dogs gaining access to the mudflats beyond the embankment, must be provided.

REC 2: The quantum of open space to be provided will be in accordance with the Dundalk and Environs Development Plan 2009–2015, while the hierarchy and typology shall be consistent with the National Playing Field Association’s ‘Six Acre Standard’. Provision will therefore include children’s equipped play areas, informal spaces and provision for outdoor sports. The location of areas for formal sports will broadly reflect Figure 7.1, although the precise dimensions, function and location of *all* spaces will be determined at the detailed planning application stage. The developers will be responsible for the management of public open space and the Strategic Recreational Area (apart from the playing fields/pitches) until such time as it is taken in charge by Dundalk Town Council.

REC 3: The landscape concept must be an integral part of the overall design of proposals and must aim to create an attractive setting in which to work and live, habitat for flora and fauna, and usable places for people of all ages and abilities to enjoy. Planting details should include a variety of indigenous species, and should augment and extend existing hedgerows and tree groups where appropriate. In the interests of amenity and safety, the Military Firing Range must be separated from the residential area and Strategic Recreational Area by means of secure fencing, a landscaped buffer or berm and, if necessary, an acoustic barrier.

8.0 CHARACTER AREAS

This section describes three distinct character areas within the residential zoned lands, demonstrating how guidance in Sections 4.0 – 7.0 shall be expressed in practice. The 3 character areas are illustrated in Figure 8.1.

8.1 Character Area 1

Character Area 1 forms the centre of the development acting as an entrance point and focus. It will be urban in character, with a strong street pattern and discernable hierarchy of streets, closes, lanes and mews. Uses will comprise civic, commercial, community and residential.

A central boulevard will run west to east from a roundabout on Blackrock Road to the Strategic Recreational Area. This will form the main spine of the development. It is likely that residential blocks will predominate along the boulevard. This boulevard will be urban in character, with attractive hard and soft landscaping, traffic calming, street furniture, and an active ground floor frontage. There will be limited on-street parking along the boulevard. Streets leading from the boulevard should reinforce its prominence and reflect the density of Character Area 1.

An internal ‘loop route’ will traverse Character Area 1, providing residents with opportunities to walk, cycle or drive throughout the development. Bus stops will be provided on this route, facilitating the provision of a public transport connection to Dundalk or Blackrock.

A mixed use area, to be known as the Village Centre, will be built around the footprint of the old farmstead, adjacent to Blackrock Road, and this will provide for uses such as a crèche, community centre, medical centre, public house, coffee shop, restaurant, pharmacy, convenience store, unit shops and post office.

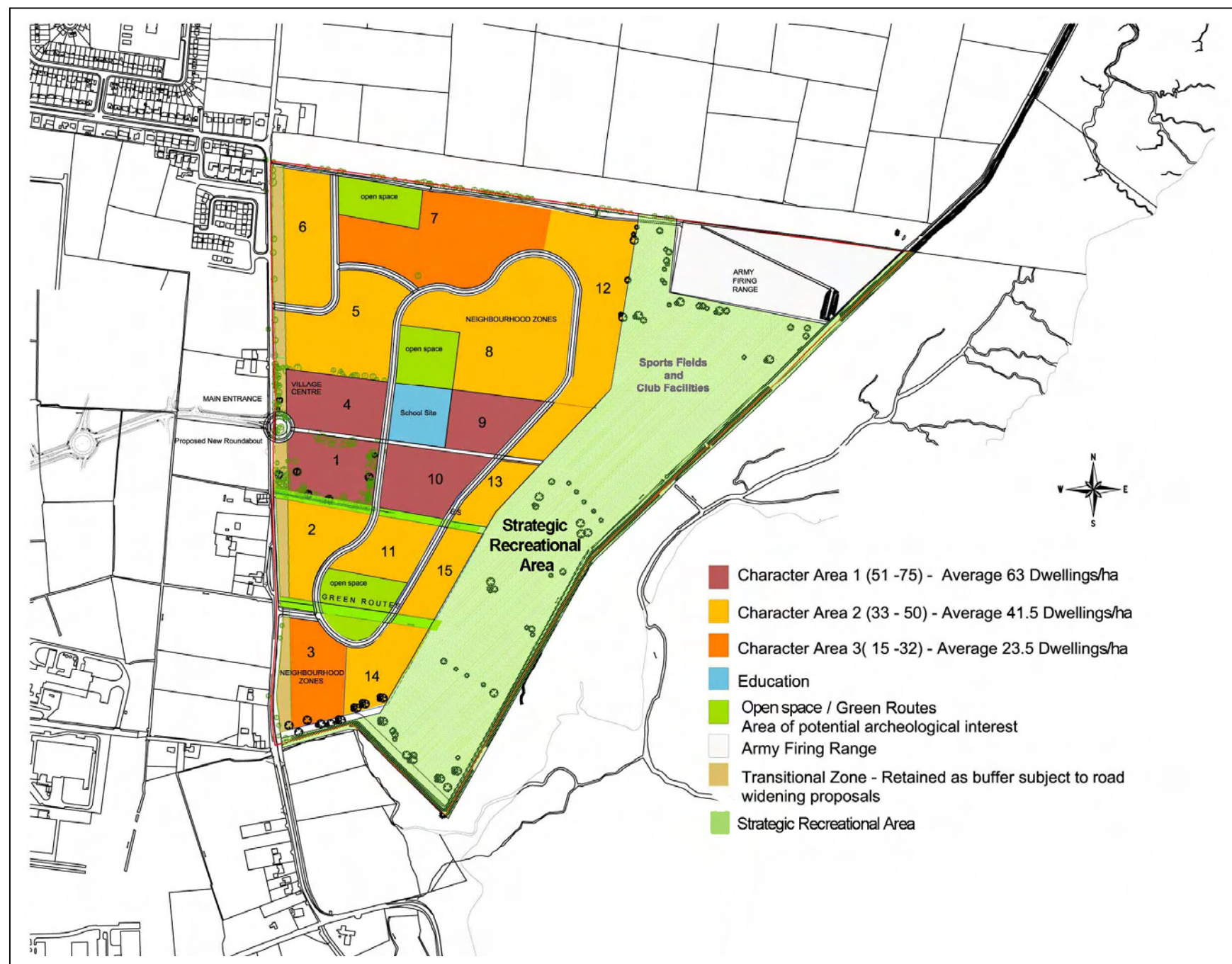


Figure 8.1 Character Areas

The configuration of the Village Centre may take the form of a square or squares providing the ‘public realm’, with buildings facing inwards. Figure 8.2 provides an illustration of how the village centre might look. Residential uses above ground will provide ‘life’ and passive supervision during the evening. Parking must be designed to ensure that the village centre is not dominated by parked cars nor congested at busy times.

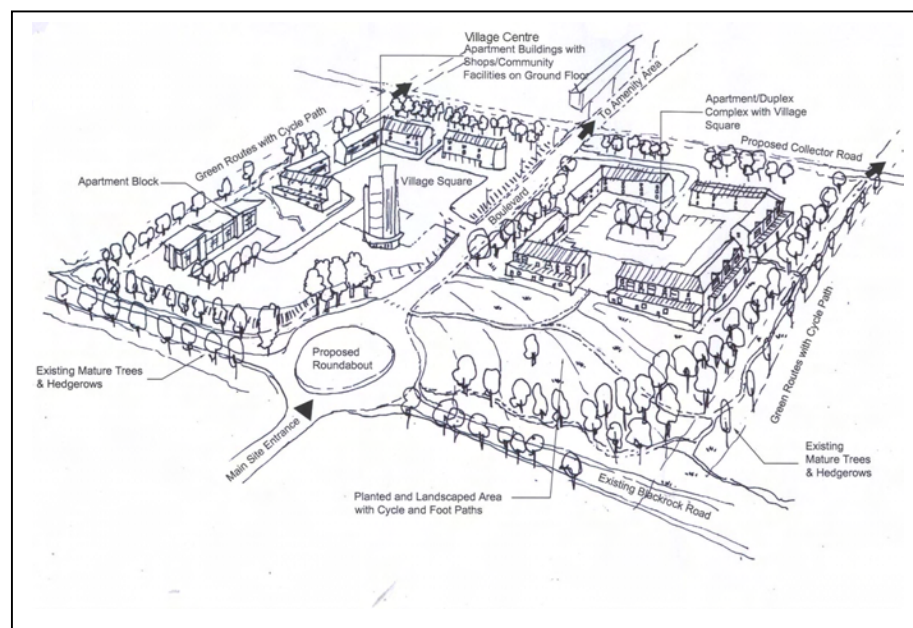


Figure 8.2 Schematic illustration of the Village Centre.

