Derry City & Strabane District Council

Comhairle Chathair Dhoire & Cheantar an tSratha Báin

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DERRY CITY & STRABANE DISTRICT COUNCIL

LOCAL DEVELOPMENT PLAN (LDP) 2032

DRAFT PLAN STRATEGY

Evidence Base EVB 7: General Development Principles and Policies, December 2019

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DERRY CITY AND STRABANE DISTRICT COUNCIL

LOCAL DEVELOPMENT PLAN (LDP) 2032

EVIDENCE BASE EVB 7: General Development Principles and Policies

This Document is one in a series which comprises the evidence base that informs the preparation of the Derry City and Strabane District Local Development Plan (LDP 2032) Plan Strategy.

It builds upon the suite of thematic Topic Papers prepared and published alongside the LDP Preferred Options Paper (POP), which established the May 2017 baseline position and identified the key issues that needed to be addressed by the LDP.

This General Development Principles and Policies Evidence Base paper updates the baseline POP position and sets out the evidence base that has informed the strategy, designations and policies within the draft LDP Plan Strategy. Evidence has been informed by feedback from public consultation, discussions with Elected Members, input from statutory consultees, stakeholder groups, from other Departments within the Council, liaison with adjoining Councils and through the iterative Sustainability Appraisal process.

The Evidence Base is published as a 'supporting document' in accordance with Regulation 15(a) of the Planning (LDP) Regulations (NI) 2015.

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1.0 Introduction to Paper

1.1 The information presented in this paper assists the Council in developing an informed and innovative approach to setting clearly defined aims and objectives in relation to the implementation of General Development Principles and Policies in the District.

1.2 This paper provides the evidence base information to assist the Council in considering how the LDP can facilitate development in a sustainable and well-designed manner over the plan period. This enables the Council to begin to:

- make informed planning decisions, particularly within the plan making context;
- consider baseline information which informs planning policy making at local level; and
- understand the link between national policy, regional policy and the development of other strategies such as the Inclusive Strategic Growth Plan 2017 – 2032 (SGP).

1.3 The LDP seeks to focus on key elements of planning including the core principles of planning, the purpose of planning, sustainable development, adapting to climate change, development management principles and good design and place-making.

1.4 In order to facilitate the inclusion of these core principles within all future planning proposals the LDP provides, within the General Development Principles and Policies Chapter, detailed policy and guidance, including overarching provisions for general development management and good design in settlements, under GDPOL 1 and GDPOL 2 respectively.

1.5 The information presented in this paper highlights the importance of setting out a set of development principles within the Local Development Plan and provides the rationale and justification for the policies proposed within the draft Plan Strategy.

2.0 Legislative and Policy Context

2.1 In preparing the new LDP, the Council has had regard to several existing plans and documents that set out the main legal and policy context and considerations of what the LDP is required to do and can include, in relation to all types of development in the District.

Legislation for LDP Preparation

2.2 **Planning Act (Northern Ireland) 2011-** Under a remit of securing the orderly and consistent development of land and the planning of that development, the Act makes general provision for LDP's in Part 2 Section 3-22.

2.3 Part 2 Section 5 states that any person who exercises any function relating to the preparation of a LDP must exercise that function with the objective of furthering sustainable development. For the purposes of delivering this function there is an onus to take account of all policies and guidance issued by the Executive Office, the Department for Infrastructure and any matters which appear to that person to be relevant.

2.4 **The Planning (Local Development Plan) Regulations (Northern Ireland) 2015 –** These regulations make specific provision for each stage of the LDP process and details the requirements at each stage: Timetable, Preferred Options Paper, Form and Content of the Development Plan Document, Development Plan Document Procedure, Annual Monitoring Report and Review of a Local Development Plan and Intervention by the Department.

It also includes provision for a circumstance requiring joint plan to be made and includes a schedule detailing transitional arrangements.

2.5 **The Planning (Development Management) Regulations (Northern Ireland) 2015 –** The accompanying schedule to these regulations specifies the thresholds for the classification of a development as major.

Policy for LDP Preparation

2.6 **Draft Programme for Government Framework 2016-21,** has an overarching purpose of 'Improving wellbeing for all – by tackling disadvantage, and driving economic growth'. To support this purpose it sets out a number of desired outcomes. A number of these outcomes can inform the overall purpose and principles of planning for our LDP. These include:

- We live and work sustainably – protecting the environment
- We enjoy long, healthy, active lives
- We have a safe community where we respect the law, and each other
- We give our children and young people the best start in life
- We have created a place where people want to live and work, to visit and invest
- We connect people and opportunities through our infrastructure

2.7 **The Regional Development Strategy 2035** (RDS, launched 2012). The Regional Development Strategy (RDS 2035) offers a strategic and long-term perspective on the future development of Northern Ireland up to 2035. The RDS contains regional guidance to provide policy direction in relation to the economy, society and environment and spatial framework guidance tailored to each component of the spatial planning framework. It sets the context in which to make policy and development decisions in order to achieve sustainable development throughout the region.

2.8 Sustainable development is at the heart of the Regional Development Strategy. The RDS aims to meet the needs of the present without compromising the ability of future generations to meet their own needs. It recognises that our society and economies are completely dependent on the environment which encompasses them and are therefore bound to its limits and capabilities.

2.9 The RDS sets out a shared vision of "An outward-looking, dynamic and liveable Region with a strong sense of its place in the wider world; a Region of opportunity where people enjoy living and working in a healthy environment which enhances the quality of their lives and where diversity is a source of strength rather than division."

2.10 It sets out 8 aims, of which 6 are relevant in the formulation of the Development Principles chapter:

- Support strong, sustainable growth for the benefit of all parts of Northern Ireland
- Strengthen Derry as the principal city of the North West
- Support our towns, villages and rural communities to maximise their potential
- Promote development which improves the health and well-being of communities
- Protect and enhance the environment for its own sake
- Take actions to reduce our carbon footprint and facilitate adaptation to climate change

2.11 The RDS sets out strategic Regional Guidance (RG) that applies to everywhere in the region and is presented under the 3 sustainable development themes of Economy, Society and Environment. The following RGs have been taken into account in formulating the Development Principles Chapter in the draft PS;

- RG7: Support urban and rural renaissance,
- RG8: Manage housing growth to achieve sustainable patterns of residential development,
- RG9: Reduce our carbon footprint and facilitate mitigation and adaptation to climate change whilst improving air quality,
- RG11: Conserve, protect and, where possible, enhance our built heritage and our natural environment and
- RG12: Promote a more sustainable approach to the provision of water and sewerage services and flood risk management.

2.12 **Strategic Planning Policy Statement (SPPS)** (published in final form by the DOE (now DfI) in September 2015) explains the new Development Plan and Development Management system requirements and consolidates the existing suite of strategic subject planning policies into a single document.

2.13 The SPPS has a statutory basis. It was prepared under Article 3 of the Planning (Northern Ireland) Order 1991 which requires the Department to formulate and co-ordinate policy for securing the orderly and consistent development of land and the planning of that development. The SPPS is a statement of central government policy on how regionally important land use planning matters should be addressed across Northern Ireland.

2.14 The SPPS sets out the purpose of planning by stating that the objective of the planning system, consistent with Part 1, Section 1 of the Planning Act (Northern Ireland) 2011 (hereafter referred to as the 2011 Act), is to secure the orderly and consistent development of land whilst furthering sustainable development and improving well-being. This means the planning system should positively and proactively facilitate development that contributes to a more socially economically and environmentally sustainable Northern Ireland. Planning authorities should therefore simultaneously pursue social and economic priorities alongside the careful management of our built and natural environments for the overall benefit of our society.

2.15 In order to support this objective the SPPS sets out direction on furthering sustainable development, including advice on how planning can assist mitigating and adapting to climate change and the importance of ecosystem services. It also identifies opportunities to build resilience into the built and natural environment and to develop and implement sustainable strategies to explore, address and manage significant flood risk. These include measures to reduce greenhouse gases (GHG) such as shaping development to reduce likely emissions including through siting, design and layout; minimising energy and resource requirements including through the re-use of historic buildings thus aiding a modal shift in transport and avoiding development in areas of increased vulnerability to climate change and related effects such as flooding.

2.16 The SPPS recognises ecosystem services as being an integral part of sustainable development requiring careful management, maintenance and enhancement. Our ecosystem services will naturally benefit from the above mitigation and adaptation measures, both directly and indirectly, through the preservation and enhancement of green infrastructure and biodiversity for example, that the implementation of such measures will result in either by specific design or as a side effect.

2.17 The requirement to carry out a sustainability appraisal, under the 2011 Act, will feed into furthering sustainable development by demonstrating how such issues have been taken into account when formulating policy. Resulting policy should reflect the above and hold a presumption to protect the natural environment.

2.18 The SPPS also provides a set of overarching core planning principles to underpin delivery of the planning reforms set out in the Planning Act (Northern Ireland) 2011. The core planning principles of the two-tier planning system are:

- Improving Health and Well-being
- Creating and Enhancing Shared Space
- Supporting Sustainable Economic Growth
- Supporting Good Design and Positive Place-making
- Preserving and Improving the Built and Natural Environment

2.19 In relation to health and well-being, it states that the planning system has an active role to play in helping to better the lives of people and communities in Northern Ireland and in supporting the Executive's key priority of improving health and well-being. One of the ways the SPPS facilitates this is by providing an annex containing detailed guidance on managing noise and improving air quality, two areas which can significantly impact health and well-being. The guidance outlines the main impacts of both issues and is clear that they are material considerations in the determining of planning applications. The annex also sets out several examples of how the LDP is positioned to address them including through the zoning land with a view to minimising incompatible uses and the identification of land for uses likely to generate significant levels of noise and/or potentially polluting development.

2.20 It expands on this by stating that it is widely recognised that well designed buildings and successful places can have a positive impact on how people feel. The way in which places and buildings are configured, patterns of movement in the space around us and the level of access to quality open space are all factors that can make us feel good. Successful places also influence the choices we make which may contribute positively to improving our health and well-being e.g. whether to walk or cycle, or whether to stay longer in a good place.

2.21 It also gives direction on a key element of planning relating to safeguarding residential and work environs. It states that there are a wide range of environment and amenity considerations, including noise and air quality, which should be taken into account by planning authorities when proposing policies or managing development. For example, the planning system has a role to play in minimising potential adverse impacts, such as noise

or light pollution on sensitive receptors by means of its influence on the location, layout and design of new development. The planning system can also positively contribute to improving air quality and minimising its harmful impacts

2.22 It also set out other amenity considerations arising from development that may have potential health and well-being implications, including design considerations, impacts relating to visual intrusion, general nuisance, and loss of light and overshadowing. Adverse environmental impacts associated with development can also include sewerage, drainage, waste management and water quality.

2.23 In relation to the creating and shared space, it sets out examples of when planning can assist with the creation and maintenance of shared space. Examples include mixed use developments; mixed tenure housing schemes; strong neighbourhood centres; temporary uses in interface locations; active street frontages; buildings that provide public services, including education, healthcare and recreational facilities; public paths and cycle ways; and passive spaces such as civic squares and public parks. There may be opportunities for the LDP to highlight how such opportunities can encourage shared space.

2.24 In relation to the Supporting Sustainable Economic Growth, the SPPS sets out how planning should take a positive approach to appropriate economic growth and this is largely considered in the Growth Strategy and Economic Development chapters of the LDP. The sustainability principles contained within the chapter also take account of the need for appropriate economic growth by including a criterion that development must be consistent with the Economic Development Strategy. Economic growth will only be sustainable when the development which facilitates or stimulates it also sustainable.

2.25 With regards to 'Supporting Good Design and Positive Place-making', the SPPS states that good design can change lives, communities and neighbourhoods for the better. It can create more successful places to live, bring communities together, and attract business investment. It can further sustainable development and encourage healthier living; promote accessibility and inclusivity; and contribute to how safe places are and feel.

2.26 In relation to place-making it states the planning system has a positive role in making successful places through its influence on the type, quantum, scale, height, massing, layout, materials, design and location of development and the use of lands.

2.27 The SPPS emphasises the importance of 'Preserving and Improving the Built and Natural Environment' and states that our region has a rich and diverse archaeological and built heritage as well as a distinctive and beautiful landscape. It also plays a critical role in supporting the local economy, and must continue to do so through sustainable economic

development activity. The quality of our local environment can also influence our health and well-being, and help tackle social deprivation.

2.28 The importance of the environment however goes far beyond the immediate benefits it can provide. Safeguarding our unique landscape (including heritage assets) and biological diversity also makes an important contribution to the protection of the wider global ecosystem. It is therefore critical that this vital asset is preserved and improved for the enjoyment and benefit of future generations. This is recognised in this chapter by the identification of built and natural environment as key areas of acknowledged importance in our District.

2.29 In addition to the core principles, the SPPS contains an annex with detailed guidance on managing noise and improving air quality.

2.30 **Planning Policy Statement 1: General Principles** was cancelled by the introduction SPPS. Whilst it is no longer the key document relating to this chapter, there is nonetheless useful guidance contained within it that should be considered. Of particular relevance to this chapter is paragraph relating to the 'Purpose of Planning' and the 'Development Control' section. It should be noted that whilst this document has been consulted, due weight has been given to the contents of SPPS in the preparation of the chapter.

2.31 The existing **Derry Area Plan 2011** was adopted in May 2000. The DAP 2011 is primarily a land use plan, which had a purpose of providing guidance on the amount and nature of development that can be expected and where it can be best located so as to create an overall environmental.

2.32 The DAP emphasises that it provided a policy framework only and it does not deal with matters of detail which will be resolved through the development management process. Notwithstanding this, it does contain broad objectives and policy that can be considered material in the formulation of this chapter.

2.33 It is noted that amongst its objectives there is support for sustainable development while protecting its natural assets and man-made heritage for the enjoyment of future generations, promotion of alternative means of transport, conserving and improving the built and natural environment and ensuring that all proposals wherever located pays attention to good design, and landscaping.

2.34 Furthermore, the DAP contains specific policies in relation to design within settlement, which could be seen as development principles.

2.35 The **Strabane Area Plan 2001** is also a land use plan and like the DAP it provides broad objectives that are consistent with the principles of development, such as the aim to

improve the quality of the urban environment, conserving and enhancing the natural and man-made environment.

Other Plans, Strategies and Guidance Documents

2.36 **Creating Places – Achieving Quality in Residential Developments**

This guidance describes the contributions to quality and sustainability that developers in Northern Ireland will be expected to make through the design of new residential developments. The guide is for use by all those involved in the design of new residential developments and the rejuvenation of existing housing areas.

2.37 **Living Places - An Urban Stewardship and Design Guide for Northern Ireland.** This Urban Stewardship and Design Guide aims to clearly establish the key principles behind good place making. It seeks to inform and inspire all those involved in the process of managing (stewardship) and making (design) urban places, with a view to raising standards across Northern Ireland. The focus of the guide is urban areas, by which is meant all of our cities, towns, villages and neighbourhoods. It recognises the wider economic, cultural and community benefits of achieving excellence in the stewardship and design of these important places, be they existing or newly proposed.

2.38 **Building on Tradition: A Sustainable Design Guide for the Northern Ireland Countryside'** provides assistance to all those involved with sustainable development in the Northern Ireland countryside to understand the requirements of policy. The guide promotes quality and sustainable building design in Northern Ireland's countryside.

2.39 **Derry City and Strabane District Council Inclusive Strategic Growth Plan – Our Community Plan:** The SGP provides a unique opportunity for the Council to genuinely shape the District for local communities and enables them to adopt a joined up approach, incorporating linkages to other functions such as regeneration, local economic development and community planning. The Local Government Act introduces a statutory link between the Community Plan (CP) and the LDP, in that the preparation of the LDP must ‘take account’ of the CP. It is intended that the LDP is the spatial reflection of the SGP and that the two should work in tandem towards the same vision for the Council area and our communities and set the long term social, economic and environmental objectives for the District.

2.40 The SGP is committed to growing Derry as the regional capital, promoting sustainability and supporting health and well-being. Its sets out outcomes and key actions for economic, social and environmental well-being:

2.41 For economic well-being it seeks actions such as creating a strong, sustainable and competitive society. For environmental well-being it seeks outcomes such as encouraging our society to live sustainably, whilst protecting and enhancing the environment and it also

seeks to connect people and opportunities through our infrastructure. For social well-being it seeks to ensure that we live in a shared, equal and safe community.

2.42 **NI Climate Change Adaptation Programme:** This document contains the Government's response to the risks and opportunities identified in the Climate Change Risk Assessment (CCRA) for Northern Ireland, which was produced as part of a UK wide risk assessment. Northern Ireland's second Climate Change Adaptation Programme (NICCAP2) was published in September 2019 and it covers the period 2019-2024 and outlines the strategic objectives in relation to the issue of climate change adaptation. It also puts forward the proposals and policies by which each of the objectives will be met and the timescales for doing so. (updated)

2.43 In July 2020 , Derry City and Strabane District Council became the first council area in Northern Ireland to adopt a Climate Change Adaptation Plan. Council also committed to wider climate action through a Climate Change Emergency Pledge. The Climate Change Emergency Pledge outlines the Council's climate action commitments, including a shift to net zero greenhouse gas emissions across the city and district by 2045. (updated)

2.44 **DCSDC Green Infrastructure Plan 2019 – 2032:** Developed specifically as evidence to inform the LDP, the Green Infrastructure Plan (GIP) reviewed the existing green infrastructure to investigate gaps in provision and explored opportunities for improvement within the District and included a buffer of approximately 10km around district boundaries to address transboundary issues.

2.45 The GIP outlines the strategic vision, aims and priorities for the District and identifies three cross cutting themes and four key strategic themes:

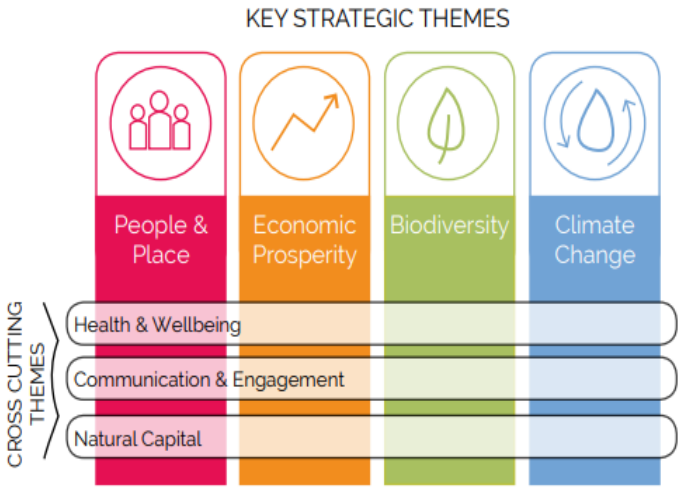


Figure 1: Green Infrastructure Plan Themes - DCSDC GIP 2032

Each of the key themes contains a strategic aim, strategic priorities and potential actions. The themes of the GIP accord with the outcomes and actions of the SGP.

Settlement and Place-making Study

2.46 Derry City and Strabane District Council (DCSDC) has commissioned this series of Settlement Studies for the City of Derry / Londonderry and the towns of Strabane, Castlederg, Newtownstewart, Claudy and Eglinton. Each location was selected for analysis because of their size, townscape/urban form/visual character and their position within the local settlement hierarchy (Sion Mills is the subject of a separate settlement study).

2.47 Its purpose is to establish an understanding of each place, its design, character and functioning, with a view to informing policies of the Derry City & Strabane District Local Development Plan (LDP)

UK Climate Change Risk Assessment 2017 Evidence Report

2.48 In compiling this report (CCRA2) the UK Government asked the Adaptation Sub-Committee of the Committee on Climate Change to consider the following question:

"Based on the latest understanding of current, and future, climate risks/opportunities, vulnerability and adaptation, what should the priorities be for the next UK National Adaptation Programme and adaptation programmes of the devolved administrations?"

2.49 To answer this question, each of the risks and opportunities identified has been assessed in a three-step urgency scoring process:

• What is the current scale of climate-related risk or opportunities, and how much action is already underway?
• What is the potential scale of future risks and opportunities, and to what extent will planned actions or autonomous adaptation address these?
• Would there be benefits from further action being taken in the next five years within each of the four countries of the United Kingdom?

2.50 The available evidence was supplemented by four research projects commissioned specifically for CCRA2, funded by the Natural Environment Research Council, Defra, and the Environment Agency:

• Future projections of UK flood risk.
• Updated projections of water availability in the UK.
• An aggregate assessment of climate change impacts on the goods and services provided by the UK's natural assets.
• Developing high-end (High++) climate change scenarios.

2.51 The CCRA2 report contains projections (based on the methodology of the Met Office's UK Climate Projections 09 – UKCP09) which show significantly higher temperatures, levels of rainfall and sea levels for NI and identifies the many implications of the associated increased flood risk, including on the built and natural environments.

2.52 The Report was to feed into an updated NI Climate Change Adaptation Programme. Northern Ireland's second Climate Change Adaptation Programme (NICCAP2) was published in September 2019 and it covers the period 2019-2024 (updated). Regional policy, such as the SPPS has therefore not had the benefit of its guidance and it is the SPPS which has largely set the direction of the General Development Principles and Policies Chapter. The Council will closely monitor this and at the review stage of the plan-making process, the District policy be amended if circumstances have changed.

Everyone's Involved – Sustainable Development Strategy

2.53 One of the six Priority Areas for Action identified in the SDS relates to '*Ensuring reliable, affordable and sustainable energy provision and reducing our carbon footprint.'* Objectives within this Priority include the need to reduce greenhouse gas emissions, increase the proportion of energy derived from renewable sources, implement energy efficiency measures (particularly for vulnerable groups), increase energy security, and adapt to the impacts of climate change.

The Air Quality Strategy for England, Scotland, Wales and Northern Ireland

2.54 The aim of strategy is to set out air quality objectives and policy options to further improve air quality from today into the long term. It provides an overview and outline of the UK Government and devolved administrations' ambient (outdoor) air quality policy. It sets out a way forward for work and planning on air quality issues, details objectives to be achieved, and proposes measures to be considered further to help reach them.

Clean Air Strategy 2019

2.55 This Clean Air Strategy is a central government document which shows how all sources of air pollution will be tackled, making our air healthier to breathe, protecting nature and boosting the economy. It is anticipated that a specific Air Quality Strategy for Northern Ireland will be prepared. This will look at air pollution on a sectoral basis, focusing on pollution from road traffic, household emissions and agricultural activities. It will put forward policy proposals for reducing air pollution from each of these sectors. It also looks at the existing Local Air Quality Management (LAQM) system to see how it should be improved, and makes recommendations regarding raising awareness of air pollution and its impacts, and how communication may be used to promote behaviour change.

Annexes A – E of PPS 15 (Revised) Planning and Flood Risk

2.56 The annexes to the current flood risk policies provide detailed information and guidance on a range of flooding related topics including the impacts of climate change, the impacts of flooding, assessing flood risk, flood proofing and of particular relevance to this chapter,

sustainable drainage. Annex C: Sustainable Drainage provides background information and context on sustainable drainage systems (SuDS) and outlines its benefits. It also provides guidance on some of the more important design and feasibility considerations to be taken into account when a SuDS is being planned.

For Information

2.57 The General Development Principles and Policies Chapter is an overarching document applicable to all forms and siting of development and as such there is a significant number of other relevant legislation, policies and other documents which have contributed to the principles and policies contained within it that are not referenced here for conciseness. Please therefore refer also to the evidence base papers for accompanying chapters where necessary.

3.0 Background and Statistical Data

3.1 The General Development Principles and Policies Chapter has been formulated with a view to setting out the LDP's position in relation to furthering sustainability and the core planning principles as identified in the SPPS. In doing so we consider the local context in terms of a baseline evidence base through consideration of the key statistical and other data relevant to each principle and policy.

3.2 This section outlines the relevant statistical and other data which has informed the principles. Users should also refer to the evidence papers for accompanying chapters for detailed evidence on specific planning subjects as data contained therein may not be fully replicated here for conciseness. The relevant data for each principle is outlined in turn below:

GDP 1 Sustainable Development

3.3 The DCSD LDP Sustainability Appraisal Scoping Report (SASR), published May 2017, identified the policies, plans, programmes and objectives relevant to sustainability. It collected baseline information about our specific environmental, social and economic conditions and considered how these might change over time. The SASR also identified our particular challenges in relation to sustainability which could affect the direction of the LDP or which the LDP might address.

3.4 A companion interim report on the sustainability appraisal accompanied the SASR. The purpose on the interim report was to document the appraisal of options and alternatives against a framework of objectives to help determine preferred options and identify any significant adverse effects (including cumulative effects) and how they may be addressed.

GDP 2 Climate Change

3.5 The NI Environmental Statistics Report, published annually by NISRA, collates environmental indicators across eight key themes: demography and public opinion, air and climate, water, marine, land, biodiversity, built heritage and waste. The trends identified all point to warmer wetter winters and hotter drier summers, reflecting the findings of the wider scientific community. The key findings are:

- The ten-year moving average trend line shows that the annual minimum temperature reached a low towards the end of the 19th century, and has been steadily increasing since.
- The mean annual maximum temperature has varied over the years, between 12 and 14 °C. In the most recent years, the ten-year moving average for maximum temperature has been between 13.6°C and 13.9°C.
- In 2018, 33.2% of the annual rainfall fell in winter, this is the second highest proportion recorded over the past two decades.

- Over time the ten year moving average has decreased from a high of 35% in 1897 to a low of 19% in 1984, however, there has been an increase in the ten year moving average in recent years (to around 25-28%).

3.6 The data contained in the DCSDC LDP Climate Consultation Response Summary Report (CCRSR, Appendix 1) contributed greatly to the LDP's approach to climate change and concurs with the NI Environmental Statistics Report in terms of identified trends. In contrast to the NI wide report, the CCRSR provides a district level context for climate change and outlines the associated adverse impacts.

3.7 The CCRSR advises that a local climate impact profile is being developed for the City and District which charts the effect of severe weather events since 2004. The profile will be further developed to include known incremental effects as a result of climate change. Initial research out of this profile revealed a total of 14 severe weather events that have resulted in significant impacts, including the severe flooding event of August 2017.

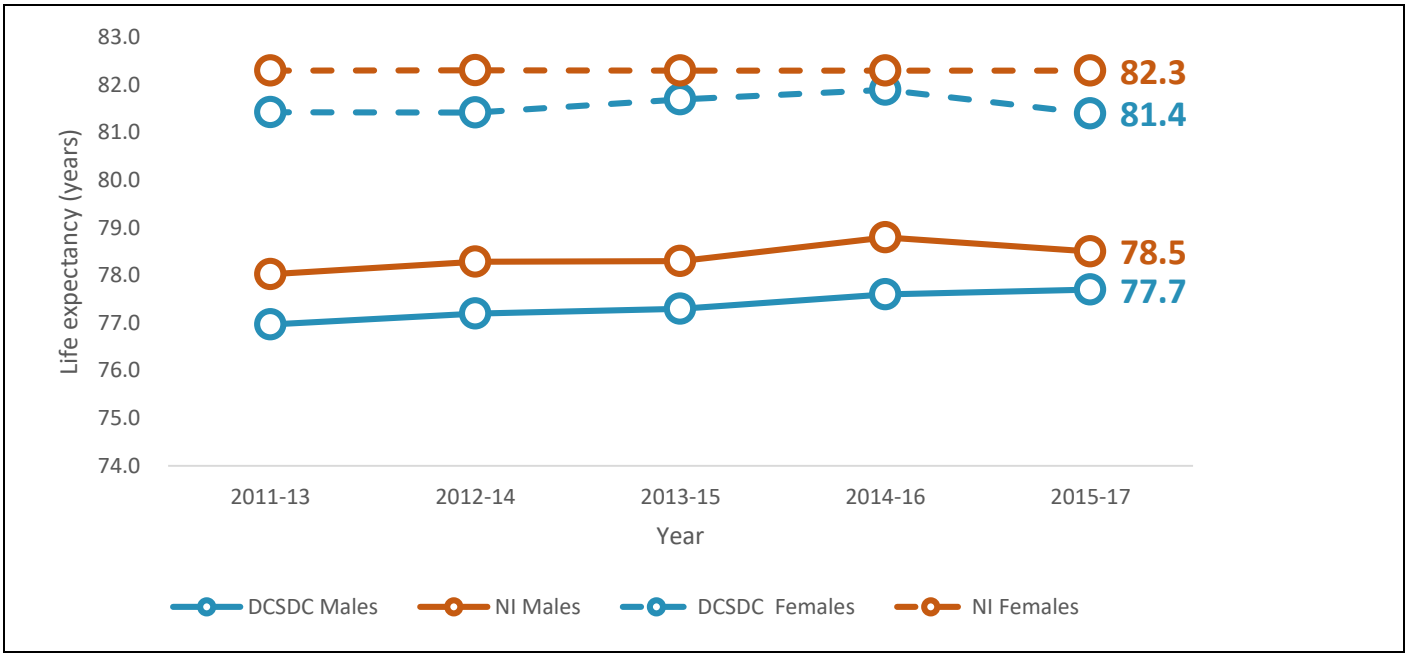
3.8 The report advises that mitigation and adaptation is the way forward in addressing the impacts of climate change and sets out related objectives. These include: ensuring development seeks to reduce greenhouse gas emissions; creating an attractive environment for innovation and investment in renewable and low-carbon technologies and infrastructure; ensuring development is resilient to current climate impacts and to the needs of the future. It also identifies measures for doing so, such as supporting the development of renewable and low carbon energy schemes.

