

APPENDIX I - NON TECHNICAL SUMMARY

FOR

VARIATION No. 1

TO THE

NAVAN DEVELOPMENT PLAN 2009-2015

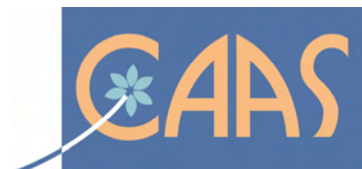
for: Meath County Council

County Hall
Railway Street
Navan
County Meath



by: CAAS Ltd.

2nd Floor, The Courtyard
25 Great Strand Street
Dublin 1



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Section 1 Introduction and Terms of Reference

This is the Non-Technical Summary of the Environmental Report for Variation No. 1 to the Navan Town Development Plan 2009-2015. The purpose of the Environmental Report is to provide a clear understanding of the likely environmental consequences of decisions regarding the adoption and implementation of the Variation.

What is an SEA?

SEA is a systematic process of predicting and evaluating the likely environmental effects of implementing a proposed plan, or other strategic action, in order to ensure that these effects are appropriately addressed at the earliest appropriate stage of decision-making on a par with economic, social and other considerations.

Why is it needed?

The SEA is being carried out in order to comply with the provisions of the SEA Regulations and in order to improve planning and environmental management within Navan. The output of the process is an Environmental Report which should be read in conjunction with the Variation.

How does it work?

All of the main environmental issues in the area were assembled and presented to the team who were preparing the Variation. This helped them to devise a Variation that protects whatever is sensitive in the environment. It also helped to identify wherever potential conflicts between the Variation and the environment exist and enabled these conflicts to be mitigated.

What is included in the Environmental Report which accompanies the Variation?

The Environmental Report contains the following information:

- A description of the environment and the key environmental issues;
- A description and assessment of alternatives;
- An assessment of the provisions of the Variation; and,
- Mitigation measures which set out to aid compliance with important environmental protection legislation - e.g. the Water Framework Directive, the Habitats Directive - and which will avoid/reduce the environmental effects of implementing the Variation.

What happens at the end of the process?

On adoption of the Variation a document is made public, referred to as the SEA Statement.

The SEA Statement includes information on how environmental considerations were integrated into the Plan as varied and why the preferred alternative was chosen in light of the other alternatives.

Section 2 The Variation

2.1 Background to the Variation

The Navan Development Plan 2009-2015 sets out the intention of the two Planning Authorities - Navan Town Council and Meath County Council, as to the future growth and sustainable development of Navan and its immediate environs. The principal aim of the Planning Authorities is to ensure that future development in Navan takes place in a planned, co-ordinated and sustainable manner over the coming years. The principle of sustainable development is therefore central to the preparation of this Plan, whereby an appropriate balance can be forged between future development and conservation.

2.2 Content of the Variation

The Variation contains 3 principal components as follow:

1. A **Core Strategy** for the Navan Development Plan 2009 – 2015 as required pursuant to Section 10 (1B) of the Planning and Development Act 2000 – 2013. In addition, it is noted that The Meath County Development Plan 2013-2019 advises that the Navan Development Plan will need to be reviewed to reflect the household projections. According to objective CS OBJ 4, it is an objective of the County Development Plan: “To ensure that the Navan, Trim and Kells Development Plans are consistent with the settlement hierarchy and population projections set out in this Development Plan. These Development Plans will be varied, if necessary, to ensure that they are consistent, within one year of the adoption of the Meath County Development Plan 2013-2019.”

The Core Strategy will ensure, inter alia, that the quantum of land identified for residential development adheres to the determined household allocation for Navan (3,984 no. units) for the period up to 2019 as contained in the new Meath County Development Plan 2013-2019.

2. Integration of a **Local Transport Plan** into the Navan Development Plan 2009 – 2015 as required pursuant to the National Transportation Authority draft Transport Strategy for the Greater Dublin Area (2030 Vision).
3. Integration of **two** existing **Local Area Plans** into the Navan Development Plan as Framework Plans subject to their review following the preparation of the Core Strategy / Local Transport Plan for the Navan Development Plan.

Revisions to the text of the Navan Development Plan to reflect changes in policy and developments that have occurred since the adoption of the Plan are also proposed.

2.3 Core Strategy Policy and Objectives

Core Strategy Policies and Objectives are as follow:

- CS POL 1 To promote land-use planning measures which aim for transportation efficiency, economic returns on transport investment, minimisation of environmental impacts and a general shift towards the use of public transportation.
- CS OBJ 1: To promote and facilitate the development of sustainable communities through land use planning, by providing for land uses capable of accommodating employment, community, leisure, recreational and cultural facilities having regard to the quality of the environment, including the natural environment, landscape character and the archaeological and architectural heritage.

- CS OBJ 2: To ensure that planning applications for residential development adhere to the Order of Priority Phasing Programme for Navan as set out in Table 2A4 of this Development Plan. The Phase 1 lands include those sites with the benefit of an extant planning permission for multi unit residential development from the date of publication of Variation No. 1 of the Navan Development Plan. No extension of duration permitted for multiple unit residential developments pursuant to Section 42 of the Planning and Development Act 2000-2014 shall extend the life of the planning permission beyond the period of the Meath County Development Plan 2013 – 2019..
- CS OBJ 3: To operate an Order of Priority for the release of residential lands as follows:
 - (i) The lands identified with an A2 “New Residential” land use zoning objective corresponds with the requirements of Table 2A4 of this Development Plan and are available for residential development within the life of this Development Plan.
 - (ii) The lands identified with an A2 “New Residential” land use zoning objective but qualified as “Residential Phase II (Post 2019)” are not available for residential development prior to 2019.
- CS OBJ 4 To implement the measures contained in the Navan Local Transport Plan 2014-2019.
- CS OBJ 5 To support the continued development of Navan as a Level 2 Retail Centre and the primary retail destination in County Meath.
- CS OBJ 6 To implement the provisions of the Meath County Retail Strategy 2013 – 2019 as they relate to Navan town and environs.

2.4 Relationship with other relevant Plans and Programmes

Introduction

The Plan to be varied sits within a hierarchy of land use forward planning strategic actions. The Plan to be varied must comply with relevant higher level strategic actions and may, in turn, guide lower level strategic actions. The following sections identify a number of these strategic actions, further details of which are contained in both the existing Plan and the Variation.

The National Spatial Strategy 2002-2020

The National Spatial Strategy (NSS) is the national planning framework for Ireland which promotes self-sustaining growth through building up sufficient scale and critical mass through a network of gateways and hubs. The gateways act at national level and the hubs act at the regional level. The county levels are partnered by the county towns and other larger towns which support the role of smaller towns, villages and rural areas as a focus for business, residential, service and amenity functions.

Regional Planning Guidelines

The Regional Planning Guidelines (RPGs) for the Greater Dublin Area 2010-2022 outline how the national spatial structure relates to each of the regions. Navan is located within the area of the Regional Planning Guidelines for the Greater Dublin Area. The Guidelines divide the overall strategy area into a Metropolitan and Hinterland area, with Navan situated in the Hinterland Area. The strategy for the Hinterland area is to channel development into a number of self-sustaining growth towns, which would be separated by green belts and in the long term would reduce the numbers commuting to Dublin. Within this area, the Guidelines state that large towns should absorb most of the new population growth and will continue to act as major service centres for adjoining towns and the surrounding rural area.

Meath County Development Plan 2013-2019

The Meath County Development Plan provides the overall statutory framework for the development of County Meath and details the spatial development strategy for the county which is organised around a hierarchical structure of urban settlements and the rural area. Navan, in addition to the Drogheda Environs, is designated as a Large Growth Town I, consistent with the Regional Planning Guidelines for the Greater Dublin Area. These towns occupy the top tier in the hierarchy. Development is to be primarily directed towards these Large Growth Towns.

River Basin Management Plans

Local Authorities, including Meath County Council, have prepared the Eastern River Basin Management Plan which is implemented in order to help protect and improve waters in the county and wider River Basin District. The Plan and associated Programme of Measures includes provisions to help ensure that water bodies in the districts meet the objectives of the Water Framework Directive.

Catchment Flood Risk Assessment and Management Studies

Catchment Flood Risk Assessment and Management (CFRAM) Studies are being undertaken for the Eastern River Basin District by the Office of Public Works.

The study is focusing on areas known to have experienced flooding in the past and areas that may be subject to flooding in the future either due to development pressures or climate change. In 2014, draft Flood Maps will be published. The final output from the study will be a CFRAM Plan, to be published in December 2016. The Plan will define the current and future flood risk in the River Basin District and set out how this risk can be managed.

Smarter Travel 2009

"Smarter Travel, A Sustainable Transport Future, A New Transport Policy for Ireland 2009 - 2020" is the Government's action plan to free towns and cities from traffic congestion, substantially cut CO2 emissions, encourage car based commuters to leave their cars at home, and encourage a shift toward walking, cycling and greater public transport usage.

GRID 25 and associated Implementation Plan

Grid25 is a high-level strategy outlining how EirGrid intends to undertake the development of the electricity transmission grid in the short, medium and longer terms, to support a long-term sustainable and reliable electricity supply. The Grid25 strategy thereby seeks to implement the provisions of the 2007 Government White Paper on Energy - "Delivering a Sustainable Energy Future for Ireland" in terms of development of electricity transmission infrastructure. The Grid25 Implementation Programme (IP) is a practical strategic overview of how the early stages of Grid25 are intended to be implemented.

Food Harvest 2020

Food Harvest 2020 is a roadmap for the Irish food industry, as it seeks to innovate and expand in response to increased global demand for quality foods. It sets out a vision for the potential growth in agricultural output after the removal of milk quotas in 2015.

Environmental Protection Objectives

The Variation is subject to a number of high level environmental protection policies and objectives with which it must comply. Note that the above policies etc. influenced the various provisions of the Plan which are detailed within Section 8 of the main SEA Environmental Report and within the Plan itself.

Section 3 The Environmental Baseline

3.1 Introduction

The environmental baseline of Navan is summarised in this section. This baseline together with the Strategic Environmental Objectives, which are identified on Table 4.1, is used in order to identify, describe and evaluate the likely significant environmental effects of implementing the Variation and in order to determine appropriate monitoring measures. The environmental baseline is described in line with the legislative requirements encompassing the following components – biodiversity, flora and fauna, population, human health, soil, water, air and climatic factors, material assets, cultural heritage, landscape and the interrelationship between these components.

The lack of a centralised data source that could make all environmental baseline data for the Plan area both readily available and in a consistent format posed a challenge to the SEA process. This difficulty is one which has been encountered while undertaking SEAs at local authorities across the country and was overcome by investing time in the collection of data from various sources and through the use of Geographical Information Systems.

3.2 Likely Evolution of the Environment in the Absence of the Plan

For the likely evolution of the environment in the absence of the variation refer to Section 4.2.

3.3 Biodiversity and Flora and Fauna

The River Boyne and Blackwater Special Conservation Area (SAC) and Special Protection Area (SPA) (Site Code: 002299) occurs within, upstream and downstream of the town and covers the channels of the Boyne and Blackwater as well as various adjacent areas (see Figure 3.1). The SAC designation extends further into adjacent lands and covers a larger area than the SPA designation.

Ecological networks are important in connecting areas of local biodiversity with each other and with nearby designated sites so as to prevent islands of habitat from being isolated entities. They are composed of linear features, such as treelines, hedgerows and rivers/streams, which provide corridors or stepping stones for wildlife species moving within their normal range. They are important for the migration, dispersal and genetic exchange of species of flora and fauna particularly for mammals, especially for bats and small birds and facilitate linkages both between and within designated ecological sites, the non-designated surrounding countryside and the more urban areas of the County.

Important ecological networks comprise a variety of features including the River Blackwater, the River Boyne, various agricultural lands, stands of trees and hedgerows.