Residential development in Character Area 1 averages 63 dwellings per hectare. To accommodate this density and ensure active mixed tenures at ground floor level, there will be a variety of heights in the area as a whole.

However, to maintain the visual integrity of the boulevard, building heights should be largely uniform, ranging from 3 to 5 stories. Opportunities for the higher buildings in this range may occur at the intersections of the loop route with the boulevard, where such buildings will act as orientation landmarks and indicate the main “gateway” into the development.

Away from the boulevard a variety of building heights will be encouraged, stepping down gradually to complement the nature of adjacent character areas. Remaining streets in Character Area 1 should be urban in character, and passively observed from adjacent buildings. It is envisaged that accommodation types will be more varied in these areas, incorporating residential blocks, town houses and duplexes.



Plate 8.1 Punctuation at end of terraces

There will be opportunities for incorporating some on-street parking in the residential parts of this Character Area, but again this should be carefully designed to avoid domination of the streetscape by parked cars.

Finishes of buildings in this Area will combine a mix of colours and textures (e.g. stone cladding, brick, timber panelling) to break down their mass. Re-cycled stone, reflecting the material of the now-demolished farm complex, could be used in addition to timber cladding, brick, stone and limited plasterwork.



Plate 8.2 Strong form and colour assisting legibility

One of the two green routes in the Plan area runs alongside the southern border of Character Area 1, providing pedestrian and cyclists with safe access to the Strategic Recreational Area and a substantial area of open space. Children’s play spaces, such as LAP and LEAPs will be located in this green route as well as in other parts of the neighbourhood.

The reserved school site will be situated in this residential area and until it is built, the site will be levelled and seeded with grass. Adjacent the school, but lying within Character Area 2, is one of three large areas of open space for outdoor sport, providing the school and high density residential areas with easy access to opportunities for active recreation.

8.2 Character Area 2

Character Area 2 comprises medium density residential development encircling Character Area 1, accessed from Blackrock Road at two points and connected (primarily) by the internal loop route.

Within this Area it is envisaged that there will be a greater mix of residential types, including terraces, crescents, courtyards, residential squares, with limited semi-detached housing and residential/apartment blocks to provide foci. Main thoroughfares in this area should display a

village type character with suburban type housing limited to subservient cul-de-sacs and mews. Buildings should generally be two and three storey in height, with four-storey punctuation where appropriate. There is opportunity here to include plentiful soft landscaping. Parking shall be provided in the vicinity of the individual units. A typical neighbourhood block is illustrated in Figure 8.3 below.



Figure 8.3 Typical neighbourhood block showing neighbourhood zones

In order to create a harmonious, unified appearance, finishes will be restricted to a relatively simple mix of materials in terms of colour and texture e.g brick, stone plaster and timber, with the introduction of some colour.

Much of this Character Area will directly abut the proposed Strategic Recreational Area on the east, or overlook lands on the north zoned for the same use, and at certain locations it will be appropriate to create 3

storey buildings to frame the interface between the Strategic Recreational Area and built areas of the Plan lands. This concept is illustrated by Figure 8.4 below.

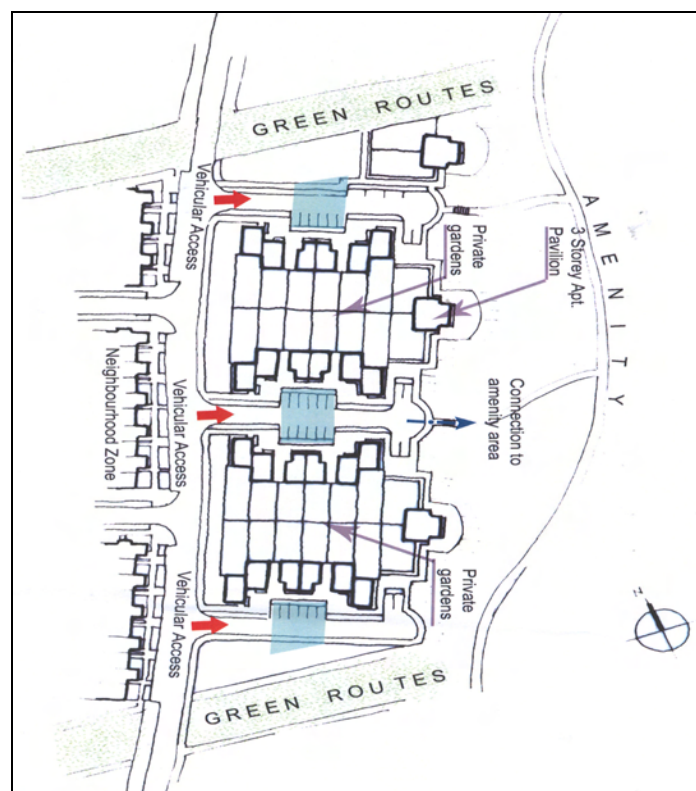


Figure 8.4 Residential development adjacent the Strategic Recreational Area

Two areas of open space for outdoor sport lie within this Character Area, as well as areas for children's play such as LAPs, LEAPs and NEAPs. The Area also includes a second green route, situated in the southern portion of the lands. Once again, this will offer opportunities for recreation, and separate pedestrians and cyclists from vehicular traffic. It will also offer direct access to the Strategic Recreational Area.



Plate 8.3 Soft landscaping in a courtyard setting



Plate 8.4 A harmonious, unified appearance, achieved by simple mix of materials in terms of colour and texture.

8.3 Character Area 3

Character Area 3 is split into two areas, one on the north of the lands and one on the south. It will comprise the lowest density of housing in the form of 1, 2 and 3 storey houses, including semi-detached and detached houses. Figure 8.5 below illustrates typical neighbourhood zones in this Area.

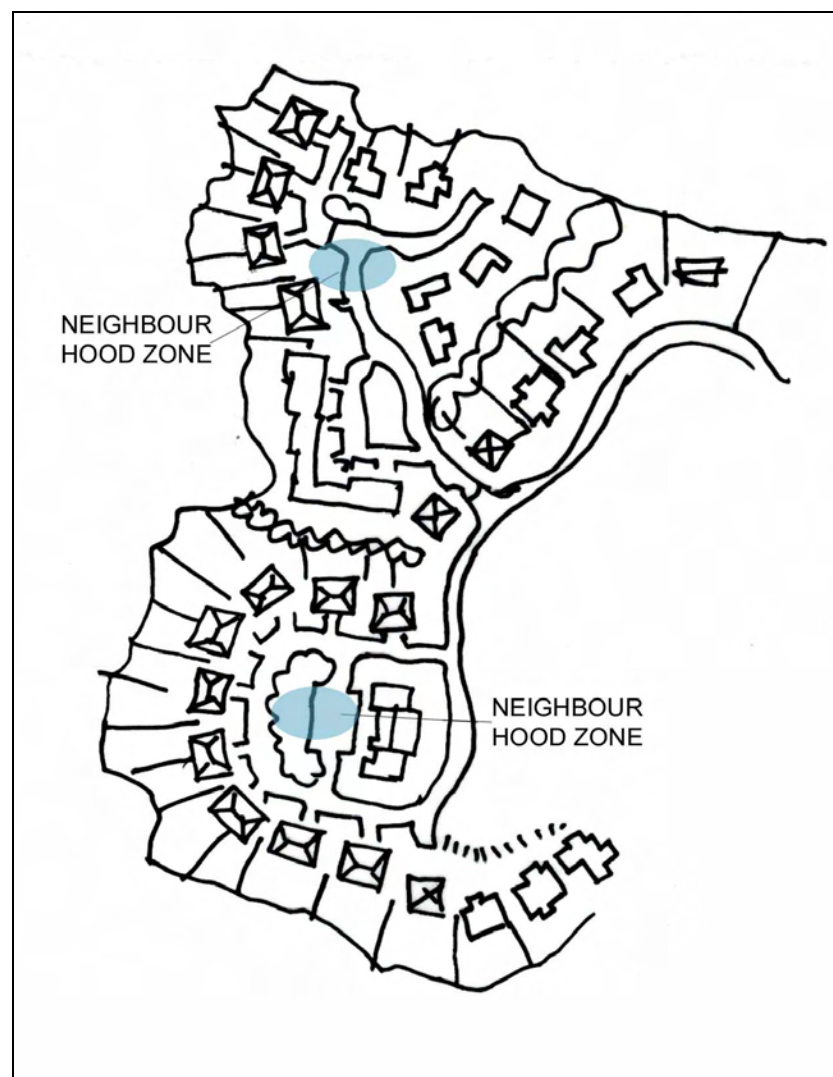


Figure 8.5 Typical Neighbourhood Zones in Character Area 3.