GDP 3 Improving Health and Well-being

3.9 The Environmental Health Department (EHD) of DCSDC prepared the Health and Community Wellbeing Service Paper to outline the main issues for consideration in relation to health and well-being in the District (Appendix 2). It advises there are a wide range of environment and amenity considerations that impact on health and well-being but highlights that air quality, noise, contaminated land and light pollution are the issues which principally warrant addressing in the LDP. The paper gives an overview of these issues and their associated evidence. It also provides detailed information on Air Quality Management Areas, Candidate Noise Manangement Areas, links to a database of potentially contaminated sites and guidance on acceptable levels of illumination for light sensitive premises in specific environmental zones, e.g. urban location, town centre, city centre.

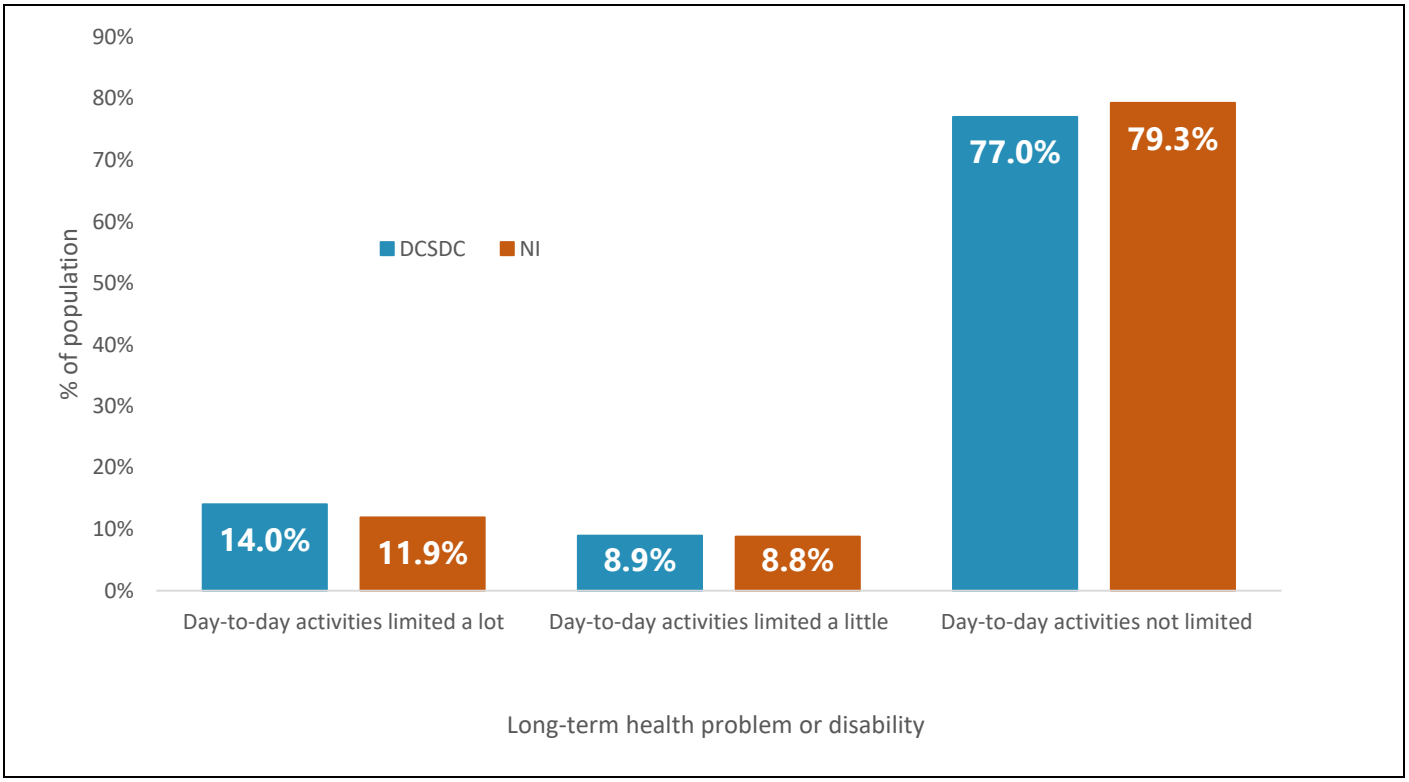
3.10 DCSDC has compiled a range of statistical data on the health of the District's population (attached in full as Appendix 3). While improvements can be seen over recent years, it is the case that our population generally is less healthy than the NI standard. For example, while life expectancy for males and females in the District is increasing, during the period 2015 – 2017 the life expectancy for DCSD females and males was 81.4 and 77.7 years, respectively and for females and males in NI as a whole it was 82.3 and 78.5, respectively.

Figure 2: Life expectancy at birth by gender, DCSDC and NI - DCSDC Statistics



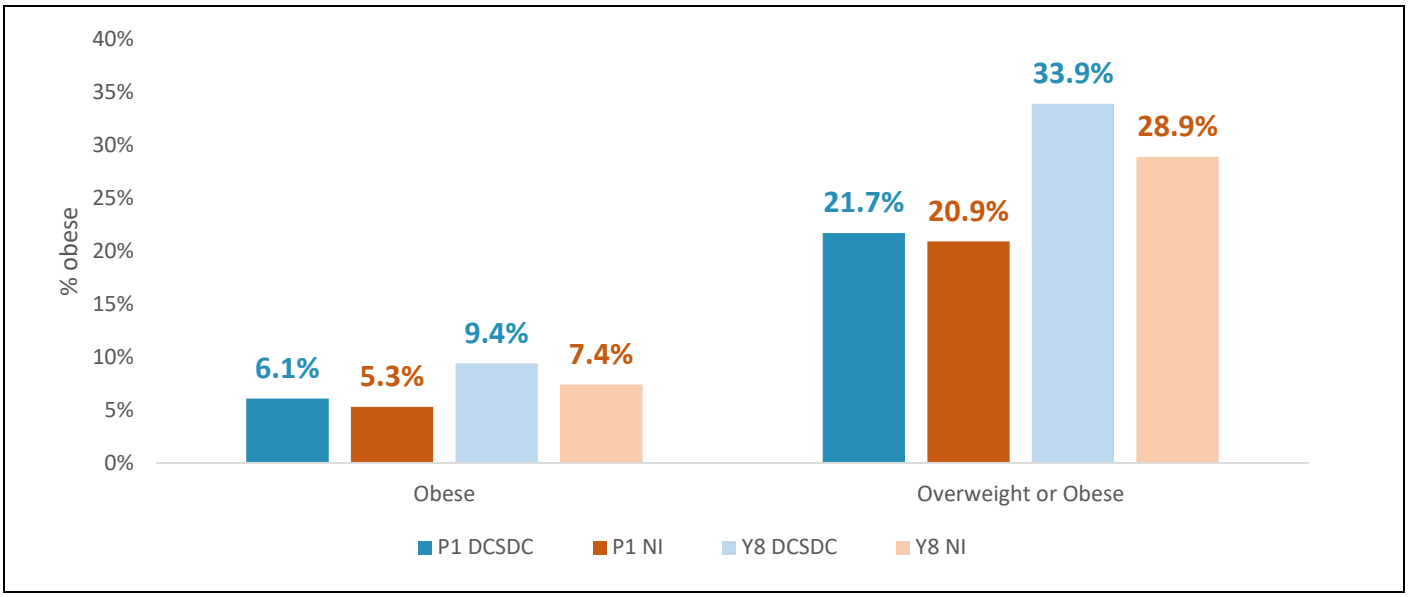
3.11 Similarly, rates of people with a long term illness or disability show our population as more affected. People for whom their illness/disability limited day to day activities a little were roughly the same at 8.9% for the District compared to NI at 8.8% but where it limited those activities a lot there was a difference of 2.1%, with 14.0% of our population affected compared to 11.9% across NI.

Figure 3: Percentage of the population with long-term health problem or disability, D CSDC and NI - DCSDC Statistics



3.12 The figures for people affected by mood and anxiety disorders, obesity and cancer continue to reflect this disparity, see Figure 4 below relating to obesity in children for example.

Figure 4: Primary 1 and Year 8 childhood BMI, 2016/17, DCSDC and NI (%) – DCSDC Statistics



3.13 The Travel Survey for NI In-depth Report presents a more optimistic picture with more people in the District relying less on travel by private car and opting more for active travel or public transport. The Northern Ireland average for public transport usage is 5%; the District equals this. For active travel, here represented by walking and cycling, the figures for the District are 28% and 1%, respectively. For the region the averages are 19% and 1%, respectively.

Table 1: Journeys per person per year by main mode and Local Government District (LGD)1: 2015-2017

Percentage / Journeys / Miles

LGD[1]	Walk	Bicycle	Car[2]	Public Transport[3]	Other[4]	All modes	Walking, Cycling or Public Transport[3]	Average number of journeys	Average distance travelled (miles)
Antrim and Newtownabbey	16%	1%	73%	5%	5%	100%	22%	902	5,428
Armagh City, Banbridge and Craigavon	15%	0%	75%	3%	7%	100%	19%	949	6,838
Belfast	29%	2%	53%	11%	5%	100%	41%	828	3,375
Causeway Coast and Glens	19%	1%	74%	3%	4%	100%	22%	916	6,600
Derry City and Strabane	28%	1%	61%	5%	6%	100%	33%	929	4,794
Fermanagh and Omagh	12%	0%	77%	3%	8%	100%	15%	796	6,792
Lisburn and Castlereagh	14%	0%	75%	7%	4%	100%	21%	842	5,330
Mid and East Antrim	19%	1%	70%	4%	6%	100%	24%	880	6,247
Mid Ulster	15%	1%	76%	3%	4%	100%	19%	909	6,723
Newry, Mourne and Down	11%	1%	78%	4%	6%	100%	16%	891	6,372
Ards and North Down	17%	1%	71%	5%	6%	100%	23%	992	5,803
All Northern Ireland	19%	1%	70%	5%	5%	100%	25%	897	5,653

1 Data has been assigned to Local Government Districts based on where the respondent lives

2 Car includes 'Car driver', 'Car passenger' and 'Car undefined'

3 Public Transport includes 'Metro and Ulsterbus', 'Other bus', 'NI Railways' and 'Black Taxi'

4 Other includes 'Motorcycle', 'Other private', 'Taxi', 'Other public' and 'Undefined mode

3.14 The Travel Survey Report also provides data on the difficulties people experience in using public transport, though this is not broken down by local government district. It shows that the foremost reasons for not using public transport are the lack of available public transport for that journey and poor connections. For more information on this please refer to the full report, the link for which is in Appendix 4.

GDP 4 Supporting Sustainable Economic Growth

3.15 According to DCSDC Economy and Labour Market statistics, in 2019 (updated), there were 60,500 employee jobs in DCSD. Of these, 27,773 were jobs carried out by males

and 32,727 were jobs held by females. However, males have a higher tendency to work in full-time positions; of the 27,773 jobs held by males, 22,120 jobs (80%) were full-time and 5,653 were part-time. The split in job status for females was more even, with 17,289 jobs (53%) being held by a female in a full-time position and 15,438 (47%) being held by a female in a part-time position. (Therefore, of all full-time jobs, 56% were held by males and 44% were female. Of all part-time jobs, 27% were held by males whilst 73% were held by females).

3.16 When compared to NI, a higher proportion of DCSD employee jobs are concentrated in those sectors with high public sector involvement. This is due to the presence of a major hospital, university campus and regional technical college in the Council District. As a result, nearly a third of employee jobs (32.9%) are in the *'Human Health and Social Work'* industry (21.6%) and the 'Education' industry (11.3%). In NI, just over a quarter (26.9%) of employee jobs are in the same industries. There has been a slight increase across the majority of the industries within the District, most notably within the manufacturing, construction, education and human health and social work industries. However contrary to this trend, the finance, real estate and public administration and defence categories have all decreased since 2011.

3.17 The economic profile of the District at 2019 is characterised by a low economic activity rate of 63.0% and an employment rate of 56.8% compared to the NI average of 72.3% and 69.0% respectively (all these figures are those aged 16-64). The unemployment rate (in 2017) of 4,820 claimants (5.0%) is a considerable improvement on past levels but is still above the Northern Ireland figure of 2.6%. The claimant count rate (Sept 2019) of 4,495 claimants (4.7%) was above the Northern Ireland figure of 2.5%.

3.18 There are high levels of deprivation across the District with 20 of the most deprived SOAs in NI and high long-term unemployed (March 2017 - DCSD figure 90.0%, NI figure 67.5%, UK figure 60.3%).

GDP 5 Creating and Enhancing a Shared Space

3.19 The Together: Building a United Community Strategy (T:BUC) advises that the Department of Justice is responsible for 54 interface structures, 41 walls or fences and 13 gates. Of the 54 structures, 9 have been erected since 1998 (8 fences and 1 gate), although none have been erected since 2008.The strategy recognises that even without these physical structures people can nevertheless often live separately from their neighbours as a result of attitudes and mindsets that have been established over many years.

3.20 The SPPS advises that shared spaces are places where there is a sense of belonging for everyone, where relationships between people from different backgrounds are most likely to be positive, and where differences are valued and respected. It offers that influencing development so that it delivers mixed use developments; mixed tenure housing schemes; strong neighbourhood centres; temporary uses in interface locations; active street

frontages; buildings that provide public services, including education, healthcare and recreational facilities; public paths and cycleways; and passive spaces such as civic squares and public parks is one of the best ways of planning addressing divisive attitudes and mindsets.

GDP 6 The Importance of Ecosystem Services & GDP 7 Preserving and Enhancing the Natural Environment

3.21 Please refer to EVB 21: Natural Environment

GDP 8 Preserving and Enhancing the Historic Environment

3.22 Please refer to EVB 23: Historic Environment

GDPOL 1 General Development Management Policy

3.23 The statistical data and other evidence for this policy is largely included within the chapter however a brief summation of the more pertinent facts is included below:

- Noise

  Noise Complaint Statistics for Northern Ireland 2017 – 2018, DAERA: The purpose of this report is to inform central government, district councils, the general public and any other interested parties as to the number and nature of noise complaints received each year by district councils across Northern Ireland. This report analyses noise complaints received by all 11 councils between 1 April 2017 and 31 March 2018. During this period 11,766 noise complaints were received in Northern Ireland. This is a 2.8% decrease in the total number of complaints received compared to the previous year.

  Noise Policy Statement for Northern Ireland – DOE, September 2014: The aim of the Noise Policy Statement is to provide clarity regarding current policies and practices to enable noise management decisions to be made in the wider context, at the most appropriate levels, in a timely and cost-effective manner. It highlights the underlying principles on noise management already found in existing legislation and guidance. The Noise Policy Statement sets out three objectives which are underpinned by the principles of sustainable development. By setting out these clear policy aims, the NPSNI provides the necessary clarity and direction to enable decisions to be made regarding what is an acceptable noise burden to place on society. The Noise Policy Statement should therefore be referred to in situations where there is no guidance or standards on the particular noise situation.

- Air Quality

  The UK Air Quality Strategy for England, Scotland, Wales and Northern Ireland, Department for Environment, Food and Rural Affairs in partnership with the Scottish Executive, Welsh Assembly Government and Department of the Environment

Northern Ireland: Although a strategic document, this provides some statistical information in relation to air quality, advising that across the UK, poor air quality reduces life expectancy by an average of 7 – 8 months, with equivalent health costs estimated to be up to £20 billion a year. Improvements between 1990 and 2001 have helped avoid an estimated 4,200 premature deaths a year, and 3,500 hospital admissions a year.

Clean Air Strategy 2019, *DEFRA:* Again though a strategic document, it advises on the break down of air pollutants in NI. In Northern Ireland air pollution comes primarily from three main sources: nitrogen oxides from road traffic emissions, in particular diesel vehicles; particulate matter from residential burning of solid fuels, in particular coal; and ammonia emissions from agricultural activities such as manure storage, handling and spreading.

Appendix 2: Health and Community Wellbeing Service paper on Local Development Plan Draft Strategy, provides information on Derry and Strabane Air Quality Management Areas.

- SuDS

3.24 Please refer to EVB 25: Flooding and Development.

- Renewable and Low Carbon Energy

3.25 Please refer to EVB 24: Renewable and Low Carbon Energy.

GDPOL 2 Design Policy in Settlements

3.26 The Place-making and Design chapters of the Plan Strategy, and their associated EVBs provide the background information for this policy. They in turn have been substantially informed by the Space Syntax Place-making and Design Study conducted by the Paul Hogarth Company on behalf of the Council and included in EVB F.

3.27 Please also refer to the chapters and EVBs for Housing In Settlements and in the Countryside; City / Town Centres, Retailing, Offices, Leisure and Other Uses; Open Space, Sport and Outdoor Recreation; Natural Environment and Historic Environment.

4.0 Preferred Options Paper Stage

4.1 No preferred options were put forward at POP stage specifically in relation to development principles however a number of representations (responses) were received from Government Departments such as DfI, community groups such as Cycle Derry, as well as interested parties such as River Faughan Anglers and RPSB which are also relevant to the development principles.

The main points in the representations were:

1. the need for consideration of sustainable development in all aspects of planning was raised;
2. LDP needs to articulate/define what constitutes the 'public interest';
3. support from a variety of respondents for policy addressing climate change but there should more onus on this;
4. health and well-being and its links to the LDP was raised by a number of bodies. This included links between transport choices, provision of open space and natural environment.
5. shared spaces should be given 'community focus';
6. protection of residential amenity was raised in relation to proposals such single turbines;
7. further exploration of ecosystem services needed;
8. consensus of support for high standards of design but requests for detailed design principles;
9. consensus of support for economic growth, though few make the distinction regarding sustainable growth. There are diverse ideas as to which sector or area would most need support to achieve this.

4.2 While there was no preferred option put forward for the development principles, the position of the LDP following the POP consultation period in relation to the comments made was a as follows:

1. The 'Purpose of Planning' section of the chapter outlines what is meant by public interest. This is based on the regional definition and accords with the SPPS. Each of the policies and proposals of the LDP have been formulated with protection of the public interest as a paramount objective.
2. Regarding those comments specific to policies and principles, DP 1: Development Principles: Sustainable Development addresses sustainable development specifically. In addition, each of the other development principles either explicitly or implicitly include proposals which promote/support sustainable development such as DP 2 Climate change which requires sustainable patterns of development in accordance with DP 1 and also DP 3 Improving Health and Well-being which encourages active travel in preference to the private car.

3. There are several policies and proposals within the Plan Strategy which address climate change, in particular DP 2 Climate Change of the Development Principles chapter. The 'Environment Objectives' of the POP outlines those objectives which relate to climate change.
4. DP 3 of the Development Principles chapter deals specifically with health and well-being issues, as well as DP 8 which looks at health and well-being through the lens of amenity considerations.
5. DP 5 Creating and Enhancing Shared Space endeavours to ensure that spaces are safe for use by everyone and well connected to all communities.
6. DP 8 Development Management outlines the main amenity considerations be to accounted for in all types of development and includes provision for the submission of impact assessments, where necessary to address unacceptable impact on residential amenity. Wind turbine development also has specific policy guidance relating to amenity within Chapter 25 – Renewable Energy.
7. DP 6 of Development Principles addresses the importance of ecosystem services and in addition, the Natural Heritage chapter of the LDP Plan Strategy provides policy detail into the protection of species and habitats that are fundamental to our ecosystem services.
8. DP 7 Design Principles of the Development Principles chapter partly addresses this and chapters 27 – 33 of the LDP sets out a Place-making & Design vision and Planning framework for the District.
9. DP 4 Supporting Sustainable Economic Growth specifically addresses the eponymous issue; however, it does not favour any sectors or areas over another. In addition, the policies contained in Chapter 7 of the LDP strategy, Economic Development are designed to ensure that proposals which will contribute to economic growth do so sustainably.

5.0 Key Considerations

5.1 Planning Policy Statement 1: General Principles (PPS 1) was superseded by the introduction of the SPPS however the SPPS does not make provision for the same issues that PPS 1 did; rather, the SPPS outlines the following core principles:

- Improving Health and Well-being;
- Creating and Enhancing Shared Space;
- Supporting Sustainable Economic Growth;
- Supporting Good Design and Positive Place Making; and
- Preserving and Improving the Built and Natural Environment.

While these core principles are necessary it is also considered that the cancellation of PPS 1 has therefore left a gap which it is felt is necessary to address for this district.

5.2 Across the board issues relating to the above core principles have been highlighted by the respondents to the POP and by key consultees but in addition, respondents highlighted the Council should adopt the principles outlined within the RSPB's good practice guidance for green infrastructure and biodiversity. The Council aims to promote developments that do not adversely affect local biodiversity and natural ecosystems.

5.3 Increase growth and employment within the city and strict have the potential to compromise environmental aims and objectives. The Council is committed to sustainable growth throughout the Derry & Strabane District provided that it,

- Does not adversely affect local established ecosystems without appropriate mitigation measures in place;
- Takes into consideration the effect on climate change;
- Promotes a positive effect on health and well-being;
- Promotes active and sustainable travel; and
- Does not detract from the natural and built environment;

5.4 In line with the SPPS the Council also supports the six guiding principles set out in the Northern Ireland Executive's Sustainable Development Strategy;

- Living within environmental limits;
- Ensuring a strong, healthy, just and equal society;
- Achieving a sustainable economy;
- Using sound science responsibly
- Promoting opportunity and innovation; and
- Promoting good governance

5.5 The Council aims to follow the SPPS by furthering sustainable development in the long-term public interest by integrating and balancing the complex social, economic and

environmental factors in the Local Development Plan. The Council will deliver or the three pillars of sustainable development through the development principles policies.

5.6 Society – The Council will facilitate sustainable housing growth in response to changing housing need, supporting urban and rural regeneration, progressing policies, plans and proposals that can improve the health and well-being of local communities; and helping build a strong and shared society.

5.7 Economy – The Council will contribute to the Executives key commitments and priorities for promoting balanced growth; tackling disadvantage by ensuring economic considerations are given appropriate weight in plan preparation and taking of planning decisions.

5.8 Environment – The Council will protect and enhance the built and natural environment, such as heritage assets, landscape and seascape assets. The Council seeks to ensure that the planning system contributes to the reduction in energy and water usage, help to reduce greenhouse gas emissions by contributing to support growth in renewable energy sources. The Council will promote developments that will reduce the need for private transport methods; promote high quality developments and good designs; work towards the restoration of and reducing the loss of biodiversity; the conservation of soil and bog lands; and, manage developments to safeguard against water pollution, flooding and secure improvements in water quality.

5.9 Each of the principles contained in the General Development Principles chapter is incorporated within policies GDPOL 1 and 2, thus making them requirements which must be met rather than aspirational in nature. Development will have to accord with the relevant provisions of the policies or else, at a minimum, provide robust justification as to why it is not feasible or possible to do so. This must be demonstrated to the satisfaction of the Council and therefore should ensure their implementation in almost all cases.

6.0 Draft Plan Strategy Stage

Following the Preferred Options Paper (POP), letters were sent to relevant consultees in March 2018. The feedback from each respondent is summarised below:

5.2 **Derry City and Strabane District Council – Environmental Health Department**- EHD raised a number of points relating to health and well-being, noise, odour, air quality, light pollution. The full response can be viewed in Appendix 2.

5.3 **Derry City and Strabane District Council – Climate Programme Manager**- raised a number of general issues on how planning can influence climate change e.g. flooding, appropriate design of developments to reduce greenhouse emissions, promotion and conservation of GI assets. The full response can be viewed in Appendix 1.

In addition to the formal consultation exercise, a series of 'round table discussion' (RTD) meetings were held in 2018. Members raised the following issues which are relevant to the development principles:

- proposals for incorporating place-making good practice were welcomed;
- consideration of sustainability should include locational rural focal points such as local halls, football clubs, churches, post offices etc;
- policy should ensure a reasonable standard and size of accommodation.

A series of member discussion meetings (MDMs) were held in the first half of 2019 to gain member input on a draft of the PS policy. Members' views centred on the proposed restriction of hot food takeaways within the vicinity of schools, about which they commented:

1. Members highlighted that the Council does not have a corporate position in terms of the regulation of the location of hot food takeaways and so it would be difficult to justify a planning policy with respect to this. Members felt it may be something to re-visit in the future;
2. Members agreed in principle that there is some correlation between the proliferation of hot food takeaways and rising obesity levels but as many of our schools are already located in the heart of their communities they felt to impose restrictions may unacceptably curtail development in those areas or in established local centres;
3. Members were concerned that the proposed policy would not effectively address the issue it aims to in that hot food takeaways are only one source poor nutrition/excessively calorific food stuffs. Energy drinks which are extremely high in sugar content for example, are another source and are readily available in local convenience shops.

A further consultation exercise was undertaken with key consultees, in June 2019, to garner their views on the most recent draft of the PS policy. While some responses are still outstanding, to date consultees commented:

DAERA

- advise that the data and references pertaining to the NI Climate Change Risk Assessment (CCRA) are outdated as the refer to 2012 assessment whereas the latest assessment is dated 2017.

DAERA Marine Division (including Marine Conservation & Reporting)

- referencing and consideration of marine legislation and policy documents is insufficient. There should be greater recognition of the interaction and integration between the marine and terrestrial planning systems.

DCSDC Environmental Health

- contaminated land seems to be absent within the general principles document;
- The need to undertake Health Impact Assessments is welcome for major developments as well as the wider commitment to health and wellbeing;
- consideration should be given to ensuring that there is capacity and adequate arrangements in place for the disposal of waste water including where necessary; the provision of grease traps in certain food businesses to protect existing drainage.
- Council has signed up to the WHO European Healthy Cities Network and is working actively to implement Phase VII core themes, it is important that these core themes are reflected within aspects of the Draft Plan Strategy.

DCSDC Biodiversity Officer

- Substantive comment was made in relation to making additional references to the Green Infrastructure Plan within specific paragraphs and also to further cross reference associated chapters;
- Suggested amended text for principles DP 1, DP 2, DP 3, DP 6 and DP 9, including 'development should prevent the loss of biodiversity and promote biodiversity net gain' under DP 1 and 'minimise the risk of environmental damage, habitat loss and fragmentation' under DP 9;
- Suggested adding multiple references to carbon storage
- Suggested caution in linking GI solutions to reducing carbon emissions as no baseline of emissions is held to measure progress against

Resultant Development Principles and Policies Content in the LDP Draft Plan Strategy

DP 1 Development Principles Sustainable Development

DP 1-: Sustainable Development sets out broad sustainable development principles, which are linked to the wider growth, spatial, housing and economic strategies of the LDP. This was largely informed by the SPPS and the RDS which in turn have been informed by the NI Sustainable Development Strategy.

DP 1 sets out the LDP's intention, in line with its objectives, as well as those of the SGP to manage development in a sustainable manner taking into account the economic, environmental and social objectives which underpin the LDP. It also proposes a policy which will direct development in sustainable manner in accordance with the PS. This will encourage sustainable development within all developments and also in accordance with the wider housing, economic, growth and spatial strategies.

The settlement hierarchy is reflective of the broad strategy for sustainable development of the LDP with services commensurate with a particular settlement's position within the hierarchy. This accords with the spatial strategy.

The broad theme of rural housing policy is sustainability. The countryside is a finite resource and the level of development growth must be sustainable. Provisions such as those contained in Chapter 17 – Housing, address the issue of sustainable housing for example in respect of clusters around focal points in the rural area. Other specific chapters also give detailed direction on sustainable development tailored to the different types of development.

DP 2 - Development Principles: Climate Change

DP 2-: Climate Change sets out broad principles of Development Management relating to climate change, such the need to take into consideration areas such active travel, flooding, etc. in development proposals. This was broadly informed by the SPPS, the NI Climate Change Adaptation Programme and the DCSDC Climate Change Programme Manager.

Climate Change: The SPPS reflects the Government's commitment to climate change, giving it a prominence that did not exist in previous policies or local development plans. Therefore, the direction given in the SPPS has informed the content of this section and proposed policy. Furthermore, DCSDC has begun the process of creating a Climate Adaptation Plan and it is therefore important that the LDP sets out Planning's approach to the topic. This has been informed through discussion with the Climate Change Manager. Areas that Planning can have influence on climate change include limiting flood risk,

reducing greenhouse gases, facilitating renewable energy, encouraging active travel, compact urban forms and generally promoting sustainable development.

DP 3 - Development Principles: Improving Health and Well-Being

The Council is committed to promoting sustainable development through the Development Principles policies. The Council policies promote health and well-being through principle DP3, it ensures that development proposals should demonstrate how they do not significantly adversely impact air quality, particularly in problem areas.

This topic and its links to Planning has been given more prominence in the SPPS. The SGP has also recognised the importance of health and well-being. The LDP provides an opportunity to direct development in a manner that contributes to a better level of health and well-being for our community. Areas that Planning can have influence on health and well-being include promotion of active travel, protecting open space and protection of the natural environment.

DP 3 sets out broad principles of Development Management relating to health and well-being, such as the need to take into consideration areas such active travel, open space etc in development proposals. This has been primarily informed by the SPPS and the SGP 2032.