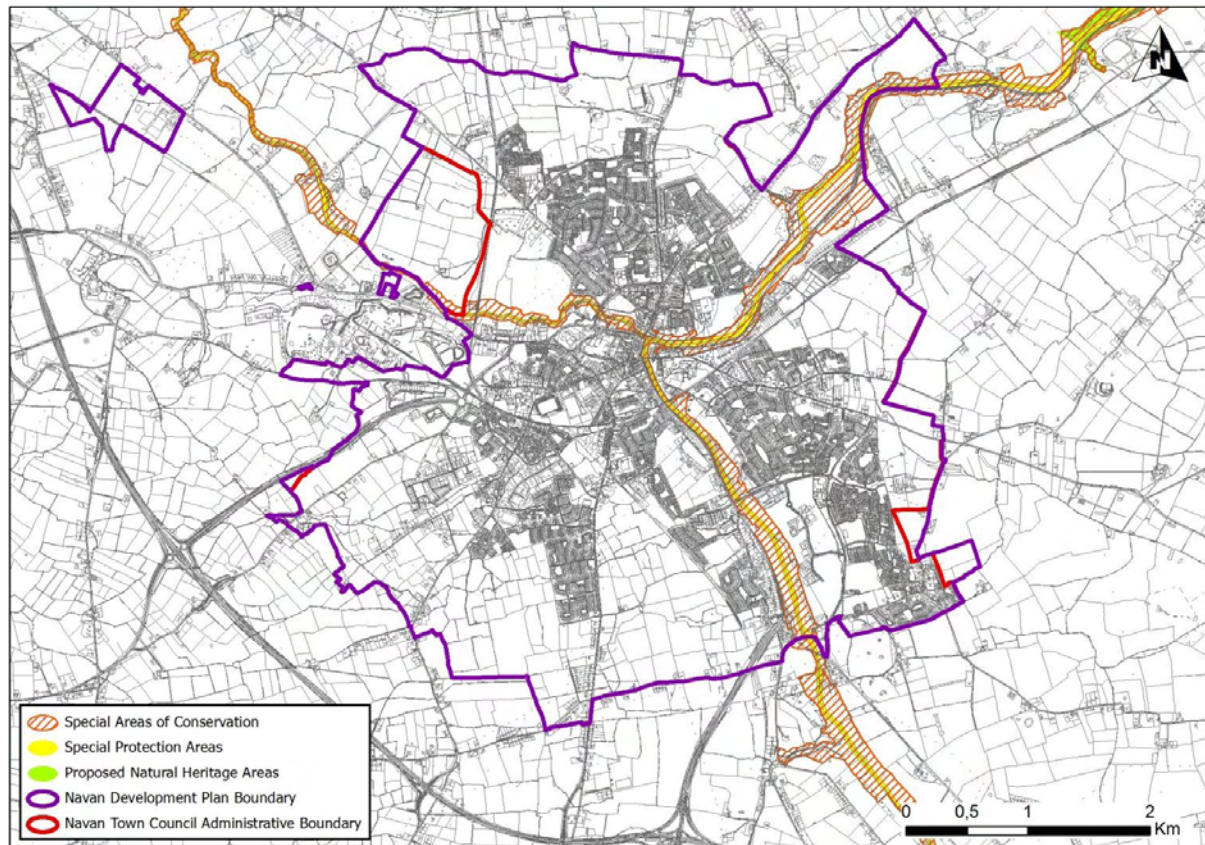


Figure 3.1 SAC, SPA and pNHA within and in the vicinity of the Plan area

Source: NPWS (datasets downloaded August, 2013)

3.4 Population and Human Health

Population

An Post Geodirectory data indicates that the current population of Navan is c.30,500 persons at time of writing. The population of Navan and Environs as per Census 2011 was 28,559 persons.

The period from 1996 to 2011 saw unprecedented growth which was amongst the highest experienced by any urban centre in the country. Overall the Navan Town and Environs population increased 205% in the 15 years between 1996 and 2011.

Human Health

Human health has the potential to be impacted upon by environmental vectors (i.e. environmental components such as air, water or soil through which contaminants or pollutants, which have the potential to cause harm, can be transported so that they come into contact with human beings). Hazards or nuisances to human health can arise as a result of exposure to these vectors arising from incompatible adjacent land uses for example. These factors have been considered with regard to the description of: the baseline of each environmental component; and the identification and evaluation of the likely significant environmental effects of implementing the Variation.

3.5 Soil

Soil is the top layer of the earth's crust. It is formed by mineral particles, organic matter, water, air and living organisms. Soil can be considered as a non-renewable natural resource because it develops over very long timescales. It is an extremely complex, variable and living medium and performs many vital functions including: food and other biomass production, storage, filtration and transformation of many substances including water, carbon, and nitrogen. Soil has a role as a habitat and gene pool,

serves as a platform for human activities, landscape and heritage and acts as a provider of raw materials. Such functions of soil are worthy of protection because of their socio-economic as well as environmental importance.

Soil types, as classified by Teagasc in co-operation with the Forest Service, EPA and GSI are mapped on Figure 3.2. Areas outside of the built areas of the town are underlain by various types of soils including *deep well drained mineral soils*, both basic and acidic, as well as *deep poorly drained mineral basic soils*. *Shallow well drained soils* underlie the valleys of the Boyne and Blackwater while *mineral alluvium* underlies their flood plains.

Tara Mines, the largest zinc mine in Europe, is located just off the Kells Road on the north western fringe of the town and is operated by the Boliden Group. The active mine may present a future constraint to certain development in its vicinity due to emissions or vibrations.

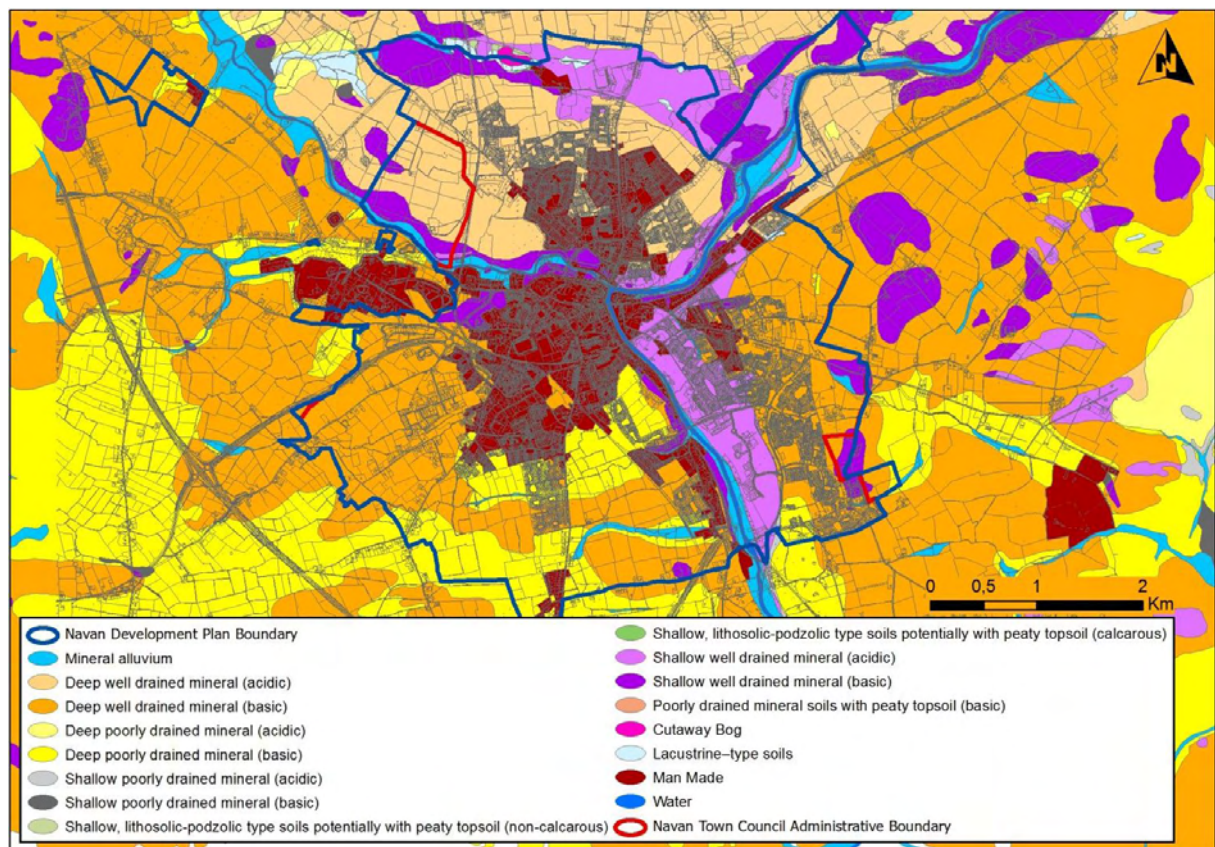


Figure 3.2 Soil Type

Source: Teagasc, GSI, Forest Service & EPA (2006) *Soils and Subsoils Class*

3.6 Water

Potential Pressures on Water Quality and the Water Framework Directive (WFD)

Human activities, if not properly managed, can cause deterioration in water quality. Pressures exerted by human activities include the following: sewage and other effluents discharged to waters from point sources, e.g. pipes from treatment plants; discharges arising from diffuse or dispersed activities on land; abstractions from waters; and structural alterations to water bodies. Since 2000, Water Management in the EU has been directed by the Water Framework Directive 2000/60/EC (WFD). The WFD requires that all Member States implement the necessary measures to prevent deterioration of the status of all waters - surface, ground, estuarine and coastal - and protect, enhance and restore all waters with the aim of achieving "good status" by 2015. All public bodies are required to coordinate their policies and operations so as to maintain the good status of water bodies which are currently unpolluted and improve polluted water bodies to good status by 2015. Ireland has been divided into

eight river basin districts or areas of land that are drained by a large river or number of rivers and the adjacent estuarine / coastal areas. The management of water resources will be on these river basin districts. Navan falls within the Eastern RBD.

WFD Surface Water Status

The WFD defines 'surface water status' as the general expression of the status of a body of surface water, determined by the poorer of its ecological status and its chemical status. Ecological status is an expression of the structure and functioning of aquatic ecosystems associated with surface waters. Such waters are classified as of "good ecological status" when they meet Directive requirements. Good surface water chemical status means that concentrations of pollutants in the water body do not exceed the environmental limit values specified in the Directive.

Figure 3.3 maps the status of the River Blackwater and River Boyne, as currently available from the EPA¹. The River Boyne is identified as being of *moderate status* upstream, through and downstream of Navan. This does not currently meet the Water Framework Directive objective of *good status*. There is no status currently identified for the section of the River Blackwater that passes through Navan. The River Blackwater has been monitored by the EPA within Navan, upstream of Pollboy/Slane Road Bridge. The most recent available Q-value, or Biotic Index Rating, (EPA, 2012) is Q3-4, which is indicative of *moderate status*. This Q-value does not meet the Water Framework Directive objective of *good status*.

The Boyne becomes transitional downstream of Navan and upstream of Drogheda where it is identified as being of *good status*.

WFD Groundwater Status

For groundwater bodies, the approach to classification is different from that for surface water. For each body of groundwater, both the chemical status and the quantitative must be determined. Both have to be classed as either *good* or *poor*. The WFD sets out a series of criteria that must be met for a body to be classed as good chemical and quantitative status.

- The status of the groundwater underlying both the town and surrounding area is currently good (see Figure 3.4) and meets the requirements as set out by the WFD Directive.

Flooding

Flooding is an environmental phenomenon which, as well have causing economic and social impacts, could in certain circumstances pose a risk to human health.