Design and finishes for housing in this Area will allow for a mix to highlight individuality, as illustrated by the following plates.



Plate 8.5 1-2 storey with contemporary style and finishes



Plate 8.6 2 storey in traditional style and materials

Part of Character Area 3 on the north of the Plan lands includes an Area of Archaeological Potential and this will be incorporated sensitively into an area of open space for outdoor sport in a manner that safeguards it's possible interest.

Part of the Character Area abuts lands to the north which are zoned as a Strategic Recreational Area and as such there are opportunities to use the orientation and design of housing to take advantage of attractive views over these lands towards the north and the Cooley mountains. Equally, the southern portion of this Character Area lies adjacent to land zoned *“To provide for the provision of public parks, open spaces, amenity and recreational facilities”* in the Dundalk and Environs Development Plan 2009 (Map 1).

9.0 ACCESS AND MOVEMENT

Objectives:

- To provide internal roads with linkages to the surrounding network.
- 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.

A successful development must comprise a hierarchy of roads, footpaths and cycleway that will enable safe and efficient movement within the plan lands between key destinations. At the same time, it must be well connected with Dundalk by means of existing roads, public transport, and pedestrian and cyclist infrastructure.

9.1 Access to the Plan Lands and Road Improvements

The plan lands will be accessed from the existing Blackrock Road at three points. The central access will be taken from a new roundabout on the Blackrock Road, directly opposite the Finnabair Road. This access will continue into the lands to form the main east-west access and therefore its 'main street'. This road will also pass through the village centre that is to be created on the site of the old farmstead, and will be bisected by an internal 'loop route', beginning and ending at the other two access points and providing vehicular access for cars and buses into the plan lands. A further link will extend from the loop route, and this will provide access to other parts of the lands for cars only. The movement framework is illustrated by the Figure 9.1.

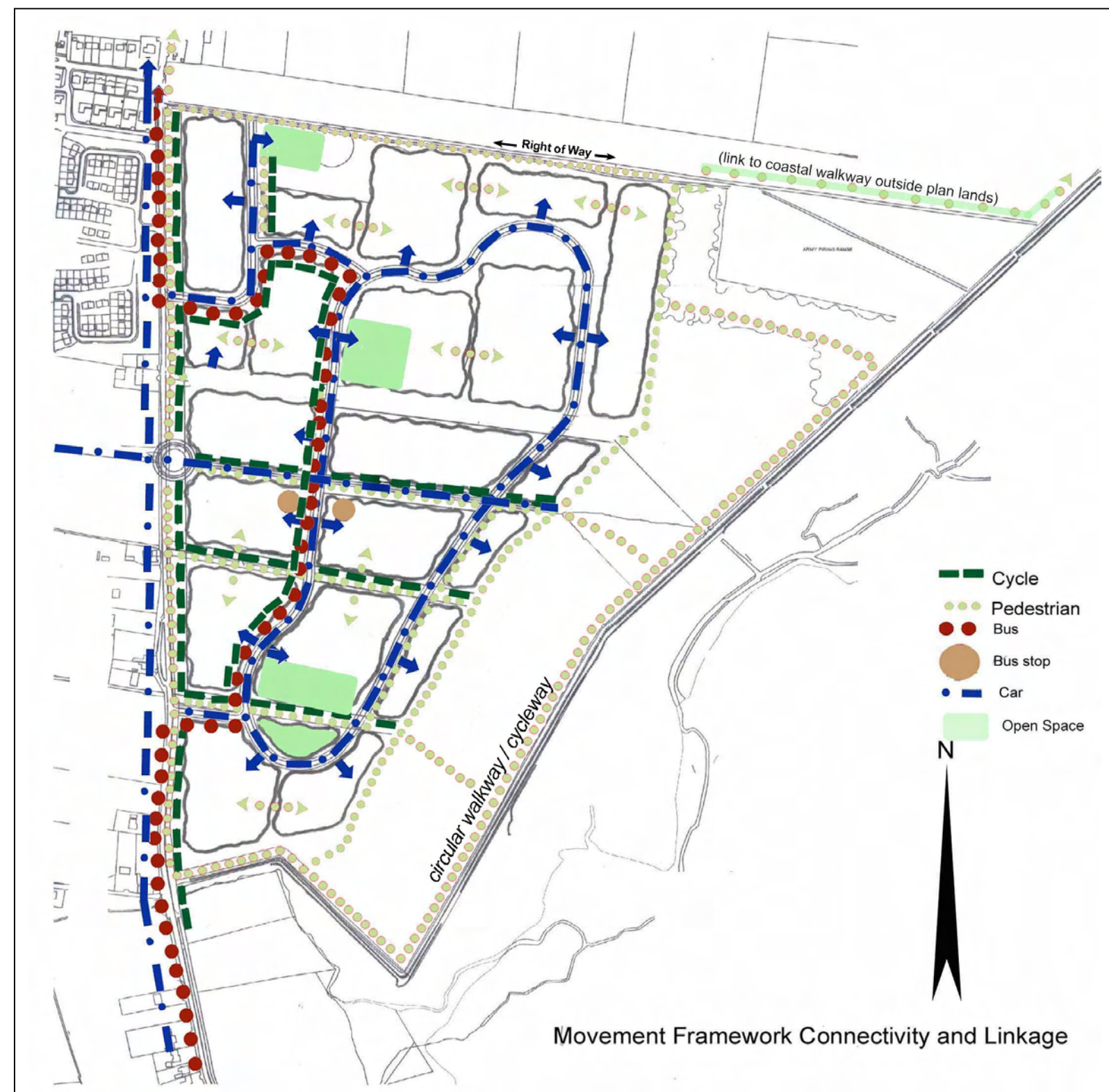


Figure 9.1 Movement Framework

The road improvements necessary in the immediate vicinity of the Plan lands will take place along the R172 Blackrock Road. These works will involve the construction of a new 4-arm roundabout at the existing T-junction of the Finnabair Road with the R172 Blackrock Road, with the 4th arm constructed for access into the Plan lands. The provision of the two priority junctions will require carriageway widening and verge setback to accommodate right turn lanes and improved visibility splays. Also, the R172 Blackrock Road will be upgraded along the entire Plan lands' frontage. These works will involve carriageway widening with pedestrian and cycle provision. Figure 5.1 shows a 'Transitional Zone' within the Plan lands and alongside Blackrock Road, which is intended to accommodate the necessary works. The width of this zone, which does not form part of the open space calculation, will be determined in the course of preparing detailed road upgrading/widening proposals.

9.2 Width and Character of Roads

The road design for the Plan lands will employ the concept of a roads hierarchy, from small scale cul-de-sacs where pedestrian movements are predominant and vehicle speeds are restricted, to local collector roads catering for higher traffic volumes including bus movements and significant numbers of pedestrians and cyclists.

From the outset, the internal roads will be designed with traffic calming in mind by using horizontal alignment constraints backed up by good urban design to keep speeds low. The careful positioning of buildings, landscaping and use of different materials can help to reinforce the need to reduce speed and reduce the dominance of the motor vehicle.

The local collector road will be designed to constrain vehicle speeds to 50km/h. And while, generally, the carriageway width will not exceed 6.1 metres, it may require widening along the bus route. The width of access roads will be such that vehicle speeds are constrained to 35km/hr.

9.3 Traffic Calming

At certain locations, both the main access roads and roads providing direct access to the residential areas may require measures to slow traffic speeds and thereby increase pedestrian and cyclist safety.

The following is a list of acceptable measures, and some of their appropriate locations, to reduce traffic speed within the development:

- **Entry Treatments:** Entry treatments mark the change from one type of road to another and, typically, different materials or rumble strips are used to make drivers aware of the change in the nature of the road. Suitable locations would be where a driver turns off the Local Collector Road onto an Access Road or from a Major Access Road to a Minor one with a shared surface.
- **Shared Surface:** Shared surfaces encourage different modes of transport to use the same area of road and in such areas the road surface finish should contrast visually and texturally with other conventional access roads so that drivers do not assume precedence.
- **Carriageway Narrowing and Chicanes:** Physical changes to the width of the road or road markings can be used to induce drivers to slow down.
- **Speed Reduction Bends:** Bends in the road at short intervals prevent drivers reaching higher speeds. Such bends need to be sufficiently tight to effectively reduce speed and adequate forward visibility must be maintained around the bends.
- **Speed Control Islands:** These involve lateral shifts of the carriageway and can incorporate the provision of overrun areas or mountable shoulders.

