

Local Development Plan | 2030

Draft Plan Strategy

Draft Habitats Regulations
Assessment (HRA)

June 2019



Antrim and
Newtownabbey
BOROUGH COUNCIL

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Have your say

Antrim and Newtownabbey Borough Council is consulting on the Antrim and Newtownabbey Local Development Plan draft Plan Strategy 2030.

Pre-Consultation on the draft Plan Strategy

To allow everyone time to read and understand the draft Plan Strategy and all its associated documents, Antrim and Newtownabbey Borough Council is publishing all documentation in advance of the formal 8 week period of public consultation. This period of pre-consultation will run from Friday 28 June 2019 to Thursday 25 July 2019.

Please note that no representations should be made during this period.

Formal Consultation on the draft Plan Strategy

The draft Plan Strategy is published for formal public consultation for a period of 8 weeks beginning on **Friday 26 July and closing at 5 pm on Friday 20 September 2019.**

The draft Plan Strategy is published alongside a range of assessments which are also open for public consultation between Friday 26 July 2019 and Friday 20 September 2019 including a Sustainability Appraisal (incorporating the Strategic Environmental Assessment), a draft Habitats Regulations Assessment and a Section 75 Screening and Rural Needs Impact Assessment Report.

Please note that representations received after the closing date on Friday 20 September 2019 will not be considered.

How to respond

The purpose of the consultation is to determine if the draft Plan Strategy is 'sound'. There are 12 tests of soundness and further information on these tests is available in the Department for Infrastructure's published Development Plan Practice Note 6 'Soundness'. We strongly recommend that you read this and other Departmental guidance if you intend to make a representation to the draft Plan Strategy. It is also recommended that you read the Planning Appeal Commission's published guidance entitled 'Procedures for Independent Examination of Local Development Plans' as this also gives information in relation to soundness and representations. Representations, should be made in writing and we would encourage you to use the methods set out below:

Online

- Via our online consultation hub at:
www.antrimandnewtownabbey.gov.uk/draftplanstrategy
- Downloading a copy of the response form from our website and forwarding it to the Forward Planning Team; or
- Requesting a copy of our response form to be posted to you or you may collect a hard copy from Antrim Civic Centre or Mossley Mill and return it to the Forward Planning Team.

By Mail

- email us at planning@antrimandnewtownabbey.gov.uk
- in writing to the following postal address:

Forward Planning Team
Mossley Mill,
Carnmoney Road North,
Newtownabbey BT36 5QA

Come and Meet us

We are also holding a series of drop-in events and public meetings where you will be able to speak to a member of the Forward Planning Team about our Draft Plan Strategy. Full details are available on our website or by contacting the Team. Planning Officers are also available between 9am and 5pm Monday to Friday at Mossley Mill. They are also available at Antrim Civic Centre by contacting us in advance to arrange an appointment.

Keeping the Community Involved

The Council wishes to encourage the ongoing involvement of the local community in the plan process. You can sign up to receive our Local Development Plan emails to keep up to date on the progress of the Plan and upcoming events.

If you would like to receive our Local Development Plan emails, please contact the Forward Planning Team.

General Data Protection Regulation

Antrim and Newtownabbey Borough Council complies with the General Data Protection Regulation (GDPR) by producing a specific Local Development Plan Privacy Notice, which lets you know how we manage any personal information we receive from you. It contains the standards you can expect when we ask for, or hold, your personal information and an explanation of our information management security policy. A copy of our Local Development Plan Privacy Notice is available on our website. All representations received will be published on our website and made available at Mossley Mill and Antrim Civic Centre for inspection at the addresses above. All representations will be forwarded to the Department of Infrastructure in advance of Independent Examination.

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Abbreviations

AE	Aerial Emissions
CEMP	Construction Environmental Management Plan
CJEU	Court of Justice of the European Union
CMS	Construction Method Statement
CPA	Coastal Policy Area
DAERA	The Department of Agriculture, Environment and Rural Affairs
DD	Direct Disturbance
DEFRA	Department for Environment, Food and Rural Affairs
DM	Detailed Management
EC	European Commission
EPA	Environmental Protection Agency
FCS	Favourable Conservation Status
HC	Hydrological Change
HL	Habitat Loss
HRA	Habitats Regulations Assessment
ID	Indirect Disturbance
IS	Introduced Species
JNCC	Joint Nature Conservation Committee
LDP	Local Development Plan
LPP	Local Policies Plan
NA	Not Applicable
NIEA	Northern Ireland Environment Agency
POP	Preferred Options Paper
PPS	Planning Policy Statement
pSPA	Proposed Special Protection Area
SAC	Special Area of Conservation
SEA	Strategic Environmental Assessment
SES	Shared Environmental Service
SLNCI	Site of Local Nature Conservation Importance
SP	Strategic Policy
SPA	Special Protection Area
SPPS	Strategic Planning Policy Statement
SuDS	Sustainable Drainage Systems
WP	Water Pollution
WwTW	Wastewater Treatment Works