DP 4 - Development Principles: Supporting Sustainable Economic Growth

The Council promotes developments that do not have an adverse effect on local amenity, landscape, ecology, ecosystems or the historical or natural environment. However, The Council will balance the need to support job creation and the economic growth against the environmental impacts.

DP 4 sets out the principles for sustainable economic growth including high standards of design, multi-modal transport options/connections and consideration of amenity, ecology and built and natural heritage assets. We have carried forward an general theme from the SPPS which is line with a PfG for NI and the economic outcomes and actions of the SGP 2032.

The SPPS identifies this as a core principle. It advises on the balancing of economic and environmental considerations. This accords with the SGP which promotes inclusive growth and sustainability in all relevant areas. The LDP builds on this SPPS core principle and channels the relevant of objectives of the SGP into three principles that proposals must observe relating to design/scale, locational accessibility and impact on amenity and natural and historic environments.

DP 5 - Development Principles: Creating and Enhancing Shared Space

DP 5 sets out broad principles of Development Management relating to shared spaces including levels of accessibility and connectivity and the promotion of shared neighbourhoods to enhance the opportunities for shared space. This is a core principle of the SPPS and the key message is being carried forward to the LDP.

The promotion of shared spaces is a key action of the SGP and their creation and enhancement is a core principle of the SPPS. The Development Principles Chapter largely mirrors the thrust of the SPPS however it provides for five individual principles for development proposals to observe relating to accessibility, shared neighbourhoods, connectivity, opportunity for shared spaces and shared public space.

DP 6 - Development Principles: Importance of Ecosystem Services

DP 6 sets out broad principles of Development Management relating to the support of ecosystems through reducing the effects of climate change, promoting green and blue infrastructure and the protection of species and habitats which merit it. This is largely informed by the core principles of the SPPS and the GIP 2032.

Both the SPPS and the SGP identify ecosystem services as being integral to sustainability. The LDP seeks to ensure all development takes account of the potential impact on ecosystem services from conception to decision. The principles put forward under DP 6 relate to the provision of green infrastructure and measures to adapt to environmental change so that ecosystems are not just protected but strengthened. These principles feed into those of DP 2 Climate Change, DP 8 Development Management and DP 9 Protecting and Enhancing the Natural Environment.

DP 7 - Development Principles: Design Principles in Settlements

DP 7 sets out broad principles and overarching requirements of Development Management relating to design and place-making, such as the need to take into consideration quality, scale, massing, layout, materials, etc in development proposals and links it to a proposal's specific context.

The DAP 2011, SAP 2011, SPPS, Living Places, Building On Tradition and Place-making & Design Study contributed to the formulation of DP 7.

The draft strategy includes a section for place-making and design visions for the settlements and this is reinforced by DP 7.

In respect of size, space standards for residential units are included in the Annex to the Housing chapter.

DP 8 - Development Principles: Development Management

DP 8 sets out broad Development Management principles for assessing Planning applications, such as how we manage development whilst taking account of the adverse impact on amenity and areas of acknowledged importance such as natural/built heritage. This has been influenced by SPPS and the former policy contained in PPS1: General Principles.

The LDP seeks to ensure that development is managed in such a way that a wide range of environmental and amenity issues are considered in all development proposals. This section provides policy guidance on amenity issues such neighbourliness, as well as direction on the importance on protecting areas of acknowledged importance such as the natural environment and the built heritage. Comments relating to noise, odour and air quality have been received from EHD and these have also been considered and factored into the proposed policy.

There is also emphasis on good design and place-making in the SPPS (DP 7 Design Principles in Settlements). The LDP has recognised this through the proposed inclusion of a full section of chapters on 'Place-making and Design' for Derry, Strabane, Local Towns, Villages/Small Settlements and Countryside. However, it is felt that it is also necessary to provide principles of design that can inform all levels of development and this policy looks at the impact of design on the character of areas and also of how design can influence how we operate on a human scale.

DP 9 – Development Principles: Preserving and Enhancing the Natural Environment

DP 9 sets out broad principles of Development Management relating to the protection and enhancement of such natural assets as landscape amenity, biodiversity and geodiversity with particular emphasis on designated areas and the mitigation of the effects of climate change on species and habitats which merit protection. The SPPS provided the overarching regional principles for these local principles. The outcomes and actions of the SGP 2032 also informed DP 9.

DP 10 – Development Principles: Preserving and Enhancing the Historic Environment

DP 10 sets out broad principles of Development Management relating to the protection and enhancement of such built heritage assets as listed buildings, scheduled monuments and archaeological sites and their setting through sympathetic design, the use of high quality materials and the promotion of reuse and adaptation of special local character. The SPPS provided the overarching regional principles for these local principles. The outcomes and actions of the SGP 2032 also informed DP 10.

Overall Policy Direction

All relevant policy and guidance has been considered in the Development Principles section for the LDP PS. In this respect, the proposed strategy of the LDP reflects the regional strategy as set out in the RDS and the SPPS. The strategy has also been influenced by the aims of the District's Strategic Growth Plan. We have also taken account of the POP representations, Member's inputs and consultee responses in reaching the conclusions in the strategy and policy wording of the PS.

The SPPS sets out the 'Purpose of Planning' and 'Core Planning Principles', as well as providing advice on particular topics such sustainable development, climate change, design/place-making and safeguarding residential amenity and protecting areas of acknowledged importance such as the natural environment and built heritage. All the above have been communicated in such a way as to provide overarching direction and guidance on the development principles of Planning, whilst applying any local or LDP specific perspective.

Whilst acknowledging and taking into account the key themes of the SPPS, the LDP seeks to provide a set of development principles that will guide and inform how development will be managed. It will seek to positively promote development subject to adherence with these development principles.

In summary, the LDP has taken account of the SPPS, but has also given local context and highlighted particular aspects relating to the broader themes set out above, which can inform all users of the LDP of what are the core principles of Planning for DCSDC. The direction is in line with the SPPS, RDS, and SGP and is consistent with the broader objectives of the LDP.

7.0 Sustainability Appraisal

7.1 Throughout their formulation, the policies contained within the General Development Principles Chapter have been subject to an ongoing internal sustainability appraisal (SA). This is in addition to the wider external SA, conducted by Shared Environmental Service as part of the wider suite of impact assessments/appraisals required under the Planning Act (Northern Ireland) 2011. The internal appraisal was carried out with the fourteen objectives of the external appraisal in mind (refer to the full wider SA for more information).

7.2 The process of sustainability appraisal aims to ensure that a council's approach towards policy is the most sustainable of all reasonable options available i.e. having considered any reasonable alternatives. In the case of the General Development policies, it is not considered that there were any reasonable alternatives as any other options would not be in accordance with the RDS 2035 of the SPPS and as such would be considered to be unsound.

7.3 With regard to the degree of sustainability of each the resulting proposed policies, this is outlined below:

- GDPOL 1 General Development Management Policy

The policy was identified to deliver significant positive outcomes for delivery of the social sustainability objective to improve health and wellbeing. These outcomes were based upon the policy aiming to control the negative impacts of nuisance pollution - noise, dust, odour, vibration, vermin, traffic, litter - on people.

Minor positive effects were also predicted for delivery of the sustainable housing objective as the policy would likely help to contribute to a good quality environment with adequate infrastructure and parking but also lighting and local biodiversity.

Positive effects were also predicted for delivery of the sustainable economic growth objective with significant positive outcomes predicted in the longer term. Positive effects were based upon the policy applying to all developments with the potential of making the area more attractive to residents, visitors and investors by aiming for a higher standard of development that is more sustainable and therefore robust. The policy is in itself similar to an investment plan. Minor positive outcomes were also predicted for delivery of the economic objective to protect physical resources and use sustainably based upon the policy helping to avoid local pollution of land/soil and helping to ensure the most efficient use of land. Minor positive outcomes were also predicted for delivery of the environmental objective to encourage active and sustainable travel based upon the policy helping to facilitate and encourage active and sustainable travel with integration of safe routes within design schemes.

Similar to the economic growth objective, the climate change objective was also identified as delivering minor positives in the short and medium term timeframes with significant positive outcomes predicted in the longer term. These effects were based upon the policy requiring SuDS in new developments and the influence of the policy to reduce applications with potentially damaging greenhouse gas emissions. Significant positive outcomes were also predicted across all timeframes for several other environmental objectives including to protect, manage and use water resources sustainably; to protect natural resources and enhance biodiversity; to maintain and enhance landscape character; and to protect, conserve and enhance the historic environment and cultural heritage. These positives were based upon the policy applying to all development and helping to ensure integration of adequate wastewater infrastructure, as well as SuDS, with no adverse impacts on natural heritage or local biodiversity allowed. Likewise, no adverse impacts on landscape or the historic environment would be allowed. The predicted positive effects would be strengthened based on the application of the policy to all development.

- **GDPOL 2 Design Policy in Settlements**

The policy was identified to deliver significant positive outcomes the majority of the social sustainability objectives. These positives were based on the policy being applicable to all applications and encouraging good design principles that may promote healthier lifestyles and/or safer environments through accessible active travel routes and local green/blue infrastructure as well as open and shared space where people could benefit from not just physical activity but also social interaction.

As the policy would apply to all applications, it could help to reduce inequalities by providing an accessible environment for people to local services and facilities and therefore an improved quality of life through design. The policy would be applicable to housing and should encourage new developments with a higher quality of development by encouraging better design that encourages and facilitates healthier and safer living environments.

Likewise, positive effects were predicted for delivery of the economic sustainability objective to enable sustainable economic growth based on the policy encouraging better design that would make local areas more attractive to residents, visitors as well as investors. This would help to maintain and increase local vibrancy and vitality. Minor positive outcomes were predicted for delivery of several of the environmental sustainability objectives, including to maintaining and enhancing landscape character; to protect, conserve and enhance the historic environment and cultural heritage. These positives were based upon the policy ensuring

landscape plans would be sought to ensure proposed schemes would not adversely impact on adjacent landscape character and likewise, sensitive design that appropriately considers the historic environment with local historic features expected to be conserved.

Minor positives were also predicted against the environmental objectives to improve air quality and to reduce the causes of climate change. These positive effects were only predicted in the long term and were based upon the policy helping to encourage and provide alternative modes of travel to the car, which should help to improve local air quality and reduce greenhouse gas emissions.

For similar reasons, significant positive outcomes were identified for delivery of the environmental objective to encourage active and sustainable travel. These significant positive effects were based upon the policy ensuring design principles that should help provide people with a more accessible local environment through improved connectivity to public transport routes and hubs as well as walking and cycling routes.

7.4 A draft Habitats Regulations Assessment (HRA) has also been undertaken and published for consultation with the Draft Plan Strategy. It similarly determines possible adverse effects on the integrity of European sites (Special Areas of Conservation and Special Protection Areas) as a result of the policies within the LDP. This assessment also includes Ramsar sites under the provisions of the Ramsar Convention.

8.0 Equality Impact Assessment

8.1 Section 75 of the Northern Ireland Act 1998 requires that public authorities have due regard to the need to promote equality of opportunity and good relations between persons of a particular religion, political opinion, race, age, marital status, sexual orientation or gender. It also includes people with disabilities or those with primary responsibility for the care of a dependant, such as an elderly person. These are known as 'Section 75' groups.

8.2 The policies contained within the General Development Principles and Policies Chapter have been subject to an equality impact assessment (EQIA) to ensure no adverse impact on these groups. This chapter scored positively to a minor or greater degree for each principle or policy.

8.3 It is considered that directing development to sustainable locations will allow for increased connectivity and therefore greater equality of opportunity for those with accessibility needs, for example access to city/town/district/local centres, health care facilities and leisure/recreational facilities and spaces. Also, more and better transport options should allow greater access to employment opportunities and a greater ability to avail of them.

8.4 Mitigating and adapting to against climate change will likely affect all groups however it can have a positive effect on the most vulnerable members of society, such as the elderly, as the ability of vulnerable groups to cope or respond to climate related events such as flooding is normally diminished.

8.5 Creating/enhancing a shared space will have a positive effect on all groups as it will help to foster good relations and a better understanding of differences. It is anticpated that this will lead to increased tolerance and thus less division across the different but often overlapping communities.

8.6 The Council is satisfied that there will be no adverse impact on any Section 75 groups as a result of the General Development Principles and Policies.

9.0 Rural Needs Impact Assessment

9.1 The Rural Needs Act 2016, requires District Councils and other Public Authorities to have due regard to rural needs when developing, adopting, implementing or revising policies, strategies and plans, and when designing and delivering public services.

9.2 To 'have due regard' means that a public authority must consciously consider the needs of people in rural areas. How much 'due regard' will depend on the circumstances and, in particular, on the relevance of rural needs to the decision or function in question. The greater the relevance and potential impact for people in rural needs, the greater the regard required by the duty.

9.3 Throughout the formulation of the draft Plan Strategy, there has been consideration of the impact of each policy approach on the rural area, relative to the urban area and policies have been amended where it was deemed appropriate to do so. In the case of the General Development Policies, no amendments were considered necessary in respect of rural impacts.

9.4 The General Development Principles and Policies Chapter is intended for all forms of development in both urban and rural areas. It not only contains specific principles, and criteria within the two policies, for sustainable development and sustainable economic growth but also threads sustainability throughout the chapter as a common theme underpinning the other principles. As such, the chapter includes some specific requirements which will normally be more difficult to achieve in the rural area, for example the promotion of active travel or the siting of development in accessible locations with sustainable and inclusive transport linkages. It is anticipated however that such requirements will be applied in a way that is appropriate to the scale and locational context of a proposal. In taking account of these contexts the chapter makes allowance for the limitations of rural/small settlement development which in turn will mitigate or offset any negative differentials.

Appendix 1

Derry City & Strabane District Council

Local Development Plan

Climate Consultation Response

Summary Report

Cathy Burns

CLIMATE Programme Manager

April 2018

Contents

Section 1 Background Context

1.1 Climate Change Current & Projected

Climate change is one of the most serious global threats. Its consequences can include flooding, famine, drought, rising sea levels and ultimately, even the extinction of species. While Northern Ireland is likely to avoid some of the most severe direct impacts manifesting in some other regions, there will be impacts, both direct and indirect.

The Intergovernmental Panel on Climate Change (IPCC) Synthesis report 2014[1] highlighted that warming of the climate system is unequivocal and that anthropogenic drivers are extremely likely to have been the dominant cause since the mid-20th Century. The Earth's climate has already become warmer, and the change will continue. The amount of warming will depend on our greenhouse gas emissions, and how quickly we can reduce them. We need to adapt society to the climate of today and the future.

The potential impacts in the UK were produced based on models and observed trends on 3 different greenhouse gas emission scenarios and published as part of the UK Climate Projections 2009. Projections were made for the UK until the end of the 21st Century.

Temperature

- Annual average UK land temperature increased by **0.9°C** in 2005 – 2014 compared to 1961–1990, with 2014 being the warmest individual year.
- Northern Ireland annual mean temperature for 1981-2010 relative to 1961-1990 amount to an increase of **0.46°C**.

City	Daily summer max temperature (°C)			
	1961-1990 Observed	2041-2060 Low	2041-2060 Central	2041-2060 High
Belfast & NI	**25.9**	**26.5**	**28.5**	**30.9**

2

[1] IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 151 pp.

[2] ASC (2016) UK Climate Change Risk Assessment 2017 Evidence Report – Summary for Northern Ireland. Adaptation Sub-Committee of the Committee on Climate Change, London.

Increased temperature can lead to the following effects;

- Increased pollution
- Poorer air quality
- Heat island effects
- Overheated buildings
- Water scarcity

Such effects serve to bring discomfort to local people as well as vulnerable and threatened species of animals and plants, including crops.

Precipitation

Heavy seasonal and annual rainfall events have increased – Northern Ireland increased by **3.4%** for the period 1961-1990 compared to 1981-2010.

City	5-day winter rainfall accumulation (mm)			
	1961-1990 Observed	2041- 2060 Low	2041- 2060 Central	2041-2060 High
Belfast & NI	**70.3**	**70.6**	**76.9**	**84.6**

3

Sea Levels

UK sea level has risen at a best-estimate rate of **1.4mm/year** since 1901, which is close to the estimated rate for global sea level.

The average sea level for Belfast is expected to increase by between **22.8cm** and **37.6cm by 2090** compared to a 1990 baseline.[4]

[3] ASC (2016) UK Climate Change Risk Assessment 2017 Evidence Report – Summary for Northern Ireland. Adaptation Sub-Committee of the Committee on Climate Change, London.

[4] ASC (2016) UK Climate Change Risk Assessment 2017 Evidence Report – Summary for Northern Ireland. Adaptation Sub-Committee of the Committee on Climate Change, London.

Flood Risk

A recent study has highlighted increased risk for the city of Derry from river flooding:

80% increase in peak river flows

*"The British Isles are a future hotspot for river flooding in Europe. The cities predicted to be worst hit under the high-impact scenario for the British Isles are Cork, **Derry**, Waterford, Wrexham, Carlisle, and Glasgow. For the low-impact scenario, **Derry**, Chester, Carlisle, Aberdeen, and Glasgow could be worst affected."* Dr Selma Guerreiro. (2018)[5]

"The research highlights the urgent need to design and adapt our cities to cope with these future conditions." Professor Richard Dawson

An increased risk of flooding and coastal erosion will put pressure on drainage, sewerage, road and rail infrastructure, water resources, agriculture and habitats as well as leading to increased run off and water pollution.

Extreme Weather Events

An Intergovernmental Panel on Climate Change (IPCC) report on extreme weather, published in 2012, states that

"changing climate leads to changes in the frequency, intensity, spatial extent, duration, and timing of extreme weather and climate events, and can result in unprecedented extreme weather and climate events." [6]

Such extreme weather events often lead to disruption to business, agriculture, services and daily life.

Air Pollution

Air quality and climate change are fundamentally interrelated. Many common air pollutants are 'climate active', and reducing emissions will lessen the warming effect on our climate. A warming climate also threatens to make air quality worse, with the prevalence of harmful photochemical smogs likely to increase throughout longer, hotter summers.

[5] Guerreiro, Selma & Dawson, Richard & Kilsby, Chris & Lewis, Elizabeth & Ford, Alistair. (2018). Future heat-waves, droughts and floods in 571 European cities. Environmental Research Letters. 13. 034009. 10.1088/1748-9326/aaaad3.. Univiersity of Newcastle

[6] IPCC, 2012: Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change [Field, C.B., V. Barros, T.F. Stocker, D. Qin, D.J. Dokken, K.L. Ebi, M.D. Mastrandrea, K.J. Mach, G.-K. Plattner, S.K. Allen, M. Tignor, and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, UK, and New York, NY, USA, 582 pp.

Air pollution from particulate matter is currently estimated to reduce the life expectancy of every person in the UK by an average of 7-8 months. The young and infirm are often particularly affected, as well as people living in deprived areas. Whilst action is required internationally, it is important that Northern Ireland plays its part by reducing air pollution and greenhouse gas emissions and preparing for the impacts of climate change. These include the effects on species and habitats and on health as a result of warmer temperatures, storms, floods and coastal erosion.[7]

1.2 Local Impacts (Derry City & Strabane District Council Area)

A local Climate Impact Profile has begun to be developed for the city and district, this charts the effect of severe weather events since 2004 and will be further developed to include known incremental effects as a result of climate change. Initial research has revealed a total of 14 severe weather events that have resulted in significant impacts, these include the following:

- December 2010
  Snow & Low temp -18 Recorded Castlederg 10-12 cm snow
  (City of Derry Airport closed)

- September 2013
  High Temp 30 degrees in Castlederg

- December 2015
  Storm Frank. Damage to buildings, travel disruption, flooding, loss of power

- August 2017 Flooding (Further details below)

Recent flood events in the City & District have served to increase awareness of the risks and impact that climate change and associated severe weather events can have. This was particularly highlighted during the flooding of August 2017 during which 60-70mm rain (63% August rainfall) in 8-9 hours.

This severe rainfall event resulted in flooding in the following local rivers:

- River Faughan estimated total peak flow 5.4 meters
- Muff River total peak flow height 3.1 meters
- Burndennet River total peak flow height 6.5 meters

[7] Department for Regional Development, (2010). Regional Development Strategy 2035. Northern Ireland. (p.44)

- Flood waters rose to depths of 600mm to the highest of 2 meters in some properties

The North West Flooding Review[8] was undertaken and reported the following impacts across various areas in the city and district:

- 400 homes & businesses affected
- Agriculture affected – livestock drowned, land damage & erosion
- 210 roads affected
- A5 closed 3 days
- City of Derry Airport closed 2 days
- 5 Bridges washed away & 89 bridges requiring repair
- 2,900m flood defenses damaged
- 1,497 calls to Flood Incident Line
- Estimated £12m worth of repairs to infrastructure (DFI)
- Glenelly Valley 1 in 3000 year event landslides

Exact costs to be confirmed:

- £300,000 allocated to Council assets
- £1m repairs
- Approx. 80 hours each for 8 senior managers

Throughout the Review, issues were raised in relation to ensuring future development does not take place in areas likely to be at risk of flooding, the reports states that,

"Historically, regional flood risk planning policies in NI have been very robust when compared to GB and other parts of Europe. The flooding in the North West has clearly reinforced the need for robust planning and flood risk polices to remain as local councils take forward their Local Development Plans."

Section 2 Climate Change & Local Authorities

2.1 Local Authority Response to Climate Change

Response to the challenge of climate change is often divided into mitigation and adaptation, however in order to affect real change the two must be done in parallel. These can be defined as follows:

[8] Department for Infrastructure. The Executive Office. Derry City & Strabane District Council, (2018) North West Flooding Review.

Mitigation – measures to reduce emissions and mitigate against further global warming

Adaptation – actions to adapt and create a resilient society to current and projected climate change and severe weather events.

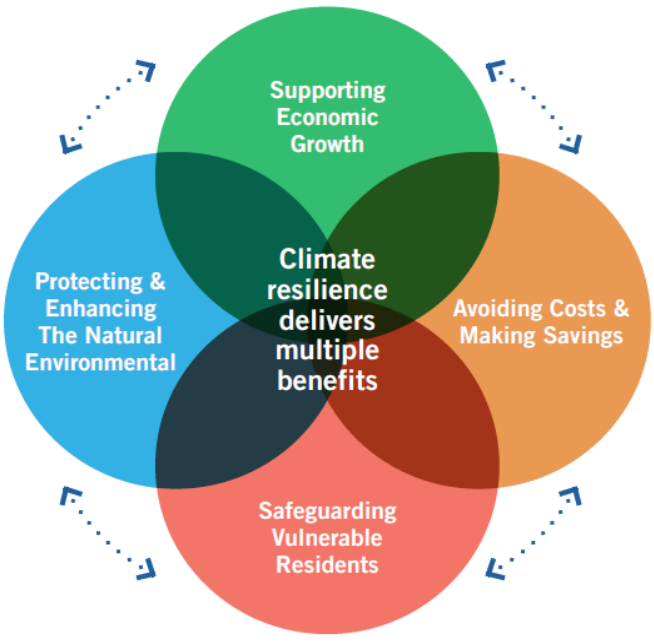
Many councils throughout the UK and Ireland are already responding with mitigation and adaptation planning and measures. In Northern Ireland it is not currently a statutory requirement for local authorities to undertake adaptation planning, however Derry City & Strabane District Council is leading the way with the CLIMATE Programme. This will see the development of the first local authority adaptation plan in Northern Ireland.

It is widely recognised that climate action by local authorities is required, reasons for which include:

- Early action saves lives & money
- EU wide cost of not adapting could reach at least €100 billion per year by 2020, rising to €250 billion a year by 2050[9]
- Councils are directly affected by severe weather events, and are often the frontline of immediate response, and will increasingly be affected by changes in our climate
- Ethical responsibility – it is often the most vulnerable who are impacted the most
- Avoid damage to both new and existing assets
- Prevent damage to local heritage that has irreplaceable cultural heritage values.

Adaptation Planning should become 'business as usual' - mainstreamed in Council decision making, policy development, service planning and delivery.

Key Benefits for Councils of developing Climate Resilience



[9] European Commission, (201

2.2 The Role of Planning & Climate Change Mitigation & Adaptation

Effective development planning and design has a central role to play in future proofing the city and district in order to address climate change and improve adaptive capacity and resilience. Used positively, planning it has a significant contribution to make by enabling high standards of development by raising awareness and aspirations rather than simply implementing regulations.

Spatial planning can play a pivotal role in delivering:

1. Ensuring progress against the UK/Northern Ireland emissions targets by ensuring development, and the communities it provides for, seeks to reduce greenhouse gas emissions that are a cause of climate change.

2. Creating an attractive environment for innovation and investment in renewable and low-carbon technologies and infrastructure.

3. Ensure development that responds and is resilient to current climate impacts and to the needs of the future based on climate projections.

This can be realised through a variety of activities, including:

- Setting out appropriate strategies and policies
- Supporting the development of renewable, decentralised and low-carbon energy schemes
- Ensuring that development proposals have minimal negative impact on the environment & do not contribute to maladaptation.
- Shape sustainable communities and reduce vulnerability to increase resilience to the effects of climate change.

Planning issues that will be impacted by climate change, and for which specific guidance should be provided include:

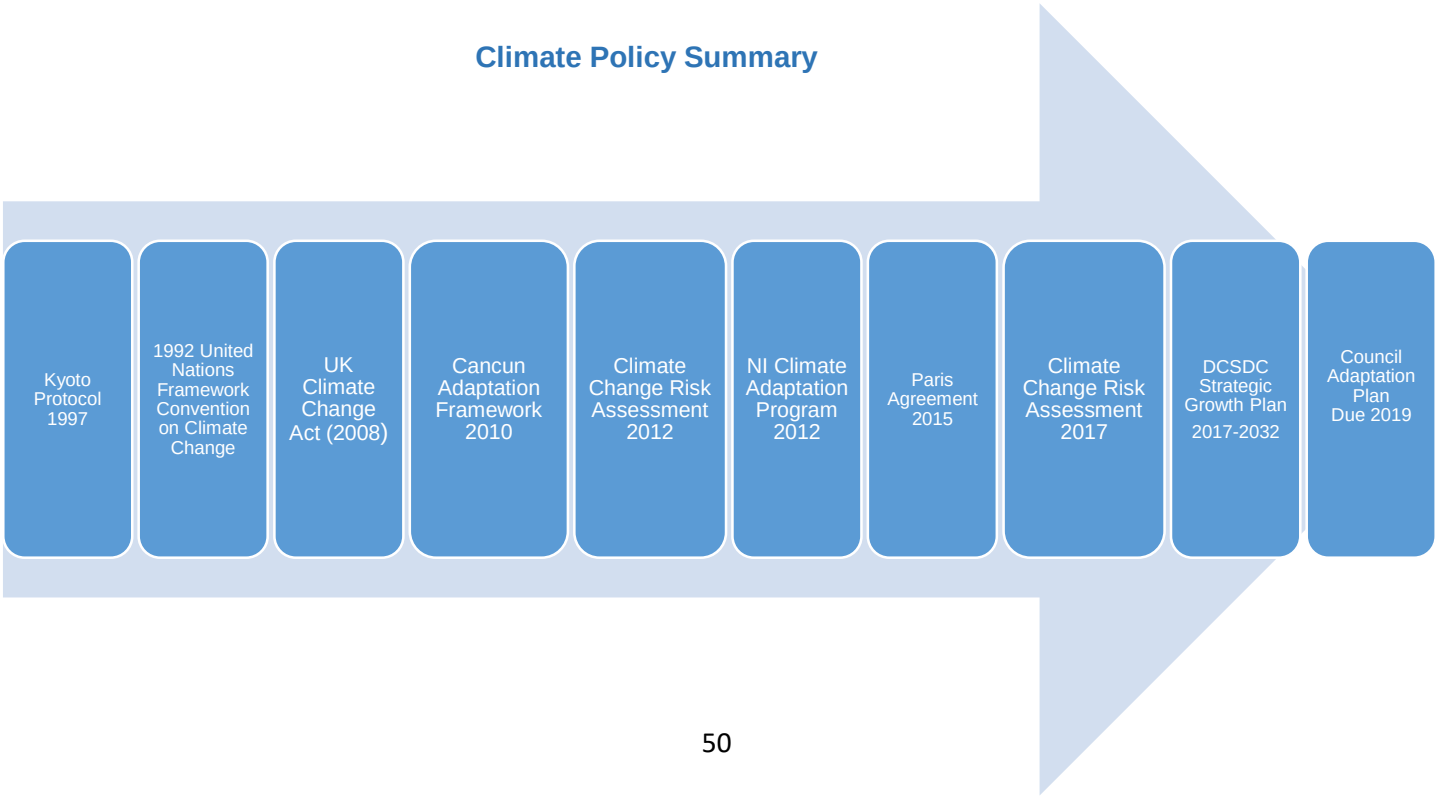
- Flooding (PPS15)
- Residential Development (PPS7 & PP12)
- Development (PPS23)

- Biodiversity and Landscape (PPS1 & EVB9)
- Infrastructure & Transport (PPS13)
- Coast (EVB17)
- Open Space (PPS8)
- Archaeology & Built environment (PPS6)
- Water Resources
- Tourism (PPS16)
- Renewable Energy (PPS18)
- Waste (PPS11)

Section 3 Policy Context

The following policy and supplementary document review outlines some of those included in the current LDP Preferred Options Paper (p.28-33) in addition further relevant documents are detailed below which directly relate to climate change, mitigation, adaptation and planning.