Locations where such features should be used within the plan lands include:

- on the main east-west street, the loop route and its extension;

- around the village centre;
- in the vicinity of the school site;
- at access points to the Strategic Recreational Area; and,
- at the entrances to residential sub-areas.

Specific locations for traffic calming measures on the main east-west street and loop route will be at:

- pedestrian and cyclist crossing points;
- exits/entrances to local parks and the primary school; and
- intersections of green routes with other routes.

9.4 Walking and Cycling

Walking and cycling are the most sustainable modes of transport and to encourage people to walk and cycle, the location of the village centre, where shops, facilities and other services are concentrated, is such that 90% of the residential areas are within 5 minutes walk. This is illustrated by Fig 4.2 in Section 4.

The main walking and cycling routes are illustrated by Figure 9.1 above. Development proposals must respect these routes. In addition, development proposals must consider further opportunities to link residential areas with, not only the proposed village centre, but also with: bus stops; other, smaller areas of open space; and, the Strategic Recreational Area. Matters to consider include:

- physical or psychological barriers such as busy roads;
- opportunities to use open space as stepping stones;
- the directness of the route with regard to desire lines; and
- safety and passive supervision of routes.

Proposals for the village centre, areas of open space, Strategic Recreational Area and school will be required to provide safe cycle

parking facilities in the form of covered or semi-covered areas with fixed stands to allow locking.

9.5 Green Routes

Two dedicated walking and cycling routes that are separated from traffic and run east to west, are proposed. These ‘green routes’ follow the existing east-west boundaries of fields and the main drainage ditches and their presence will create attractive vistas through the plan lands. As with other routes and open spaces, neighbouring dwellings should be designed to look onto these green routes and ensure passive supervision. Plates 9.1 – 9.5 show examples of green routes in Amsterdam and Adamstown, South Dublin, which provide safe and convenient play areas for children and are overlooked to ensure passive supervision.



Plate 9.2 Footpaths within green route.



Plate 9.4 Children’s playground located at the end of a green route



Plate 9.1 Green route overlooked by apartments.



Plate 9.3 Personalisation of rear gardens backing onto a green route.



Plate 9.5 Green Routes can also function as ‘environmental corridors’ to enhance biodiversity

9.6 Bus Routes

The use of public transport as a sustainable alternative to the private car will be encouraged by the provision of a bus route and covered stops within the plan lands. The bus route will follow the internal loop route discussed in section 9.1 and covered stops will be provided along this route and at the village centre.

ACC 1: This Plan proposes a movement framework comprising three access points from the Blackrock Road, internal 'loop routes', a central east-west street and 2 green routes following the main east-west drainage ditches. Development proposals must provide for the movement framework illustrated by Figure 9.1 and, where necessary, provide traffic calming measures that will enable pedestrians and cyclists to reach a variety of destinations directly and safely.

10.0 INFRASTRUCTURE

Objectives

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

10.1 Ground levels

The Flood Risk Assessment undertaken by Royal Haskoning (see section 2.1.1) recommended implementation of Option 2 – improvement of the main coastal defence by raising the embankment crest to 6.0mODM and armouring the front face and crest; raising the development lands to between 4.25mODM and 4.41mODM in residential areas and 3.5mODM in amenity areas; and, provision of return embankments for the amenity lands at the north and south boundaries. All property threshold levels should be at least 4.41mODM.

The existing ground levels throughout the site vary between 2.1 – 3.0mODM. Consistent with the recommendations of Royal Haskoning, the levels throughout the site shall be raised by approximately 1.25 – 2.3mODM.

Figure 10.1 shows the existing and proposed ground levels.

10.2 Foul Sewerage

In relation to foul sewerage, lands to the north of the Inner Relief Road drain to the Coes Road pumping station via the Coes Road Main Drain. This major combined sewer catchment has been extended westwards of

the Xerox site, and in the medium term it will be called upon to accept drainage from lands zoned industrial to the west and south of Xerox.

Lands to the east of the Red Barns and Blackrock roads are extremely flat, and lie outside the drainage catchment for Coes Road as matters stand.

In terms of a local foul sewage pumping station, and the importance of reserving capacity at Coes Road for lands that will have no other drainage option, a separate rising main towards the Soldiers Point Wastewater Treatment Plant must be considered. In the absence of any available guidelines on the wider utility of such a station, it is not possible to take an overview of the entire drainage requirement in this sector of Dundalk.

In the circumstances, a dedicated pumping station, located to the North East of the lands and a rising main along the Blackrock Road/Red Barnes road to Point Road, is preferable to any attempt to anticipate and build a section of a larger catchment Rising Main (see Figure 10.2 at the end of this section). The effluent can be delivered to the Point Road Pumping Station, and this would deliver the effluent via the existing rising main directly to the Wastewater Treatment Plant.

The existing Point Road Pumping Station has a direct rising main to the Preliminary Units of the Dundalk Wastewater Treatment Plant. Delivering the pumped effluent from the proposed pumping station into the Point Road sump would prevent the need to lay a small diameter rising main through the landscaped Wastewater Treatment Plant. The sump could be sized and its base level selected to accept effluent from other lands in its gravitational catchment northwards to the Shore Road.

The proposed development, at full development, will have a projected foul water load of 13100cu.m./d and 370kg/d BOD, or 6200PE.

The proposed development will increase the load on the existing Wastewater Treatment Plant at Soldiers’ Point, but within the margin, which it is capable of treating while producing a compliant treated effluent.

No special monitoring of this development is required; it is expected to produce a standard domestic/light commercial sewage similar to that from other such development in Dundalk

Dundalk Town Council has no plans to develop further services in this area. In light of this, the foul sewerage, including the on-site pumping station and pumped rising main, together with any up-grading works to the Point Road Pumping Station and/or its rising main, shall be undertaken at no cost to the Council. There may, however, be a role for the Council in serving wayleaves for construction and maintenance of pumped, rising sewerage across lands that not in the developer’s ownership.

10.3 Surface Water Drainage

The receiving environment for surface water is the network of open channels that separate the individual fields in the lands east of the Red Barns Road and west of the existing sea rampart. These channels are tide locked at high tide, and they drain through valved outlets to the channels through the mudflats on the seaward side of the rampart

The proposed development will consist of phased housing, service roads and open space, generally on imported fill with a surface level for roads and footpaths of approx. 4.41m ODM.

It is proposed to use imported fill material as an attenuating medium for surface water runoff, where practical and suitable, in accordance with the approach recommended by SUDS. A petrol interceptor will be fitted to each main outfall to the natural ditch system.

Assuming that the remaining undeveloped inland areas upgrade from the Red Barns road develop on the basis of sound Sustainable Urban

Drainage practice, the drainage of surface water from the proposed development into the channel network will be possible, but will place a requirement for maintenance of the surface water drainage system, to ensure it remains serviceable as it discharges into the varying water levels in the receiving channels. The existing ditch drainage network shall be maintained where practical and upgraded as necessary, taking account of the proposed development and best practice in design.

The quality of surface water will be maintained at pre-development levels by the use of petrol interceptors and other measures.

10.4 Water Supply

Dundalk currently uses approximately 18 Mld within a headworks capacity of 27 Mld in the Treatment Works at Cavan Hill, so that water availability at source is not a constraint per se. Water Rights to abstract up to 36 Mld exist at present, so that the Council may increment capacity at Cavan Hill at any time they consider the headroom to warrant it.

In terms of the water supply network, the twin 600mm Trunk Mains from Cavan Hill are routed to the southern side of Dundalk, and these pressurise the 300 mm diameter watermain routed along the Inner Relief Road. This in turn feeds the 10 inch main on the Avenue Road, which branches at the Blackrock Road junction into a 6 inch and 3 inch main heading west and east respectively. Consulting Engineers were appointed in late 2006 to prepare a preliminary report on upgrading the facilities at Cavan Hill.

The proposed development will draw from the 6-inch watermain on the Blackrock Road, and this will sustain the initial Phases of the development. The maintenance of adequate residual pressures along the Blackrock Road may require for latter phases the insertion of a link main between the Inner Relief Road and the Blackrock Road, and may even

require extension of the 600 mm diameter trunk main, especially if the industrial zoned lands south of Dundalk are developed with a large water user drawing from a future branch line off the twin 600 mains referred to above.