In 2009 the DEHLG published *The Planning System and Flood Risk Management* Guidelines for Planning Authorities. These are aimed at ensuring a more consistent, rigorous and systematic approach which will fully incorporate flood risk assessment and management into the planning system. Planning authorities are required to undertake flood risk identification, assessment and management processes as appropriate when preparing Development Plans and other plans and in the consideration of applications for planning permission.

In compliance with the aforementioned Guidelines, a Strategic Flood Risk Assessment (SFRA) has been undertaken alongside the preparation and adoption of the Variation. This assessment has identified lands that are at elevated levels of flood risk within the Plan area (see Figure 3.5). All recommendations made by the SFRA have been integrated into the Variation.

¹ Dataset downloaded August 2013.

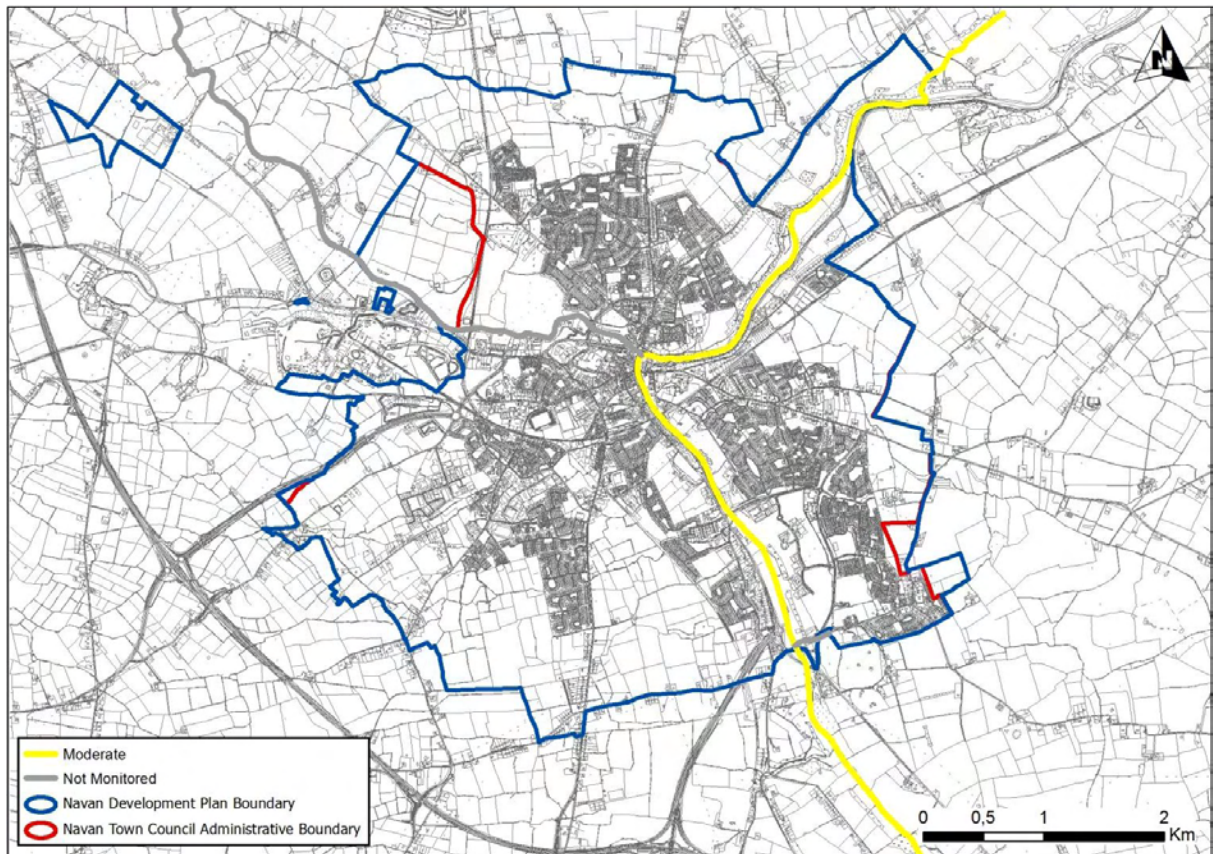


Figure 3.3 WFD Surface Water Status

Source: EPA (2011; datasets downloaded August, 2013)

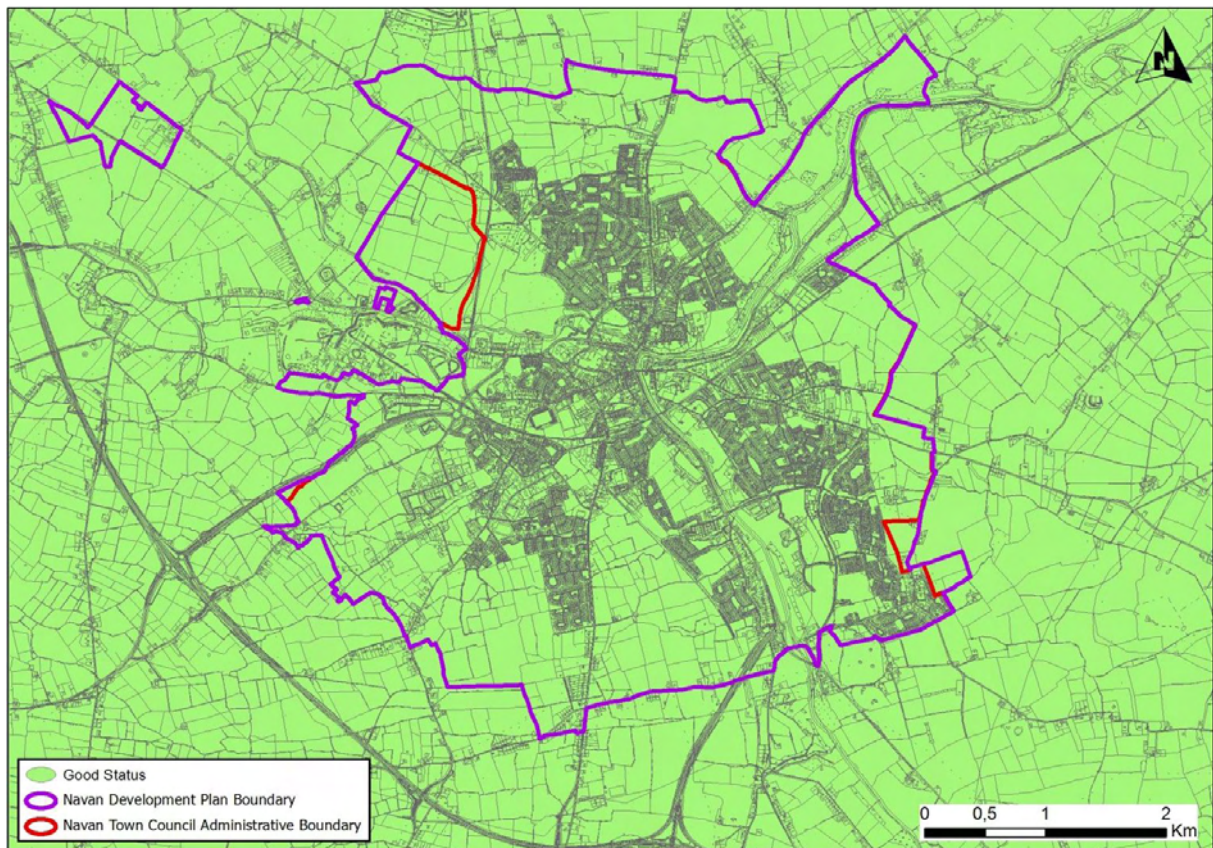


Figure 3.4 WFD Status of Groundwater

Source: EPA (2011; datasets downloaded August, 2013)

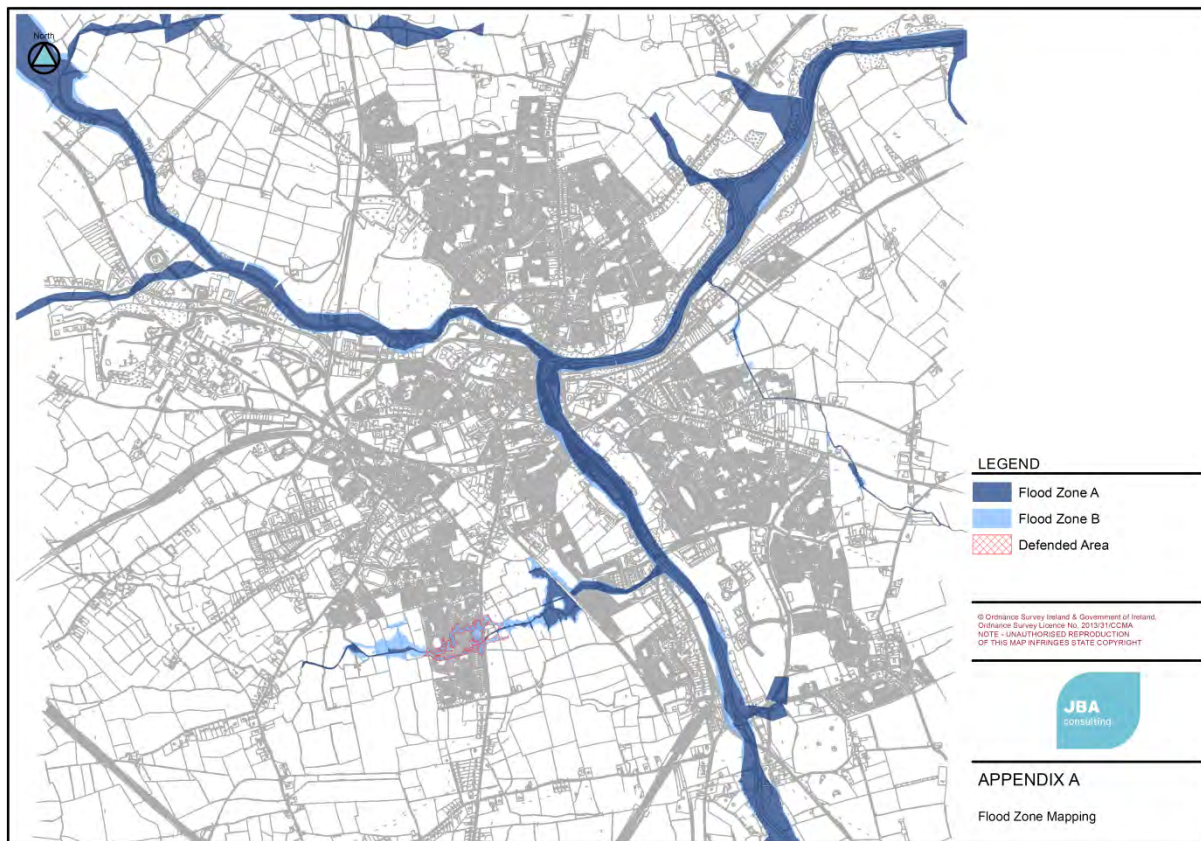


Figure 3.5 Flood Zone Mapping

Source: JBA

3.7 Air and Climatic Factors

Ambient Air Quality

In order to protect human health, vegetation and ecosystems, EU Directives set down air quality standards in Ireland and the other Member States for a wide variety of pollutants. These pollutants are generated through fuel combustion, in space heating, traffic, electricity generation and industry and, in sufficient amounts, could affect the well-being of the areas inhabitants. The EU Directives include details regarding how ambient air quality should be monitored, assessed and managed.

In order to comply with air quality standards directives, the EPA measures the levels of a number of atmospheric pollutants. For the purposes of monitoring in Ireland, four zones are defined in the Air Quality Standards Regulations 2002 (SI No. 271 of 2002).

Navan is in Zone C where air quality is currently identified as being "good". The EPA's (EPA, 2013) *Air Quality in Ireland 2012* identifies that air quality in Ireland continues to be good, with no exceedances for the pollutants measured in 2012.