3.1 Climate Change Legislation & Policy



UK Climate Change Risk Assessment

Northern Ireland Evidence Report 2017

The UK Climate Change Act 2008 requires the UK government to produce a UK Climate Change Risk Assessment (CCRA) every 5 years. The aim of which is to "*assess current and future risks to opportunities for the UK from climate change.*"

The most recent evidence report was published in 2017. It outlined risks to the UK in six key areas:

1. Flooding and coastal change risks to communities, businesses and infrastructure.
2. Risks to health, well-being and productivity from higher temperatures.
3. Risks of water deficits in public water supply, and for agriculture, energy generation and industry, with impacts on freshwater ecology.
4. Risks to natural capital, including soils, coastal, marine and freshwater ecosystems, and biodiversity.
5. Risks from climate-related impacts on domestic and international food production and trade.
6. New and emerging pests and diseases, and non-native species, affecting people, plants and animals.

The Northern Ireland Summary Report identified the following local key risk areas:

- Natural environment and natural assets
- Infrastructure
- People and built environment
- Business and industry
- International dimensions
- Cross cutting issues

In response to the CCRA (again every five years), the Climate Change Act also requires each of the devolved administrations to produce a climate change adaptation programme.

Northern Ireland Climate Change Adaptation Programme (2014)

Department of Environment

The Northern Ireland Climate Change Adaption Programme is developed on a cross departmental basis. The 2014 programme identified the following key priorities for action across Northern Ireland:

- Partnership Working
- Raise Awareness
- Research & Evidence
- Actions (5 Years)
- Flooding
- Water
- Natural Environment
- Agriculture & Forestry

Currently adaptation planning and coordination is undertaken by the Department for Agriculture, Environment & Rural Affairs and Climate NI. An Adaptation Sub Group manages Programme delivery; an updated NI Adaptation Plan is due for completion in 2019.

According to the current Adaptation Plan, Planning plays an important role in climate adaptation:

Section 6.11 The planning system plays an important role in guiding the location of development, both public and private, away from areas at risk of flooding through the implementation of planning policy in the development management and development plan processes.

Section 6.86 The planning system will minimise the vulnerability of biodiversity to the impacts of climate change and facilitate adaptation by promoting the provision of green infrastructure and contributing to the enhancement and conservation of the natural environment as an integral part of social, economic and environmental development. This will be complemented by the identification, establishment, protection and management of a coherent and resilient ecological network.[10]

[10] Department of the Environment, (2014) Northern Ireland Climate Change Adaptation.

The plan places an emphasis on planning to mitigate for flooding using measures such as SuDs and a holistic approach to developments and flood alleviation.

There is an emphasis on the role of the Strategic Planning Policy Statement and associated Local Development Plans to address climate adaptation and mitigation in respect of all areas where possible.

3.2 Local Policy Context - NI Central Government

Climate change, mitigation and adaptation are included in a number of key Northern Ireland Government policies and documents. The table below outlines the current relevant documents and the headline statements pertaining to climate change.
Further detailed sections and explanation is provided in Appendix A.

Policy / Document Title	Department/ Agency	Relevant Statement(s)
Program for Government (Draft)	Northern Ireland Executive Office Jan 2018	➢ Reduce greenhouse gas emissions by at least 35% (compared with 1990 levels) by 2025 ➢ We live and work sustainably – Protecting the Environment
Northern Ireland Regional Development Strategy 2035	Department for Regional Development 2010	➢ Protect and enhance the environment for its own sake ➢ Take actions to reduce our carbon footprint and facilitate adaptation to climate change
Strategic Planning Policy Statement for Northern Ireland. Planning for Sustainable Development	Department for the Environment 2015	➢ Section 3.10 A central challenge in furthering sustainable development is mitigating and adapting to climate change, whilst improving air quality.
North West Flood Risk Management Plan	Department for Agriculture & Rural Development, Rivers Agency 2015	➢ Designated Significant Flood Risk Areas ➢ Keep new development outside Flood Risk Areas ➢ Ensure new development within Flood Risk areas is suitably constructed ➢ Planning for the integration of SuDS and Natural Flood Risk Management techniques on a catchment scale, will be taken forward during this Flood Risk Management

Policy / Document Title	Department/ Agency	Relevant Statement(s)
		Plan cycle (2015-21)

Policy / Document Title	Department/ Agency	Relevant Statement(s)
Sustainable Water, A Long Term Strategy for Northern Ireland 2015-2040	Department for Regional Development 2015	➢ **FRMD Policy 1A** To ensure land-use planning decisions are informed to help minimise flood risk ➢ **FRMD Policy 1B:** Make space for surface water management in development plans ➢ **FRMD Policy 1C:** Sustainable Drainage Systems ➢ **FRMD Policy 1D:** Design for drainage exceedance to be incorporated into all new drainage infrastructure.
Managing Storm Water. A Strategy for Promoting the use of Sustainable Drainage Systems (SuDs) within NI	Northern Ireland Environment Agency 2011	➢ Promotes the use of SuDs as a response to climate change and increased flood risk

Policy / Document Title	Department/ Agency	Relevant Statement(s)
Valuing Nature A Biodiversity Strategy for Northern Ireland to 2020	Department for the Environment 2015	➢ Reduce the impact of climate change in order to meet the challenge of halting biodiversity loss. ➢ Value of key ecosystem services and the benefits they can provide to regulating and adapting to climate change
North West River Basin Management Plan	Department for Agriculture, Environment & Rural Affairs 2015	➢ Invasive Species control ➢ Use of SUDS in PPS 15 planning applications ➢ Protection of freshwater, coastal and marine environments – capacity building for planning departments and teams.
Draft Marine Plan for Northern Ireland	Department for Agriculture, Environment & Rural Affairs 2018	➢ Public authorities, where appropriate, must consider the potential impact of proposals on greenhouse gas emissions and the proposals ability to adapt to a changing climate.

3.3 Derry City & Strabane District Council Policy

Derry City & Strabane District Council Strategic Growth Plan

November 2017

Within the DCSDC the Strategic Growth Plan importance is given to climate change and supporting environment:

"The Planet Matters:

We care deeply about our local environment and climate change. We understand that we are ultimately dependent on the natural world as a support system and we need to live sustainably: to produce and consume within our planetary boundaries. We believe we can have a circular economy and a low carbon society. We need to promote renewable energy. Develop an integrated, sustainable transport system and connect our rich waterways and greenways."

Relevant outcomes and actions for consideration include:

We prosper through a strong, sustainable and competitive economy.

We live sustainably – protecting and enhancing the environment

We connect people & opportunities through our infrastructure. [11]

[11] Derry City & Strabane District Council, (2017) Strategic Growth Plan

Derry City & Strabane District Council

Air Quality Action Plan

&

2015 Updating Screening Assessment, 2016 Progress Report and 2017 Progress Report.

The benefits of reducing greenhouse gas emissions will be felt several decades in the future, whilst air quality benefits are felt 'here and now' in the form of improved public health and environmental improvement. If policy is not integrated unintentional increases in emissions of air pollutants or greenhouse gases can occur, requiring costly remedial measures to mitigate the impacts.

Land-use planning and transport planning also underpin the development of effective air quality action plans, and close liaison between air quality and planning officers is therefore critical to improving air quality.[12]

The current air quality report and action plans highlight the role of statutory functions such as planning to support and deliver Council targets:

- M21 Use Planning Process to ensure potential air quality issues are assessed. Comment upon planning applications to ensure that all relevant air quality issues are highlighted and mitigation measures are considered wherever possible

- Derry City and Strabane District Council considers all planning applications that are submitted in the district. If any proposed development has the potential to adversely affect air quality in relation to the relevant public exposure criteria, as described in the most recent Technical Guidance LAQM.TG16, the developer is requested to submit an air quality assessment.

- DCSDC Air Quality Officer to remain a consultee on all relevant planning applications to ensure air quality assessments and issues are addressed.

[12] Environmental Protection UK, (2001) Air Quality and Climate Change: Integrating Policy Within Local Authorities.

Derry City & Strabane District Council Green Infrastructure Plan

2018

See: https://www.derrystrabane.com/getmedia/70ecf409-28a0-4262-9533-ca6ea6b75bd9/Green-Infrastructure-Plan-2019-2032.pdf

Derry City & Strabane District Council
Climate Adaptation Plan

(Updated)

In July 2020, Derry City and Strabane District Council became the first council area in Northern Ireland to adopt a Climate Change Adaptation Plan. Council also committed to wider climate action through a Climate Change Emergency Pledge. DSDC are the lead partner in the CLIMATE project (Collaborative Learning Initiative Managing and Adapting to the Environment) which is part funded by the ERDF Northern Periphery and Arctic Programme 2014-2020. Through the project, a comprehensive Climate Change Adaptation Plan has been produced, which will be delivered by a supporting Action Plan.

The aims of the Adaptation Plan are to increase capacity to respond to climate change; to raise awareness of the impacts of climate change across the City & District; and to lead by example and work collaboratively to ensure resilience and deliver climate adaptation.

The Adaptation Action Plan will be delivered by the relevant teams across Council and implementation will be monitored by the All-Party Climate Adaptation Working Group, which was established in June 2019 to discuss and debate climate change issues globally, regionally and locally.

The Climate Change Emergency Pledge outlines the Council's climate action commitments, including a shift to net zero greenhouse gas emissions across the city

and district by 2045. The Pledge and accompanying action plan includes working across Council to reduce emissions and working with other relevant agencies and stakeholders to ensure the Derry City and Strabane District Council area achieves net zero greenhouse gas emissions by 2045, and the need to adapt to climate change impacts now and in the future.

The Climate Change Adaptation Plan & Supplementary Information Document, see:

https://www.derrystrabane.com/climate

Section 4 Recommendations

4.1 General Principles

Climate change mitigation and adaptation measures need not represent a 'new' area of policy for DCSDC planning teams. Many local plan policies already set requirements which can contribute to climate change adaptation e.g. policies to protect floodplains. Therefore, existing policies and guidance can be reviewed to incorporate climate change 'headroom'.

Planning Policy Statements and application decisions should include due consideration of climate impacts – both current and predicted.

When developing planning policies and plans published material on projected climate change and its impacts contained within central government and DCSDC polices and other vulnerability assessments regarding the risks of temperature increases, flood risk, sea level rise and water availability should be considered.

In applying the UKCIP 09 projections, local planning teams may consider using the High++ scenarios for assessing vulnerability and planning for resilience and adaptation options to sea level rise. This especially applies to particularly vulnerable locations or sensitive development.
For impacts not covered by this derived material, such as extreme weather events, assessments can be informed directly by the latest set of UK Climate Projections and the latest Northern Ireland Climate Change Risk Assessment, NI Flood Maps and Local Climate Impacts Profiles.

When preparing Local Plans and taking planning decisions local planning authorities should pay particular attention to integrating adaptation and mitigation approaches and looking for 'win-win' solutions that will support sustainable development

Climate change adaptation should be considered from the start of the process to ensure that it becomes an integral part of developments rather than an 'add-on'. This is better in terms of the effectiveness of the adaptation response and helps minimise the impact on planners and developers

Local planning authorities should be aware of and avoid the risk of **maladaptation** (adaptation that could become more harmful than helpful). For example, designing buildings to maximise solar gain in winter without thinking through the implications for overheating in summer.

Partnership / Collaborative Working

Partnership working adds value in that planners and developers can work with a range of bodies such as government agencies, local communities and departments within DCSDC which can advise and support the integration of climate change adaptation into the development process.

When planning for change, developers, architects, planners and designers should adopt a shared vision to ensure that any new development or regeneration is designed to take account of the effect of a changing climate.

Consultee on Applications

The Parks Department and Climate Adaptation Working Group should be consulted at PAD meetings for zoning and all major developments and applications to confirm that the relevant climate impact, mitigation and adaptation requirements for each individual site are outlined. The Parks department are to review plans as a statutory consultee.

Planning & Design Polices

Policies should ensure spatial planning supports flood risk, river basin and surface water management policies and plans, and emergency plans

Policies should reflect principles on delivering sustainable development with particular reference to climate mitigation and adaptation.

Planning Processes are recommended to assess the suitability of sites for new development, and for the type and intensity of development, against the following criteria:

1. Whether developing the site is appropriate, having regard to the intended lifetime of the development and increases in risk resulting from changes in the climate to known physical and environmental elements such as sea level rise, flooding, increased temperatures, instability and extremes of weather.

2. Ensure that, when new development is brought forward in areas with significant vulnerability to impacts arising from changes in the climate, risks can be avoided or managed through suitable and sustainable adaptation measures so as to provide sufficient resilience.

3. Whether development of the site would result in the loss of a significant carbon sink.

4. Whether developing the site would provide opportunities to help the existing community to adapt to impacts arising from changes in the climate, including through sustainable drainage systems and green infrastructure.

5. In the case of residential developments whether the proposal provides gardens and plots for allotments, or other community areas to maximise opportunities for local food sourcing.

6. The effect of developing the site on the capacity of biodiversity to adapt to likely changes in the climate (ensure habitat connectivity to enable translocation of species vulnerable to climate change.)

7. Pay particular attention to vulnerable groups, as different impacts (and options to manage impacts) will affect parts of the community differently.

8. The extent to which existing or future potential opportunities for decentralised energy could contribute to the energy supply of new development on the site.

9. Consider the need for ongoing maintenance and appropriate end use: To be successful many adaptation measures must be appropriately maintained and used by occupiers of developments.

10. The scope for sustainable and low-carbon transport (particularly physically active modes) to make up a high proportion of trips to and from the site, including service trips.

13

In addition, design policies should ensure that:

- Materials should be selected in accordance with a life cycle assessment and should be durable and appropriate to the climate
- Developments achieve standards such as EcoHomes/BREEAM ratings of "Very Good" as a minimum and where possible exceed such standards to adopt a holistic 'Living Buildings' approach
- The protection of biodiversity features
- The provision of green features, including green roofs, mitigation against pollution to air, water and land
- That flood risk, both on and off-site is minimised
- The protection of the City's historic and listed buildings, and
- The protection and enhancement of the City's natural environment

Assessments & Conditions

Existing tools and regulation can help support the adaptation response such as environmental assessments, statutory obligations, building regulations and planning consents.

Options for applying climate mitigation and adaptation assessments include:

- A climate sensitive development checklist incorporated into Local Development Plans, (aligned to vulnerability assessments within the DCSDC Climate Adaptation Plan)
- Integrate climate mitigation and adaptation into strategic environmental assessment criteria. The SEA Environmental Report and other evidence-gathering for plan preparation can enable consideration to be given to the vulnerability of areas to the impacts of changes in climate.
- Establish a requirement for Climate Change & Sustainability Statement on all major developments and plans.
- The attachment of planning conditions and obligations (e.g. by requiring SUDS to manage pollution and flood risk)

[13] Town and Country Planning Association for the Planning and Climate Change Coalition, (2012) Planning for Climate change – Guidance for Local Authorities.

- Planning gain to act as a key instrument for enabling developers to contribute to climate proofing by requiring them to minimise future impacts and to carry out works which will provide community benefits.
- Consider application of standards such as BREEAM to promote sustainable development
- Supplementary Planning Documents can provide more detailed guidance on adaptation

How can planning deal with the uncertainty of climate risks when promoting adaptation in particular developments?

The impact of climate change needs to be taken into account in a realistic way. In doing so, local planning will want to consider:

- Identifying no or low cost responses to climate risks that also deliver other benefits, such as green infrastructure that improves adaptation, biodiversity and amenity value of sites.
- Building in flexibility to allow future adaptation if it is needed, such as setting back new development from rivers so that it does not make it harder to improve flood defences in future
- The potential vulnerability of a development to climate change risk over its whole lifetime

4.2 Green Infrastructure

Relevant Planning Polices
PPS2, PPS8, PPS13, PPS7, PPS12

Green Infrastructure can provide many outcomes for climate mitigation and adaptation including;

- Local flood risk management
- Carbon sequestration
- Provide urban cooling
- Supporting local biodiversity
- Facilitate sustainable travel
- Support healthy living environments & community resilience
- Local access to shady outdoor space

"GI is vital to enable people and wildlife to adapt to the rising temperatures and extreme weather events associated with climate change. GI helps to mitigate climate change by reducing greenhouse gas emissions (for example through carbon storage and sequestration and by reducing car use through facilitating walking and cycling).
As our environment alters as a result of climate change, many species will be unable to adapt and will need to move to find more suitable habitats. Changes in the behaviour and a decline in the abundance and distribution of species are already being observed. Over time these and other changes are likely to become increasingly profound.
Maintaining the resilience and capacity of the natural environment to cope with climate change is therefore vital to ensure a sustainable environment for future generations and to protect and increase species and habitat richness. A well-planned network of GI reduces fragmentation of the landscape and facilitates migration of species to new and more favourable habitats." [14]

Trees serve to temper severe weather through attenuation of water flow, as well as moderation of temperatures through reflection of sunlight, providing shade they can limit the urban heat island effect. In addition, they contribute to improved air quality, preserve landscapes, enhance biodiversity and transform the appearance of an area.
Therefore, trees should be considered a core part of any new housing and or public realm scheme.
Existing trees and hedgerows of good form and in good condition should be retained wherever practical. For new planting, consideration should be given to enhancing biodiversity of planting stock, to enhance resilience to emerging pests and disease as a result of climate change.

Relevant assessments should require developments to fully explore the opportunities to develop, conserve, restore and enhance GI assets.

4.3 Flood Risk

Relevant Planning Policy PPS15

Planning is one of the most cost effective means of reducing potential future flood damage, this can be achieved by ensuring current and future development and flood risk policies

[14] The Town and Country Planning Association and The Wildlife Trusts, (2012) Planning for a Healthy Environment – Good Practice Guidance for Green Infrastructure and Biodiversity.

(PPS15, particularly section 3.7 & 5.8) are robust and are core elements of new Local Development Plans.

The significant increases in winter rainfall, the likely rise in the frequency of extreme weather events and rising sea levels, means that climate change will increase the risks of flooding to development in the city and district. Flood risk should be appraised at the earliest stages of the planning and design process and this needs to consider the full range of potential flood sources.

Flood risk is not just an issue for consideration by those developments located in or close to the flood zones around the city's coast and rivers. For many developments the main flood risk issue to consider will be the management of surface water run-off. As development often reduces surface permeability by replacing permeable ground with impervious roofs and paved surfaces, there can be significant increases in surface run-off, leading to increases in flood risk.

The preferred solution if the inclusion of Sustainable Urban Drainage.

SUDS involve a range of techniques including: soakaways, infiltration trenches, permeable pavements, grassed swales, green roofs, trees, gardens, ponds, wetlands and green infrastructure. SUDS offer significant advantages over conventional piped drainage systems in reducing flood risk by attenuating the rate and quantity of surface water run-off from a site, promoting groundwater recharge, and improving water quality and amenity.

Consideration should be given to uncovering and restoring streams and buried waterways.

“Daylighting is an applicable technique to assist communities in reducing polluted runoff, addressing flash flooding concerns and improving the liveability of the built environment.”[15]

Development proposals will need to document their approach to drainage as part of the Flood Risk Assessment, part of the Climate Change & Sustainability Statement.

4.4 Water Resource

In addition to flooding, developments should seek to adapt to respond to water resources and water supply issues and water related impacts on built structures (e.g. increased weathering of facades)

[15] American Rivers, (2013) Daylighting Streams: Breathing Life into Urban Streams & Communities.

The Climate Change and Sustainability Statement should indicate what measures have been used in relation to water use and conservation. This may include, low flush toilets, low flow taps, water saving white goods, incorporation of showers rather than baths and installation of water meters.

Rainwater Harvesting Techniques

Where possible, harvested rainwater should be substituted for mains water. It can be used for flushing toilets (unless harvested from a green roof), watering plants/ gardens, topping up garden ponds and wetland habitats, and for general cleaning tasks such as car washing. Systems should be connected to the mains supply to ensure that water is always available, even at times of low rainfall. SUDS can also be integrated with rain-water harvesting schemes and can be designed to provide water attenuation during storms.

Urban Design EVB10 apply to relevant section

Incorporate SuDS and blue/green infrastructure within public realm schemes, where possible.

4.5 Housing

Relevant Planning Policy PPS7

The location, layout and design of housing and residential environments is vital at the outset to minimise vulnerability to climate change.

In the longer term, building climate resilience into new properties will avoid unnecessary climate-related damages and costs, as the impacts of climate change begin to be felt more intensely.

This may mean leaving some space without buildings, such as providing increased run-off storage and SuDs as well as integrating increased green infrastructure.

As with all developments consideration should be given to ensure habitat connectivity to enable translocation of species vulnerable to climate change.

Planning policy should explain the benefits of passive solar design and survivability, natural ventilation, building orientation, shading and landscaping and use of locally sources materials.

Applications for all major development proposals should submit a Climate Change and Sustainability Statement which in the case of residential developments should address the following: (In addition to the Planning & Design Polices outlined in Section 4.1)

Does the development consider the risk of flooding and coastal change for the lifetime of the development?

Does the development reduce the risk of flooding?

Is the development ready for the higher temperatures that climate change will bring?

Has the development maximised the potential of passive solar design and passive survivability?

Has the development considered availability of water and water infrastructure for the lifetime of the development and design responses to promote water efficiency and protect water quality?

Has the development integrated green infrastructure and allowed for optimum open space?

How has the development incorporated energy efficiency and renewable energy measures?

Does the development proposal enable alternatives to travel by car?

Does the development facilitate the future sustainable management of waste?

Does the development reduce carbon emissions through selection of materials?

4.6 Carbon Emissions

Examples of mitigating climate change by reducing emissions:

- Reducing the need to travel and providing for sustainable transport

The Climate Change and Sustainability Statement should make clear how the design of the development proposals has incorporated features that enable alternatives to 'carbon-hungry' travel. The arrangement, layout and characteristics of development such as GI Networks can all reduce the need to use cars, and make the alternatives more attractive.

- Providing opportunities for renewable and low carbon energy technologies
- Providing opportunities for decentralised energy and heating

The simplest and most important way to reduce carbon emissions is to reduce energy use. Examples include: use of low energy appliances and fittings passive techniques of ventilation / cooling natural day-lighting solar design and passive survivability.

- The Climate Change and Sustainability Statement should also consider the selection of materials. This can affect the carbon emissions resulting from new development,

including through embodied energy used during manufacture or extraction, and through transportation. The following should be considered:

- The selection of local materials to avoid transportation impacts;
- The selection of low carbon materials. Certain materials have very high embodied energy including uPVC, cement products, and certain metals. Other materials, such as lime-based products or timber have much lower embodied energy;
- The selection of recycled products or materials as well as reusing existing buildings rather than demolishing and replacing;
- The selection of materials for long life span, and ease of maintenance.

Major developments should include an energy strategy as part of the Climate Change and Sustainability Statement, including an energy demand assessment, which will set out how this approach has been followed.

If a development is unable to reduce carbon dioxide emissions by the required amount outlined in the updated policy statement a carbon offset fund should be established as an alternative. Such a carbon fund could be managed by the Council and could be used to develop and deliver climate mitigation and adaptation projects.

4.7 Energy Efficiency

Relevant Planning Policy PPS18

Renewable energy is an integral part of the UK Government's approach to climate change and its aim of reducing CO2 emissions by 60% by 2050. Renewable energy can be generated at a range of scales, and on-site generation is recognised as having an important role to play in achieving targets for CO2 reduction.

Energy efficiency measures are generally cheaper to implement than renewable energy technologies. By reducing a development's need for energy, and by maximising its energy efficiency, total energy demand for the development will be less.

Siting / location of renewable energy projects should take due consideration of potential climate change and or severe weather impacts / damage.

Planning should ensure that any renewable energy initiatives in particular wind energy should not result in maladaptation.

This includes consideration of certain energy efficient heating systems which could result in contributions to poor air quality.

The Derry City & Strabane District Council Energy Team should be consulted on major developments.

4.8 Waste

Relevant Planning Policy PPS11

Consideration should be given to the location of waste management facilities, this process should include a vulnerability assessment for existing infrastructure and future planned developments in light of existing climate change and severe weather events as well as projections for increase in temperature, rainfall, flooding and sea level rise. (This initial assessment will be included in the development of the DCSDC Climate Adaptation Plan)

The Climate Change and Sustainability Statement should also demonstrate how a proposal has considered waste management as part of a comprehensive approach to climate change and sustainable design. This should include the following considerations:

- Where appropriate, the retention of existing buildings and adaptation to a new use
- Designing new buildings to be flexible for adaptation of uses or capable of expansion reducing the need for demolition in the future.
- The design of suitable individual or shared waste sorting and recycling facilities
- The provision of local shared recycling facilities for new residential or mixed use developments
- The provision of a composting facility in all properties with gardens or landscaped space.

4.9 Transport

Relevant Planning Policy PPS13

Consideration should be given to the potential future vulnerability of the rail network in Derry adjacent to the coast. Reference should be made to existing Flood Maps and cognisance given to climate predictions and research which may come to light in this area.

As noted in section 4.5 all development, particularly housing and residential sites should enable sustainable travel and promote development of Green Infrastructure throughout the City & District this includes ensuring that GI is integrated into future zoning exercises.

Policies and plans should seek to integrate adaptation requirements into the design of new and upgraded infrastructure from the start, which can often come at lower cost than adding them at a later stage.

This process should include a vulnerability assessment for existing infrastructure and future planned developments in light of existing climate change and severe weather events as well as projections for increase in temperature, rainfall, flooding and sea level rise in order to identify priorities for adaptation action.

Example of adaptation measures may include updated design codes for engineering e.g. bridge & road construction, early warning and communication systems in the event of severe weather impact and or relocation of vulnerable transport infrastructure.

Further actions will be defined dependent upon the outcomes of the DCSDC Climate Adaptation Plan.

Parks Department and GI team should be consulted on zoning and application decisions and due consideration given to the DCSDC Green Infrastructure Plan.

4.10 Public Utilities

Relevant Planning Policy PPS15

In response to consultation letter nothing further to add to the points raised above and other relevant report sections relating to policy context, flooding, water resources, air quality, Sustainable Urban Drainage and development planning.

4.11 Countryside & Landscape EVB 9

Due consideration should be given to existing & projected impact from climate change and severe weather events on the landscape character of the countryside.

The following landscape characteristics should be assessed for current and potential climate impacts.

Landscape Character Features

- Soils
- Vegetation
    - Mudflats & Saltmarsh
    - Raised Bog
    - Sand Dunes
    - Hedges
- Rivers & Drainage Systems
- Lakes / Water bodies / Wetland
- Trees
    - Native Woodland
    - Riverine Trees

    - Mixed Woodland
    - Commercial Woodland
    - Parks & Designed Landscapes
- Land Use (E.g agriculture, renewable energy, industry, leisure, amenities)
- Field Pattern
- Settlement Pattern
- Communications
    - Roads
    - Paths
    - Lanes
    - Rail
- Built Heritage
    - Vernacular Architecture
    - Bridges
    - Enclosures & Forts
    - Souterraines
    - Schedules Monuments
    - Listed Buildings
    - Industrial Heritage (E.g. mill buildings, races etc)
    - Military Heritage
    - Ecclesiastic

Consideration should be given to the value of wetlands, saltmarshes, peatland, forests and flood plains as a means of absorption of water to help mitigate flooding particularly downstream in urban areas and settlements. Value should also be given to value of such habitats for carbon sequestration and for species vulnerable to the effects of climate change. The above points are of particular relevance when reviewing and undertaking development pressure analysis and subsequent zoning and designation exercises.

4.12 Archaeology and the Built Heritage

Relevant Planning Policy PPS6, PPS23

Due consideration is to be given of existing and potential impact from climate change, this should be incorporated into planning policy and any decisions which affect the archaeology and built heritage of the district.

Climate change and associated severe weather events can have a detrimental impact on sites and structures and planning decisions should seek to mitigate against such by ensuring that decisions do not exacerbate impacts or contribute to maladaptation.

4.13 Coast

Coastal Development EVB17

Consideration to be given to a combination of adaptation responses to coastal erosion and sea level rise to include natural measures and / or traditional 'hard' engineering options.

Specific consideration should be give the final version of the Marine Plan for Northern Ireland specifically the following guidance:

A public authority will require the proposer to:

- submit an analysis of the processes currently at work;
- demonstrate how coastal process may affect or be affected by a proposal;
- demonstrate how adverse impact is, in order of preference, avoided, minimised and/or mitigated
- demonstrate a proposal's resilience to future risk, where appropriate.

This may be shown in a coastal impact study. Any analysis carried out should be proportionate to the potential impact and the sensitivity of the area.

Proposers should ensure that proposals do not cause or exacerbate flood risk or coastal change elsewhere and allow the continued functioning of existing services and activities.

It is important to minimise and/or mitigate potential changes to coastal processes.[16]

[16] Department for Agriculture, Environment and Rural Affairs, (2018) Draft Marine Plan for Northern Ireland

Appendix A

Local Policy Context – NI Central Government

Northern Ireland
Programme for Government (Draft) Jan 2018

The Northern Ireland Executive, in its Programme for Government (2011-2015), had set a target of continuing to work towards reducing its greenhouse gas emissions by at least 35% (compared with 1990 levels) by 2025.