10.5 Electricity Supply

All residential and commercial development in the area must be connected to the national electricity network. The site is situated to the east of Dundalk town and an adjacent electrical supply is available. Assuming site development of approximately 1731 residential units it is predicted that a supply of 3.5MVA will be required to serve the site demands.

It is proposed that where possible and appropriate existing overhead cables on site will be under-grounded as part of site development. Early consultation will take place with the ESB to agree under grounding and prevent sterilisation of land corridors along existing routes.

The proposed network to serve the phased development will be detailed when at planning stage. Ducting will be placed in accordance with the requirements set out in the ESB publication “Electrical Services Guidebook for Housing Schemes”.

10.6 Telecom Services

It is the intention of the developer to support the development of an up to date telecommunications infrastructure including the Internet, E-mail and digital television to enhance the plan area for future residents.

Connection will be made to the existing national telecommunications grid through both traditional copper and fibre optic connections. The development area is serviceable for Broadband and other telecom services.

Ducting for the proposed telecom network to the site will be placed in accordance with the requirements as set out in the service provider’s requirements.

10.7 Gas Supply

All residential and commercial development will be connected to the national grid network. There is an existing natural gas supply in town that can be readily extended to the site. Bord Gais have a 125mm PE 4bar gas pipeline located at either end of the plan area on the western side of the Blackrock Road. Bord Gais will require the supply to the proposed development site to be with an extension of the existing 125mm PE 4bar pipeline creating a looped supply through the site.

The development may require underground pressure reduction installations and, if required, an area if approximately 2.5 sq. m. in a footpath or landscaped area will cater for these. Gas mains will be laid in accordance with the requirements set out in the Bord Gais guideline publications.

INFRA 1 Consistent with the recommendations of the Flood Risk Assessment Report prepared by Royal Haskoning, the levels throughout the site shall be raised by approximately 1.25 – 2.3mODM.

INFRA 2 Public infrastructure and services for foul and potable water, and surface water drainage will be provided in accordance with details in this Plan.

INFRA 3 Electricity, gas and telecommunications infrastructure will be provided in line with details in this plan.