Noise - The Environmental Noise Directive

Noise is unwanted sound. The Environmental Noise Regulations (SI No. 140 of 2006) transpose into Irish law the EU Directive 2002/49/EC relating to the assessment and management of environmental noise, which is commonly referred to as the Environmental Noise Directive or END. The END defines a common approach intended to avoid, prevent or reduce on a prioritised basis the harmful effects, including annoyance, due to exposure to environmental noise. The END does not set any limit value, nor does it prescribe the measures to be used in the action plans, which remain at the discretion of the competent authorities. Limit values are left to each member state. At this point in time, Ireland does not have any statutory limit values.

Climatic Factors

The key issue involving the assessment of the effects of implementing the plan on climatic factors relates to greenhouse gas emissions arising from transport. It is noted that the Variation contains a number of actions which respond to potential threats to environmental components arising from a changing climate.

Flooding (see Section 3.6) is influenced by climatic factors and the implications of climate change with regard to flood risk in relevant locations have been considered by the SFRA which has been undertaken for the Plan. There are emerging objectives relating to climate adaptation and that there is likely to be future Guidance for climate change proofing of land use plan provisions as is flagged in the National Climate Change Adaptation Framework (DECLG, 2012). Some of these objectives might relate to green infrastructure which can achieve synergies with regard to the following: provision of open space amenities; sustainable management of water; protection and management of biodiversity; protection of cultural heritage; and protection of protected landscape sensitivities.

In 2009, Ireland's greenhouse gas emissions decreased across all sectors due to the effects of the economic downturn with a decline in total emissions of 7.9 per cent. In 2010, Ireland's emissions fell by a further 0.7 per cent. Ireland's emissions profile has changed considerably since 1990, with the contribution from transport more than doubling and the share from agriculture reducing since 1998.

Travel is a source of: noise; air emissions; and energy use (38.8% of Total Final Consumption in Ireland in 2010 was taken up by transport, the largest take up of any sector)².

Land-use planning contributes to what number and what extent of journeys occur. By addressing journey time through land use planning and providing more sustainable modes and levels of mobility, noise and other emissions to air and energy use can be minimised. Furthermore, by concentrating populations, greenfield development - and its associated impacts - can be minimised and the cost of service provision can be reduced.

Maximising sustainable mobility will also help Ireland meet its emission target for greenhouse gases under the 2020 EU Effort Sharing target which commits Ireland to reducing emissions from those sectors that are not covered by the Emissions Trading Scheme (e.g. transport, agriculture, residential) to 20% below 2005 levels.

3.8 Material Assets

Waste Water

The waste water treatment plant at Farganstown that serves the Plan area failed to meet the overall requirements of the Urban Waste Water Regulations in 2011 and 2010 as it failed requirements on:

- Total nitrogen in waste water discharged to sensitive areas from urban areas >10,000 PE (in 2011 it failed because of the quality of the discharge and in 2010 it failed because of the amount of samples taken and the quality of the discharge).
- (In 2011) Total phosphorous in waste water discharged to sensitive areas from urban areas >10,000 PE (because of the amount of samples taken and the quality of the discharge).

The waste water treatment plant has a design capacity of 40,000 PE and can be upgraded to 60,000 PE without requiring new EIS. Inlet works, etc. have a design capacity of 60,000 PE. The plant has an EPA License for 50,000 PE. There are considerable fluctuations in the average recorded flows within the plant which have varied from 38,000 PE (Annual Environmental Report, 2009) to 29,000 PE (Annual Environmental Report, 2010). Water Services in the Council estimate that the current average load is in the range 32,000 – 33,000 PE and that there is approximately 12,000 PE available. There may be constraints to serving new development at certain locations due to the network (rather than due to capacity in the plant).

² Sustainable Energy Ireland (2011) *Energy in Ireland 1990 – 2010*

Drinking Water

Navan's public water supply is sourced primarily from the Blackwater at Liscarton Works and augmented by Kilcarn Works on the Boyne. Liscarton produces 12,000 m³ daily and Kilcarn produces 2,500 m³ daily.

Water Services in the Council estimate that this output can be increased by a further 1,000 m³ (5,000 PE) although this does not include commitments made by the Planning Authority with regard to extant planning permissions while also needing to retain an acceptable level of headroom.

The Navan Mid Meath Water Supply Scheme involves the development of a new water supply from a proposed abstraction at Ballinter on the River Boyne and a new water treatment works to be constructed near Dowdstown. The Council has secured the right to abstract up to 44,000m³/day from the river Boyne at Dowdstown and in line with the approved Preliminary Report are advancing a Stage 1 WTP of 26,300m³/day (131,500 PE). The new works will supply Navan via a new reservoir which has been constructed at Carn Hill and has a capacity of 16,000m³. The Dowdstown supply will replace the existing supplies and will have the capacity to supply the projected scheme demand of 26,300m³ by 2025.

Waste

Between 2009 and 2011 both the total packaging recovered by self-complying packagers and the total collected and brought household waste have decreased (EPA National Waste Reports).

The total collected and brought household waste in Meath in 2009 amounted to 57,572 (t). This figure dropped to 55,311 (t) in 2011. The total packaging recovered by self-complying packagers in 2009 amounted to 519 (t). This figure dropped to 308 (t) in 2011 (EPA, 2013).

Transport

Navan functions as a major transportation mode in Co. Meath. The town is strategically located close to the M3 motorway on the N3 National Primary Road which connects Dublin to Ballyshannon via Cavan. The N51 National Secondary Road passes through the town and connects Drogheda with Mullingar.

Navan is also served by several regional roads, namely the R147, R153, R161, and R162. The town experiences high levels of through traffic as a result. The Town has benefited greatly from the construction of the M3 Clonee to North of Kells Motorway Scheme which has provided a bypass for the town with a southern interchange accessible from Kilcarn and with a northern interchange accessible from the Athboy Road.

3.9 Cultural Heritage

Archaeological Heritage

Navan's archaeological heritage is protected under the National Monuments Acts (1930-2004), Natural Cultural Institutions Act 1997 and the Planning Acts. The Record of Monuments and Places (RMP) is an inventory, established under Section 12 of the National Monuments (Amendment) Act 1994, of sites and areas of archaeological significance, numbered and mapped. The RMP includes all known monuments and sites of archaeological importance dating to before 1700 AD, and some sites which date from after 1700 AD. Figure 3.6 shows the spatial distribution of entries to the RMP.

Architectural Heritage

The term architectural heritage is defined in the Architectural Heritage (National Inventory) and Historic Monuments Act 1999 as meaning all: structures and buildings together with their settings and attendant grounds, fixtures and fittings; groups of structures and buildings; and, sites which are of technical, historical, archaeological, artistic, cultural, scientific, social, or technical interest.

The Record of Protected Structures (RPS) is legislated for under the Planning and Development Acts 2000-2010. Protected Structures are defined as structures, or parts of structures that are of special

interest from an architectural, historical, archaeological, artistic, cultural, scientific, social or technical point of view. Current entries to the RPS in Navan are mapped on Figure 3.7.

The Planning and Development Acts 2000-2010 provide the legislative basis for the protection of areas known as Architectural Conservation Areas (ACAs). An ACA is a place, area or group of structures or townscape which is of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest or value, or contributes to the appreciation of protected structures, whose character it is an objective to preserve in a development plan.

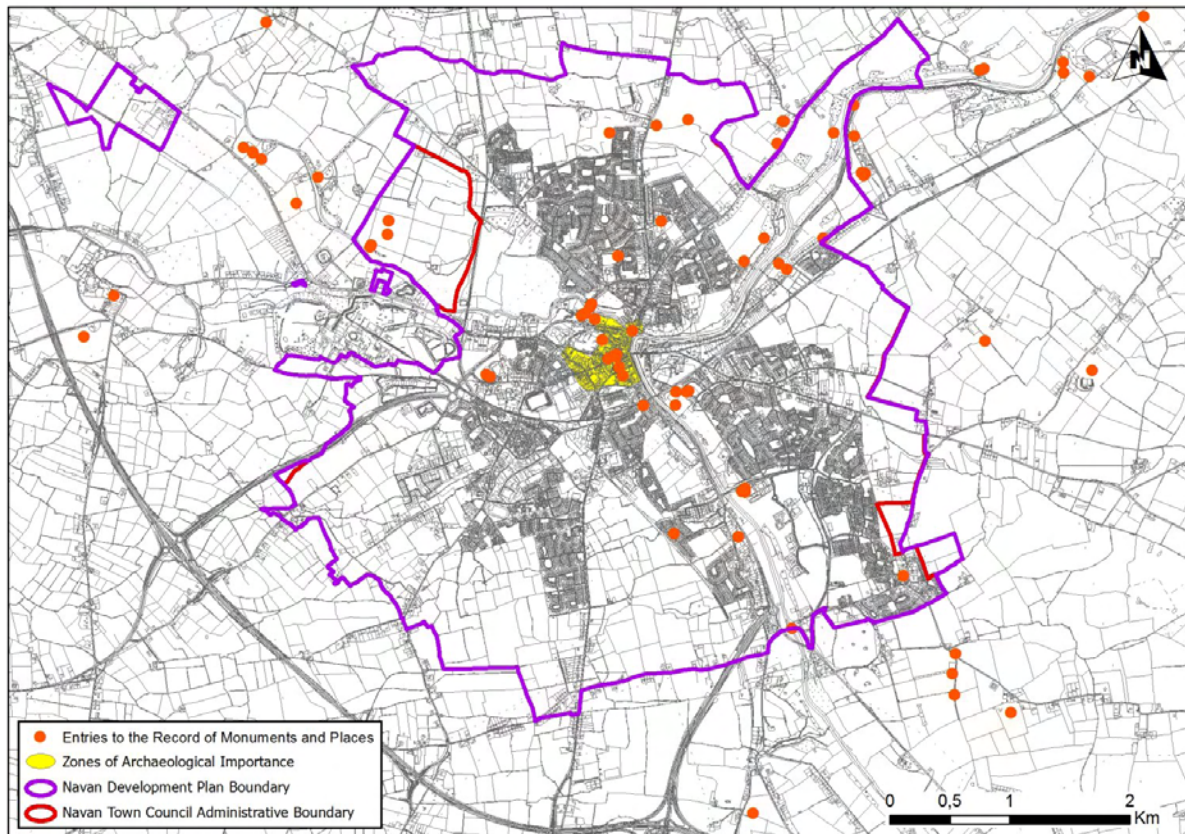


Figure 3.6 Archaeological Heritage - Entries to the Record of Monuments and Places and Zone of Archaeological Importance

Source: Meath County Council (2013)