In addition, core relevant outcomes include:

We live and work sustainably – Protecting the Environment, this is actioned and measured via the following targets:

- Percentage of all journeys which are made by walking/cycling/public transport
- Annual mean nitrogen dioxide concentration at monitored urban roadside locations
- Levels of soluble reactive phosphorus in our rivers and levels of Dissolved Inorganic Nitrogen in our marine waters
- Biodiversity (Percentage of protected area under favourable management)

Northern Ireland Regional Development Strategy 2035

Department for Regional Development (2010)

The relevant core aims of the Regional Development Strategy are as follows:

- Protect and enhance the environment for its own sake
- Take actions to reduce our carbon footprint and facilitate adaptation to climate change which in turn supports the Programme for Government priority Protecting our people, environment and creating safer communities.

The Spatial Framework enabled the aims of the RDS to be realised, in relation to climate change mitigation and adaptation this is translated as:

> Importance in all aspects of forward planning to address the consequences of climate change; this means an even greater focus on where people live and work and how transport and energy needs are planned.

Section 3.26 addresses climate mitigation with the following targets:

- Reduce greenhouse gas emissions from transport.

This will include reducing the need to use the car. By designing neighbourhoods that have shops, workplaces and services, schools, churches, parks, and other amenities near homes, residents and visitors will have increased opportunities for walking, cycling, or taking public transport as they go about their daily lives.

- Reduce noise and air pollution from transport.

This will include the need to adapt the existing transport network to facilitate the modal shift away from the car. The car may be essential for some journeys but its social and economic value needs to be weighed against its impact on the environment. The way existing transport is used needs to be looked at to favour modes of transport that allow reduction of Northern Ireland's carbon footprint.

- Use more energy efficient forms of transport.

There is already demand for more fuel efficient vehicles and vehicles which do not rely on fossil fuels. Some of these technologies, such as electric vehicles, will require investments in infrastructure to unlock their potential. The Northern Ireland ecar project which consists of a consortium of public and private sector organisations will bring benefits to our

environment, society and economy. People will also need to be educated in the benefits of embracing these technologies.

- Improve the energy efficiency and adaptability of buildings.

Almost half of the per capita carbon footprint is generated by how homes and other buildings are used. Around 75% of the current building stock will be standing in 2050. Improvements should be made to buildings to minimise energy use and encourage zero carbon emissions, while ensuring that the character of buildings of architectural or historic interest is maintained. Planning authorities determining, and developers proposing, new housing should consider how they could be flexibly used over the lifespan of the building.

- Increase the use of renewable energies.

Energy production from fossil fuels is a major source of greenhouse gas emissions and other pollutants. Northern Ireland is largely dependent on fossil fuel combustion for electricity generation. Energy efficiency along with decarbonisation of the power sector is the key to achieving emissions reduction targets. The Strategic Energy Framework for Northern Ireland 2010 sets a target of 40% of electricity consumption from renewable sources by 2020 as well as achieving 10% penetration of renewable heat. This will require increasing numbers of renewable electricity installations and the grid infrastructure to support them. These must be appropriately sited to minimise their environmental impact.

- Utilise local production of heat and/or electricity from low or zero carbon energy sources.

In addition to the carbon benefits, increased use of microgeneration plays an important part in diversifying our energy mix and ensuring Building a Better Future 45 security of energy supply. It can allow energy to be produced and consumed locally, help alleviate fuel poverty (especially in off-gas network areas) and play a part in meeting renewable energy targets. Passive Solar Design (PSD) refers to the use of solar energy for the heating and cooling of buildings. Using this approach, the building itself or some part of it will take advantage of the natural energy in materials and air created by exposure to the sun.

- Develop strong linkages between policies for managing air pollution and climate change.

Climate change and air pollutants share common sources. Greenhouse gases are most active high up in the atmosphere, whereas the most important factor for air quality is the concentration of pollutants nearer the earth's surface.

- Protect Air Quality Management Areas.

In order to improve air quality for all citizens in Northern Ireland local authorities are responsible for reviewing the state of air quality in their district. Development should be consistent with the designated air quality management area action plans.

Section 3.27 further addresses climate mitigation and adaptation with the following targets:

- Re-use land, buildings and materials.

The use of previously developed land for new build and the adaptation and re-use of older buildings will help alleviate the pressure on open space. The retention and retrofitting of existing dwellings, the re-use of vacant homes and the provision of 'living over the shop' accommodation create the most sustainable form of housing.

The potential for some underutilised land and buildings to support protected species needs to be considered when planning their re-use. The use of recycled building rubble should be encouraged to reduce the depletion of natural resources and to limit transportation of such materials.

- Adopt grey water recycling.

Recycling waste water from activities like dish washing, bathing and laundry saves on water treatment costs and reduces demand for drinking water for non-drinking purposes.

- Minimise development in areas at risk from flooding from rivers, the sea and surface water run-off.

Flooding is a natural phenomenon that cannot be entirely prevented. A precautionary approach to development in areas of flood risk should be exercised using the latest flood risk information that is available. We need to develop our town and cities in a manner that avoids the risk where possible. Developments in areas, even those outside flood risk areas should incorporate Sustainable Drainage Systems (SUDS).

- Protect soils.

A fully functioning soil reduces the risk of flood and protects underground water supplies by neutralising and filtering out potential pollutants. Development leading to soil sealing, loss of biodiversity and deposition of processed materials represent significant threats to soils. Soil acts as a significant means of capturing and storing carbon thereby reducing the impact of climate change. Therefore, there is a need to manage soil, protect peat habitats, and safeguard soils in urban areas.

- Protect and extend the ecosystems and habitats that can reduce or buffer the effects of climate change.

Many ecosystems and habitats (such as peat bogs) act as sinks or stores for carbon if undisturbed. Other habitats such as salt marsh may provide protection against some effects or allow for adaptation to those Building a Better Future 47 changes (e.g. effects with sea-level rise). These areas should be protected and where possible extended.

- Identify key assets and areas that are at risk through climate change.

In adapting to climate change it is essential that we maintain accurate and reliable information about key assets. These include impacts on species and habitats and on health through the impacts of warmer temperatures, storms, floods, rising sea level, coastal erosion and the coastal squeeze caused by habitats that are trapped between a fixed landward boundary, such as a sea wall and rising sea levels.[17]

Strategic Planning Policy Statement for Northern Ireland (SPPS)

Planning for Sustainable Development

Department for the Environment (2015)

SPPS clearly states that in order to further sustainable development the core area of mitigating and adapting to Climate Change should be addressed as follows:

- Section 3.10 A central challenge in furthering sustainable development is mitigating and adapting to climate change, whilst improving air quality.

This includes the need to reduce emissions of greenhouse gases that contribute to climate change and to respond to the impacts brought about by climate change. A key pledge of the Executive is 'to continue to work towards a reduction in greenhouse gas emissions by at least 35% on 1990 levels by 2025'.

- Section 3.12 The development and publication of the SPPS fulfils a DOE commitment in the Adaptation Programme to identify and implement opportunities to build resilience into the built and natural environment and to develop and implement sustainable strategies to explore, address and manage significant flood risk.

- Section 3.13 The planning system should therefore help to mitigate and adapt to climate change by:

[17] Department for Regional Development, (2010). Regional Development Strategy 2035. Northern Ireland.

- shaping new and existing developments in ways that reduce greenhouse gas emissions and positively build community resilience to problems such as extreme heat or flood risk;
- promoting sustainable patterns of development, including the sustainable reuse of historic buildings where appropriate, which reduces the need for motorised transport, encourages active travel, and facilitates travel by public transport in preference to the private car;
- requiring the siting, design and layout of all new development to limit likely greenhouse gas emissions and minimise resource and energy requirements;
- avoiding development in areas with increased vulnerability to the effects of climate change, particularly areas at significant risk from flooding, landslip and coastal erosion and highly exposed sites at significant risk from impacts of storms;
- considering the energy and heat requirements of new developments when designating land for new residential, commercial and industrial development and making use of opportunities for energy and power sharing, or for decentralised or low carbon sources of heat and power wherever possible;
- promoting the use of energy efficient, micro-generating and decentralised renewable energy systems; and
- working with natural environmental processes, for example through promoting the development of green infrastructure and also the use of sustainable drainage systems (SuDs) to reduce flood risk and improve water quality.

The Importance of Ecosystem Services

The SPPS states the following:

Our environmental assets and a good quality environment provide benefits that enhance economic performance, offer new opportunities for investment and employment, and improve living standards, health and well-being, and our quality of life. A good quality environment can also help to improve resilience to climate change, as trees and other green infrastructure provide important ecosystem services that reduce the effects of flooding and the urban heat island.

Coastal Development

- Section 6.33 Coastal areas need to be protected from coastal squeeze, to safeguard against loss of distinctive habitats, and to help adaptation to climate change, and accordingly states the landscape setting of features should also be conserved.

- Section 6.42 Development will not be permitted in areas of the coast known to be at risk from flooding (see Flood Risk), coastal erosion, or land instability.

Flood Risk

- Section 6.99 Climate change is generally expected to increase flood risk, albeit that there remains much uncertainty as to the degree of climate change that will occur and the implications for particular areas of Northern Ireland.

A range of strategic objectives and policy points should be taken into account in the preparation of the Derry City and Strabane District Council local development plan in relation to flood risk. These cover a range of issues that are impacted by Climate Change and implementation actions which would be applicable as adaptation measures.

Examples include making reference to flood risk maps and consideration of the susceptibility of land to flooding when making planning decisions, requirements for Drainage Assessments on sites to mitigate against pluvial flooding, and working in partnership with other agencies to consider flood risk management.

Transportation

- Section 6.295 The greater use of sustainable transport is also necessary to meet the Executive's target of a reduction in greenhouse gas emissions of at least 35% by 2025, based on 1990 levels. This strategic need for more sustainable transportation is reflected in the Regional Development Strategy 2035 (RDS) which states the requirement to reduce our carbon footprint and facilitate mitigation and adaptation to climate change whilst improving air quality. Reducing greenhouse gas emissions from transport is listed as one of the mitigating measures and reduced private car use is considered necessary in moving towards this goal. [18]

[18] Department for the Environment, (2015) Strategic Planning Policy Statement for Northern Ireland (SPPS)

North West Flood Risk Management Plan

Department for Agriculture & Rural Development

Rivers Agency

2015

The Department recognises that that the long-term flood risk management decisions that are taken today, will only be sustainable if they are future proofed and take into account the potential increased flood risk from climate change. This is particularly important for decisions in relation to the provision of flood defences and development planning.

Therefore, to inform these important decisions the Department has prepared a range of climate change flood hazard maps (NI Flood Maps). These maps illustrate the estimated flood plains for the year 2030 and are based on the best available predictions for the meteorological conditions and sea levels for that time.

All planning applications and zoning of areas should consider designated **Significant Flood Risk Areas** outlined in the North West Flood Management Plan.

The key approaches in terms of Flood Prevention are: -

Keep new development outside Flood Risk Areas

- Inform the development planning process to ensure, as far as possible, that new zonings within local development plans are located outside flood risk areas.
- Input to the development control process to ensure, as far as possible, that individual applications are located outside flood risk areas.

Ensure new development within Flood Risk areas is suitably constructed

- In accordance with PPS 15 ensure that any development which has to be located, **"by exception",** in flood risk areas is built in the appropriate manner with adequate flood resistance/resilience measures commensurate with the flood risk to the development and that the development does not cause increased flood risk elsewhere.

- Ensure that all proposed development applications within flood risk areas are accompanied by a flood risk or drainage assessment.

Sustainable Water

A Long-Term Water Strategy for Northern Ireland (2015-2040)

Department for Regional Development

2015

In addition, the NWFRMP states that; Planning for the integration of SuDS and Natural Flood Risk Management techniques on a catchment scale, will be taken forward during this Flood Risk Management Plan cycle (2015-21) with a view to increasing the pace of implementation in the next Flood Risk Management Plan cycle.[19]

The Sustainable Water Strategy seeks to ensure land-use planning decisions are informed to help minimise flood risk.

With specific reference to climate change the strategy states that predictions indicate that it is likely that there will be more high intensity rainfall events which will overwhelm the urban drainage systems and overtop existing flood defences more regularly.

The Strategy recommends the development of long-term plans to secure future water resources, taking account of drinking water demands and the impact of climate change.

- It is important that the planning system takes full and proper account of flood risk. This means preventing most forms of development in high flood risk areas and ensuring that surface water from new developments is properly managed and does not overwhelm existing sewers or watercourses, increasing the risk of flooding elsewhere in a catchment.

- Ensure that planning decisions (either through the development plan process or the determination of planning applications) and policies are informed by up-to-date information on flood risk management.

The Flood Risk Management Strategy outlines the policies to be adopted**:**

- **FRMD Policy 1A**

  To ensure land-use planning decisions are informed to help minimise flood risk

[19] Department for Agriculture & Rural Development, Rivers Agency, (2015) North West Flood Risk Management Plan.

FRMD 1A Proposed Actions:

- Prevent inappropriate development in high flood risk areas and ensure that future development does not increase flood risk.
- Land-use planning decisions must continue to be informed by up-to-date information on the risk from all significant sources of flooding.
- Any exceptional development permitted within high flood risk areas must make provision for adequate mitigation measures commensurate with the flood risk to the development and elsewhere as a result of it.
- Where possible, surface water drainage systems (e.g. from roads, housing developments and car parks) should not be connected to the combined sewer system.

- **FRMD Policy 1B:**

  Make space for surface water management in development plans

  Key Site Requirements (KSRs) on zoned lands to address surface water flooding.

- **FRMD Policy 1C:**

  Sustainable Drainage Systems

  Sewer infiltration and predicted increases in surface water due to climate change and development means that sewers will fail more often in the future.

  The aim is to make SuDS the preferred option for managing surface water in all new developments, where this is feasible.

- **FRMD Policy 1D:**

  Design for drainage exceedance to be incorporated into all new drainage infrastructure.

  Consider if 'Design for Drainage Exceedance' should be a requirement in all new developments.

By considering zoning suitable land through LDPs, large surface water drainage schemes such as lakes, wetlands and wet woodland could be created to meet the future drainage needs of the proposed development in an area. This water can also provide environmental and recreational value.

Future development plan zonings should make provision for both wastewater treatment facilities and sustainable drainage systems (FRMD Policy 1B). [20]

Managing Storm Water

A Strategy for Promoting the Use of Sustainable Drainage Systems (SuDS) within Northern Ireland

Northern Ireland Environment Agency

2011

Increasingly, reliance on traditional drainage systems is proving inadequate to address the issue of storm drainage. Alone, such systems may not cope with the demands made by new development, in addition to the more intense and increasingly unpredictable rainfall arising from climate change.

The limitations of the traditional approach have been uncovered by the impacts of climate change and the improvements demanded by both the Water Framework Directive and the Floods Directive.

Recent urban flash flooding and the resultant pollution problems, experienced in a number of urban centres across Northern Ireland, are evidence of a problem which it is now widely anticipated will only increase over time. The future of SuDS schemes will need to be designed to facilitate climate change.[21]

[20] Department for Regional Development, (2015) Sustainable Water, A Long-term Water Strategy for Northern Ireland (2015-2040)

[21] Northern Ireland Environment Agency, (2011) managing Storm Water, A Strategy for Promoting the Use of Sustainable Drainage Systems (SuDS) within Northern Ireland.

Valuing Nature A Biodiversity Strategy for Northern Ireland to 2020

Department for the Environment (2015)

The strategy highlights the importance of reducing the impact of climate change in order to meet the challenge of halting biodiversity loss.

"Climate, ocean currents and weather conditions can all affect landscapes, habitats and individual species. However, people have been a major factor in determining landscapes and biodiversity. While some of these influences have benefitted biodiversity, others have resulted in its decline. The main problems that the Northern Ireland environment faces include agricultural intensification, pollution, the spread of invasive species, over- and/or under-grazing, and the spread of urban development and associated infrastructure." [22]

In addition, the strategy recognises the value of key ecosystem services and the benefits they can provide to regulating and adapting to climate change, these include:

- Mountains, moorlands and heaths
- Forestry (Northern Ireland Forestry- A Strategy for Sustainability and Growth (Forest Service) aims to achieve 12% forest cover by 2050
- Wetlands provide key ecosystem services, including natural flood protection and water supply and also contain important fisheries. In addition, wetlands are used for, and impacted by, farming, towns and other land uses within their catchments.

Due consideration should therefore be afforded to wetlands in particular Ramsar sites within the North West.

"Renewable energy offers the potential for wider environmental benefits through mitigating greenhouse gas emissions from energy generation and socio-economic benefits including employment opportunities. However, renewable energy could also have potentially adverse impacts in both the construction and operational phases – for example, impacts of noise, collision risks and barriers to migrations. Planning and licensing systems regulate renewable

[22] Department of the Environment, (2015) Valuing Nature A Biodiversity Strategy for Northern Ireland to 2020. (p.18)

energy projects to realise their potential for contributing to climate change mitigation while ensuring sustainable development is achieved." (p.18)

North Western River Basin Management Plan Summary

Department for Agriculture & Rural Affairs (2015)

NWRBMP includes a specific section on climate change and the impacts on the North West river basin, this includes a series of actions and recommendations:

- Invasive Species control
- Use of SUDS in PPS 15 planning applications
- Protection of freshwater, coastal and marine environments – capacity building for planning departments and teams.

Draft Marine Plan for Northern Ireland April 2018

Department for Agriculture, Environment & Rural Affairs

The current draft marine plan for Northern Ireland specifically addresses the challenges of climate change and proposes particular actions in relation to planning;

Climate Change

Public authorities, where appropriate, must consider the potential impact of proposals on greenhouse gas emissions and the proposals ability to adapt to a changing climate.

Climate Change Mitigation

A public authority may require a proposer to demonstrate:

a) how they have considered the proposal's greenhouse gas emissions during its lifetime; and

b) measures to minimise and/or mitigate these emissions, where appropriate.

Climate Change Adaptation

Where climate change has the potential to impact on a proposal during its lifetime, a public authority may require the proposer to demonstrate:

a) how the impact has been considered; and

b) measures to address the adverse impact, where appropriate.

Relevant Risks to be Considered

- Risks to and opportunities for marine species, fisheries and marine heritage from ocean acidification and higher water temperatures;
- Risks to habitats and heritage in the coastal zone from sea-level rise and loss of natural flood protection;
- Risks to the natural environment and natural assets from salt water intrusion, flooding and coastal erosion;
- Risks and opportunities from changes in landscape character;
- Risks to the viability of coastal communities from sea level rise;
- Risks to people, communities and buildings from flooding;
- Risks to business sites, infrastructure from flooding and erosion;
- Risks to business from loss of coastal locations and infrastructure;
- Risks to offshore infrastructure from storms and high waves; and
- Risks to health from poor water quality.

Through the UK Climate Change Act 2008 it is required that consideration is given as to how the marine area can adapt to the impacts of climate change. Through understanding the impacts and effects of climate change, proposers can improve the resilience of a proposal over its lifetime.

In reducing greenhouse gas emissions, planning should take account of emissions directly and indirectly related to applications and developments and the impact on measures already in place to reduce emissions. The most efficient use of fossil fuels or low carbon alternatives should be incorporated into plans. Some proposals, such as, renewable energy in the marine area, can play a role in directly reducing society's need for fossil fuels.

Increased temperatures, sea level rise and extreme weather events increase the risk of coastal erosion and flooding, and should be taken into account by when considering applications and zoning areas.

Developments should be located and designed to cope with current and future conditions. Care needs to be taken to ensure developments do not adversely impact on natural ecosystems, particularly where the management of these contributes to measures to reduce or limit greenhouse gas emissions.

Developments, applications and zoning of areas should consider the UK Climate Change Risk Assessment – Northern Ireland Summary and the National Adaptation Plan published in 2019.

Public authorities must consider the potential impact of proposals on coastal processes and conversely, how coastal processes may impact upon proposals over their lifetime, through decision making processes. The nature of coastal processes may require that attention is given to potential transboundary effects.

To assist in this assessment, a public authority will require the proposer to:

- submit an analysis of the processes currently at work;
- demonstrate how coastal process may affect or be affected by a proposal;
- demonstrate how adverse impact is, in order of preference, avoided, minimised and/or mitigated
- demonstrate a proposal's resilience to future risk, where appropriate.

This may be shown in a coastal impact study. Any analysis carried out should be proportionate to the potential impact and the sensitivity of the area.

Proposers should ensure that proposals do not cause or exacerbate flood risk or coastal change elsewhere and allow the continued functioning of existing services and activities.

It is important to minimise and/or mitigate potential changes to coastal processes.[23]

[23] Department for Agriculture, Environment and Rural Affairs, (2018) Draft Marine Plan for Northern Ireland

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http://ukclimateprojections.metoffice.gov.uk

Climate General Principle Text for inclusion in LDP

Climate change is one of the most serious global threats.

The Earth's climate has already become warmer, and the change will continue. The amount of warming will depend on our greenhouse gas emissions, and how quickly we can reduce them. We need to adapt society to the climate of today and the future.

Climate projections for the UK are based on low, medium and high carbon emission scenarios, based on the medium emissions the daily summer temperature for Belfast and NI will reach 28.5 by 2041, while the levels of winter rainfall over a 5-day period will increase to 76.9mm (an increase of over 6mm for previous 30 years)[24].The Northern Ireland Flood Maps identify a significant amount of areas vulnerable to flooding by 2030 in the city and district. In addition, the average sea level is set to increase with Derry cited as one of the European cities at highest risk of coastal and river flooding. [25]

Climate change leads to changes in the frequency, intensity, spatial extent, duration, and timing of extreme weather and climate events, such extreme weather events often lead to disruption to business, agriculture, services and daily life.

The key identified risks and impact to the UK from climate change include;

- Flooding and impact to business, community, infrastructure, agriculture and natural environment. Details of local flood risk is available via the Northern Ireland Flood Maps and designated Significant Flood Risk Areas.

- Increased temperature and impacts on health, infrastructure, water supply, productivity, agriculture and natural environment.

Within the city and district the effects are being increasingly felt with instances of severe flooding, heatwaves and disruption from wind and severe cold

Response to the challenge of climate change is often divided into mitigation and adaptation:

Mitigation – measures to reduce emissions and mitigate against further global warming

Adaptation – actions to adapt and create a resilient society to current and projected climate change and severe weather events.

[24] ASC (2016) UK Climate Change Risk Assessment 2017 Evidence Report – Summary for Northern Ireland. Adaptation Sub-Committee of the Committee on Climate Change, London.

[25] Guerreiro, Selma & Dawson, Richard & Kilsby, Chris & Lewis, Elizabeth & Ford, Alistair. (2018). Future heat-waves, droughts and floods in 571 European cities. Environmental Research Letters. 13. 034009. 10.1088/1748-9326/aaaad3.. Univiersity of Newcastle

Key international and national climate change policy and legislation ranges from the Kyoto Protocol in 1997 to the 2008 UK Climate Change Act, 2015 Paris Agreement and the 2017 UK Climate Change Risk Assessment. The 2019 NI Climate Adaptation Program outlines the priority areas for action across the region.

Effective development planning and design has a central role to play in future proofing the city and district in order to address climate change and improve adaptive capacity and resilience. Planning and developments should ensure land zoning, designations and applications have taken into account the most recent and up to date data available for climate projections, flood risk, national risk assessments and local climate impact profiles.

Developments should also consider the potential impact of proposals on greenhouse gas emissions and the ability to adapt to a changing climate including the potential vulnerability of a development to climate impacts/risk both current and predicted over its whole lifetime.

When planning for change, developers, architects, planners and designers should adopt a shared vision, paying particular attention to integrating adaptation and mitigation approaches and looking for 'win-win' solutions that will support sustainable development and should avoid the possibility of maladaptation.

Key actions which are also reflected in the Strategic Planning Policy Statement for Northern Ireland 2015 includes:

4. Ensuring progress against the UK/Northern Ireland emissions targets by delivering appropriate design and construction of sites and buildings. This includes shaping new and existing developments in ways that reduce greenhouse gas emissions and minimise resource and energy requirements.

5. Ensure development that responds and is resilient to current climate impacts and to the needs of the future based on climate projections. This includes avoiding development in areas with increased vulnerability to the effects of climate change, particularly areas at significant risk from flooding, landslip and coastal erosion and highly exposed sites at significant risk from impacts of storms. Development can positively build community resilience to problems such as extreme heat or flood risk through appropriate siting, design and layout. This should include delivery of a holistic approach to climate impacts such as integration of green infrastructure and measures such as such SUDS.
   Where a development has been approved "by exception" in flood risk areas is should be developed in the appropriate manner with adequate flood resistance/resilience measures commensurate with the flood risk at the location and also does not cause increased flood risk elsewhere.
6. Development proposals should seek to work with natural environmental processes, for example through promoting the development of green infrastructure which delivers multiple benefits that improves adaptation, biodiversity and amenity value of sites. Developments should fully explore opportunities to develop, conserve, restore and enhance GI assets.

Appendix 2

Health and Community Wellbeing Service paper on Local Development Plan Draft Strategy

The following paper outlines Environmental Health and Wellbeing issues for consideration in the draft Plan Strategy (PS) currently being developed by officers within the Local Development Planning Team.

Within the Derry City and Strabane District Council there are a number of environmental health and wellbeing challenges that should be considered in the production of the Local Development Plan (LDP) PS. In considering these challenges the Health and Community Wellbeing Service is mindful that the LDP PS must align with regional planning framework and policy outlined in the Regional Development Strategy 2035 (RDS) and Strategic Planning Policy Statement (SPPS) for Northern Ireland as well the Councils Strategic Growth Plan 2017-2032. The Strategic Growth Plan has sustainability at its centre and focuses on a number of areas including

- promoting sustainable communities
- development of a circular economy
- modal shift from the private car to walking, cycling and public transport
- reducing carbon emissions through energy efficiency and renewable energy
- protecting our own local ecosystems as sources of clean air, water and fertile topsoil

The Health and Community Wellbeing Service believe that these areas should underpin sustainability within the draft PS.

The SPPS states that 'When place-making, planning authorities should make efficient use of existing capacities of land, buildings and infrastructure, including support for town centre and regeneration priorities in order to achieve sustainable communities where people want to live, work and play now and into the future'. Accordingly, implementing mitigation measures to avoid, minimise and remedy negative impacts on the environment is essential to achieving sustainable communities.

There are a wide range of environment and amenity considerations, including noise and air quality, which have to be taken into account by planning authorities when proposing policies or managing development. For example, the planning system has a role to play in minimising potential adverse impacts, such as noise on sensitive receptors by means of its influence on the location, layout and design of new development. The planning system can also positively contribute to improving air quality and minimising its harmful impacts. The need for adequate private, semi-

private and public amenity space in all residential development contributes to mental and physical wellbeing and the strengthening of social cohesion. By embedding environmental considerations within the planning process, the planning system will be better placed to improve the health and well-being of the council area in order to achieve the Council's vision of creating a thriving, prosperous and sustainable City and District with equality of opportunity for all.

The Health and Community Wellbeing Service would take this opportunity to highlight the following challenges that should be considered in developing the LDP PS for Derry City and Strabane District Council. The paper gives an overview of the main issues and evidence associated with:

- Air Quality
- Noise
- Contaminated Land
- Light Pollution

AIR QUALITY

The presence of air pollution can lead to poor air quality and to an adverse impact on human health, typically by irritating the lungs and airways or by passing into our blood via our lungs. Air pollution is also known to adversely affect ecosystems such as water quality, soils, plants and animals.

The RDS recognises the dangers from air particulate pollution stating that it is estimated that it reduces life expectancy in the UK by 7-8 months. The RDS acknowledges that there is a need to reduce air pollution from transport by the use of more energy efficient transport as well as a need to continue to protect Air Quality Management Areas.

The Committee on Medical Effects of Air Pollution (2010**)** estimated the burden of particulate matter (PM) air pollution in the UK in 2008 to be equivalent to nearly 29,000 deaths and an associated loss of population life of 340,000 life years lost. The International Agency for Research on Cancer (2012) listed diesel exhaust pollution as a Class 1 carcinogen and extended this to all ambient air pollution in 2013. WHO (2013) state there is no evidence of a safe level of exposure to PM or a threshold below which no adverse health effects occur.

The SPPS details that the LDP must consider the location of development which may give rise to air pollution. Annex A of SPPS gives examples as to how the LDP should have regard to air pollution considerations:

- identifying land or setting out criteria for the location of potentially polluting developments and the availability of alternative sites;
- zoning land with a view to minimising the potential for incompatible land uses to become established in close proximity; and
- taking into account the existing or likely future air quality in an area and having regard to any local Air Quality Management Area (AQMA) action plans in planning for development. This could include reducing the need to travel and integrating development with public transport services.