Glossary

Adverse effect on site integrity	An effect on the qualifying features of an international site which would undermine the achievement of the conservation objectives for that site and which would have a negative effect on the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitats, complex of habitats and/or the levels of populations of the species for which the site is or will be designated.
Competent Authority	For the purposes of the Habitats Regulations the expression 'competent authority' includes government departments, district councils and statutory undertakers, and any trustees, commissioners, board or other persons who, as a public body and not for their own profit, act under any statutory provision for the improvement of any place or the production or supply of any commodity or service.
Cumulative Impact	A number of developments in a locality or a continuous activity over time that together may have an increased impact on the environment.
De minimis	Having no appreciable effect.
Global Status	The global status is an expert judgement of the overall value of the site for the conservation of the relevant Annex I habitat. Sites have been graded A, B or C.
International sites	Collective term that includes European SACs, SPAs, SACs, pSPAs, SCIs and Ramsar sites (although the latter is a wider international designation).
Introduced Species	Invasive species, non-native, competitive or predatory species.
Habitats Regulations	The Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended).
In combination effect	Refers to effects that may be likely significant effects when considered in combination with effects from other plans or projects.
Likely significant effect	An effect that cannot be ruled out on the basis of objective information. Likely in this context means there is a risk or possibility that an effect will be significant. An effect is significant if it would undermine a site's conservation objectives.
Mitigation measures	Measures to avoid, cancel or reduce the effects of a plan or project on an international site.
Natura 2000 (N2K)	The European network of special areas of conservation and special protection areas under the Wild Birds Directive, provided for by Article 3(1) of the Habitats Directive.
Ramsar site	Site listed under the Convention on Wetlands of International Importance adopted at Ramsar, Iran in 1971. As a matter of policy these sites are treated in the same way as international sites.
Special Areas of Conservation (SACs)	Special Areas of Conservation (SACs) are sites that have been adopted by the European Commission and formally designated by the government of each country in whose territory the site lies.
Special Protection Area (SPA)	Area classified under Article 4 of the EU Birds Directive 1979 and 2009.
The Directives	Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora and Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds. These Directives are referred to as the Habitats Directive and the Birds Directive respectively and together are called 'The Directives' for the purposes of this report.

Non-Technical Summary

Habitats Regulations Assessment

Regulation 43 of the Habitats Regulations, which implements a requirement of the Habitats and Birds Directives, requires an appropriate assessment to be undertaken of plans and projects which are likely to have a significant effect on an international site in Northern Ireland, either alone or in combination with other plans or projects.

This is known as Habitats Regulations Assessment (HRA) and provides for assessment of the implications of a land use plan for international sites in view of their conservation objectives. International sites include Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar sites.

This draft HRA Report is prepared in support of the draft Plan Strategy for Antrim and Newtownabbey Borough Council Local Development Plan (LDP). It records the assessment of the draft Plan Strategy proposals and its potential impacts on international sites.

Overview of draft Plan Strategy

The draft Plan Strategy provides a plan-led policy framework for making day-to-day decisions to help Antrim and Newtownabbey Borough Council (the Council) deliver sustainable development for employment, homes and infrastructure in a high quality environment across the Borough. It sets out how the area will change and grow until 2030.

The draft Plan Strategy sets out the Plan Vision and Objectives, followed by Strategic Policy 1: Sustainable Development. This incorporates the Spatial Growth Strategy for our Borough. Following this a further nine Strategic Policies are presented under the themes of A Place of Economic Opportunity; A Vibrant and Liveable Place; and A Place with a Sustainable Future. Each of these Strategic Policies is supported by a number of Detailed Management Policies which provide the operational detail. Finally, an indication of how the Plan Strategy will be monitored and reviewed is set out. The draft Plan Strategy will be published for public consultation and subject to independent examination before it is adopted.

The nature of the draft Plan Strategy is that it has the potential to have a significant effect on some international sites, therefore we are undertaking a HRA in our role as a competent authority to ensure the legal requirements of the Habitats Regulations are fully met.

International Sites Overview

A total of 28 sites that have the potential to be connected to the plan area were reviewed. These include sites ranging from large sites such as Lough Neagh and Lough Beg and Belfast Lough SPAs and Ramsar sites to the much smaller Rea's Wood and Farr's Bay SAC. Sites beyond the Council area with an ecological connection were also included, for example Skerries and Causeway SAC which is connected via marine waters. On a precautionary basis, all sites within 15km of the plan area were also considered. Maps 2 to 4 illustrate these sites in relation to the Borough.

Screening of the Plan

All of the Plan Strategy proposals were reviewed, from the Plan Vision and Strategic Objectives through the Growth Strategy and Spatial Framework to the Strategic Policies and related Detailed Management Policies. This found that some proposals, for example the Vision and the Strategic Objectives, are general policy statements which state a direction without details of how they will be delivered. Some of the Strategic Policies such as Strategic Policy 5: Community Infrastructure and Strategic Policy 7: Historic Environment, are too general to assess, however their delivery was considered under the Detailed Management Policies. Some Detailed Management Policies are such that they could not have an effect on international sites, for example some relating to urban design and public safety or protecting assets such as open space and the historic environment. Finally, some policies were identified as having potential for likely significant effects on international sites. These included the strategic policy for employment, some parts of the Spatial Framework relating to development in settlements and the countryside, and Detailed Management Policies including those relating to minerals, tourism and renewable energy.

Potential Impacts

All the potential impacts of the draft Plan Strategy proposals were considered. It was found that the draft Plan Strategy could have the potential to affect international sites through the following impacts:

- **Habitat Loss:** Direct habitat loss in an international site or loss of supporting habitat such as fields used by whooper swans.
- **Direct Disturbance:** This includes noise, vibration or light disturbance during construction or operation, or the presence of people on land developed for recreational use.
- **Indirect Disturbance:** Disturbance beyond development sites arising from increased levels of recreation including water sports.
- **Introduced Species:** The introduction of invasive species, non-native, competitive or predatory species or of diseases of key species.
- **Aerial Emissions:** Aerial emissions may arise from industry, transport or agricultural intensification.
- **Water Pollution:** Deterioration of, or failure to, improve water quality due to direct runoff of pollutants, including fuel, chemicals and sediments, from development during construction or operation or indirect pollution due to the inadequacy of wastewater treatment facilities.
- **Hydrological Change:** Alteration of the hydrology of sensitive habitats and species by either increasing or decreasing runoff or water percolation into aquifers.