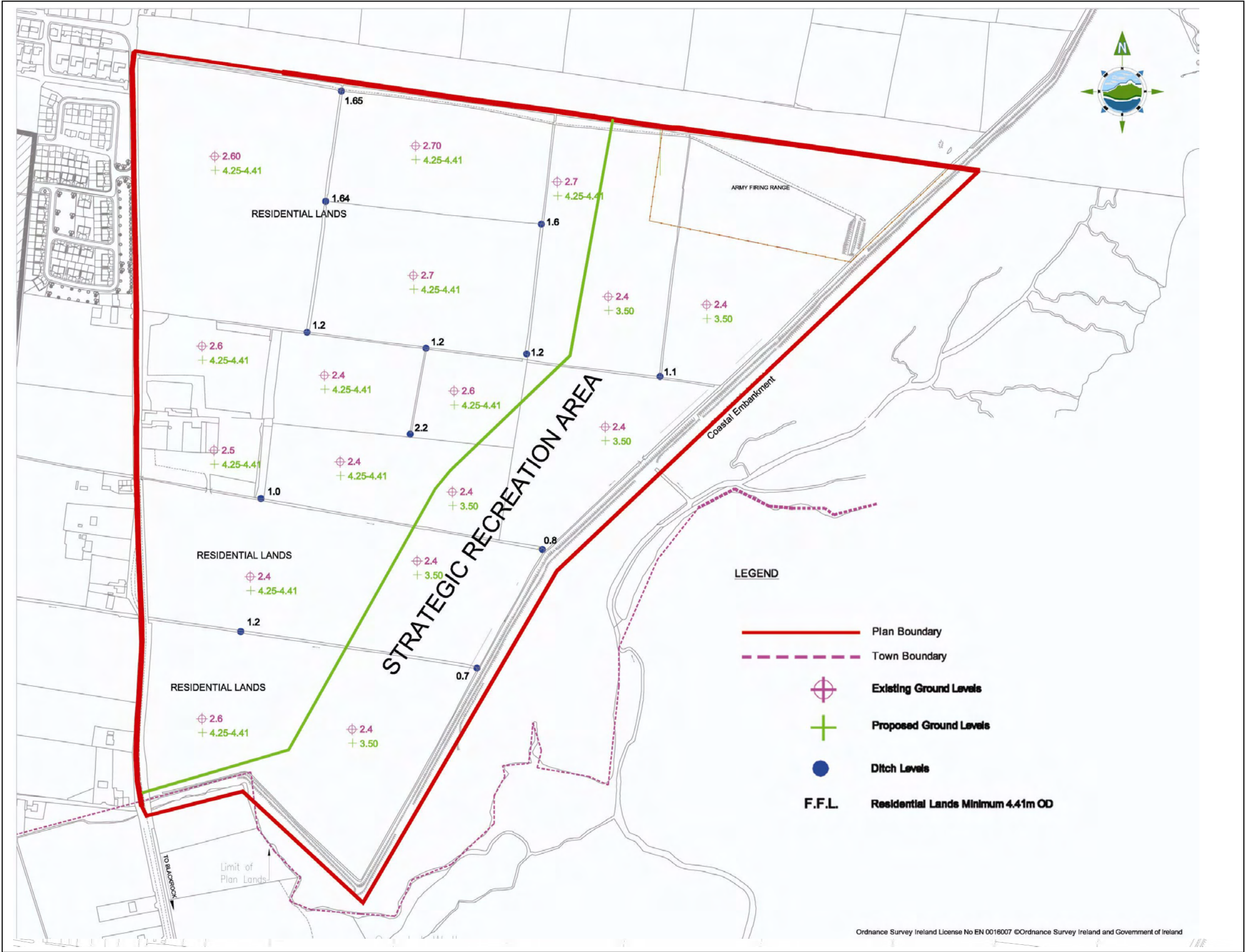


Figure 10.1: Existing and Proposed Development Levels

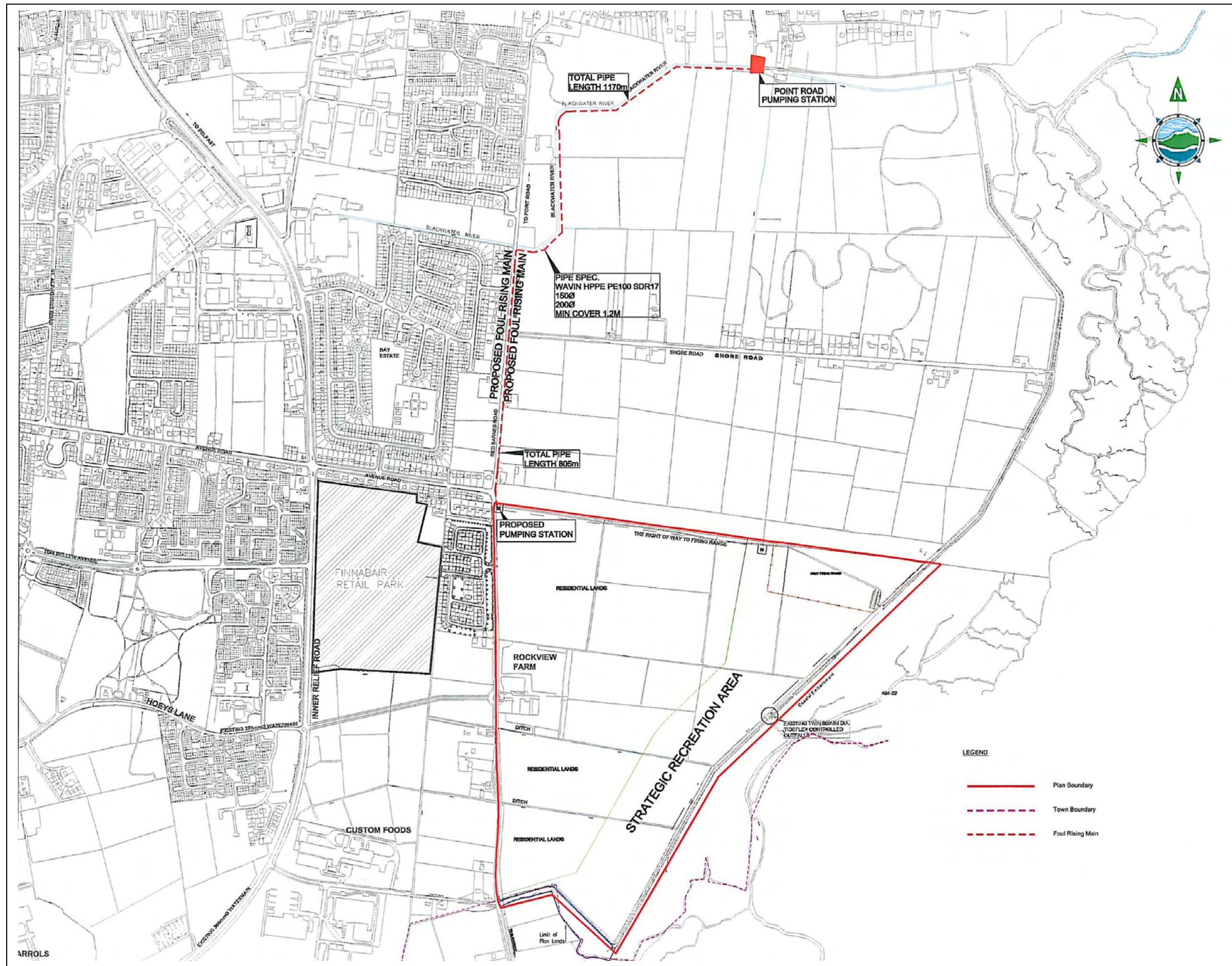


Figure 10.2 Rising main route and location of pumping stations

11.0 IMPLEMENTATION

11.1 Introduction

The new community requires a range of physical, social, and recreational infrastructure to support and sustain itself, some items of which will be essential from the outset, others that will be required as the development proceeds. Implementation of the development will therefore comprise initial pre-development engineering and infrastructure works, followed by three phases of development, which will see the roll out of housing in tandem with appropriate items. Although a school site is reserved in the area to be developed in Phase 1, construction of the school is not itemised in this Phase because the timing of its provision will be determined according to need.

Figure 11.1 shows the sequence of the 3 phases, while Table 11.1 at the end of this section summarises the key to be provided in each phase. Table 5.1, showing the *indicative* numbers of houses that could be developed in each area, is also reproduced below.

IMPL1: Prior to the commencement of development, an Infrastructure Framework Plan for the Plan lands shall be completed in co-operation with the Planning Authority. Development of the lands will occur in three phases consistent with the phasing map and details in this section.

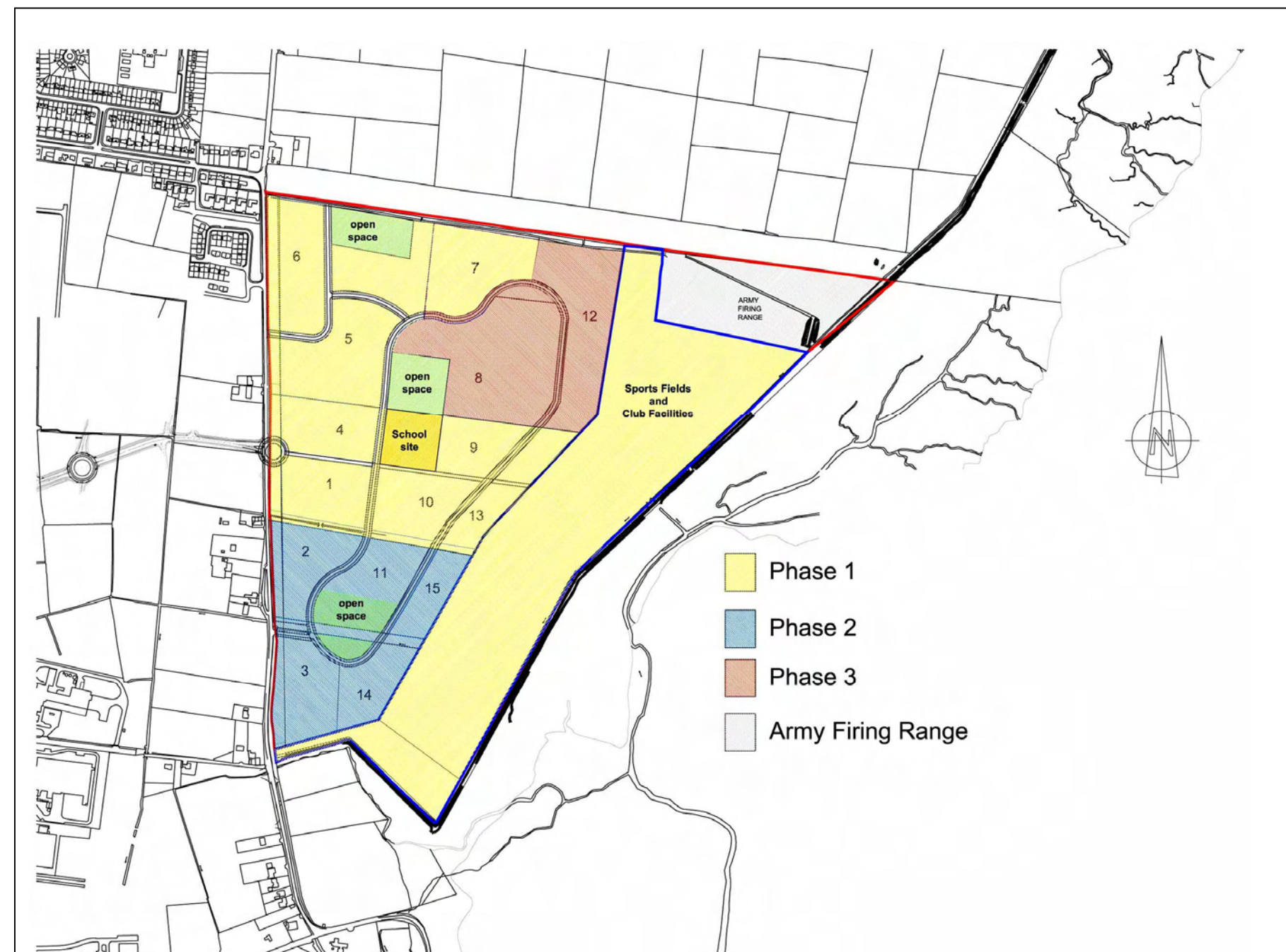


Figure 11.1 – Phasing sequence

11.2 Pre-Development Engineering And Infrastructure Works

Site Levels, Embankment and Walkway/Cycleway

Of prime concern is the minimisation of flood risk. Therefore, on receipt of planning permission, work to raise and reinforce the coastal embankment and ground levels will commence. The raising and reinforcement of the coastal embankment, and land-raising of the SRA will be entirely completed prior to commencement of Phase 1. The balance of the lands will be filled, in a sequence of phases (1, 2 and 3) and sub-phases of the same. The proposed sequence of development has been devised with a view to minimising disturbance to new occupants as subsequent areas are developed.

The construction of the circular walkway/cycleway within the SRA will be undertaken as part of the works to raise and reinforce the coastal embankment and ground levels within the SRA. Upon completion of the circular walkway/cycleway, educational and interpretative signage, concerning the importance and sensitivity of the adjacent SPA, cSAC and pNHA, and measures to prevent public access and unleashed dogs onto the mudflats beyond the embankment, will be erected

Educational and interpretative signage concerning the importance and sensitivity of the adjacent SPA, cSAC and pNHA and measures to prevent public access and unleashed dogs onto the mudflats beyond the embankment. *These will be erected prior to the first occupation of dwellings constructed in Phase 1;* and

Foul Water

The main element of infrastructure to be provided at the outset is the construction of a Pumping Station and Rising Main to pump effluent to the Dundalk Wastewater Treatment Plant. Provision of the necessary physical infrastructure for each phase will commence at the outset of that phase.

Water Supply

The initial phases of development will draw from the 6-inch watermain on the Blackrock Road, while later phases may require the insertion of a link main between the Inner Relief Road and the Blackrock Road and, potentially, the extension of the 600mm trunk main.

Surface Water Drainage

The use of SUDS (Sustainable Urban Drainage Systems) will be implemented in the control and management of surface water generated by the proposed development. Petrol interceptors will be fitted at each outfall location as surface water drains to the existing ditches that are routed through the site.

Construction Traffic

A new roundabout opposite the link road from the Finnabair Retail Park will form the main site access. Two further access roads, one located to the north and one at the southern end of the lands, will be provided. The provision of these three access roads, at the outset, will facilitate the movements of construction traffic over the period of the development of the site, and accommodate the additional traffic generated by the occupation of the development.

Other Items of Pre-Development Engineering and Infrastructure

The buffer/berm around Military Firing Range (located in the Strategic Recreational Area) will be constructed.