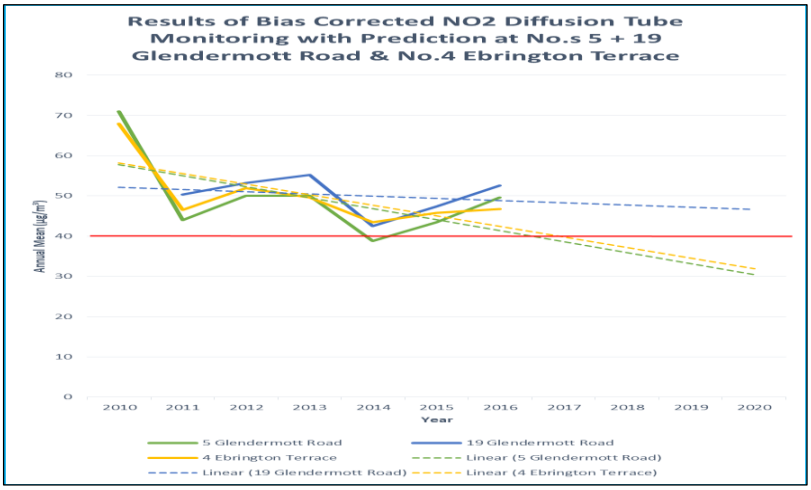
The LDP must also ensure that other developments are, as far as practicable, not adversely affected by major existing or potential future sources of air pollution.

Derry City and Strabane District Council has a statutory duty to review, assess and report on air quality across the City and District under the Local Air Quality Management (LAQM) regime. This is provided for via Part 3 of the Environment (Northern Ireland) Order 2002 and the relevant Policy and Technical Guidance documents LAQM.PGNI (09) and LAQM.TG (16). LAQM reporting requirements are to be reviewed by DEARA as part of a wider air quality strategy update.

Initial air quality assessments carried out by the legacy councils concluded that measures would be required in specific areas of the then council areas in order to mitigate the effects of nitrogen dioxide (NO_2) associated principally with road transport and particulate matter (PM10) pollution associated with domestic burning of coal. Air Quality Management Areas (AQMA's) and Action Plans were drawn up for these areas to improve air quality within them.

Three automatic monitoring stations monitor air quality across the Council district. They provide real time information to the public in relation to air pollution levels re and can be viewed at www.airqualityni.co.uk. One site is a roadside site (Dales Corner) located close to an existing Air Quality Management Area (AQMA) and the two others are urban background sites one of which (Springhill) is located within an AQMA. A network of diffusion tubes is also in place at road junctions to measure NO_2 levels with AQMA's. Monitoring of air pollutants along with detailed air quality dispersion models provides a robust framework for decision making in relation to air quality.

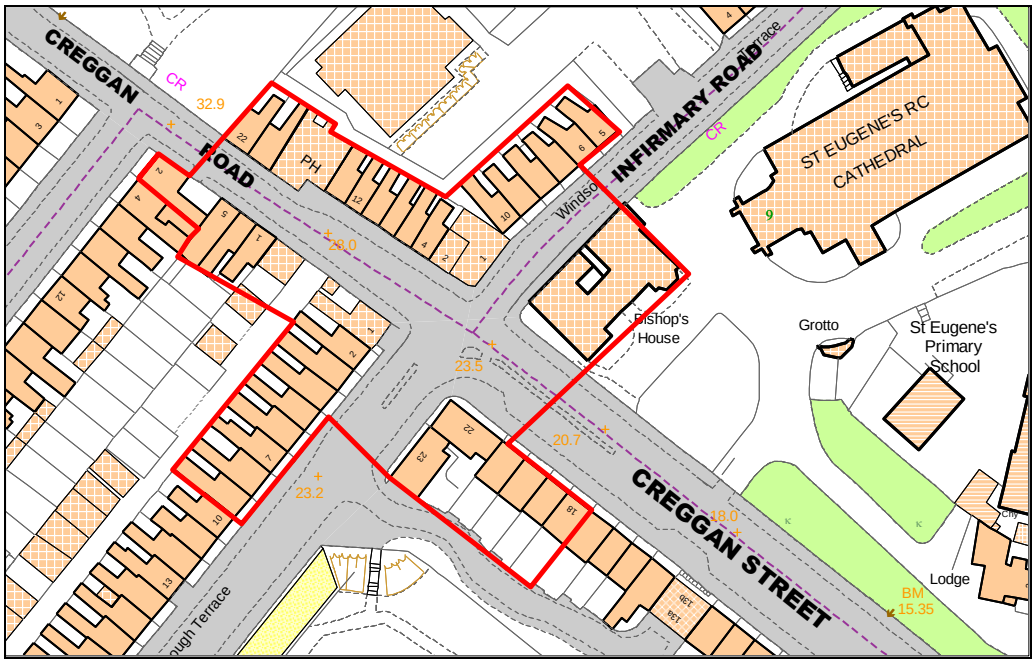
The monitoring data indicates that air quality in the Council district has generally improved over recent years however transport related issues continue to present challenges in certain areas. For example it can be seen in the figure below that No.4 Ebrington Terrace and No. 5 Glendermott Road show a larger decrease in projected pollutant concentrations than No.19 Glendermott Road with the trend suggesting that levels should have been below the annual mean NO_2 limit value of 40ug/m^3 as indicated in red on the graph, by late 2016/early 2017. The general increase from 2014 to 2016 has negatively altered the overall downward trend and could account for why the levels are currently above the limit value. The downward trend at No.19 Glendermott Road is less pronounced and would suggest that the limit value will be met in the mid to late 2020's.



There are currently a number of Air Quality Management Areas (AQMAs) across the city and district where the health based air quality objectives for NO_2 and PM were exceeded. They are detailed as follows:

Maps of the AQMA's declared for NO_2 (Annual Mean)

Creggan Road Air Quality Management Area



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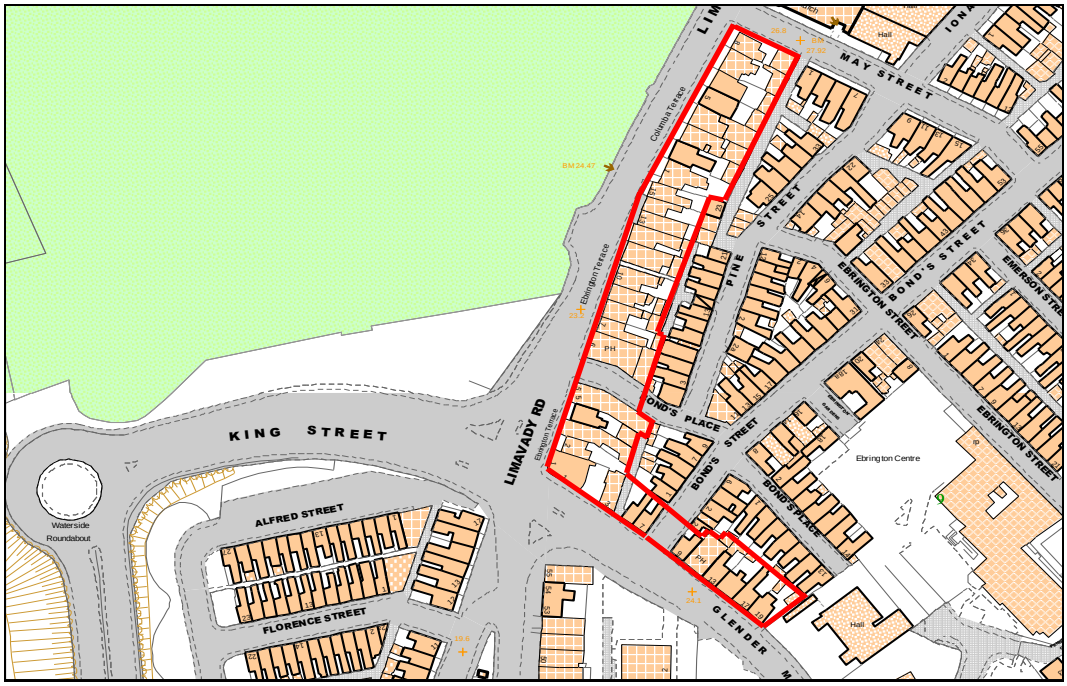
Dale's Corner Air Quality Management Area



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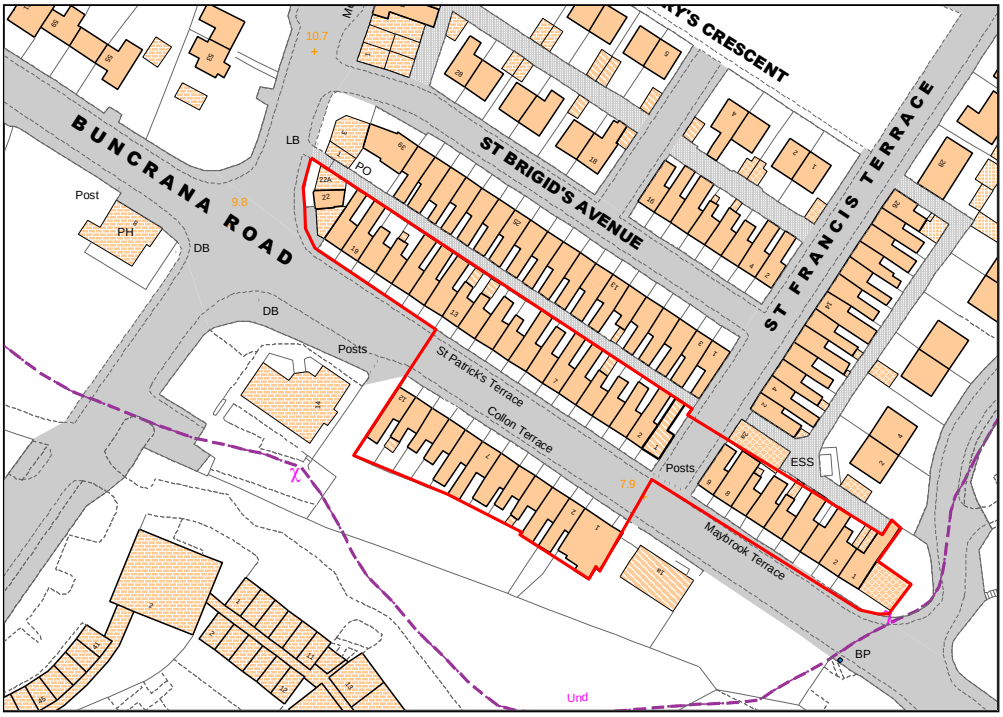
Buncrana Road Air Quality Management Area



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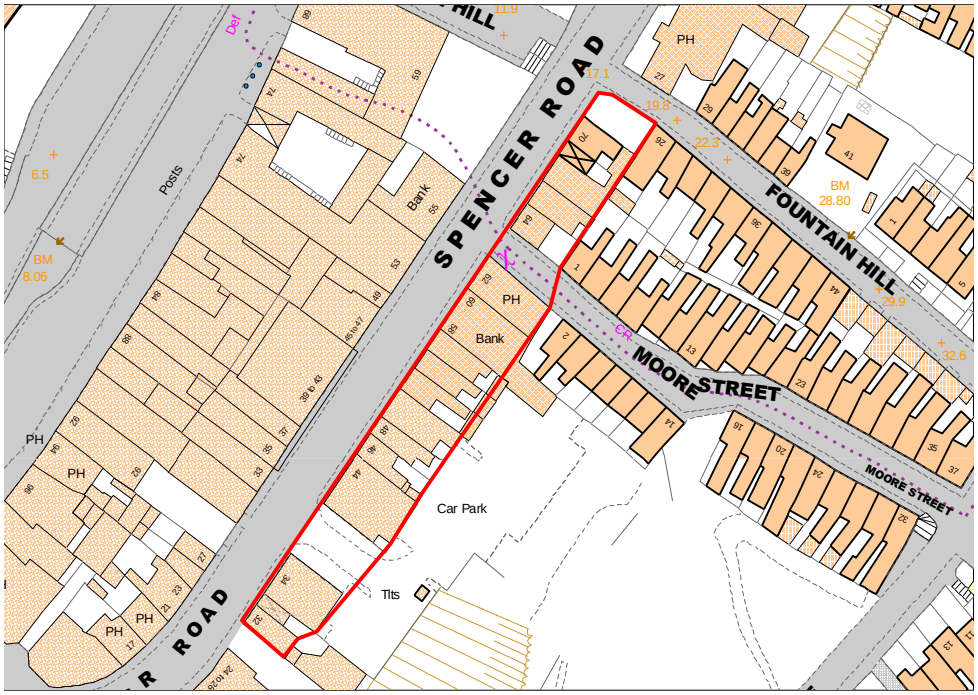
Spencer Road Air Quality Management Area



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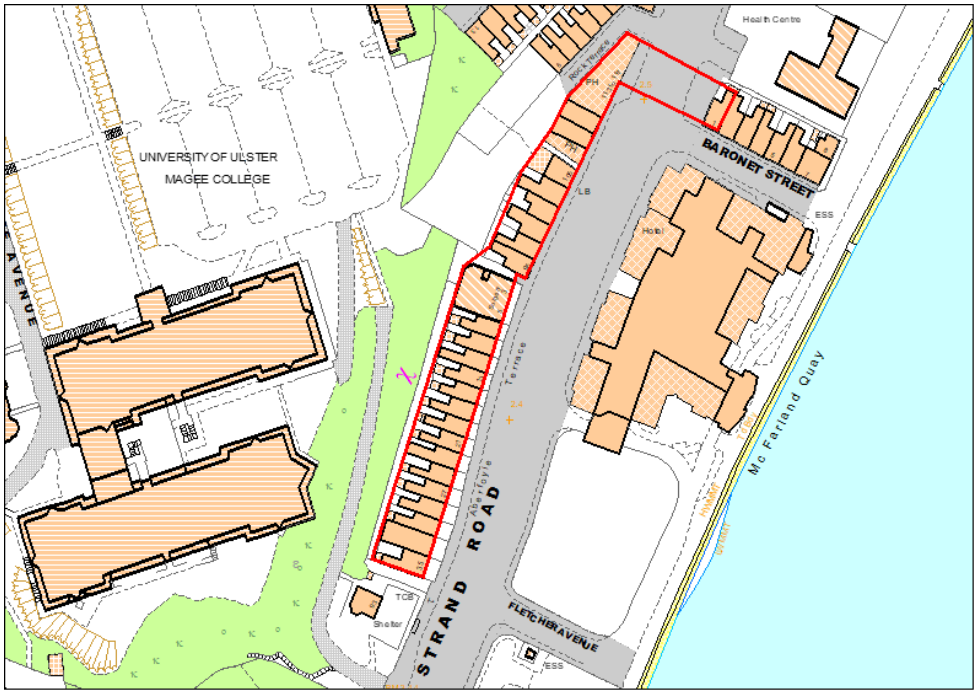
Strand Road Air Quality Management Area



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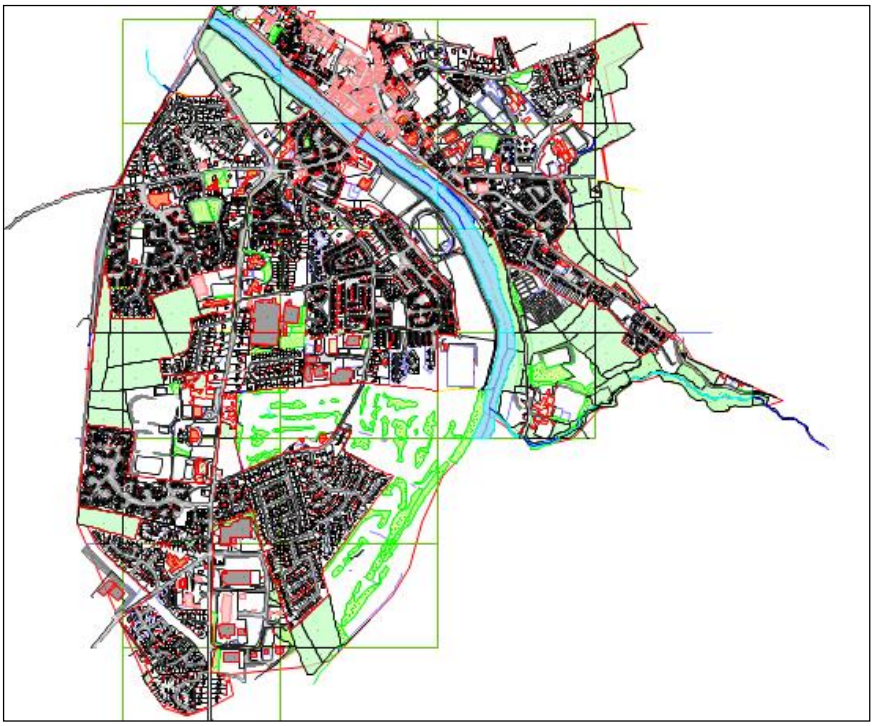
Detailed Assessments have resulted in the recommendations that Strand Road AQMA be revoked and that the Spencer Road AQMA be reduced in size so that Council shall have four AQMA's for NO_2 from traffic sources. The AQMA at Strand Road, declared due to nitrogen dioxide, is in the process of being revoked and the AQMA at Spencer Road shall be reduced in size. Road transport continues to be a significant source of NO_2 particularly with diesel vehicles. In 2016 66.2% of cars registered in the DCSDC area were diesels compared to a NI average of 55.4%.The proposed introduction of a new Air Quality Strategy for Northern Ireland should also see the introduction of a Clean Air bill which will provide an opportunity to control emissions from specific sources and encourage modal shift to walking, cycling and public transport. In the absence of the progression of a NI Air Quality Strategy or Clean Air bill the DCSDC PS should develop local policy that encourages modal shift and maintains sustainable communities. Developers should for large scale development including road development assess (using modelling techniques) the air quality impact of their proposals on existing Air Quality Management Areas and at points of relevant exposure where sensitive receptors are located.

Maps of the AQMA's declared for Particulate Matter (PM_{10})

Strabane Town Air Quality Management Area



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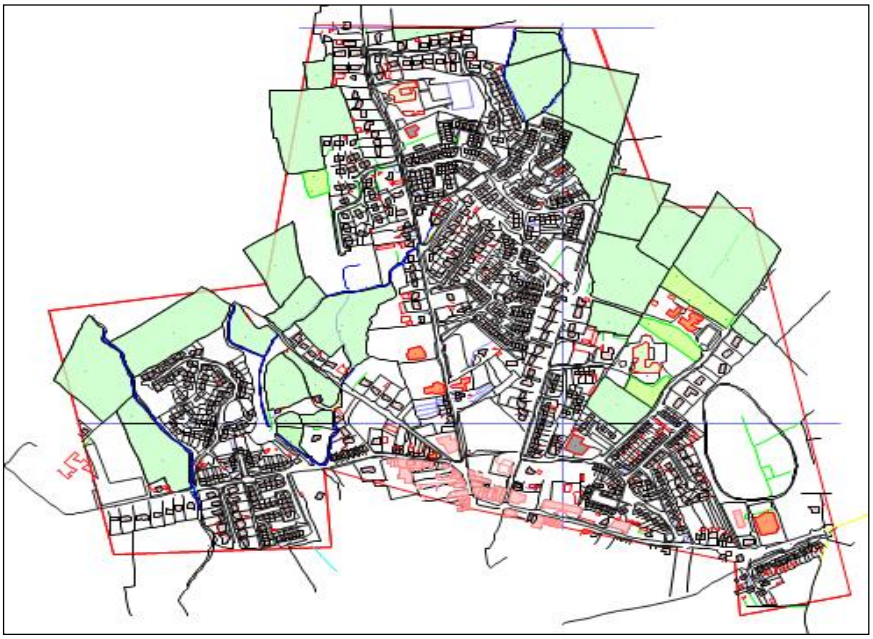
Castlederg Air Quality Management Area



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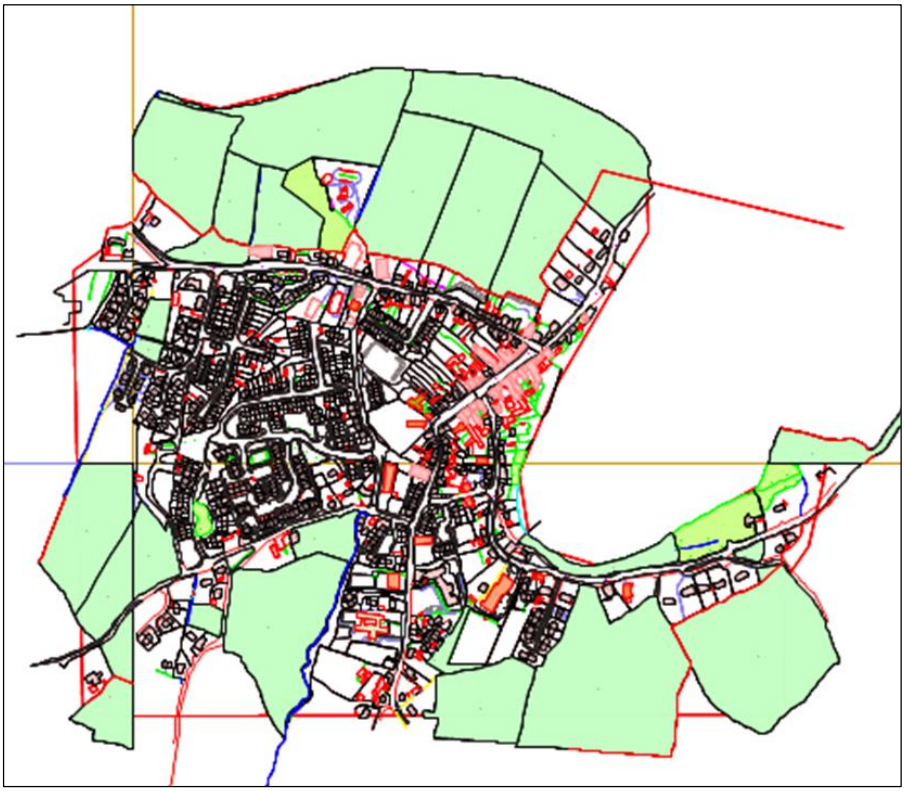
Newtownstewart Air Quality Management Area



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All three AQMA's for particulate matter (PM10) were supplemented by the declaration of 3 overlying Smoke Control Areas in order to control domestic emissions from solid fuel combustion. DCSDC is now in the process of revoking these AQMA's due to the fact that measures have now been realised and pollution levels have reduced to well below health limit values. However it is the Councils intention to keep the Smoke Control Areas in place so as to maintain air quality.

In relation to air quality the introduction of a new Air Quality Strategy for Northern Ireland should see the introduction of a Clean Air bill which would provide an opportunity to see a ban on the supply of "smoky" coal across Northern Ireland. If there is failure to progress a local air quality strategy or clean air bill the Council may consider introducing a council wide smoke control across its district. In housing terms, the PS should encourage developers to consider as part of their proposals renewable sources of energy and encourage a move away from those based on fossil fuels. Any energy for use in housing needs to be sustainable and the implications for fuel poverty and rural housing needs to be considered. The Environmental Health Service is keen to see further policy developed in line with UK planning and would refer the LDP team to the following guidance produced by the

Institute of Air Quality Management and a recent Public Health England document which gives direction on creating healthier places through planning

http://www.iaqm.co.uk/text/guidance/air-quality-planning-guidance.pdf

https://www.gov.uk/government/publications/spatial-planning-for-health-evidence-review

The SPPS outlines that where a proposed development is likely to have a significant air quality impact or add to a cumulative impact in an area, applications should be supported by sufficient information to allow full consideration of the impact on local air quality. Adequate consultation between the planning authority and those with responsibility for air quality and pollution control will be essential. The impact on ambient air quality is likely to be particularly important for development proposals located within or close to a designated AQMA. Planning authorities should consider whether adequate means of mitigation of harmful air quality impacts can be achieved when making a decision.

In assessing other development proposals likely to be impacted by poor air quality, for example within an AQMA, the planning authority should ensure adequate consultation with the relevant authorities, including Environmental Health. This is particularly important where the proposed development is a sensitive receptor such as housing or an economic development proposal requiring a relatively contaminant free environment. Planning authorities should consider whether all potential means of mitigation have been exhausted, for example through modification of layout and / or design elements in making its decision. Other options, such as consideration of an alternative site to avoid an area where air quality objectives are regularly being exceeded, should also be explored with the developer. In this regard, pre application discussion is likely to be particularly useful.

Vehicle transport has been identified as the main source of nitrogen dioxide emissions. Traffic reductions would lead to a significant reduction in background nitrogen dioxide concentrations however it should be noted that currently 3 Air Quality Management Areas for Nitrogen Dioxide are located along the main arterial routes close to housing at Dales Corner, Strand Road and Buncrana Road. The completion of a new circular road and 3rd road bridge would remove the majority of heavy goods vehicles (the main source of NO_2 pollution) away from residential property. Likewise, the completion of the A5 and A6 road schemes will remove residents from road traffic sources of pollution.

Whilst DCSDC does not have responsibility for managing the road network, the LDP should nonetheless encourage and facilitate use of public transport alongside walking and cycling. In the addition, the LDP PS process should have regard to

transport plans and initiatives being implemented by the Department of Infrastructure and the work of the Councils Active and Sustainable Transport Forum.

It's also important that there is flexibility within the PS to consider emerging technologies and information on health that emerge over the lifetime of the plan e.g. the implication of micro plastics on the aquatic environment are well known but further research is ongoing in relation to impacts on air quality and health. In the 2017 Annual Report of The Chief Medical Officer for England, "Health Impacts of All Pollution – what do we know?" it was recommended that potential impact of all relevant forms of pollution upon human health should be considered at all stages of local authority planning, considering risk at both consistent low-level exposure as well as intermittent high level exposure.

Dust

Large scale construction development has the potential to impact on existing development through dust generation associated with demolition and construction. This authority has seen an increase in complaints associated with such activity. Supplementary planning guidance would be useful such as that developed by the Greater London Authority "The Control of Dust and Emissions during Construction and Demolition (July 2014)" and guidance produced by the Institute of Air Quality Management.

https://www.london.gov.uk/what-we-do/planning/implementing-london-plan/supplementary-planning-guidance/control-dust-and
http://iaqm.co.uk/text/guidance/construction-dust-2014.pdf

A number of our old mineral workings could be reopened, existing ones may seek to be extended and albeit after assessment some may be suitable for development a number may have the potential to impact on local residential amenity due to dust (and noise) both from operational activity and the adjoining local road network. The Planning Strategy for Rural Northern Ireland (1993) in MIN 3 refers to areas of constraint and these may need to be reviewed as part of the PS. MIN 6 also refers to the protection of amenity (noise, vibration and dust). MIN 6 states "the potential for conflict will be reduced by requiring a degree of separation to be kept between mineral workings and other developments particularly where mineral operations involve blasting. The distance required will vary according to the nature of the mineral operations and neighbouring developments. Permission will not normally be granted for mineral workings and other developments to be in close proximity where potential sources of nuisance are judged to be incompatible with standards of amenity acceptable to the Department and other relevant authorities". Such protection needs to be reiterated within the PS.

The PS should ensure that dust impacts are appropriately assessed and would refer the LDP team to the following guidance produce by the Institute of Air Quality Management which could form the basis of supplementary planning guidance.

http://www.iaqm.co.uk/text/guidance/mineralsguidance_2016.pdf

Odour

Odours from proposed development and the encroachment of development on existing odour producing activity can be a material consideration in planning. This applies to odours associated with industrial development (Waste Water Treatment, Intensive Farming, Handling Waste and Slurry stores), Commercial Activity (hot food bars/takeaways) and proposals for residential property to encroach on same. A precautionary approach would be prudent to avoid impacts on amenity and avoid potential enforcement action through other legislation. In the absence of specific guidance for Northern Ireland supplementary guidance/guidance notes should be produced as part of the PS in order to ensure proper assessments are undertaken of odour impacts. See the following

http://www.iaqm.co.uk/text/guidance/odour-guidance-2014.pdf

https://www.pembrokeshire.gov.uk/adopted-local-development-plan/good-practice-advice-notes

NOISE (including vibration)

Noise is an inevitable consequence of a mature and vibrant society, but it is regarded by some to be an unwelcome feature of everyday life. Noise is subjective and different people react to it in different ways. What can cause annoyance to some people may barely be noticeable to others. Noise can however have the effect of causing people to feel annoyed simply because it is audible. As noise increases in volume, it can interrupt conversation, disturb sleep and, in extreme conditions, may affect the physical wellbeing of those affected.

The SPPS outlines that the Councils should consider noise issues in bringing forward local planning policy. The SPPS states LDP's have a role in reducing the potential for detrimental noise impacts through the implementation of measures such as zoning. Examples of how LDPs can reduce the potential for detrimental noise impact include:

- the zoning or identification of land for uses likely to generate significant levels of noise, due to the nature of the activity or the potential for traffic generation, should

take account of the location of sensitive receptors such as housing or parkland and designated Quiet Areas;

• the zoning or identification of land for noise sensitive uses such as housing, should take account of established noise generating uses which should not be unduly restricted or subject to unreasonable cost and administrative burdens, as a result of new incompatible development; and

• where the potential for adverse noise impact exists, the LDP should seek to mitigate this through the application of appropriate key site requirements to new zonings (for example by requiring new housing in proximity to an existing noise generating use to be set back a specified distance and / or to incorporate sound proofing design elements).

The SPPS states 'Planning authorities should pay regard to the Noise Policy Statement for Northern Ireland (September 2014 as it seeks to set clear policy aims to enable decisions to be made and will ensure appropriate inter-relationship between the planning system and what is acceptable noise burden to place on society.'