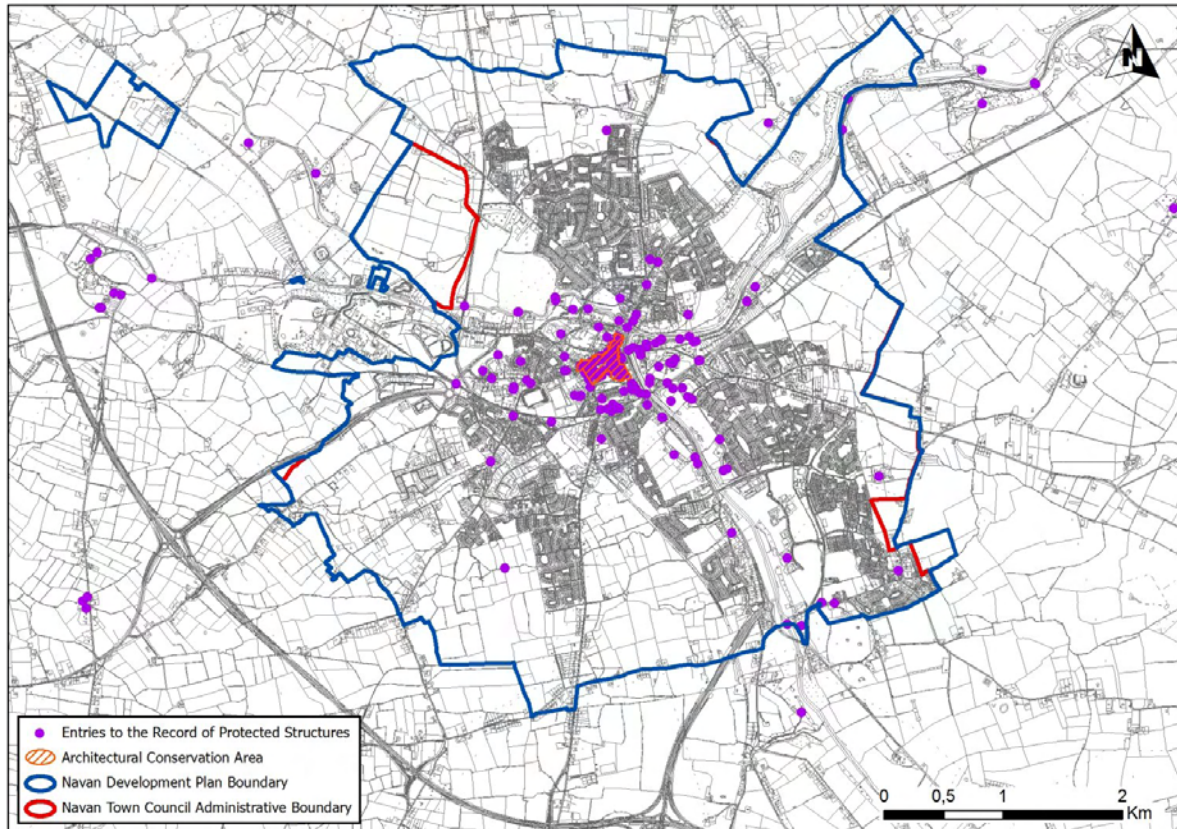


Figure 3.7 Architectural Heritage - Entries to the Record of Protected Structures and Architectural Conservation Area

Source: Meath County Council (2013)

3.10 Landscape

Landscape Character Assessment

The Meath County Development Plan 2013-2019 is accompanied by a county level Landscape Character Assessment which identifies 20 Landscape Character Areas (LCAs) within the county. These LCAs are geographically specific areas which have taken into account a variety of landscape related factors.

The Assessment attributes each of the landscape areas with, inter alia, a *value* - which refers to the contribution the LCA makes to the inherent character of County Meath - and a *sensitivity* - which refers to the LCA's overall resilience to sustain its character in the face of change and its ability to recuperate from loss or damage to its components. There are 5 different landscape character areas within the Town Development Plan area which are mapped on Figure 3.8 and detailed on Table 3.1 below.

Landscape Character Area	Value	Sensitivity
Boyne Valley	Exceptional	High
Blackwater Valley	Very High	High
North Navan Lowlands	Moderate	Medium
West Navan Lowlands	Moderate	Medium
Central Lowlands	High	Medium

Table 3.1 Landscape Character Areas

Focal Points and Views

A number of views and prospects have been identified for protection by the current Town Development Plan given their special amenity value. The views and prospects that are considered of particular importance by the current Town Plan are along the Boyne Corridor, including the Ramparts area, Athlumney Castle, the Motte, Viaduct and bridging points of the Boyne and Navigation Canal.

In addition to the views protected under the current Town Plan, there are 2 Protected Views designated in the Meath County Development Plan 2013-2019, the origins of which are located within the vicinity of the town.

Protected views and prospects from the current Town Plan and from the current County Development Plan are indicated on Figure 3.9 below.

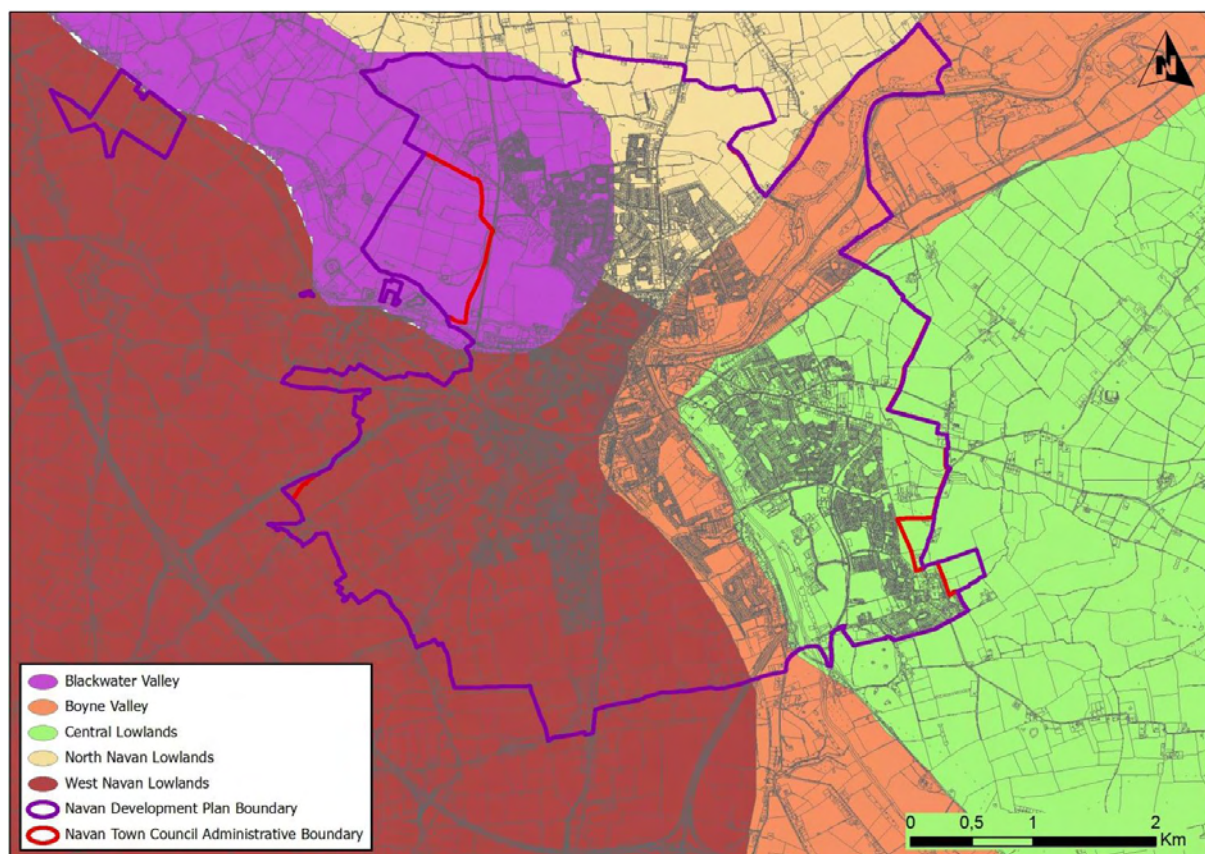


Figure 3.8 Landscape Character Areas

Source: Meath County Council (2013)

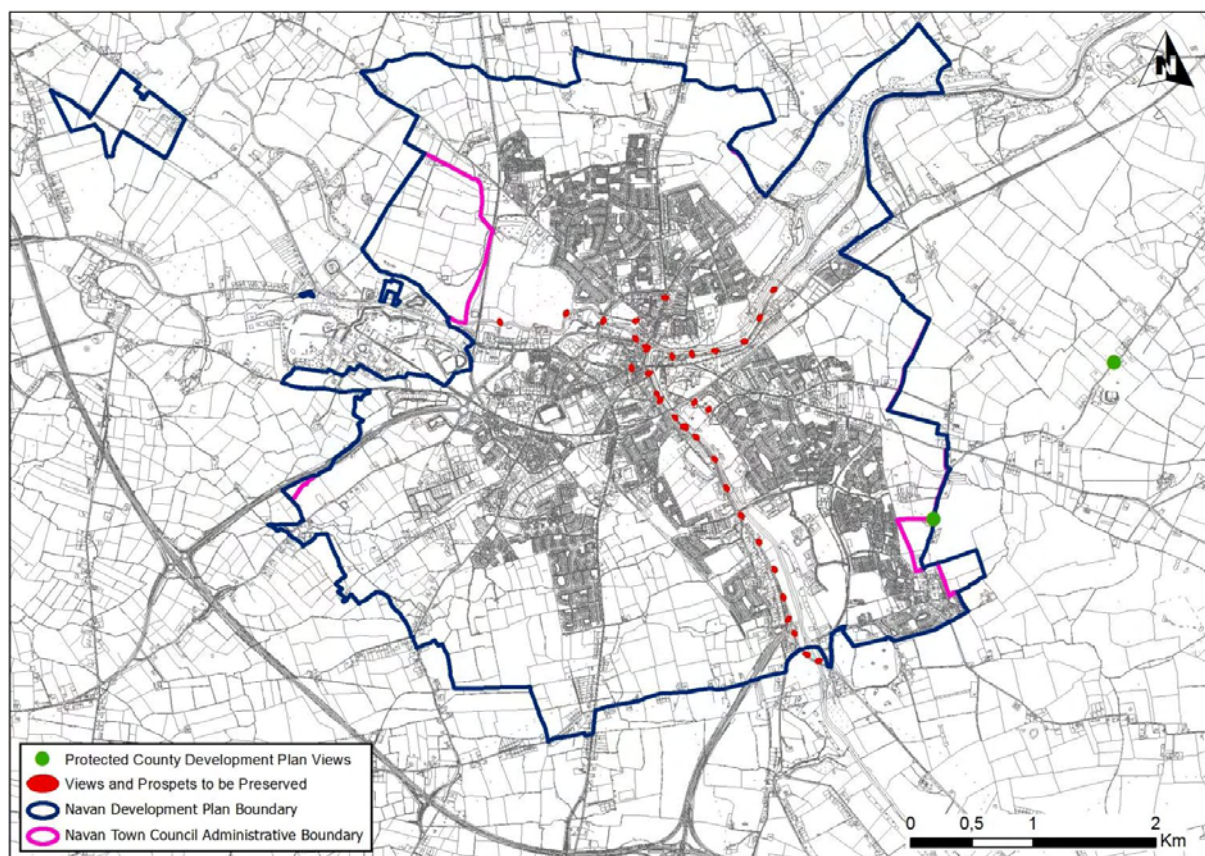


Figure 3.9 Protected Views, Views and Prospects to be Preserved

Source: Meath County Council (2013)

3.11 Appropriate Assessment and Strategic Flood Risk Assessment

A Stage 2 Appropriate Assessment (AA) has been undertaken alongside the preparation and adoption of the Variation. The requirement for AA is provided under the EU Habitats Directive (Directive 1992/43/EEC).

The AA concluded that the Variation will not affect the integrity of the Natura 2000 network. The preparation of the Variation, SEA and AA has taken place concurrently and the findings of the AA have informed both the Variation and the SEA. All recommendations made by the AA were integrated into the Variation.

A Strategic Flood Risk Assessment (SFRA) has been undertaken alongside the preparation and adoption of the Variation. The requirement for SFRA is provided under 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (DEHLG, 2009).

The preparation of the Variation, SEA and SFRA has taken place concurrently and the findings of the SFRA have informed both the Variation and the SEA. All recommendations made by the SFRA have been integrated into the Variation.

Section 4 Alternatives

4.1 Introduction

The SEA Directive requires that reasonable alternatives (taking into account the objectives and the geographical scope of the plan or programme, or a variation to these) are identified, described and evaluated for their likely significant effects on the environment.

The description of the environmental baseline (both maps and text) and Strategic Environmental Objectives (SEOs) are used in the evaluation of alternative scenarios.

4.2 Development Plan Alternative already selected and considered

4.2.1 Introduction

Meath County Council in preparing the Town Development Plan 2009-2015 undertook a SEA which examined 4 alternative scenarios.