Prior to the commencement of development, an Infrastructure Framework Plan for the Plan lands shall be completed in co-operation with the Planning Authority. This Plan shall be informed by the above advice on pre-development works and phasing.

11.3 Phase 1

This Phase will see the completion of land-raising for the Phase 1 area, and continuation of raising the areas for Phases 2 and 3.

Dwelling & Population Yield

Phase 1 will see the development of areas 1, 4, 5, 6, 7, 9, 10 and 13, yielding approximately 885 dwellings (*assuming average densities - see Table overleaf*). The approximate population arising from this Phase will be approximately 2327, assuming a household size of 2.63 persons.

Civic Commercial and Community Facilities

From the outset, residents of the Plan lands will require shops and certain facilities and items of community infrastructure. This Phase will therefore see the construction of:

- A neighbourhood centre, to accommodate a range of shops, services and facilities including 1000sqm (net) of local shopping uses; and,
- child care provision in line with the Dundalk and Environs Development Plan and Louth County Childcare Guidelines.

Public Open Space/Strategic Recreational Area/Playing Fields and Pitches/Green Routes

Recreational opportunities will be provided for the residents of new housing, alongside provision of the Strategic Recreational Area, which is to benefit the town as a whole. Phase 1 will therefore see the creation of:

- 2 areas of open space for outdoor sport and areas for children’s play (one encompassing the Area of Potential Archaeological Interest and another adjacent to the reserved school site);
- 6 playing pitches and fields, club house with changing facilities and car parking within the SRA;

- 1 green route within the residential lands;
- amenity planting within the SRA.

Infrastructure & Engineering Work/Items

In support of the above, the following items of infrastructure will be constructed/installed:

- main street/boulevard;
- sections of internal loop route (the distributor road), including footpaths and cycleways;
- access roads;
- pumping station and rising main; and,
- water supply network; petrol interceptors, and ESB and telecom connections.

The delivery of the housing and associated areas of open space, services and facilities will adhere broadly to the sequence in the table beside:

Phase 1 (a): Development of areas 1, 10 and 13 (yielding approximately 286 dwellings), with 1 green route; children’s play areas; 3 playing pitches within the SRA, and approximately 76 child care spaces within the Village Centre. Phase 1 (b): Development of areas 4 and 9 (yielding approximately 223 dwellings), with 1 area of open space for outdoor sport (adjacent to the reserved school site); children’s play areas; 3 playing pitches, a club house and associated car-parking within the SRA; and, approximately 59 child care spaces within the Village Centre. Phase 1 (c): Development of areas 5, 6, and 7 (yielding approximately 376 dwellings), with 1 area of open space for outdoor sport (encompassing the Area of Potential Archaeological Interest); children’s play areas; and, approximately 100 child care spaces within the Village Centre.
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11.4 Phase 2

This Phase will see completion of land-raising of the area of Phase 2 and continuation of raising area for Phase 3.

Dwelling & Population Yield

Phase 2 will see the development of areas 2, 3, 11, 14 and 15, yielding approximately 358 dwellings (*assuming average densities - see Table alongside*). The population arising from this Phase will be approximately 941, assuming a household size of 2.63 persons.

Civic Commercial and Community Facilities

Additional childcare facilities will be constructed in this Phase, subject to need.

Public Open Space/Strategic Recreational Area/Playing Fields and Pitches/Green Routes

The SRA will have been completed by the end of Phase 1, and therefore this Phase will see the creation of:

- 1 area of open space for outdoor sport and areas for children’s play within the residential areas; and,
- 1 green route.

Infrastructure & Engineering Work/Items

In support of the above, the following items of infrastructure will be constructed/installed:

- sections of the internal loop route, including footpaths and cycleways;
- access roads;
- water supply network, petrol interceptors, ESB and telecom connections.

11.5 Phase 3

In Phase 3 the final areas of land-raising will be completed, and the remaining areas of housing developed.

Dwelling & Population Yield

Phase 3 will see development of areas 8 and 12, yielding approximately 488 dwellings (*assuming average densities - see Table alongside*). The population arising from this Phase will be approximately 1283, assuming a household size of 2.63 persons.

Civic Commercial and Community Facilities

Additional childcare facilities will be constructed in this Phase, subject to need.

Public Open Space/Strategic Recreational Area/Playing Fields and Pitches/Green Routes

This Phase will see creation of:

- areas for children’s play.

Infrastructure & Engineering Work/Items

In support of the above, the following items of infrastructure will be constructed/installed:

- sections of the internal loop route, including footpaths and cycleways;
- access roads;
- water supply network, petrol interceptors, ESB and telecom connections.

AREA	USE	DENSITY RANGE*	NET AREA	DWELLING RANGE		Average number of dwellings
			(hectares)	(Lower)	(Higher)	
1	Village Centre* (mixed use)	High	1.97	100	148	124
2	Residential	Medium	1.7	56	85	70.5
3	Residential	Low	2.09	31	67	49
4	Village Centre* (mixed use)	High	2.02	103	151	127
5	Residential	Medium	3.35	110	167	138.5
6	Residential	Medium	2.31	76	115	95.5
7	Residential	Low	6.0	90	192	141.5
8	Residential	Medium	7.12	235	356	295.5
9	Residential	High	1.54	78	115	96.5
10	Residential	High	1.96	100	147	123.5
11	Residential	Medium	2.79	92	139	115.5
12	Residential	Medium	4.65	153	232	192.5
13	Residential	Medium	0.94	31	47	39
14	Residential	Medium	1.7	56	85	70.5
15	Residential	Medium	1.26	42	63	52.5
	Totals		41.40	1353	2109	1731

Table 5.1: Proposed density mix and indicative yields

* Although the village centre zones will be developed at high density, in practice, some of the land in the quantum will be developed with civic and commercial uses, potentially reducing the residential yield.

	Pre-development Works	Phase 1	Phase 2	Phase 3	Totals
Dwelling & Population Yield		Development of areas 1, 4, 5, 6, 7, 9, 10 and 13, yielding approximately 885 dwellings, <i>assuming average densities</i> . The estimated population will be approximately 2327 persons.	Development of areas 2, 3, 11, 14 and 15, yielding approximately 358 dwellings, <i>assuming average densities</i> . The estimated population will be approximately 941 persons.	Development of areas 8 and 12, yielding approximately 488 dwellings, assuming average densities. The estimated population will be approximately 1283 persons.	Average number of dwellings = 1731 Approximate population = 4551
Civic Commercial and Community facilities		Construction of: - a neighbourhood centre, to accommodate a range of shops, services and facilities, including 1000sqm (net) local shopping; and, - child care provision in line with the Louth County Development Plan and Louth County Childcare Guidelines (equivalent to approximately 235 child care spaces).	Construction of additional childcare facilities, subject to need.	Construction of additional childcare facilities, subject to need.	1000 sqm neighbourhood services uses, to accommodate a range of shops, services and facilities; and, - child care provision in line with the Louth County Development Plan and Louth County Childcare Guidelines.
Public Open Space/Strategic Recreational Area/Playing Fields and Pitches/Green Routes	- Circular walkway/cycleway within the SRA (constructed and completed as part of the works to the coastal embankment and land raising in the SRA). - Erection of educational and interpretative signage concerning the importance and sensitivity of the adjacent SPA, cSAC and pNHA, and measures to prevent public access and unleashed dogs onto the mudflats.	Creation of: 2 areas of open space for outdoor sport and areas for children's play within residential lands; 6 playing pitches and fields, club house with changing facilities and car parking within the SRA; 1 green route; - amenity planting within the SRA.	Creation of: 1 area of open space for outdoor sport - areas for children's play; and, 1 green route	Creation of: areas for children's play,	3 areas of open space for outdoor sport; - children's play areas; - Strategic Recreational Area with amenity planting; 6 playing pitches and fields, club house with changing facilities and car parking within the SRA; - circular walkway/cycleway; - Educational and interpretative signage concerning the importance and sensitivity of the adjacent SPA, cSAC and pNHA and measures to prevent public access and unleashed dogs getting onto the mudflats beyond the embankment and, 2 green routes.
Infrastructure & Engineering Work/Items	Completion of works concerning: - coastal embankment height and strength; - raising of lands within the SRA, - buffer/berm around Military Firing Range; - pumping station and rising main; and, 3 site entrances and access roads. Commencement of land-raising for Phases 1, 2 and 3.	Completion/Construction of: - Completion of land-raising area of Phase 1 and continuation of raising areas of Phases 2 and 3. - main street/boulevard; - sections of internal loop route (the distributor road), including footpaths and cycleways; - access roads; - construction of water supply network; construction/installation of petrol interceptors, and ESB and telecom connections.	Completion/Construction of: - land-raising the area of Phase 2 and continuation of raising area for Phase 3; - sections of the internal loop route, including footpaths and cycleways; - access roads; - water supply network, petrol interceptors, ESB and telecom connections.	Completion/Construction of: - land-raising the area of Phase 3 - sections of the internal loop route, including footpaths and cycleways; - access roads; - water supply network, petrol interceptors, ESB and telecom connections.	Raising/reinforcement of embankment and entire plan lands and creation of: - buffer/berm around Military Firing Range; - site entrances; - boulevard/main street; - internal loop route, including footpaths and cycleways; - access roads; pumping station and rising main; - water supply network; petrol interceptors; ESB and telecom connections.