The Noise Policy Statement for Northern Ireland, through the effective management and control of environmental, neighbour and neighbourhood noise aims to:

- Avoid or mitigate significant adverse impacts on health and quality of life having regard to the principles of sustainable development;
- Mitigate and minimise adverse impacts on heath and quality of life – this means that the noise impact should lie between the LOAEL (Lowest Observed Adverse Effect Level) and the SOAEL (Significant Observed Adverse Effect Level). Its requires that all reasonable steps should be taken to mitigate and minimise adverse effects in health and quality of life while together taking into account the guiding principles of sustainable development. This does not mean that adverse effects cannot occur but that effort should be focused on minimising such effects; and
- Where possible, contribute to the improvement of health and quality of life – to be achieved through the proactive management of noise, recognising that there will be opportunities for such measures to be taken and that they will deliver potential benefits to society. The protection of quiet places and quiet times as well as the enhancement of the acoustic environment will assist with delivering this aim. However, attempts to improve the acoustic environments should not be to the detriment of other potential environmental impacts.

The NPSNI is relevant to most forms of noise, except workplace (occupational) noise and therefore applies to the following types of noise:

- environmental noise - noise from transportation and industrial sources;
- neighbour noise - noise from inside and outside people's homes; and
- neighbourhood noise - noise arising from within the community such as from entertainment premises, trade and business premises, construction noise and noise in the street.

With regard to the development planning system, the NPSNI states that the planning system can minimise the potential for noise nuisance through the zoning of land. By way of example, zoning for economic development should consider the potential for noise nuisance upon sensitive receptors such as existing or approved residential development. Where potential for adverse impacts are unavoidable, the development plan should seek to mitigate through the application of key site requirements to new zonings (for example by requiring new housing in proximity to an existing noise generating activity to be set back a specified distance and / or to incorporate sound proofing design elements).

In the absence of specific guidance within the planning framework in England on proposed residential development approaching transport related sources of noise the Institute of Acoustics, Association of Noise Consultants and Chartered Institute of Environmental Health produced " ProPG: Planning and Noise, New residential Development (May 2017)"

http://www.ioa.org.uk/publications/propg

This document encourages better acoustic design for new residential development and aims to protect people from the harmful effects of noise and although not policy recommends an approach that should be considered when assessing the impact of existing transport sources of noise on residential development. A supplementary document to the guidance discusses planning and noise policy and guidance in the context of the National Planning Policy framework in England.

NPSNI states it "will itself inform the preparation of Development Plans by Local Authorities and will ensure that the interrelationship between the planning system and the Environmental Noise Directive is better reflected," The aim of the Environmental Noise Directive (2002/49/EC) (commonly referred to as END) is to 'avoid, prevent or reduce on a prioritised basis the harmful effects, including annoyance, due to exposure to environmental noise'. This is to be achieved by determining the noise exposure of the population through noise mapping, making information on environmental noise available to the public, developing Action Plans based on the mapping results to reduce noise levels where necessary, and preserving environmental noise quality where it is good (which includes protecting Quiet Areas).

The Environmental Noise Directive (END) requires that noise from various transport and industrial noise sources be mapped every five years. The transport noise sources that have been mapped are road, rail traffic and air traffic. Two rounds of noise maps have been completed to date; round 1 based upon 2006 data and round 2 based upon 2011 data. It should be noted that the resultant noise maps are derived from noise modelling and as such, they are not based on actual ambient noise readings.

The Department for Infrastructure (formerly DRD) has been designated as a competent authority under END and developed a Noise Action Plan (2013-2018) to address noise from road transport.

https://www.daera-ni.gov.uk/articles/noise

Generated Noise maps from data previously collected were then investigated using a series of analytical tools needed to sift and manipulate through the vast amounts of electronic data. At this stage an understanding of the number of people exposed to different noise levels and the number of buildings affected was reached, thus enabling an initial list of Candidate Noise Management Areas (CNMAs) to be prepared. Candidate Noise Management Areas were initially identified where the LA10, 18h indicator is at least 75dB.

The main bulk of the CNMAs are located within the Belfast Agglomeration, twenty three out of a total thirty two. Nine of which are located in proximity to a motorway. The other CNMAs within the Belfast Agglomeration are located along main routes within the urban areas of Belfast, Lisburn, Bangor and Holywood.

Outside of the Belfast Agglomeration there are a total of nine CNMAs located in the towns and cities of Londonderry, Ballymena, Dungiven, Ballykelly, Moy, Newtownards and Armagh. An overview of the schemes to be considered outside the next five year period which will assist in addressing noise within the identified CNMAs are outlined in the Action Plan. All these schemes were subject to the availability of finance.

Potential measures in the 2013-2018 Action Plan refer to Londonderry – CNMA1 and the promotion of a suitable alternative such as the A2 Buncrana Road widening scheme.

For all the CNMA's the DRD indicated that they would monitor, alongside DoE Planning Service, and if developments are proposed within these designated areas any mitigation measures will be assessed as part of the design and planning process for implementation. To ensure that the overall aims of the END and this Action Plan are fully realised, noise issues need to be carefully considered through the planning system for specific development proposals and at a more strategic scale through the

production of development plans. There needs to be a transparent relationship between the planning system and the END, allowing local planning policy to reflect this.

Londonderry – CNMA1

As part of the development process, the LDP will have to take cognisance of areas highlighted by the various Noise Action Plans and other appropriate designations. The SPPS provides examples of how LDPs can reduce the potential for detrimental noise impact including, 'the zoning or identification of land for uses likely to generate significant levels of noise, due to the nature of the activity or the potential for traffic generation, should take account of the location of quiet receptors such as housing or parkland and designated Quiet Areas'.

Sensitive Development will have to take account of noise implications.

- Land zoned for sensitive uses such as housing will have to take into account established noise generating uses which should not be unduly restricted or subject to unreasonable cost and administrative burden as a result of new incompatible development. Key site requirements should also be implemented to new zonings where the potential for adverse noise impact exists.

Places of refuge from the noise of urban living will need to be protected

- The SPPS recognises the need for development of land uses likely to generate significant levels of noise to take into consideration sensitive receptors such as housing, parkland and designated Quiet Areas. Quiet Areas have not been proposed in the DCSDC area. Nonetheless the protection of green spaces and their location away from anthropogenic sources of noise can assist in improving health and wellbeing.

Planning should seek to reach balanced decisions

- The SPPS provides guidance on managing development, 'planning authorities should treat noise as a material consideration in the determination of planning applications for proposals likely to give rise to significant levels of noise and also for proposals such as housing in proximity to established noise generating uses such as quarrying or certain industrial uses. Where noise is identified as a significant issue, consultation with the relevant authorities, including environmental health, may be necessary.

Although industrial noise is mentioned in general, renewable sources of energy including wind farms predominate areas of the council area and further consideration to this and mineral development needs to be addressed within the Strategic Plan. In particular encroachment of housing within proximity of such development can lead to residential development that is not sustainable. Equally the provision of residential development close to areas of the Council with a night time economy (entertainment premises and late night restaurants/takeaways) can lead to noise impacts on the proposed development that make it unsustainable. Planning authorities should seek to reach balanced decisions that consider noise issues alongside other relevant material considerations, including the wider benefits of the particular proposal. It may be appropriate to apply conditions to planning approvals for new development or change of use proposals in order to mitigate against excessive noise impacts.

CONTAMINATED LAND

Regeneration can be the main driver of remediation of brownfield sites. The risks to health and the environment must be considered in the continued regeneration of sites. Such risks should be identified and mitigated thereby ensuring that brownfield or previously developed land can be brought back to use. Remediation of the contaminated land must demonstrate that the risks to human health and the environment have been appropriately remediated and that the land is safe and suitable for its end use.

Contaminated Land can cause wide environmental damage and has the potential to limit a healthy environment. Derry City and Strabane District has a legacy of contaminated land arising from past industrial use and the disposal of waste (Mobouy site and tarry waste sites). It should be noted within Northern Ireland, land contamination was to be administered via Part III of the Waste and Contaminated Land (Northern Ireland) Order 1997, which was based around the principal of the 'polluter pays'. Although the Order was made on 26th November 1997, a commencement order for Part III has not yet been issued. The Order would however, have required councils to survey their districts in order to identify contaminated land sites and then to take enforcement action to ensure that such lands were appropriately remediated. The definition of "contaminated land" is any land which appears to a district council in whose district it is situated to be in such a condition, by reason of substances in, on or under the land, that—

a) significant harm is being caused or there is a significant possibility of such harm being caused; or

b) pollution of waterways or underground strata is being, or is likely to be, caused;

In Great Britain, land contamination is dealt with via Part 2A of the Environmental Protection Act 1990. The government's statutory guidance states however, that enforcing authorities should seek to use Part 2A only where no appropriate alternative solution exists, citing as an alternative that land contamination be addressed when land is developed or redeveloped under the planning system.

In the absence of Northern Ireland specific legislation, local councils have dealt historically with land contamination through the planning process. Derry City and Strabane District Council would typically request that the development of potentially contaminated sites be informed by an adequate risk assessment and remediation strategy in order to ensure that all unacceptable risks to human health are addressed and that the development is suitable for its proposed use. Similarly, the Northern Ireland Environment Agency would also provide consultation responses to the Planning Service in respect of developments in order to ensure that all environmental risks associated with land contamination are adequately addressed. Waste arising from the operation of developments can cause land contamination which can have a detrimental impact on sensitive habitats or species or indirect impacts if subsequent emissions to water occur.

Accordingly, it is important that land contamination continues to be dealt with via the Planning Regime and that contaminated land considerations for the city are adequately reflected in the formation of the PS.

A potential issue for the LDP PS is that the locations of land contamination have not been comprehensively identified across the Council area. This is as a result of the failure to commence Part III of the Waste and Contaminated Land (Northern Ireland) Order 1997. It should be noted however that the Northern Ireland Environment Agency has published a 'Historical Land Use Database' which contains a record of approximately 14,000 sites across Northern Ireland with a previous industrial land use that could give rise to land contamination. The database is based on historic maps and records held by local councils for the period 1834 to 1960. More recently, NIEA has augmented the database using information from its Industrial Heritage, Waste Management License and Pollution Incidents databases. The 'Historical Land Use Database' has not however been fully validated and NIEA therefore provides it on a "without prejudice" basis. Access to the database is available via the Land Property Services Spatial NI website as follows:

https://www.spatialni.gov.uk/

In addition, Northern Ireland Environment Agency historical land use maps are available via the following web link https://dfcgis.maps.arcgis.com/apps/webappviewer/index.html?id=6887ca0873b446e39d2f82c80c8a9337

As part of the implementation of planning policy, it is considered that due consideration must be given to investigating land contamination, having regard to the NIEA land use database, historical land use maps, council records where available and having regard to previous / historical site uses and previous planning applications. This approach will ensure the appropriate identification, investigation and remediation of contaminated land sites as a result of redevelopment objectives contained within the council's LDP. Certain land uses may be suitable for development and others may not depending on the proposed intended use of the land and the land contamination identified.

It should be noted that the NIEA are currently consulting with Councils on the implementation of Part III of the Waste and Contaminated Land (Northern Ireland) Order 1997.

LIGHT POLLUTION

Extensive artificial light from premises can cause distress to neighbours. Under the Clean Neighbourhoods and Environment Act (Northern Ireland) 2011, councils can take action against artificial light coming from poorly positioned security lights, garden lights, flood lighting from sports grounds or industrial lighting insomuch as the artificial light emitted from the premises is prejudicial to health or constitutes a

nuisance. This provision does not however apply to artificial light emitted from an airport, harbour premises, railway premises, a bus station, and public service vehicle operating centre, a goods vehicle operating centre, a lighthouse or a prison.

Light pollution of our dark skies and residential areas also occurs from public lighting of roads and footpaths, sports facilities and industrial development causing impacts on the local environment.

The Institute of Lighting Professionals (ILP) has provided guidance on acceptable levels of illumination for light sensitive premises in specific environmental zones, e.g. urban location, town centre, city centre. As part of the local development planning process, lighting schemes for developments should be required to adhere to the Institute of Lighting Professionals UK recommendations for obtrusive light limitations for exterior lighting installations - Guidance Notes for the Reduction of Obtrusive Light GN01:201144. In this document reference is made to environmental zones and it is recommended that Local Planning Authorities specify the following environmental zones for exterior lighting control within their Development Plans.

Table 1 – Environmental Zones

Zone	Surrounding	Lighting Environment	Examples
E0	Protected	Dark	UNESCO Starlight Reserves, IDA Dark Sky Parks
E1	Natural	Intrinsically dark	National Parks, Areas of Outstanding Natural Beauty etc
E2	Rural	Low district brightness	Village or relatively dark outer suburban locations
E3	Suburban	Medium district brightness	Small town centres or suburban locations
E4	Urban	High district brightness	Town/city centres with high levels of night-time activity

For each Zone design lighting guidance levels are recommended.

Table 2 – Obtrusive Light Limitations for Exterior Lighting Installations – General Observers

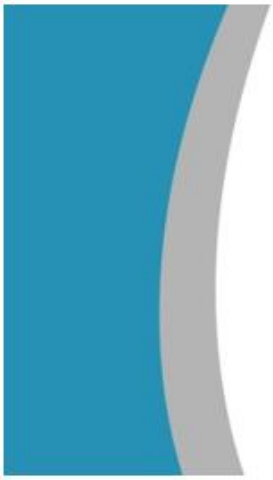
Environmental Zone	Sky Glow ULR [Max %] (1)	Light Intrusion (into Windows) E_v [lux] (2)		Luminaire Intensity I [candelas] (3)		Building Luminance Pre-curfew (4)
		Pre-curfew	Post-curfew	Pre-curfew	Post-curfew	Average, L [cd/m^2]
E0	0	0	0	0	0	0
E1	0	2	0 (1*)	2,500	0	0
E2	2.5	5	1	7,500	500	5
E3	5.0	10	2	10,000	1,000	10
E4	15	25	5	25,000	2,500	25

According to the SPPS, the planning system has a role to play in minimising potential adverse impacts, such as light pollution on sensitive receptors by means of its influence on the location, layout and design of new development.

Consideration should therefore be given to ensuring minimal artificial light from developments via the improvement of street lighting and the submission of lighting plans at the planning application stage to encourage the consideration of the impacts of developments on neighbours, ecology and surrounding buildings. This approach will ensure that artificial lighting is fit for use in new developments as well as fulfilling objectives for sustainable development.

Appendix 3

Health



Derry and Strabane
Statistics

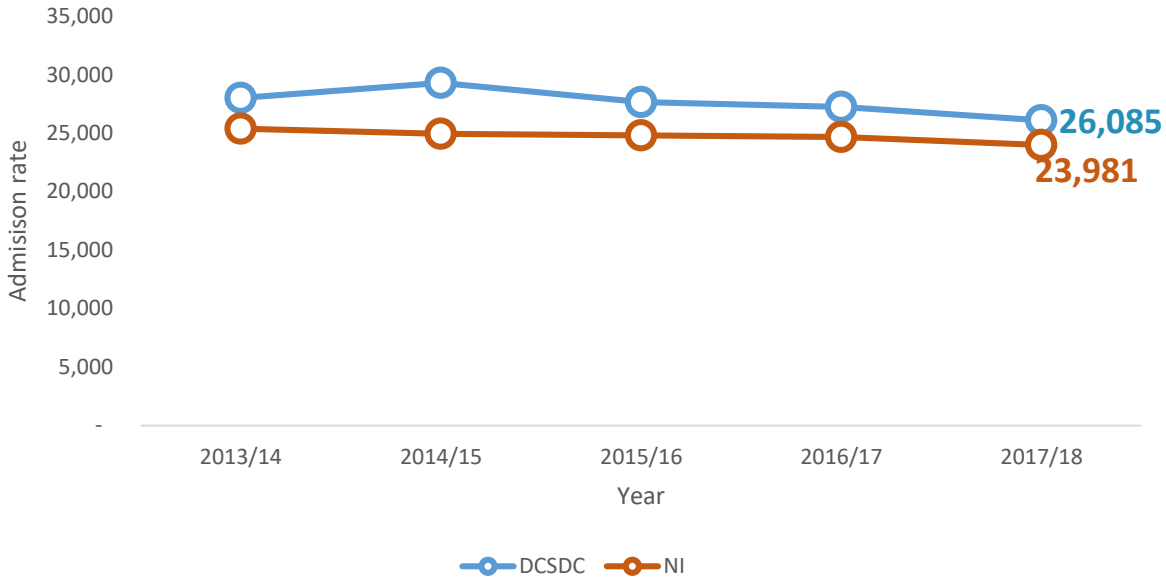
Admission rates

Table 1: Standardised admission rates (all admissions) per 100,000 population for DCSDC and NI

Period	DCSDC	NI
2013/14	28,003	25,372
2014/15	29,285	24,940
2015/16	27,664	24,794
2016/17	27,246	24,673
2017/18	26,085	23,981

Source: Public Health Information and Research Branch, DoH

Figure 1: Standardised admission rates (all admissions) per 100,000 population for DCSDC and NI



Source: Public Health Information and Research Branch, DoH

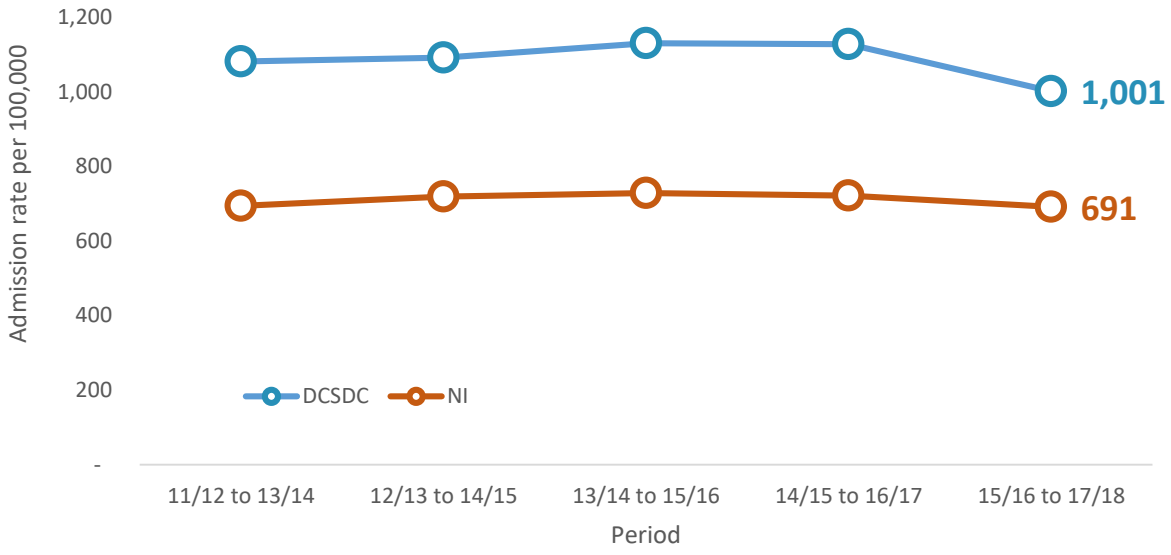
- In 2017/18, there were 26,085 admissions per 100,000 people compared with a lower rate of 23,981 for NI.

Table 2: Standardised admission rates due to alcohol related causes, per 100,000 population, DCSDC and NI

Period	DCSDC	NI
2011/12 to 2013/14	1,081	694
2012/13 to 2014/15	1,091	719
2013/14 to 2015/16	1,130	728
2014/15 to 2016/17	1,127	721
2015/16 to 2017/18	1,001	691

Source: Public Health Information and Research Branch, DoH

Figure 2: Standardised admission rates, due to alcohol related causes, per 100,000 population, DCSDC and NI



Source: Public Health Information and Research Branch, DoH

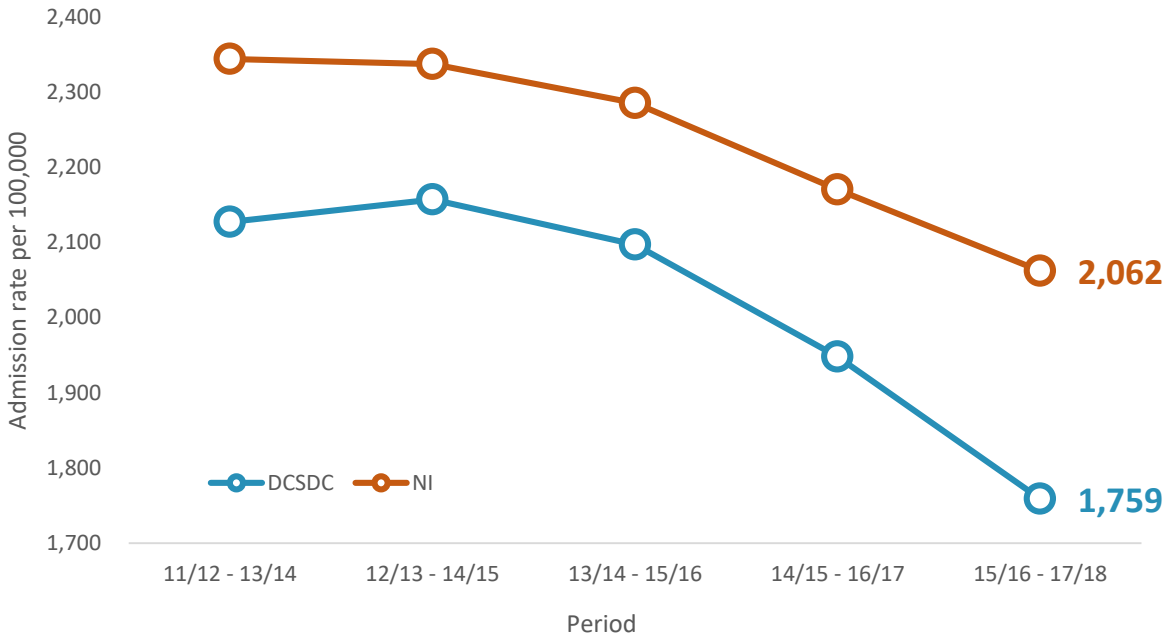
- The standardised admission rate due to alcohol related causes, has decreased slightly between 2014/15 to 2016/17 and 2015/16 to 2017/18. Figures for NI have also recorded a slight decrease.

Table 3: Standardised admission rates due to circulatory disease, per 100,000 population, DCSDC and NI

Period	DCSDC	NI
2011/12 to 2013/14	2,127	2,344
2012/13 to 2014/15	2,157	2,337
2013/14 to 2015/16	2,097	2,285
2014/15 to 2016/17	1,948	2,170
2015/16 to 2017/18	1,759	2,062

Source: Public Health Information and Research Branch, DoH

Figure 3: Standardised admission rates due to circulatory disease per 100,000 population for DCSDC and NI



Source: Public Health Information and Research Branch, DoH

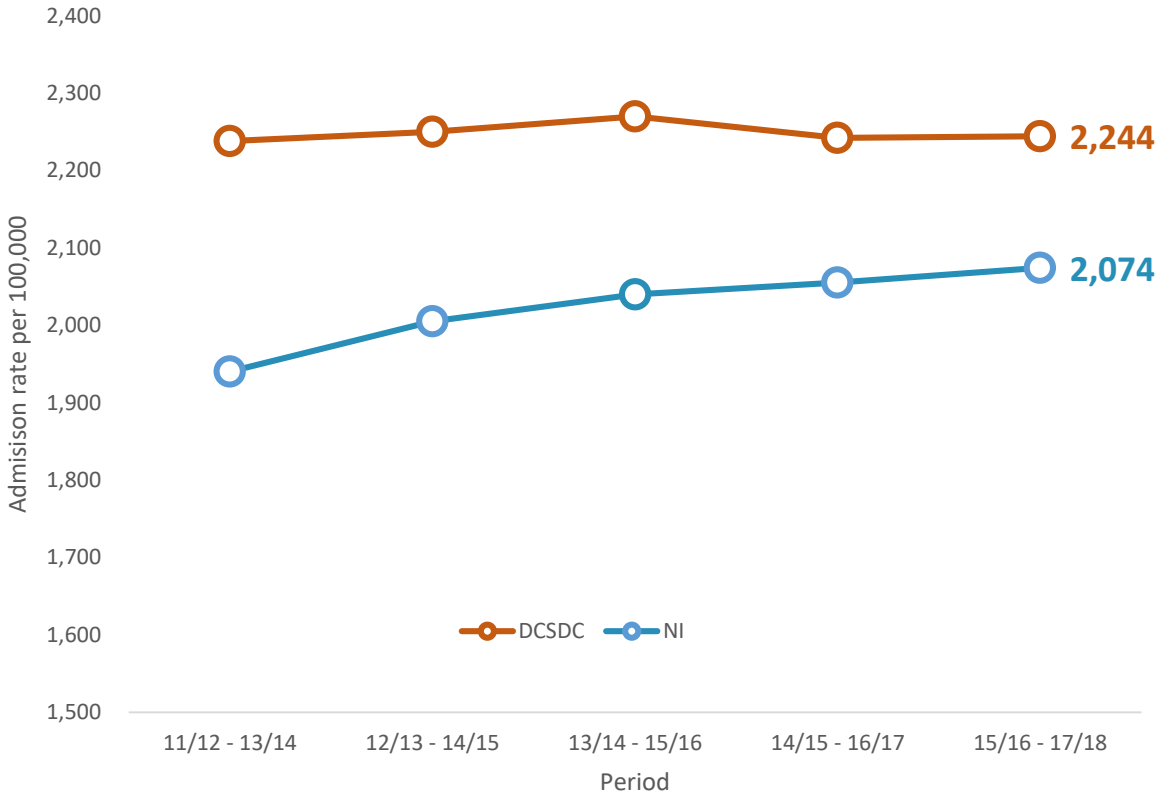
- The DCSDC admission rates for circulatory disease have decreased from the period beginning in 2012 (2,157). Now the rate is 1,759 per 100,000 during the period 2015/16 to 2017/18.

Table 4: Standardised admission rates due to respiratory disease per 100,000 population for DCSDC and NI

Period	DCSDC	NI
2011/12 to 2013/14	2,238	1,940
2012/13 to 2014/15	2,250	2,005
2013/14 to 2015/16	2,270	2,040
2014/15 to 2016/17	2,242	2,055
2015/16 to 2017/18	2,244	2,074

Source: Public Health Information and Research Branch, DoH

Figure 4: Standardised admission rates due to respiratory disease per 100,000 population for DCSDC and NI



Source: Public Health Information and Research Branch, DoH

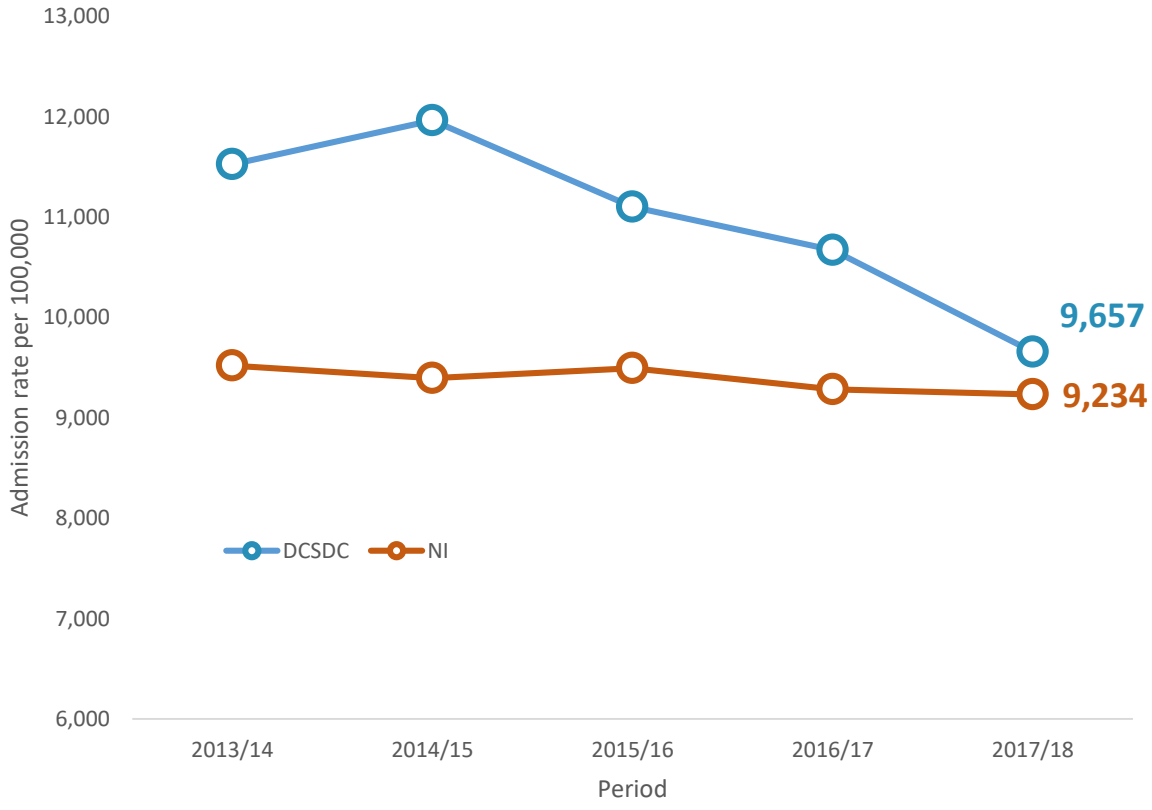
- The DCSDC admission rates for respiratory disease have been increasing since the period beginning 2010/11. Rates in NI are generally lower but have also increased during the same period starting 2010/11.