The 'Compact Town Scenario' was chosen for the Plan due to the considerable environmental advantages it offered over the other scenarios, as it represented the most balanced and sustainable means of accommodating the future growth of the town.

4.2.2 Consistency of Variation No. 1 with Compact Town Scenario

The Variation is consistent with the Compact Town Scenario which was selected for the Plan and assessed in the SEA Environmental Report that was prepared alongside the Navan Town Development Plan in 2009.

4.2.3 Positive Effects

It was identified that the Compact Town Scenario would:

- Contribute towards the development of a walkable and accessible town (resulting in positive effects upon sustainable mobility);
- Favour the reuse of under-utilised and brownfield sites over greenfield development (resulting in positive effects, both within the Plan area and beyond, upon the protection of human health, biodiversity and flora and fauna, soil and water resources, cultural heritage, landscape designations and upon efforts to provide adequate and appropriate water and waste management services, maximise sustainable mobility and minimise increases in flood risk); and
- Facilitate service and infrastructure provision in an economically efficient and community friendly manner (direct positive effects on water and waste management services, flood risk management and sustainable mobility; indirect positive effects upon the protection of various environmental components).

4.2.4 Negative Effects

4.2.4.1 Potential Negative Effects

There exist a number of potentially significant adverse environmental effects which could occur as a result of implementing the selected Compact Town Scenario. These are as follows and have been and will be mitigated as a result of mitigation measures which have been integrated in the existing Plan:

Biodiversity and Flora and Fauna

- Loss of biodiversity with regard to Natura 2000 Sites and Annexed habitats and species

- Loss of biodiversity with regard to ecological connectivity and stepping stones
- Loss of biodiversity with regard to designated sites including Wildlife Sites and species listed on Schedule 5 of the Wildlife Act 1976

Population and Human Health

- Spatially concentrated deterioration in human health

Soil

- Damage to the hydrogeological and ecological function of the soil resource

Water

- Adverse impacts upon the status and quality of water bodies
- Increase in the risk of flooding

Air and Climatic Factors

- Failure to contribute towards sustainable transport and associated impacts

Material Assets

- Failure to provide adequate and appropriate waste water treatment
- Failure to comply with drinking water regulations and serve new development with adequate drinking water that is both wholesome and clean
- Increases in waste levels

Cultural Heritage

- Effects on entries to the Record of Monuments and Places and other archaeological heritage
- Effects on entries to the Records of Protected Structures and other architectural heritage

Landscape

- Occurrence of adverse visual impacts

4.2.4.2 Residual Negative Effects

Section 5 outlines the measures that have mitigated and will mitigate the potential negative effects that are detailed above. Residual adverse effects likely to occur - considering the extent of detail provided by the Plan and assuming that all mitigation measures are complied with by development - are identified for each of the environmental components as follows:

Biodiversity and Flora and Fauna

- Loss of an extent of non-protected habitats arising from the replacement of semi-natural land covers with artificial surfaces

Population and Human Health

- None

Soil

- Loss of an extent of soil function arising from the replacement of semi-natural land covers with artificial surfaces

Water

- Flood related risks remain due to uncertainty with regard to extreme weather events

Air and Climatic Factors

- None

Material Assets

- Residual wastes to be disposed of

Cultural Heritage

- Potential alteration to the context and setting of architectural heritage (Protected Structures) however these will occur in compliance with legislation
- Potential alteration to the context and setting of archaeological heritage (Recorded Monuments) however this will occur in compliance with legislation
- Potential loss of unknown archaeology however this loss will be mitigated by measures integrated into the Plan

Landscape Designations

- None³

4.2.5 Evaluation against SEOs

Strategic Environmental Objectives (SEOs) are methodological measures against which the environmental effects of the Variation can be tested. If complied with in full, SEOs would result in an environmentally neutral impact from implementation of the Plan as varied. The SEOs are set out under a range of topics and are used as standards against which the provisions of the Variation can be evaluated in order to help identify areas in which potential adverse impacts may occur. SEOs are distinct from the objectives of the Variation and are developed from international and national policies which generally govern environmental protection objectives. Such policies include those of various European Directives which have been transposed into Irish law and which are intended to be implemented within the Plan area.

The provisions of the alternatives are evaluated using compatibility criteria (see Table 4.2) in order to determine how they would be likely to affect the status of the SEOs (see Table 4.1).

The SEOs and the alternatives are arrayed against each other to identify which interactions - if any - would cause effects on specific components of the environment. Where the appraisal identifies a likely conflict with the status of an SEO the relevant SEO code is entered into the conflict column - e.g. B1 which stands for the SEO likely to be affected - in this instance 'to ensure compliance with the Habitats Directive with regard to the protection of Natura 2000 Sites and Annexed habitats and species'.

The interactions identified are reflective of likely significant environmental effects⁴;

1. Interactions that would be likely to improve the status of a particular SEO would be likely to result in a significant positive effect on the environmental component to which the SEO relates.
2. Interactions that would probably conflict with the status of an SEO and would be unlikely to be mitigated would be likely to result in a significant negative effect on the environmental component to which the SEO relates.
3. Interactions that would potentially conflict with the status of an SEO and would be likely to be mitigated would be likely to result in potential significant negative effects however these effects could be mitigated.

³ The Plan contributes towards the protection of landscape designations. Navan's landscapes will change overtime as a result of natural changes in vegetation cover combined with new developments.

⁴ These effects include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects.

Table 4.1 Strategic Environmental Objectives

SEO Code	SEO
B1	To ensure compliance with the Habitats and Birds Directives with regard to the protection of Natura 2000 Sites and Annexed habitats and species ⁵
B2	To ensure compliance with Article 10 of the Habitats Directive with regard to the management of features of the landscape which - by virtue of their linear and continuous structure or their function act as stepping stones - are of significant importance for wild fauna and flora and/or essential for the migration, dispersal and genetic exchange of wild species
B3	To avoid significant impacts on relevant habitats, species, environmental features or other sustaining resources in designated sites including Wildlife Sites and to ensure compliance with the Wildlife Acts 1976-2010 with regard to the protection of species listed on Schedule 5 of the principal Act
PHH1	To protect populations and human health from exposure to incompatible landuses
S1	To avoid damage to the hydrogeological and ecological function of the soil resource
W1	To maintain and improve, where possible, the quality and status of surface waters
W2	To prevent pollution and contamination of ground water
W3	To comply as appropriate with the provisions of the Planning System and Flood Risk Management: Guidelines for Planning Authorities (DEHLG, 2009)
M1	To serve new development with adequate and appropriate waste water treatment
M2	To serve new development with adequate drinking water that is both wholesome and clean
M3	To reduce waste volumes, minimise waste to landfill and increase recycling and reuse.
C1	To reduce travel related emissions to air and to encourage modal change from car to more sustainable forms of transport
CH1	To protect archaeological heritage including entries to the Record of Monuments and Places and/or their context
CH2	To protect architectural heritage including entries to the Record of Protected Structures and Architectural Conservation Areas and their context
L1	To avoid significant adverse impacts on the landscape - especially with regard to landscapes which are most valuable and most sensitive to change and protected focal points and views

Table 4.2 Criteria for appraising the effect on SEOs

Likely to Improve status of SEOs	Probable Conflict with status of SEOs- unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated
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Table 4.3 Evaluation of Development Plan Alternative already selected and considered against SEOs

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs- unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated
Scenario A: Compact Town Scenario - County Development Plan Alternative Scenario already selected and considered	C1 [contributes towards the development of a walkable and accessible town] B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 CH1 CH2 L1 C1 [favours the reuse of under-utilised and brownfield sites over greenfield development] M1 M2 M3 C1 W3 PHH1 S1 B1 B2 B3 W1 W2 [facilitates service and infrastructure provision in an economically efficient and community friendly manner]		B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1 [potential conflicts arising between this scenario and various environmental components – all would be mitigated]

⁵ 'Annexed habitats and species' refer to those listed under Annex I, II & IV of the EU Habitats Directive and Annex I of the EU Birds Directive.

4.3 Limited Consideration of Lower Tier Alternatives with regard to the Variation

The Variation does not provide for any significant increases in land zoned for development however it does provide for the phasing of already zoned lands, with the application of Specific Objective *Residential Phase II (Post 2019)*. As the development is already provided for by the existing Plan, the population target and phasing of residential lands would be unlikely to result in significant environmental effects.

This specific instance is an assessment of a Variation to the Navan Development Plan 2009-2015 which precludes examination of alterations to the existing zonings, unless there is an interface with the identified flood risk zones.

Notwithstanding this limitation, the Variation was examined to determine the potential for effects to arise from:

- Any alternatives of the detail of the implementation – i.e. from the sequencing or phasing of the development; or
- Any alternatives arising from induced, indirect or secondary developments that could arise from the project.

Two principle potential areas of effect were identified:

1. Sequencing of development could bring about less sustainable patterns of mobility if lands that were more distant from services and utilities were developed first.
2. Indirect effects could arise from the development of lands that require the development or upgrade of new transportation projects. The most significant projects with a potential to give rise to effects are:
 - Project requiring new river crossings; and
 - Projects requiring new or upgraded roads.

New river crossings, in particular, have the potential to give rise to the more significant effects because of the ecological status of the rivers in this area. Other potential effects arising are the loss of agricultural lands and associated threats to biodiversity, cultural heritage and landscape arising from both new roads and river crossings.

The use of lands that could give rise to less sustainable patterns of mobility would principally give rise to effects on air (noise, pollution and energy use) as well as deterioration in the efficient use of material assets – with resultant effects on human beings. These potential impacts are summarised on Table 4.4 below.

Table 4.4 Potential induced, indirect or secondary effects

Environmental Component	Potential induced, indirect or secondary effects			
	less sustainable patterns of mobility	requiring new river crossings	requiring new or upgraded roads	
Biodiversity and flora and fauna				
Population and human health				
Soil				
Water				
Material Assets				
Air and climatic factors				
Cultural Heritage				
Landscape				

Table 4.5 shows the ranking of the potential effects for each zoning site according to the criteria of: requirement for a new bridge crossing; and requirement for new road construction.

Table 4.5 Ranking of sites

Site Name	New Bridge Required	New Road Required	Proposed Access	Alternative Access
Sites Least Likely to give rise to induced, indirect or secondary environmental effects				
Site N Beechmount			Dan Shaw Rd	na
Site E Blackcastle			N51	na
Site K Academy Street			R 147	Onto LDR1(a) link between Dublin & Trim rds
Site J Swan Lane			Old Balreask Woods	
Site C Simonstown			R 162	na
Site P Commons Lane			Commons Rd	na
Site R St. Pat's N51			R 147	na
Site Q Mullaghboy			Old Athboy Rd	na
Site F Boyne Road			Boyne Rd	na
Site H St. Marthas			R 153	Possible access onto Local Distributor Road through Johnstown Wood
Site I Johnstown			Existing local rd	na
Sites with a greater likelihood of giving rise to induced, indirect or secondary environmental effects				
Site L Trim Road North			R161 & LDR1(a) New Road	na
Site G Farganstown			New Road LDR6	Portion of site can access onto R153 & Old Road Athlumney
Site D Clonmagadden SDZ			New Road LDR5	N51 & R 162
Site O Trim/Commons Rd			New Road LDR2(a)	R161, Commons Rd and through Canterbrook & Balreask Manor housing developments
Site M Trim Road South			New Road LDR1(a)	R161
Sites most likely to give rise to induced, indirect or secondary environmental effects				
Site B Clonmagadden	New over Blackwater	Bridge	May require completion of LDR4	Clonmagadden Rd
Site A Tara Mines	New over Blackwater required	Bridge	New Road LDR4	

Decisions relating to the phasing of zoned lands took into account of a number of considerations - economic, technical, social and environmental. The environmental factors included those above and those specifically and exhaustively assessed as the basis for the previous plan and SEA already referred to as well as those detailed above.