Screening sites for likely significant effects

On review of the long-list of international sites, it was found that 8 of the 28 sites identified in the long-list could be eliminated because they are beyond the distance where aerial emissions could have an effect and have no other connection with the plan area which could result in a conceivable impact. The screening found that significant effects could not be entirely ruled out for the remaining 20 sites. Some of these sites, such as Larne Lough SPA and Ramsar, have multiple designations. The following is a list of the sites screened in for further assessment.

- Antrim Hills SPA
- Belfast Lough Open Water SPA
- Belfast Lough Ramsar
- Belfast Lough SPA
- Curran Bog SAC
- Copeland Islands SPA
- East Coast (NI) Marine proposed SPA
- Larne Lough Ramsar
- Larne Lough SPA
- Lough Neagh and Lough Beg Ramsar
- Lough Neagh and Lough Beg SPA
- Montiagh Moss SAC
- North Channel SAC
- Outer Ards Ramsar
- Outer Ards SPA
- Rea's Wood and Farr's Bay SAC
- Skerries and Causeway SAC
- Strangford Lough Ramsar
- Strangford Lough SPA
- The Maidens SAC

Protective measures incorporated in the draft Plan Strategy

Some of the policies screened in include additional caveats within them, or in their amplification, which emphasise that development should not be at the expense of the natural environment. All development brought forward under these or other policies are subject to all relevant policy including Detailed Management Policy DM 37 – Designated Sites of Nature Conservation Importance which directly protects international sites and applies to all development. The requirements of the Habitats and Birds Directive however, mean that the potential effects of the draft Plan Strategy must be assessed in the absence of such protective measures or mitigation. Therefore, despite the inclusion of protective measures, these policies must be further assessed. The potential impacts of the draft Plan Strategy on each international site were therefore assessed and mitigation to avoid or reduce the effects of these impacts is identified.

Appropriate Assessment

Each of the sites shortlisted was subject to more detailed assessment. These appropriate assessments considered the conservation objectives, threats to the sites and sensitivities of features. They also took account of the condition of those features. The measures included within the draft Plan Strategy and further recommendations to protect international sites and their selection features were also reviewed.

Recommendations

Appropriate assessment for each international site helped identify further measures to help avoid or reduce likely significant effects. These will enhance understanding of and protection for international sites and further reduce the risks of adverse effects on site integrity, including from cumulative impacts. These also ensure, in the event that development connected to an international site is proposed, that potential impacts are taken into account at an early stage. Some of protective measures have already been incorporated in the draft Plan Strategy and some recommendations are to be implemented at later stages. Those which are additional follow.

- 1. International Sites - Evidence:** Seek updated information to identify any new evidence about International sites, habitats and species before finalising the HRA for the adopted Plan Strategy and preparing the Local Policies Plan.

2. **Cumulative Effects:** Identify and consider further plans or projects that, in combination, may lead to a cumulative adverse effect on site integrity in the final HRA for the Plan Strategy.
3. **Screening - General:** Screen all developments in close proximity to, or with a pathway to, designated sites or supporting habitat and carry out HRA where necessary.
4. **Screening - Aerial Emissions:** Implement guidance on screening planning applications for aerial emissions and carry out HRA where necessary.
5. **International Sites - Recreation:** Where development could increase recreation pressure in any International site potential impacts must be assessed through HRA.
6. **Waterfowl Supporting Habitat/Flight Paths:** Obtain updated information on supporting habitat and flight paths for waterfowl from DAERA, RSPB and others to identify locations where development could cause disturbance or disrupt flight.
7. **Wastewater Treatment:** Land release should be phased to ensure alignment of housing delivery with planned infrastructure investment and development lead-times. New development cannot proceed until there is evidence of adequate wastewater treatment infrastructure or alternative treatment facilities.
8. **Hen Harrier Range:** Obtain updated information on hen harrier ranges from DAERA to inform locations where development could impact on hen harrier.
9. **International Sites – Disturbance Construction:** For development close to Belfast Lough assess potential disturbance impacts so that, where necessary, measures can be put in place such as timing of construction and operations and use of Marine Mammals Observers during construction.
10. **International Sites – Disturbance Operation:** Address at development management, through assessment of potential effects and mitigation to avoid or reduce these.

Conclusions of the HRA

The appropriate assessments identified that, although effects are uncertain at this strategic stage, potential impacts cannot be ruled out for many plan proposals in the absence of protective measures. The evidence gathered and assessment undertaken enables us to conclude that, subject to included mitigation and the recommendations, the implementation of the draft Plan Strategy will not adversely affect the integrity of the sites listed above.

Next Steps

The HRA will be added to and finalised following public consultation and independent examination of the draft Plan Strategy, then published alongside the adopted Plan Strategy. Further information, where available, about international sites and their selection features, will be taken into account. Before finalising the HRA, relevant plans and projects will be reviewed to further assess potential in combination effects. The Habitats Regulations allows for the competent authority to obtain the opinion of the general public on the HRA if it considers it appropriate and therefore comments are also invited on this draft HRA. Details on how to comment can be found at the front of this report.

1 Antrim and Newtownabbey draft Plan Strategy

1.1 Antrim and Newtownabbey Local Development Plan

The purpose of the Antrim and Newtownabbey Local Development Plan, comprising the Plan Strategy and Local Policies Plan, is to inform the general public, statutory authorities, developers and other interested bodies of the policy framework and land use proposals that will implement the strategic objectives of the Regional Development Strategy and guide development decisions within Antrim and Newtownabbey Borough Council up to 2030.

The draft Plan Strategy for Antrim and Newtownabbey Local Development Plan (LDP) sets out how the area will change and grow over the period up to 2030. It:

1. Sets out the strategic objectives of Antrim and Newtownabbey Borough Council in relation to accommodating growth in the form of new homes and economic development activities to improve the quality of life and meet the needs of our growing population, whilst also protecting the environment.
2. Informs the general public, statutory authorities and developers of the policy framework against which all proposals will be assessed.
3. Provides certainty for developers by indicating what sort of development will (and will not) conform with the Plan.
4. Provides information on how we will monitor the Plan objectives to ensure that they are being achieved.