Table 11.1 Phases and corresponding items of physical, social and recreational infrastructure.

APPENDIX 1

STRATEGIC ENVIRONMENTAL ASSESSMENT

NON-TECHNICAL SUMMARY

1.0 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 12 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/cycleway running through the Strategic Recreational Area; and,
- flood prevention measures.

The 12 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'.

Comment on the overall assessment of these objectives and their effects is set out below, while the following Table summarises the predicted effects of the *policies* that stem from the 12 objectives, on the same 9 subjects.

2.0 The Likely Significant Impacts on the Environment

2.1 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/cycleway 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.

2.2 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.

2.3 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.

2.4 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.

2.5 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.

2.6 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.

2.7 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 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/cycleway 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.

2.8 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.

2.9 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.

3.0 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.

4.0 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/cycleway 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.

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

Introduction

Whereas the Non-Technical Summary of the Environmental Report presents a summary of the effects of the Plan’s 12 objectives on 9 environmental subjects (based on topics identified by Annex 1 of Directive 2001/42/EC), the following Table summarises the predicted effects of the *policies* that stem from the Aim and 12 objectives on the same 9 subjects.

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

AIM/OBJECTIVES	POLICIES	1	2	3	4	5	6	7	8	9
Recreation, Open Space and Landscaping - objectives										
4. To provide a Strategic Recreational Area extending across some 33% of the total Plan area, incorporating playing pitches/fields a clubhouse with changing facilities and parking, and a circular walkway with potential to form a link in the Council's proposed coastal walkway.	REC 1: Proposals for the development of the Strategic Recreational Area must provide for both formal and informal recreational activities, including 6 no. playing fields/pitches with associated club house and parking, footpaths connecting to the residential areas, and a circular walkway/cycleway, with potential to connect to the Council's proposed Coastal Walkway. Legal, educational and interpretative signage concerning the importance and sensitivity of the adjoining SPA, cSAC and pNHA, and measures to prevent the public and unleashed dogs gaining access to the mudflats beyond the embankment, must be provided.	√	O	O	O	O	O	√	√	O
5. To provide integrated areas of attractive open space for active and passive uses within lands zoned residential.	REC 2: The quantum of open space to be provided will be in accordance with the Dundalk and Environs Development Plan 2009–2015, while the hierarchy and typology shall be consistent with the National Playing Field Association's 'Six Acre Standard'. Provision will therefore include children's equipped play areas, informal spaces and provision for outdoor sports. The location of areas for formal sports will broadly reflect Figure 7.1, although the precise dimensions, function and location of <i>all</i> spaces will be determined at the detailed planning application stage. The developers will be responsible for the management of public open space and the Strategic Recreational Area (apart from the playing fields/pitches) until such time as it is taken in charge by Dundalk Town Council.	O	O	√	O	O	O	√	√	O
6. To ensure a high level amenity for future residents and foster biodiversity.	REC 3: The landscape concept must be an integral part of the overall design of proposals and must aim to create an attractive setting in which to work and live, habitat for flora and fauna, and usable places for people of all ages and abilities to enjoy. Planting details should include a variety of indigenous species, and should augment and extend existing hedgerows and tree groups where appropriate. In the interests of amenity and safety, the Military Firing Range must be separated from the residential area and Strategic Recreational Area by means of secure fencing, a landscaped buffer or berm and, if necessary, an acoustic barrier.	√	O	O	O	O	O	√	√	O
Access and Movement - objectives										
7. To provide internal roads with linkages to the surrounding network.	ACC 1: This Plan proposes a movement framework comprising three access points from the Blackrock Road, internal 'loop routes', a central east-west street and 2 green routes following the main east-west drainage ditches. Development proposals must provide for the movement framework illustrated by Figure 9.1 and, where necessary, provide traffic calming measures that will enable pedestrians and cyclists to reach a variety of destinations directly and safely.	O	O	√	O	O	O	O	√	O
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 - objectives										
9. To raise the Plan lands and safeguard them from flooding.	INFRA 1: Consistent with the recommendations of the Flood Risk Assessment Report prepared by Royal Haskoning, the levels throughout the site shall be raised by approximately 1.25 – 2.3mODM.	O	O	O	O	√	O	√X	O	O
10. To provide public infrastructure and services for foul and fresh water, and surface water drainage (including flood prevention measures).	INFRA 2: Public infrastructure and services for foul and potable water, and surface water drainage will be provided in accordance with details in this Plan.	O	O	O	O	√	O	O	√	O
11. To provide electricity, gas and telecommunications infrastructure.	INFRA 3: Electricity, gas and telecommunications infrastructure will be provided in line with details in this plan.	O	O	O	O	√	O	O	√	O
Implementation - objectives										
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	IMPL 1: Prior to the commencement of development, an Infrastructure Framework Plan for the Plan lands shall be completed in co-operation with the Planning Authority. Development of the lands will occur in three phases consistent with the phasing map and advice in this section.	O	O	O	O	O	O	O	√	O

APPENDIX 2

THE NATIONAL PLAYING FIELDS ASSOCIATION (NPFA): SIX ACRE STANDARD

The following is a summary of the NPFA’s Six Acre Standard (published in 2001), outlining its guidance on play spaces. The NPFA, now known as Fields in Trust (FIT), is a UK charity, which campaigns for play and sports provision in the United Kingdom. While its advice is often adopted in the UK and elsewhere, its policy and standards obviously do not over-ride existing policies and standards in the plans and strategies of authorities in Ireland. Nonetheless, useful aspects of its advice may be incorporated into Irish plans and strategies, at the discretion of Local Authorities.

The Six Acre Standard

The NPFA/FIT defines outdoor playing space as “space which is available for sport, active recreation or children’s playspace which is of suitable size and nature for its intended purpose and safely accessible and available to the general public”. The NPFA recommend that the overall minimum standard of 2.4ha per 1000 population be met by a combination of two types of playing space: Equipped Play Areas (comprising LAPs, LEAPs, NEAPs), including informal play space, and Play Space For Outdoor Sport in the following proportions:

	Population	Equipped Play Areas (comprising LAPs, LEAPs, NEAPs) and including informal play space (ha)	Play Space For Outdoor Sport (ha)	Total
NPFA Standard	1000	0.8	1.6	2.4ha

The NPFA/FIT recommends a hierarchy of Equipped Play Areas in order to satisfy the needs of different age groups. These are: -

- (a) Local Areas for Play (LAP)
- (b) Local Equipped Areas for Play (LEAP)
- (c) Neighbourhood Equipped Areas for Play (NEAP)

LAP

(a) A LAP is a small area of open space specifically designed for young children to play close to where they live. At least one LAP should be located within one minutes walking time of every home (100m walking distance), catering mainly for 4-6 year olds and be suitable for children with disabilities. The main activity area should be a minimum of 100m2 with a buffer zone surrounding it, which can include footpaths and planted areas to minimise disturbance to nearby residents. For a LAP, which is a play area for young children, a supervised location is crucial. Often this will be at the end of a cul-de-sac and close to the side of houses.

LEAP

(b) A LEAP is a play area equipped mainly for children of early school age (4-8 years old) although consideration should be given to older and younger children. LEAPs should be located within five minutes walking time from every home (400m walking distance). The main activity area should be a minimum of 400m2 with a buffer between it and the boundary of the nearest residential property. This buffer zone can include footpaths and planted areas. A LEAP is designed for older children and such areas should be supervised by nearby dwellings being able to overlook the area.

NEAP

(c) A NEAP is an unsupervised site equipped mainly for older children, which should incorporate a kickabout area and opportunities for wheeled play. A NEAP should be provided within 15 minutes walking time from every home (1000m walking distance). The activity area should be a minimum of 1000m2 with a buffer zone between it and the boundary of the nearest residential property, so as to minimise any disturbance to nearby houses.