In addition, sustainable transport was examined by the team preparing the Variation with regard to: the potential for permeability; whether the site was served or had the potential to be served by public bus; or whether the site was served or had the potential to be served by the cycle network in the town. With lower scores demonstrating suitability for development, the specific land detailed on Table 4.5 were scored (from a sustainable transport perspective - this relates to SEA C1) from 1 to 5 as follows: Site A - 1; Site B - 1; Site C - 5; Site D - 1; Site E - 1; Site F - 5; Site G - 1; Site H - 1; Site I - 3; Site J - 5; Site K - 1; Site L - 1; Site M - 3; Site N - 1; Site O - 1; Site P - 3; Site Q - 3; Site R - 3; Site S - 5.

The phasing selected for the Variation (indicated by the black shading on yellow 'New Residential' zoned land on Figure 4.1) will further contribute towards sustainable mobility patterns and the accompaniment of water services infrastructure with new development, both of which are which are already contributed towards by the Plan. The phasing will also delay the replacement of non-artificial surfaces with artificial surfaces which could, inter alia, delay potential effects on non-designated ecology.

Potential adverse effects of implementing the Plan as varied will be mitigated by, inter alia, individual measures which have been integrated into the Plan that was adopted in 2009 and additional/amended measures recommended to be integrated into the Plan by this SEA and the AA and SFRA of the Variation. These measures are identified in Section 5.

The Variation was adopted with a number of changes made to the version of the Proposed Variation which was first put on public display. These changes are as follows:

- Master Plan 7 - Lands at Knockumber were zoned for enterprise and employment uses rather than for retail warehousing. This change was determined as not being likely to result in significant environmental effects.
- The extent of the R1 "Rail Corridor" shown on Map No. 1 Land Use Zoning Objectives and Map No. 2 Development Objectives was amended to correspond with that indicated on the permitted town centre expansion scheme. This change reflected what is already permitted as part of the town centre expansion scheme.
- An interface with the detailed design of Phase II of the Navan Rail Line was added to Map No. 1 Land Use Zoning Objectives and Map No. 2 Development Objectives. This change would further contribute towards efforts to achieve sustainable mobility - these efforts are already contributed towards by the Plan and Variation No. 1.
- Minor changing of phasing on lands situated east of Tubberclare – no significant environmental implications.

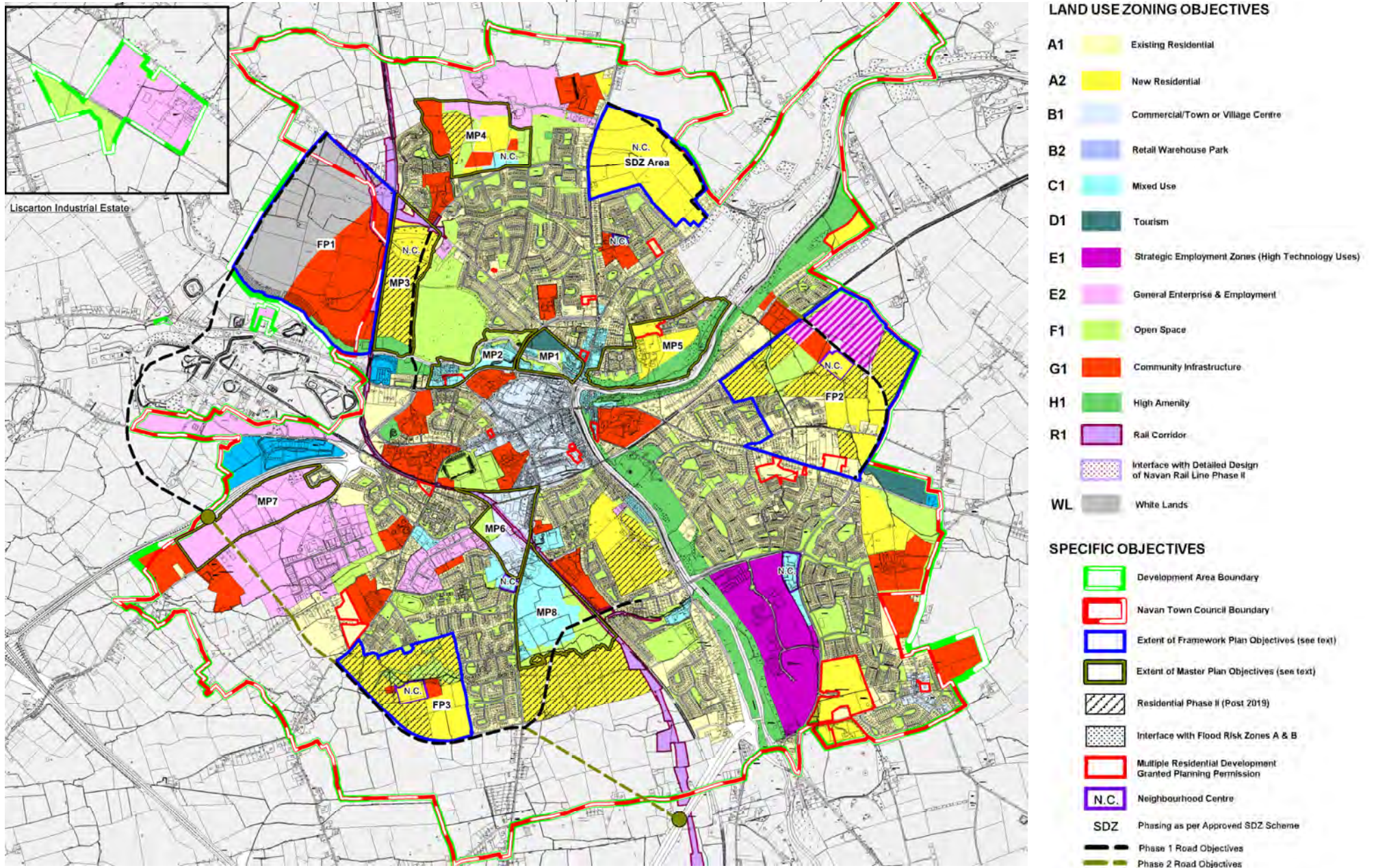


Figure 4.1 Land Use Zoning of the Plan as varied

Section 5 Evaluation of Variation Provisions

5.1 Methodology

The description of the environmental baseline (both maps and text) and Strategic Environmental Objectives (SEOs) are used in the evaluation of alternative scenarios.

The provisions of the Variation are evaluated using compatibility criteria in order to determine how they would be likely to affect the status of the SEOs.

The SEOs and the text-based provisions are arrayed against each other to identify which interactions - if any - would cause effects on specific components of the environment. Where the appraisal identifies a likely conflict with the status of an SEO the relevant SEO code is entered into the conflict column - e.g. B1 which stands for the SEO likely to be affected - in this instance 'to ensure compliance with the Habitats Directive with regard to the protection of Natura 2000 Sites and Annexed habitats and species'.

The interactions identified are reflective of likely significant environmental effects⁶;

1. Interactions that would be likely to improve the status of a particular SEO would be likely to result in a significant positive effect on the environmental component to which the SEO relates.
2. Interactions that would probably conflict with the status of an SEO and would be unlikely to be mitigated would be likely to result in a significant negative effect on the environmental component to which the SEO relates.
3. Interactions that would potentially conflict with the status of an SEO and would be likely to be mitigated would be likely to result in potential significant negative effects however these effects would be likely to be mitigated by measures which have been integrated into the Variation.

The degree of significance of effects occurring cannot be fully determined at this level of decision making due to the lack of exact detail available with regard to the type or scale of the specific developments that will be permitted under the Plan as varied.

Mitigation measures to prevent or reduce significant adverse effects posed by the Plan as varied are identified in Section 6 - these have been integrated into the Plan that was adopted in 2009 or the Variation.

5.2 Potential Impacts and their Determination

Environmental impacts which occur, if any, will be determined by the nature and extent of multiple or individual projects and site specific environmental factors.

Avoidance of conflict with SEOs and the environment is dependent upon compliance with the mitigation measures which have emerged through the SEA, AA and SFRA processes and which have been integrated into the Variation. The potentially significant adverse environmental effects arising from implementation of the Variation are detailed below in Section 4.2.

5.3 Interrelationship between Environmental Components

The SEA Directive requires the Environmental Report to include information on the likely significant effects on the environment, including on issues such as biodiversity, fauna, flora, population, human

⁶ These effects include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects.

health, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors.

Likely significant effects on environmental components which are identified include those which are interrelated; implementation of the Plan as varied will not affect the interrelationships between these components. The presence of significant interrelationships between environmental components is identified on Table 5.1.

Table 5.1 Presence of Interrelationships between Environmental Components

Component	Biodiversity, flora and fauna	Population and human health	Soil	Water	Air and Climatic factors	Material assets	Cultural heritage	Landscape
Biodiversity, flora and fauna		No	Yes	Yes	Yes	Yes	No	Yes
Population and human health			Yes	Yes	Yes	Yes	No	No
Soil				Yes	No	Yes	No	No
Water					No	Yes	No	No
Air and Climatic factors						Yes	No	No
Material assets							Yes	Yes
Cultural heritage								Yes
Landscape								

5.4 Cumulative Effects

Cumulative effects are one of the types of effects which have been considered in the assessment of Variation provisions. Cumulative effects can be described as the addition of many small impacts to create one larger, more significant, impact.

There are 2 types of potential cumulative effects that have been considered, namely:

- Potential *intra-Plan* cumulative effects - these arise from the interactions between different types of potential environmental effects resulting from a Plan, or variation to a Plan; and,
- Potential *inter-Plan* cumulative effects - these arise when the effects of the implementation of one plan, or variation to a plan, occur in combination with those of other plans or developments.

A variety of potential *intra-Plan* cumulative environmental effects occur when considering the implementation of the Variation. The interrelationships between environmental components that determine these potential effects are identified on Table 5.1 e.g. interrelationships between: human health and water quality; human health and air quality; and human health and flood risk.

With regard to potential *inter-Plan* cumulative environmental effects, these occur as a result of the combination of: potential environmental effects which are identified by the assessment as arising from Proposed Variation measures; and the effects arising from other plans or developments. Other Plans and developments which have been considered by the assessment of environmental effects include those which are detailed under Section 2.4 Relationship with other relevant Plans and Programmes and those which are detailed throughout Section 3.

The assessment of the likely *inter-Plan* cumulative environmental effects requires knowledge of the likely effects of all plans/developments under consideration. The assessment is limited in this instance as there has been limited assessment of the likely types of developments provided for by other policies, plans and programmes that could occur in combination with the implementation of the Proposed Variation. Taking into account available information, the key potential *inter-Plan* cumulative environmental effects that are considered in the assessment relate to effects upon the status of surface and ground waters and associated interactions (in combination with Regional Planning Guidelines, Development Plans and River Basin Management Plans), such as those related to ecology and drinking water resources, and potential effects upon the landscape. Other potential *inter-Plan* cumulative environmental effects include those occurring on various environmental components within areas where the County Development Plan is in force and the potential cumulative visual impact of development in areas adjacent to the Town Development Plan area.

Effects that may arise as a result of implementing the Proposed Variation have been mitigated to the extent that the only residual effects likely to occur as a result of implementation of the Proposed Variation are those which are identified under Section 5.5.