The Local Development Plan for Antrim and Newtownabbey supports and spatially represents our Community Plan vision:

Antrim and Newtownabbey is a resilient, socially responsible community where citizens enjoy a high quality of life.

This will be achieved by delivering against the following outcomes:

- Our citizens enjoy good health and wellbeing;
- Our citizens live in connected, safe, clean and vibrant places;
- Our citizens benefit from economic prosperity;
- Our citizens achieve their full potential; and
- Our vulnerable people are supported.

The Plan Strategy is the first stage of a two stage Local Development Plan for the Borough. The Local Development Plan will also consist of the Local Policies Plan (LPP), which is the second stage of the plan making process.

1.1.1 Preparation - the process and progress

The Plan Strategy is underpinned by an extensive evidence base combined with community engagement undertaken as part of the Preferred Options Paper (POP) consultation process. The POP was published in January 2017 and subject to 12 weeks of public consultation. Consideration and analysis of the representations received to the POP are set out in the Preferred Options Paper – Public Consultation Report, 2019. In light of the consultation process, revisions have been made to the approach to some of the preferred options contained in the POP. In addition studies to inform the Plan Strategy have provided further supporting evidence and where appropriate evidence papers have been updated.

1.1.2 Overview of Antrim and Newtownabbey Borough Council area

The LDP will apply to the entire Antrim and Newtownabbey Borough Council area which covers 728 square kilometres stretching from the shores of Lough Neagh in the west to the shores of Belfast Lough in the east. This is an area with an attractive and varied landscape centred on the South Antrim hills and the Six Mile Water valley, which is also endowed with a rich historic and archaeological heritage. Map 1 in Appendix 6 illustrates the council Area.

1.2 Local Development Plan - The Stages

1.2.1 Preferred Options Paper

The Preferred Options Paper (POP) published in January 2017 outlined the main issues and policy options to address them. It was accompanied by a Sustainability Appraisal Interim Report which was informed by HRA baseline information.

1.2.2 Plan Strategy

The draft Plan Strategy has taken account of representations on the POP, further evidence gathering and discussions with stakeholders and Elected Members. This draft HRA has been prepared to assess the potential impacts of the Plan Strategy on international sites.

1.2.3 Local Policies Plan

The Local Policies Plan (LPP) is the second stage of the LDP and identifies settlement limits, zonings and environmental designations and, where appropriate, introduces local policies or key site requirements for these zones and designations.

The legacy area plans that apply to our Borough are set out below. These plans have provided a baseline in terms of designations and zonings which have been considered in the development of the Council's LDP.

- Antrim Area Plan 1984-2001 and its alterations;
- Belfast Urban Area Plan 2001;
- Carrickfergus Area Plan 2001;
- Draft Newtownabbey Area Plan 2005; and
- Draft Belfast Metropolitan Area Plan 2015.

These existing plans, in effect, represent the LPP until such time as it has been prepared. Another draft HRA will be prepared to assess the potential impacts of the draft LPP on international sites.

1.2.4 Supplementary Planning Guidance

The draft Plan Strategy identifies that Supplementary Planning Guidance (SPGs) will be provided to support a number of Detailed Management Policies. These will largely relate to design of development or the Historic Environment Detailed Management Policies. If however any SPG is prepared which relates to international sites it will be screened, and if necessary assessed, for HRA.

1.2.5 Integrated Sustainability Appraisal

LDPs must also be subject to Strategic Environmental Assessment and to Sustainability Appraisal during their preparation with reports required at defined stages. The Sustainability Appraisal process both informed, and was informed by, the HRA process.

1.2.6 Structure of the draft Plan Strategy

The draft Plan Strategy is presented as a single volume comprising 14 sections. The first two sections introduce the plan and present the legal and policy context, profile of the Borough and key issues. The Plan Vision and Strategic Objectives are presented in Section 3, followed by Section 4 which sets out the Growth Strategy and Spatial Framework.

The further nine Strategic Policies (SPs), accompanied by Detailed Management (DM) Policies, follow in Sections 5 - 13. These DM Policies are grouped in three themes under which policy groups are presented. The layout of policies is as follows:

A Place of Economic Opportunity

- Section 5. Employment
- Section 6. Transportation and Infrastructure

A Vibrant and Liveable Place

- Section 7. Homes
- Section 8. Community Infrastructure
- Section 9. Placemaking and Good Design
- Section 10. Historic Environment

A Place with a Sustainable Future

- Section 11. Natural Heritage
- Section 12. Natural Resources
- Section 13. Environmental Resilience and Protection

For each section an introduction provides the context and sets out how it relates to the LDP Strategic Objectives and Community Plan Outcomes. We then present our strategic policy and explain why we have taken that approach. The DM Policies are introduced, each policy presented in a text box and, where necessary, amplification provided to provide further detail on how the policy will be applied.

Section 14 finally sets out how the plan will be monitored and reviewed.

2 Habitats Regulations Assessment: The Approach

2.1 Introduction

This Section describes the overall approach taken to carry out Habitats Regulations Assessment (HRA) for plans in general and how that approach has been applied to the draft Plan Strategy. The tools for this assessment were developed in accordance with the Directives and Habitats Regulations described below and informed by the Habitats Regulations Handbook and further reference material (Appendix 1).

In the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended), hereafter referred to as the Habitats Regulations, Regulation 43 requires an appropriate assessment to be undertaken of plans and projects which are likely to have a significant effect on an international site in Northern Ireland, either alone or in combination with other plans or projects. This is known as HRA and provides for assessment of the implications of a land use plan for European sites in view of their conservation objectives. European sites are defined in the Habitats Regulations as Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), candidate SACs and proposed SPAs. Ramsar sites are also assessed as a matter of policy and included in the term 'international sites' for this report.