Table 5: Standardised admission rate for emergency admissions per 100,000 population for DCSDC and NI

Period	DCSDC	NI
2013/14	11,527	9,520
2014/15	11,961	9,394
2015/16	11,100	9,495
2016/17	10,671	9,285
2017/18	9,657	9,234

Source: Public Health Information and Research Branch, DoH

Figure 5: Standardised admission rate for emergency admissions per 100,000 population for DCSDC and NI



Source: Public Health Information and Research Branch, DoH

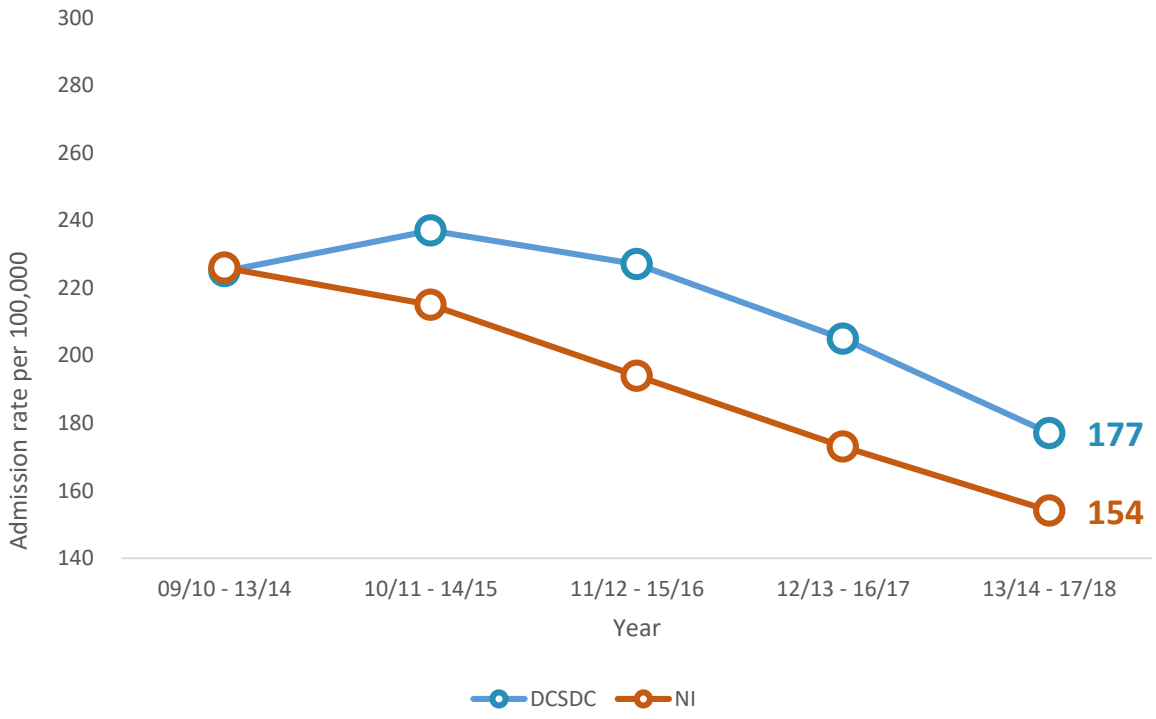
Figures for DCSDC show that the admission rate for emergency admissions has been increased from 2012/13 (11,165) and stood at 11,961 admissions per 100,000 people in 2014/15.The rate has been decreasing since then and now stands at 9,657 per 100,000.

Table 6: Standardised admission rate for self-harm per 100,000 population for DCSDC and NI

Period	DCSDC	NI
2009/10 to 2013/14	225	226
2010/11 to 2014/15	237	215
2011/12 to 2015/16	227	194
2012/13 to 2016/17	205	173
2013/14 to 2017/18	177	154

Source: Public Health Information and Research Branch, DoH

Figure 6: Standardised admission rate for self-harm per 100,000 population for DCSDC and NI



Source: Public Health Information and Research Branch, DoH

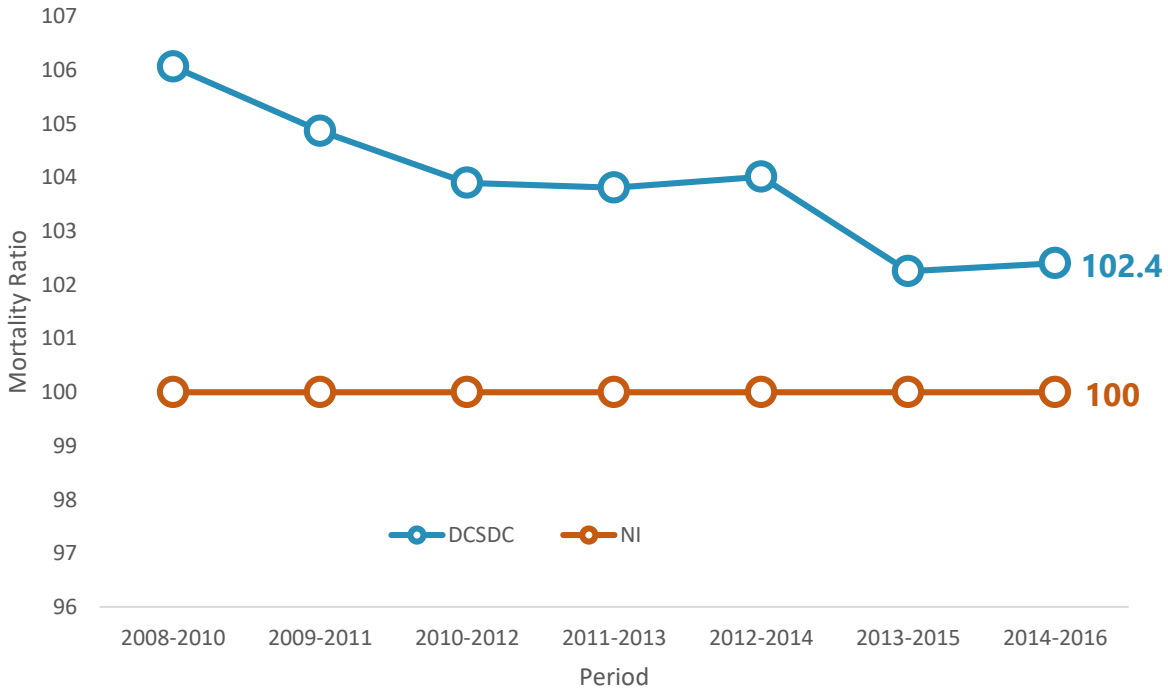
Life expectancy, Mortality, Death and Limiting Long-Term Illness

Table 1: Standardised mortality ratio for DCSDC

Period	DCSDC	NI
2008-2010	106.1	100
2009-2011	104.9	100
2010-2012	103.9	100
2011-2013	103.8	100
2012-2014	104.0	100
2013-2015	102.3	100
2014-2016	102.4	100

Source: Death Statistics, Demography and Methodology Branch

Figure 1: Standardised mortality ratio for DCSDC



Source: Death Statistics, Demography and Methodology Branch

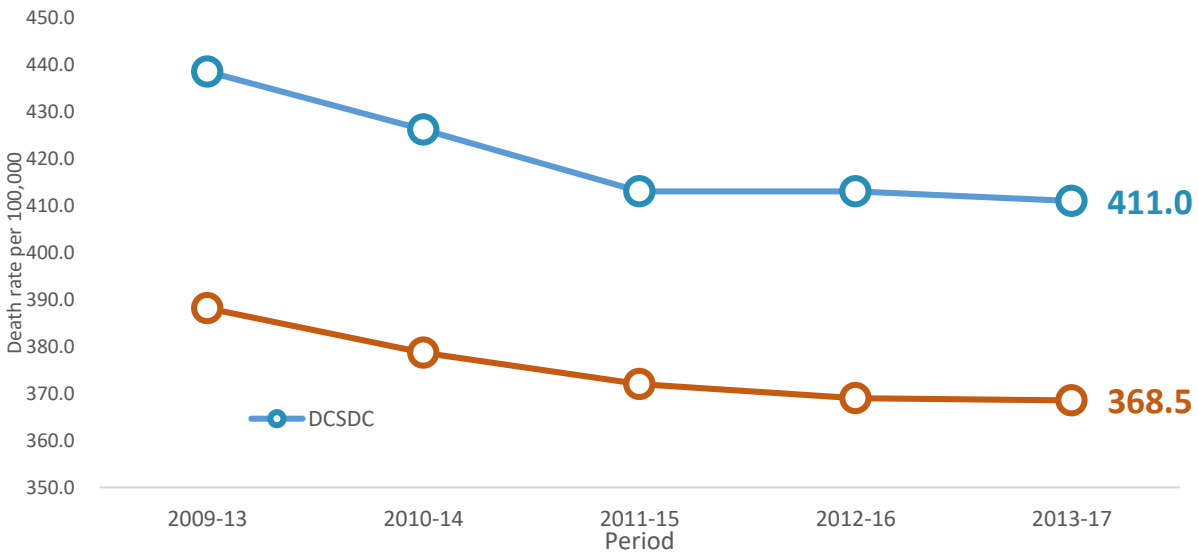
- The standardised mortality ratio for DCSDC has generally decreased between the periods 2008-2010 and 2014-16 to where it was no longer significantly different from that of NI.

Table 2: Standardised death rate (Under 75, all-cause mortality) per 100,000 population, DCSDC and NI

Period	DCSDC	NI
2009-13	438.5	388.2
2010-14	426.1	378.7
2011-15	413.4	371.8
2012-16	413.2	369.2
2013-17	411.0	368.5

Source: Public Health Information and Research Branch, DoH

Figure 2: Standardised death rate (Under 75, all-cause mortality) per 100,000 population, DCSDC and NI



Source: Public Health Information and Research Branch, DoH

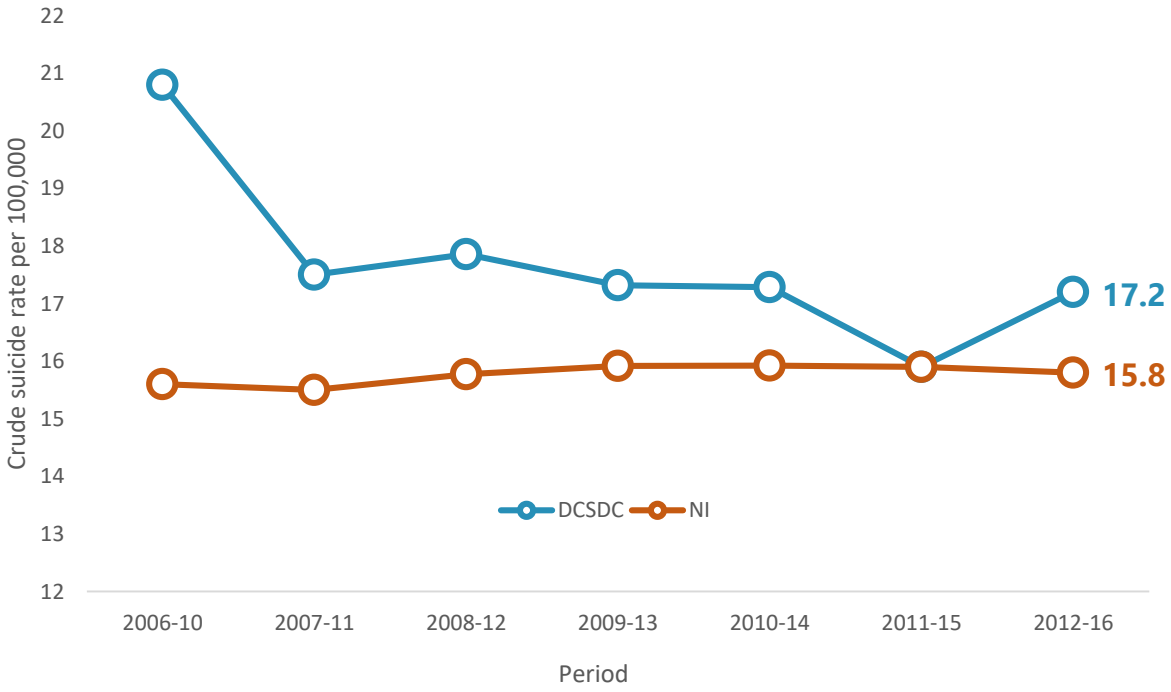
- The standardised death rate for DCSDC and NI, for those aged under 75, continues to decline. Over the period 2013-17, there were 411.0 deaths of those aged under 75 compared with a rate of 368.5 for NI.

Table 3: Crude suicide rate per 100,000 population, DCSDC and NI

Period	DCSDC	NI
2006-10	20.8	15.6
2007-11	17.5	15.5
2008-12	17.9	15.8
2009-13	17.3	15.9
2010-14	17.3	15.9
2011-15	15.9	15.9
2012-16	17.2	15.8

Source: Public Health Information and Research Branch, DoH

Figure 3: Crude suicide rate per 100,000 population, DCSDC and NI



Source: Public Health Information and Research Branch, DoH

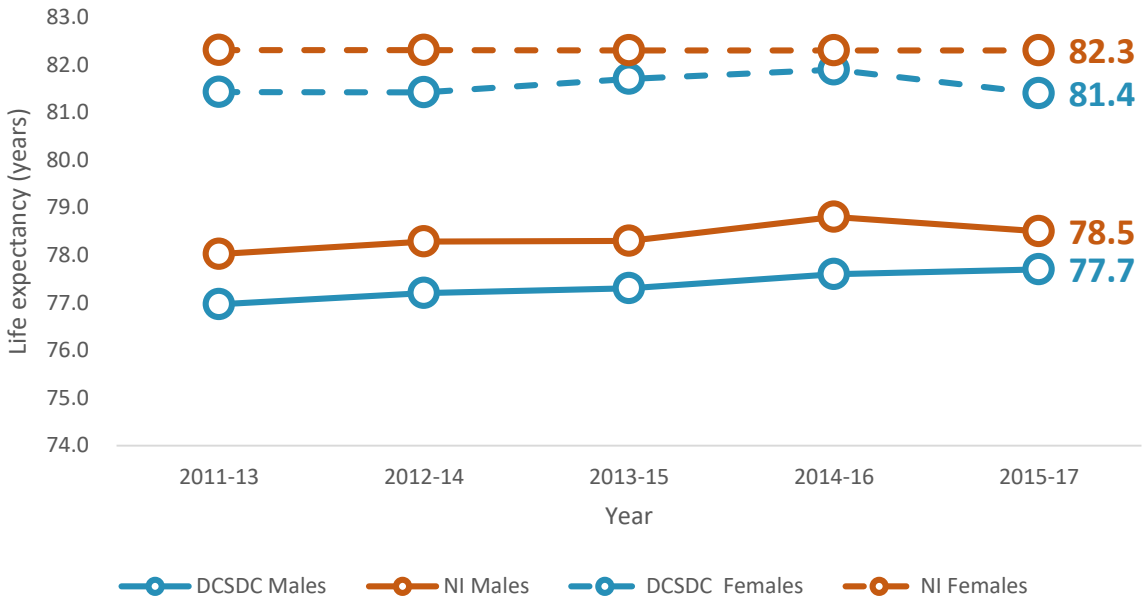
- The crude suicide rate for DCSDC decreased from the period beginning 2006 and stood at a rate of 17.2 per 100,000 during the period 2012-16. The crude suicide rate has remained relatively static for NI and stood at 15.8 per 100,000 population during the period 2012-16.

Table 4: Life expectancy at birth by gender, DCSDC and NI, 2011-13 to 2015-17

Period	DCSDC Males	NI Males	DCSDC Females	NI Females
2011-13	77.0	78.0	81.4	82.3
2012-14	77.2	78.3	81.4	82.3
2013-15	77.3	78.3	81.7	82.3
2014-16	77.6	78.8	81.9	82.3
2015-17	77.7	78.5	81.4	82.3

Source: Health inequalities – life expectancy decomposition 2017, Department of Health

Figure 4: Life expectancy at birth by gender, DCSDC and NI



Source: Health inequalities – life expectancy decomposition 2017, Department of Health

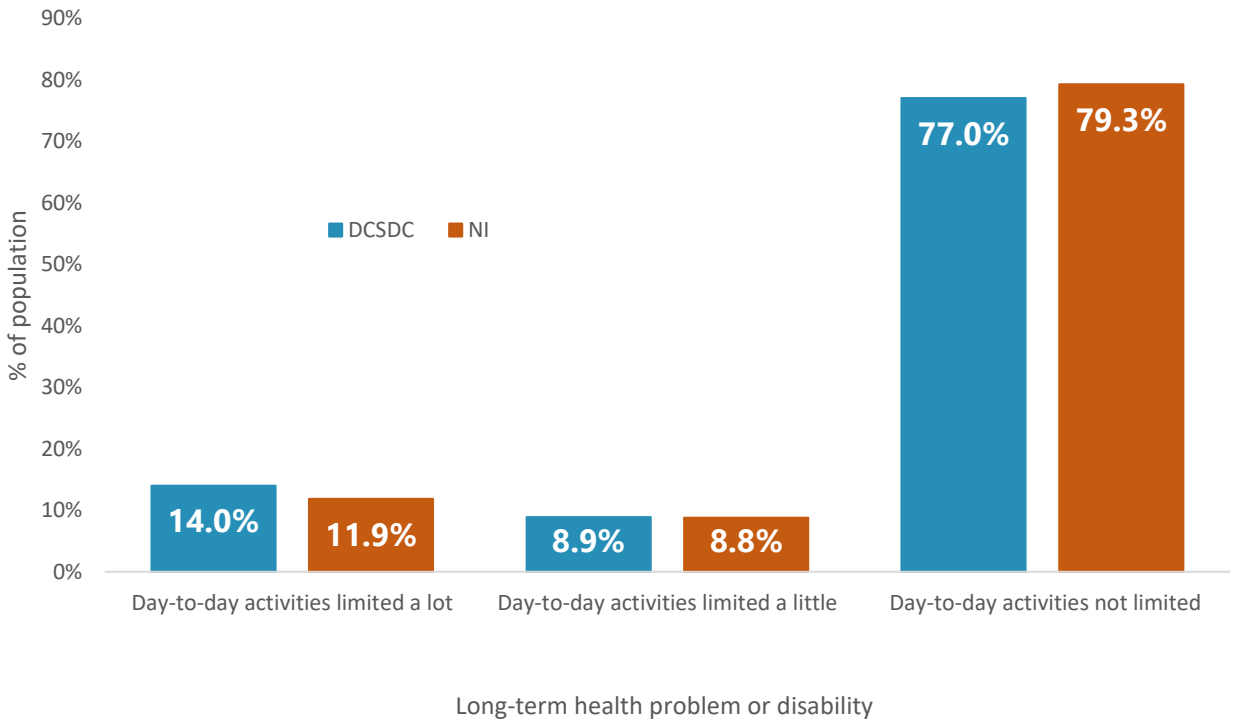
- Female life expectancy for both DCSDC and NI is higher than male life expectancy with both increasing and with male life expectancy increasing at a faster rate.
- Life expectancy for males and females is lower in DCSDC when compared with NI. During 2015-17, females in DCSDC had a life expectancy, at birth, of 81.4 (82.3 in NI). Males in DCSDC had a life expectancy of 77.7 years at birth compared with a life expectancy of 78.5 for males in NI.

Table 5: Percentage of the population with long-term health problem or disability, DCSDC and NI

Region	Long-term health problem or disability		
	Day to day activities limited a lot	Day to day activities limited a little	Day to day activities not limited
DCSDC	14.0%	8.9%	77.0%
NI	11.9%	8.8%	79.3%

Source: Census 2011

Figure 5: Percentage of the population with long-term health problem or disability, DCSDC and NI



Source: Census 2011

- Most day to day activities are not limited – the figures are 77.0% for DCSDC and 79.3% for NI
- Figures for day to day activities limited a lot are 14% and 11.9% for DCSDC and NI respectively
- Figures for day to day activities limited a little are 8.9% and 8.8% for DCSDC and NI respectively

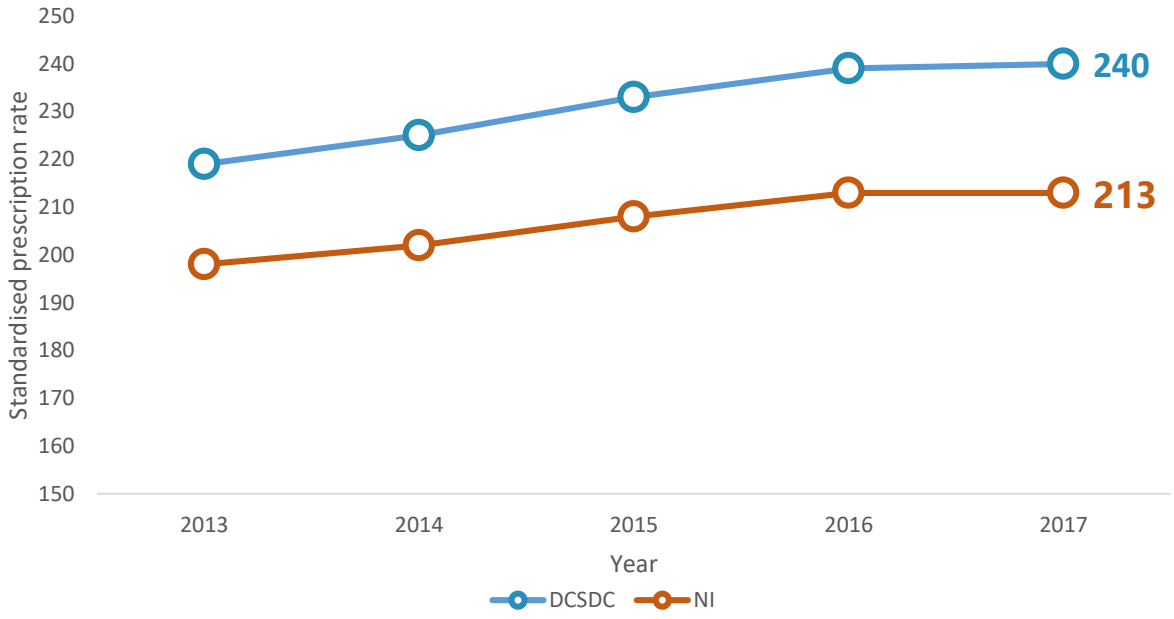
Mood and anxiety disorders, obesity and cancer

Table 1: Standardised prescription rate for mood and anxiety disorders, per 100,000 population, DCSDC and NI

Year	DCSDC	NI
2013	219	198
2014	225	202
2015	233	208
2016	239	213
2017	240	213

Source: Public Health Information and Research Branch, DoH

Figure 1: Standardised prescription rate for mood and anxiety disorders, per 100,000 population, DCSDC and NI



Source: Public Health Information and Research Branch, DoH

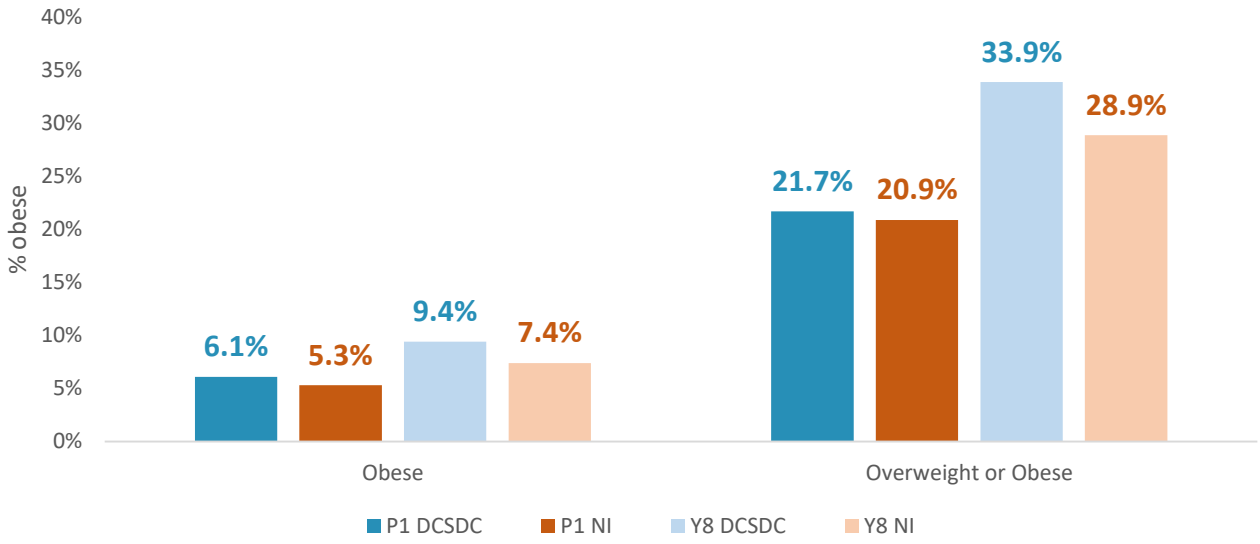
- There has been an increase in the standardised prescription rate for mood and anxiety disorders for both DCSDC and NI between 2012 and 2016. By 2017, the standardised prescription rate stood at 240 per 100,000 people within DCSDC.

Table 2: Primary 1 and Year 8 childhood BMI, 2016/17, DCSDC and NI (%)

Year	P1		Y8	
	DCSDC	NI	DCSDC	NI
Obese	6.1%	5.3%	9.4%	7.4%
Overweight or Obese	21.7%	20.9%	33.9%	28.9%

Source: Public Health Information and Research Branch, DoH

Figure 2: Primary 1 and Year 8 childhood BMI, 2016/17, DCSDC and NI (%)



Source: Public Health Information and Research Branch, DoH

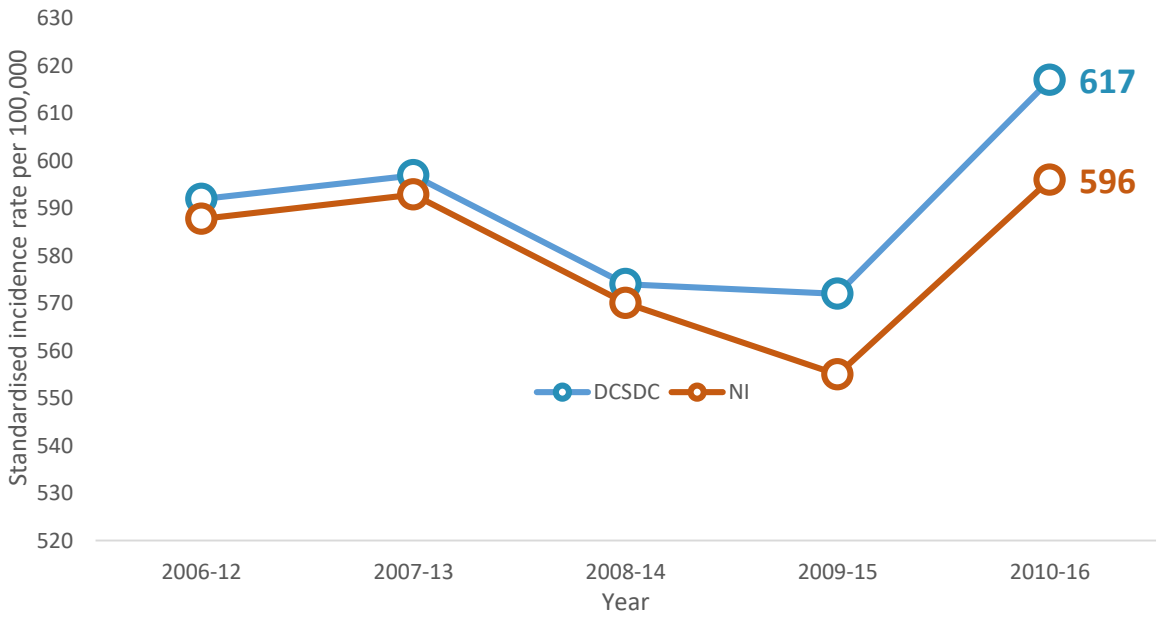
- Children within DCSDC, in both Primary 1 and Year 8, tend to have higher scores in terms of their Body Mass Index (BMI) when compared to children within NI as a whole.
- In 2016/17, 6.1% of DCSDC children, in Primary 1, had a BMI that fell within the obese range (5.3% for NI). In addition, 9.4% of Year 8 children fell into the same category (7.4% for NI).

Table 3: Standardised incidence rate for cancer per 100,000 population, DCSDC and NI

Period	DCSDC	NI
2006-12	592	588
2007-13	597	593
2008-14	574	570
2009-15	572	555
2010-16	617	596

Source: Public Health Information and Research Branch, DoH

Figure 3: Standardised incidence rate for cancer per 100,000 population, DCSDC and NI



Source: Public Health Information and Research Branch, DoH

- Over the period 2010-16, the rate within DCSDC, stood at 617 per 100,000 people compared with an NI rate of 596.
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Appendix 4

https://www.daera-ni.gov.uk/consultations/noise-policy-statement-northern-ireland-npsni

https://www.daera-ni.gov.uk/news/noise-complaint-statistics-northern-ireland-2016-2017

http://www.airqualityni.co.uk/laqm/aqma?id=452

https://www.daera-ni.gov.uk/articles/standing-advice-0