5.5 Residual Adverse Effects

Section 6 outlines the measures that have mitigated and will mitigate the potential negative effects that are detailed above. Residual adverse effects likely to occur - considering the extent of detail provided by the Plan and assuming that all mitigation measures are complied with by development - are identified for each of the environmental components as follows:

Biodiversity and Flora and Fauna

- Loss of an extent of non-protected habitats arising from the replacement of semi-natural land covers with artificial surfaces

Population and Human Health

- None

Soil

- Loss of an extent of soil function arising from the replacement of semi-natural land covers with artificial surfaces

Water

- Flood related risks remain due to uncertainty with regard to extreme weather events

Air and Climatic Factors

- None

Material Assets

- Residual wastes to be disposed of

Cultural Heritage

- Potential alteration to the context and setting of architectural heritage (Protected Structures) however these will occur in compliance with legislation
- Potential alteration to the context and setting of archaeological heritage (Recorded Monuments) however this will occur in compliance with legislation
- Potential loss of unknown archaeology however this loss will be mitigated by measures integrated into the Plan

Landscape Designations

- None⁷

5.5.1 Overall Findings

The overall findings (in addition to those detailed in preceding sections) are that:

- The Council have integrated all recommendations arising from the SEA, AA and SFRA into the Proposed Variation;
- Some Proposed Variation provisions would be likely to result in significant positive effects upon all of the environmental components; and

Some Proposed Variation provisions would have the potential to result in significant negative environmental effects (these are described below) however these effects will be mitigated by the mitigation measures which have been integrated into the Variation or the Plan that was adopted in 2009 (see Section 8 of the main Environmental Report).

⁷ The Plan contributes towards the protection of landscape designations. Navan's landscapes will change overtime as a result of natural changes in vegetation cover combined with new developments.

Section 6 Mitigation and Monitoring Measures

6.1 Mitigation

Mitigation measures are measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse impacts on the environment of implementing the Plan as varied.

Various environmental sensitivities and issues have been communicated to the Council through the SEA, AA and SFRA processes. By integrating related recommendations into the Plan as varied, the Council have ensured that both the beneficial environmental effects of implementing the Plan as varied have been and will be maximised and that potential adverse effects have been and will be avoided, reduced or offset.

All recommendations made by the SEA, AA and SFRA processes were integrated into the Variation.

The measures generally benefit multiple environmental components i.e. a measure providing for the protection of biodiversity, flora and fauna could beneficially impact upon the minimisation of flood risk and the protection of human health, for example.

6.2 Monitoring

The SEA Directive requires that the significant environmental effects of the implementation of plans and programmes are monitored. This section details the measures which will be used in order to monitor the likely significant effects of implementing the Plan as varied.

Monitoring can enable, at an early stage, the identification of unforeseen adverse effects and the undertaking of appropriate remedial action.

6.2.1 Indicators and Targets

Monitoring is based around indicators which allow quantitative measures of trends and progress over time relating to the Strategic Environmental Objectives identified in Table 4.1 and used in the evaluation. Each indicator to be monitored is accompanied by the

target(s) which were identified with regard to the relevant strategic actions.

Table 10.1 overleaf shows the indicators and targets which have been selected for monitoring the likely significant environmental effects of implementing the Variation, if unmitigated.

The Monitoring Programme may be updated to deal with specific environmental issues - including unforeseen effects - as they arise. Such issues may be identified by the Council or identified to the Council by other agencies.

6.2.2 Sources

Measurements for indicators generally come from existing monitoring sources. Existing monitoring sources include those maintained by the Council and the relevant authorities e.g. the Environmental Protection Agency, the National Parks and Wildlife Service and the Central Statistics Office.

Internal monitoring of the environmental effects of grants of permission in the Council will provide monitoring of various indicators and targets on a *grant of permission by grant of permission*⁸ basis. Where significant adverse effects - including positive, negative, cumulative and indirect - have the potential to occur upon, for example, entries to the RMP, entries to the RPS or ecological networks as a result of the undertaking of individual projects or multiple individual projects such instances should be identified and recorded and should feed into the monitoring evaluation.

6.2.3 Reporting

A stand-alone Monitoring Report on the significant environmental effects of implementing the Plan as varied will be

⁸ The likely significant effects of development proposals on environmental sensitivities are further determined during the development management process. By documenting this determination (e.g. whether a proposed development will impact upon a Protected Structure or whether a proposed development can be adequately served with water services) while granting permissions, or at a later date, the requirement to monitor the effects of implementing the Plan as varied can be achieved.

prepared before in advance of the beginning of the review of the Plan. This report should address the indicators set out below.

The Council is responsible for the ongoing review of indicators and targets, collating existing relevant monitored data, the preparation of monitoring evaluation report(s), the publication of these reports and, if necessary, the carrying out of corrective action.

6.2.4 Thresholds

Thresholds at which corrective action will be considered include:

- The occurrence of flood events;
- Court cases taken by the Department of Arts, Heritage and the Gaeltacht regarding impacts upon archaeological heritage including entries to the RMP;
- Complaints received from statutory consultees regarding avoidable environmental impacts resulting from development which is granted permission under the Plan as varied;
- Boil notices on drinking water; and
- Fish kills.

Table 6.1 Selected Indicators, Targets and Monitoring Sources

Environmental Component	Selected Indicator(s)	Selected Target(s)	Source (Frequency)
Biodiversity, Flora and Fauna	B1: Conservation status of habitats and species as assessed under Article 17 of the Habitats Directive	B1: Maintenance of favourable conservation status for all habitats and species protected under national and international legislation to be unaffected by implementation of the Plan as varied ⁹	<ul style="list-style-type: none"> Internal monitoring of environmental effects of grants of permission (grant by grant). Department of Arts, Heritage and the Gaeltacht report of the implementation of the measures contained in the Habitats Directive - as required by Article 17 of the Directive (every 6 years). Consultations with the NPWS (at monitoring evaluation - see Section 6.2.3).
	B2: Percentage loss of functional connectivity without remediation resulting from development provided for by the Plan as varied	B2: No significant ecological networks or parts thereof which provide functional connectivity to be lost without remediation resulting from development provided for in the Plan as varied	<ul style="list-style-type: none"> Internal monitoring of environmental effects of grants of permission (grant by grant). CORINE mapping resurvey (every c. 5 years).
	<p>B3i: Number of significant impacts on relevant habitats, species, environmental features or other sustaining resources in designated sites including Wildlife Sites resulting from development provided for by the Plan as varied</p> <p>B3ii: Number of significant impacts on the protection of species listed on Schedule 5 of the Wildlife Act 1976</p>	<p>B3i: Avoid significant impacts on relevant habitats, species, environmental features or other sustaining resources in designated sites including Wildlife Sites resulting from development provided for by the Plan as varied</p> <p>B3ii: No significant impacts on the protection of species listed on Schedule 5 of the Wildlife Act 1976</p>	<ul style="list-style-type: none"> Internal monitoring of environmental effects of grants of permission (grant by grant). Consultations with the NPWS (at monitoring evaluation - see Section 6.2.3).
Population and Human Health	PHH1: Occurrence (any) of a spatially concentrated deterioration in human health arising from environmental factors resulting from development provided for by the Plan as varied, as identified by the Health Service Executive and Environmental Protection Agency	PHH1: No spatial concentrations of health problems arising from environmental factors as a result of implementing the Plan as varied	<ul style="list-style-type: none"> Consultations with EPA and Health Service Executive (at monitoring evaluation - see Section 6.2.3).
Soil	S1: Soil extent and hydraulic connectivity	S1: To minimise reductions in soil extent and hydraulic connectivity	<ul style="list-style-type: none"> Internal monitoring of environmental effects of grants of permission (grant by grant).

⁹ Except as provided for in Section 6(4) of the Habitats Directive, viz. There must be:
(a) no alternative solution available;
(b) imperative reasons of overriding public interest for the plan to proceed; and
(c) adequate compensatory measures in place.

Environmental Component	Selected Indicator(s)	Selected Target(s)	Source (Frequency)
Water	W1i: Classification of Overall Status (comprised of ecological and chemical status) under the European Communities Environmental Objectives (Surface Waters) Regulations 2009 (SI No. 272 of 2009)	W1i: Not to cause deterioration in the status of any surface water or affect the ability of any surface water to achieve 'good status' ¹⁰ by 2015	<ul style="list-style-type: none"> Internal monitoring of environmental effects of grants of permission (grant by grant). Data issued under the Water Framework Directive Monitoring Programme for Ireland.
	W2: Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC	W2: Not to affect the ability of groundwaters to comply with Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC	<ul style="list-style-type: none"> Internal monitoring of environmental effects of grants of permission (grant by grant). Data issued under the Water Framework Directive Monitoring Programme for Ireland (multi-annual).
	W3: Number of incompatible developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk	W3: Minimise developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk in compliance with <i>The Planning System and Flood Risk Management Guidelines for Planning Authorities</i>	<ul style="list-style-type: none"> Internal monitoring of environmental effects of grants of permission (grant by grant).
Material Assets	M1: Number of new developments granted permission which can be adequately and appropriately served with waste water treatment over the lifetime of the Plan as varied	M1: All new developments granted permission to be connected to and adequately and appropriately served by waste water treatment over the lifetime of the Plan as varied	<ul style="list-style-type: none"> Internal monitoring of environmental effects of grants of permission (grant by grant).
	M2: Number of non-compliances with the 48 parameters identified in the European Communities (Drinking Water) Regulations (No. 2) 2007 which present a potential danger to human health as a result of implementing the Plan as varied	M2: No non-compliances with the 48 parameters identified in the European Communities (Drinking Water) Regulations (No. 2) 2007 which present a potential danger to human health as a result of implementing the Plan as varied	<ul style="list-style-type: none"> EPA The Provision and Quality of Drinking Water in Ireland reports (multi-annual). EPA Remedial Action List (every quarter).
	M3i: Total collected and brought household waste M3ii: Packaging recovered (t) by self-complying packagers	M3i: Minimise increases in and, where possible, reduce household waste generation M3ii: Maximise increases in packaging recovered (t) by self-complying packagers	<ul style="list-style-type: none"> EPA National Waste Reports EPA Ireland's Environment Reports
Air and Climatic Factors	C1: Percentage of population travelling to work, school or college by public transport or non-mechanical means	C1: An increase in the percentage of the population travelling to work, school or college by public transport or non-mechanical means	<ul style="list-style-type: none"> CSO Population Data (every c. 5 years).

¹⁰ Good status as defined by the WFD equates to approximately Q4 in the current national biological classification of rivers.

Environmental Component	Selected Indicator(s)	Selected Target(s)	Source (Frequency)
Cultural Heritage	CH1: Percentage of entries to the Record of Monuments and Places - including Zones of Archaeological Potential (and the context of the above within the surrounding landscape where relevant) – protected from adverse effects resulting from development which is granted permission under the Plan as varied	CH1: Protect entries to the Record of Monuments and Places - including Zones of Archaeological Potential (and their context of the above within the surrounding landscape where relevant) from adverse effects resulting from development which is granted permission under the Plan as varied	<ul style="list-style-type: none"> • Internal monitoring of environmental effects of grants of permission (grant by grant). • Consultation with Department of Arts, Heritage and the Gaeltacht (at monitoring evaluation - see Section 6.2.3).
	CH2: Percentage of entries to the Record of Protected Structures and Architectural Conservation Areas and their context protected from adverse effects resulting from development which is granted permission under the Plan as varied	CH2: Protect entries to the Record of Protected Structures and Architectural Conservation Areas and their context from adverse effects resulting from development which is granted permission under the Plan as varied	<ul style="list-style-type: none"> • Internal monitoring of environmental effects of grants of permission (grant by grant). • Consultation with Department of Arts, Heritage and the Gaeltacht (at monitoring evaluation - see Section 6.2.3).
Landscape	L1: Number of complaints received from statutory consultees regarding avoidable impacts on the landscape - especially with regard to landscapes which are most valuable and most sensitive to change and protected focal points and views - resulting from development which is granted permission under the Plan as varied	L1: No developments permitted which result in avoidable impacts on the landscape - especially with regard to landscapes which are most valuable and most sensitive to change and protected focal points and views - resulting from development which is granted permission under the Plan as varied	<ul style="list-style-type: none"> • Internal monitoring of environmental effects of grants of permission (grant by grant).