The nature of the draft Plan Strategy is that it has the potential to have a significant effect on the selection features of some international sites therefore we are undertaking a HRA in our role as a competent authority. Shared Environmental Service (SES) based in Mid and East Antrim Borough Council provides support to Antrim and Newtownabbey Borough Council on HRAs for plans and projects. SES has therefore, in conjunction with the Council, prepared this draft HRA for the draft Plan Strategy to ensure the legal requirements of the Habitats Regulations are fully met.

The HRA will be finalised following public consultation and independent examination of the draft Plan Strategy and published alongside the adopted Plan Strategy. Regulation 43 (4) of the Habitats Regulations allows for the competent authority to obtain the opinion of the general public on the HRA if it considers it appropriate. Therefore comments are also invited on this HRA.

2.1.1 The Directives

These are Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora and Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (codified version). These Directives are referred to as the Habitats Directive and the Birds Directive respectively and together are called the Directives for the purposes of this report.

The overall aim of the Directives is to maintain or restore the favourable conservation status of habitats and species of community interest. Special Areas of Conservation and Special Protection Areas are designated to afford protection to habitats and species listed in the Habitats and Birds Directives. These designations form a suite of sites that are collectively known as the Natura 2000 network.

2.1.2 HRA – The Stages and Steps

HRA is normally described in four stages:

- Stage 1: Screening for likely significant effects;

- Stage 2: Appropriate Assessment and the Integrity Test;
- Stage 3: Alternative Solutions; and
- Stage 4: Imperative reasons of overriding public interest and compensatory measures.

The stages and steps for each are detailed in Appendix 3.

Stage 1 involves firstly deciding whether a plan or project should be subject to HRA (Step 1). If through the review there is found to be a requirement for HRA, those proposals with potential likely significant effects are identified along with the types of impact that they may have. Steps 2, identifying international sites, and 3, gathering information about those sites, help to identify the international sites which the plan may affect and compiles information about those sites.

Analysis of the information collated in steps 1 to 3 enables steps 4, discretionary discussion with the statutory nature conservation body, and 5, screening for likely significant effects on the selection features of international sites, to be carried out.

2.2 In combination and cumulative effects

Consideration must be given to any cumulative effects of proposals during plan preparation. These include potential cumulative effects within the plan and in combination effects with other relevant plans and projects. Local Development Plans are in preparation by neighbouring councils in Northern Ireland. Belfast City Council published its draft Plan Strategy for consultation in August 2018 and Mid Ulster District Council published its draft Plan Strategy for consultation in February 2019. Other strategies, such as those for infrastructure, could have an in combination effect. As the Plan Strategy is scheduled to be adopted in 2021 over 18 months will have elapsed from this draft HRA. Relevant plans and projects will therefore need to be reviewed before the HRA is finalised to further assess in combination effects.

2.3 Integrating HRA with Plan Preparation

HRA is an iterative process carried out in parallel with plan preparation. The HRA will be updated in line with knowledge of plan effects and any changes or further information relating to international sites and their features. SES provided HRA baseline information during preparation of the POP.

The policies proposed within the draft Plan Strategy have been assessed to determine whether any of the potential impacts could materialise as a result of the draft Plan Strategy. This draft HRA will be published for consultation with the draft Plan Strategy. A draft HRA will also be published for consultation with the draft Local Policies Plan. A final HRA will be published when each of these are adopted.

2.4 Assessment Assumptions and Limitations

Strategic Planning Policy Statement (SPPS) for Northern Ireland

The SPPS, published in September 2015, sets out regional planning policies for securing the orderly and consistent development of land in Northern Ireland under the reformed two-tier planning system. The provisions of the SPPS must be taken into account in the preparation of LDPs and are material to all decisions on individual planning applications and appeals. Furthering sustainable development underpins the SPPS and the five core planning principles include 'Preserving and improving the

built and natural environment'. The SPPS includes regional strategic objectives for natural heritage that are general in nature, for example:

- Protect, conserve, enhance and restore the abundance, quality, diversity and distinctiveness of the region's natural heritage; and
- Take actions to reduce our carbon footprint and facilitate adaptation to climate change.

There are however several SPPS policies that must be taken into account in the determination of planning applications and which specifically apply to international Designations as detailed in paragraphs 6.173 – 6.178 in Appendix 3

It is therefore assumed that these policies can be taken as applying to the draft Plan Strategy and the LDP as a whole and that they are material to all decisions on individual planning applications. Policy DM 37 in the draft Plan Strategy reflects the SPPS.

Previous Plans

The previous area plans, include a variety of spatial designations, some of which will be retained until the LPP or may be retained for the life of this LDP.

1. Antrim Area Plan 1984-2001 and its alterations;
2. Belfast Urban Area Plan 2001;
3. Carrickfergus Area Plan 2001;
4. Draft Newtownabbey Area Plan 2005;
5. Draft Belfast Metropolitan Area Plan 2015.

Other Regulations

An assumption is made that existing regulations and legislation that are independent of planning are implemented and enforced by the relevant authority. These include Water Order discharge consents, abstraction licensing, marine licensing and Pollution Prevention Control permits for which HRA may also be required. Major development would normally be subject to Environmental Impact Assessment in addition to HRA. NI Water is responsible for public wastewater treatment works and is a competent authority. It must approve all connections to mains sewerage and will not do so where there is insufficient network or treatment capacity.

HRA at other Stages of Plan Making and Development Management

The LPP will be subject to HRA, at which stage revised or new zonings and local policies will be reviewed. The need for HRA will also be considered on a case by case basis at the development management stage and assessment carried out where required.

Consideration of CJEU Case C323/17 (People over Wind & Sweetman)

On 12 April 2018, the Court of Justice of the European Union (CJEU) issued a judgment, *Case C323/17 (People over Wind & Sweetman)*, which ruled that Article 6(3) of the Habitats Directive must be interpreted as meaning that mitigation measures, referred to in the judgment as measures which are intended to avoid or reduce effects, should be assessed within the framework of an appropriate assessment. It is therefore no longer permissible to take account of measures intended to avoid or reduce the harmful effects of the plan or project on an international site at the Stage 1 test of likely significance.

In light of this, a cautious approach has been taken to screening the plan for potential impacts. Stage 1 Assessment does consider essential features and characteristics of the plan; it also takes account of regional and strategic context and other regulatory controls that will apply to development under the plan. However measures envisaged to avoid or prevent what might otherwise have been adverse effects on the integrity of international sites are not taken into account in Stage 1 and instead will be assessed at Stage 2 appropriate assessment. Unless there is certainty that a site can be screened out at Stage 1, assessments will be progressed to Stage 2 appropriate assessment for those features for which there may be a likely significant effect. Incorporated and additional measures to avoid or reduce significant effects are assessed at Stage 2 appropriate assessment.

Climate Change

Northern Ireland faces changes to its climate with the prospect of hotter, drier summers, warmer winters and more frequent extreme weather events. The Northern Ireland Climate Change Adaptation Programme was published in January 2014. This contains the Northern Ireland Executive's response to the risks and opportunities identified in the Climate Change Risk Assessment for Northern Ireland (published January 2012) as part of the overall UK Climate Change Risk Assessment. The Adaptation Programme provides the strategic objectives in relation to adaptation to climate change, the proposals and policies by which each department will meet these objectives, and the timescales associated with the proposals and policies identified in the period up to 2019. The second Northern Ireland Climate Change Adaptation Programme (NICCAP) (2019-2024) will provide local level evidence with targeted local adaptation information.

The draft Plan Strategy reflects regional policy on climate change and refers to climate change in its vision:

Development will be sustainable and of high quality and will address the ongoing challenges of climate change.

Climate change is specifically addressed in Strategic Objective 12:

Ensure the responsible use of land and natural resources and promote sustainable energy production to mitigate and adapt to climate change.

SP 9 supports the development of a diverse range of renewable energy technologies in appropriate locations and the total amount of energy from renewable sources is one of the indicators for monitoring. Policy DM 45 details how renewable energy will be accommodated and indicates appropriate locations.

SP10 and Policy DM 47 The Flood Risk Policies avoid inappropriate development in locations vulnerable to flood risk in the future as a consequence of climate change. The draft Plan Strategy also seeks to create the conditions to promote use of public transport and reduce reliance on the private car where it is feasible to do so addressing this in SP 3 and with a specific Policy DM 12.

It is acknowledged that increased levels of development that will arise from the plan have the potential to add to anthropogenic drivers of climate change. However the causes of climate change are global, much of the action required must take place at national and international levels, and it is not within the scope of the LDP to bring about levels of change such that they will have an evident impact on climate change as it affects international sites. Climate change is therefore not assessed as an impact that the draft Plan Strategy directly contributes to.

The conservation objectives for SPAs do not refer to climate change. Those for SACs address climate change as follows: 'Northern Ireland faces changes to its climate over the next century. Indications are that we will face hotter, drier summers, warmer winters and more frequent extreme weather events.' The action recommended is 'When developing SAC management plans, the likely future impacts of climate change should be considered and appropriate changes made.' Therefore, while climate change is acknowledged, specific measures have not been addressed. If future site specific evidence and management plans identify climate change adaptation measures these will be taken into account when this HRA is finalised to assess whether any draft Plan Strategy policies inhibit the potential of selection features to adapt to climate change. This will also be considered at LPP stage.

Strategic Nature and Timescale of draft Plan Strategy

Some approaches represent a continuation of a previous policy, however each proposal was considered on its own merits in the assessment. Many of the proposals affect multiple locations or locations which have not been defined. This makes it hard to determine the significance of overall effects. This meant that, while many proposals were found to be too general to assess, potential minor or significant effects cannot be ruled out for some proposals at this stage.

The assessment of strategic plans can present a challenge in terms of deciding what effects may come about as a result of the plan and which cannot occur due to other strategic and regulatory requirements with which the LDP and development management decisions must comply. The view could be taken that, given that Policy DM 37 is included to meet the requirements of the SPPS, and that all planning applications must comply with the Habitats Regulations, then the draft Plan Strategy cannot result in an adverse effect on the integrity of any international site. To terminate the HRA on this basis would miss the opportunity to draw attention to the extent of international sites in or connected to the Council area. Deferring HRA to development management stage would also fail to consider cumulative impacts within the plan or in combination effects with other plans and projects.

As the Plan Strategy is scheduled to be adopted in 2021 over 18 months will have elapsed from this draft HRA. New information about international sites, selection features and plans and projects to be considered in combination will therefore need to be incorporated. The HRA will be reviewed before finalisation to ensure that it is proportionate while also fully meeting the requirements of the Habitats Regulations, Directives and related case law. It will be amended where necessary to ensure that it is up to date before it is finalised.

Brexit

The Northern Ireland Assembly produced a paper on 'Northern Ireland's environment – Background and Potential 'Brexit' Considerations' (September 2016) which states, 'A complete departure from the EU may give the UK Government more scope and control over environmental objectives. Whether this would involve a relaxation, tightening, or continuation of environmental standards remains to be seen depending on requirements to be retained by International/global agreements and priorities and negotiations between the EU and UK¹. More recent reviews and

¹ <http://www.niassembly.gov.uk/assembly-business/committees/agriculture-environment-and-rural-affairs/research-papers-2016/northern-irelands-environment---background-and-potential-brexit-considerations/>

developments mean that this uncertainty about the effects of Brexit remain. As the Habitats and Birds Directives requirements have been incorporated in domestic regulations, it is assumed that the procedures for protection of European sites will continue to have effect. It is not clear however what the influence of future European case law on interpretation of the Habitats Regulations will be or how long it will have a bearing on domestic legislation.

3 Screening of Plan and Potential Sites

Step 1: Deciding whether a plan should be subject to HRA

The EC Guidance (referenced in Appendix 1) does not specify the scope of a plan which should be subject to the Directive and related transposing legislation but it does state that the key consideration is whether it is likely to have a significant effect. Guidance on application of HRA (referenced in Appendix 1) recommends reviewing proposals against a number of criteria. These may lead to plans being exempted, eliminated or excluded from the need for HRA. The criteria are explained in more detail in Appendix 3.

The draft Plan Strategy does not directly relate to the management of any international site therefore it cannot be exempted from the requirement of the Habitats Regulations. The draft Plan Strategy is part of the Local Development Plan and clearly represents a strategic and local development plan therefore HRA is required on this account. The outcome of this step is that the draft Plan Strategy requires HRA as a strategic and local development plan.

Step 2: Identifying the international sites that should be considered in the assessment

Baseline information on international sites that are connected with the Council area was compiled for the POP. This included sites within or adjacent to the Council area, with an ecological connection such as a hydrological link, those within 15km as a precautionary approach and those that are connected by infrastructure. These pathways are discussed further in Section 4. This baseline was reviewed and updated to reflect any changes in designations resulting in a 'long-list' of 28 sites to be considered as listed in Table 1.

Table 1: Long-list of Sites Connected with Council Area

- | | |
|--------------------------------|------------------------------------|
| • Antrim Hills SPA | • Lough Neagh and Lough Beg Ramsar |
| • Ballynahone Bog Ramsar | • Lough Neagh and Lough Beg SPA |
| • Ballynahone Bog SAC | • Montiagh's Moss SAC |
| • Belfast Lough Open Water SPA | • Murlough SAC |
| • Belfast Lough Ramsar | • North Channel SAC |
| • Belfast Lough SPA | • Outer Ards Ramsar |
| • Copeland Islands SPA | • Outer Ards SPA |
| • Curran Bog SAC | • Peatlands Park SAC |
| • Dead Island Bog SAC | • Rea's Wood and Farr's Bay SAC |
| • East Coast (NI) Marine pSPA | • Skerries and Causeway SAC |
| • Garron Plateau Ramsar | • Strangford Lough Ramsar |
| • Garron Plateau SAC | • Strangford Lough SPA |
| • Larne Lough Ramsar | • The Maidens SAC |
| • Larne Lough SPA | • Wolf Island Bog SAC |

Step 3: Gathering information about the international sites

Information for each site on the long-list identified at Step 2 was reviewed to assess location relative to the plan area, pathways, qualifying interests, conservation objectives and potential threats to site integrity.

Step 4: Discretionary discussions on the method and scope of the appraisal

The Statutory Nature Conservation Body is represented by the Northern Ireland Environment Agency (NIEA) of the Department of Agriculture, the Environment and

Rural Affairs (DAERA). DAERA has already provided input in relation to the Strategic Environmental Assessment (SEA) for the draft Plan Strategy and conservation objectives are published on its website therefore it was not considered necessary to formally consult DAERA further at this stage. SES did however meet DAERA staff to seek feedback on its approach to HRA for draft Plan Strategies and to identify further information that DAERA may hold which is not in the public domain. As a result of this DAERA gave advice on the SES approach. DAERA also provided a spreadsheet on Condition of Features in Areas of Special Scientific Interest (ASSIs) and Natura 2000 sites (N2Ks) 2017 and provided updates where available in February 2019. Before we finalise the HRA DAERA will be asked for any more up to date information on international sites and selection features.

4 Screening draft Plan Strategy for Likely Significant Effects

4.1 Overview

This Section firstly provides an overview of the review of the plan proposals followed by a discussion of the findings for each strategic policy group. A likely significant effect is one that cannot be ruled out on the basis of objective information. Likely in this context means there is a risk or possibility that an effect will be significant. An effect is significant if it would undermine a site's conservation objectives. The potential impacts that could arise as a result of the plan are identified. Finally the connection between the draft Plan Strategy and the sites is assessed to determine those sites for which there could be a likely significant effect.

Step 5: Screening the draft / proposed plan for likely significant effects

All of the Plan Strategy proposals were reviewed, from the Plan Vision and Strategic Objectives through the Growth Strategy and Spatial Framework to the nine Strategic Policies and related Detailed Management (DM) Policies, against the following screening categories and the findings are recorded in Appendix 5. In some cases more than one category was thought to apply.

- General Policy Statements
- Plans or projects referred to but not proposed
- No likely significant effect
- Proposals too general to assess
- Potential minor effects
- Potential significant effects

This found that some proposals, for example the Vision and the Strategic Objectives, are general policy statements which state a direction without details of how they will be delivered. Some Detailed Management Policies are such that they could not have a likely significant effect on international sites, for example some relating to urban design and public safety or protecting assets such as open space and the historic environment. Some of the Strategic Policies are too general to assess as it is not known where they might be applied and whether they could have an effect. Likely significant effects could not be ruled out for the remaining proposals.

4.1.1 Vision and Strategic Objectives (Section 3)

The Vision is an overall aspiration for the Borough which acknowledges the importance of our natural environment. Delivery of the Vision is through the Strategic Objectives, Growth Strategy and Spatial Framework, Strategic Policies and Detailed Management Policies. The Strategic Objectives such as 'Promote sustainable growth by managing development in our settlements and countryside to meet the needs of all our citizens both urban and rural' all represent general policy statements which state a direction without details of how they will be delivered.

4.1.2 Growth Strategy and Spatial Framework (Section 4)

The Growth Strategy and Spatial Framework provides for growth therefore there is potential for development pressures affecting international sites. Strategic Policy 1: Sustainable Development underpins the remaining Strategic Policies and it has been screened in three parts. SP1a: Sustainable Development & Development Impact

Assessments, is a presumption in favour of development although the overriding principle is that development should be sustainable. SP1.4 identifies that assessments may be required in support of applications. These may include shadow HRAs or assessments such as air quality modelling and drainage which can inform HRAs.

SP1b sets out the Spatial Growth Strategy and the Places of our Borough. The historic development of settlements, such as Antrim and Metropolitan Newtownabbey, mean that some are closely related to international sites. Depending on the location of development in the countryside there is potential for pathways for effects on international sites.

SP1c Delivering Sustainable Outcomes provides for mechanisms to guarantee measures will be implemented, some of which such as sustainable drainage may be protective of international sites. Decommissioning or restoration post development could have likely significant effects.

4.1.3 A PLACE OF ECONOMIC OPPORTUNITY

Strategic Policy 2 – Employment

This includes employment lands, agricultural development, Strategic Employment Locations, Local Employment Sites and Sustainable Tourism therefore there are potential effects from this strategic policy. Sustainable Tourism highlights some locations, including Shane's Castle and Lough Neagh, which include international sites. With the exception of DM 3, which seeks to avoid conflicting land use, there is potential for likely significant effects on international sites from all the other DM policies which support delivery of this Strategic Policy.

Strategic Policy 3 - Transportation & Infrastructure

This strategic policy recommends the need for road improvements on the A26 and A57 however these would be delivered through Department for Infrastructure (DfI) Roads. Local road schemes in support of development could have potential impacts if there are pathways to international sites. It is supportive of proposals necessary to maintain, improve or expand existing operational facilities at Belfast International Airport to meet anticipated growth needs and associated car parking. This policy has been screened in for consideration. With the exception of DM 11, which constrains where access is permitted to protected routes in the interests of safety, there is potential for effects on international sites from all the other DM policies which support delivery of this Strategic Policy.

4.1.4 A VIBRANT AND LIVEABLE PLACE

Strategic Policy 4 - Homes

This will lead to growth in homes varying from around 1% in villages and hamlets, through 7.7% in the countryside, to 28.2% in Antrim and 40% in Metropolitan Newtownabbey. This can put pressure on water supply and waste treatment capacity. Depending on the location of development there is potential for effects arising from the implementation of most of the related DM policies.

Strategic Policy 5 - Community Infrastructure

This relates to community infrastructure from health and education through to recreation and open space and delivery is considered under the DMs. DM 23 seeks to protect open space and will have no likely significant effect; DM 24 could have a potential impact depending on the location of facilities.

Strategic Policy 6 - Placemaking and Good Design

This strategic policy is too general to assess therefore delivery is considered under the DMs. The DMs all relate to how rather than where development takes place therefore they cannot have a likely significant effect.

Strategic Policy 7 - Historic Environment

This strategic policy is too general to assess therefore delivery is considered under the DMs. The DMs all relate to how rather than where development takes place therefore they cannot have a likely significant effect.

4.1.5 A PLACE WITH A SUSTAINABLE FUTURE

Strategic Policy 8 - Natural Heritage

This implements Strategic Objective 11 'Promote biodiversity and conserve the natural assets of our countryside, coast and loughs.' It is protective of the natural environment including international sites. It allows for identifying Sites of Local Nature Conservation Importance and Local Landscape Policy Areas in the Local Policies Plan which may have a protective effect depending on location.

DM 37.1 - 37.3 only enables development that is not likely to have a significant effect, or will have not adverse effect on site integrity, or, in exceptional circumstances meets the requirements of the Directives and Habitats Regulations. The policy is protective, implementation is detailed in the amplification 11.13 -11.18. DM 37 to 39 and DM 42 all provide additional protection to natural heritage, which may, where it relates to habitats or species that are also site selection features, provide additional protection to international sites. The policies do not promote development. However, as this policy is explicitly to protect international sites, it must be screened in at this stage.

DM 40 largely constrains development in land adjacent to Lough Neagh and Lough Beg and Belfast Lough and Local Landscape Policy Areas. It allows however for low intensity recreational use or tourism proposals; uses directly related to agriculture or forestry; proposals related to geothermal energy or the extraction of regionally important minerals within the Lough Neagh and Lough Beg Strategic Landscape Policy Area. These exceptions may enable development that could have likely significant effects. DM 41 constrains coastal development to exceptional circumstances however does not totally exclude it so impacts cannot be ruled out.

Strategic Policy 9 - Natural Resources

This provides a framework for protection and use of mineral reserves and for renewable energy. SP 9.2 includes '(b) ... a presumption against unconventional hydrocarbon extraction, until such times as there is sufficient and robust evidence regarding all the potential environmental impacts of such extraction; (c) ... a presumption against minerals development that would affect the following environmentally sensitive sites / designations unless it can be demonstrated, that there is a regional need for the proposed mineral that outweighs the importance of the site: ... Sites of Nature Conservation Importance (International, National and Local sites).' It therefore does not exclude use of such resources in the future.

DM 43 Enables minerals development therefore potential for impacts depending on location, scale and nature of development. DM 45 allows for renewable energy development therefore may have an impact depending on scale, nature and location. However international and National Sites of Nature Conservation

Importance are identified as 'Group 2: Areas of significant protection' in which '... proposals will only be appropriate in circumstances where any significant effects on the amenity and qualities of these areas can be substantially overcome by siting, design and other forms of mitigation.' DM 44 constrains development of a potential mineral reserve however use of that reserve is not allowed under this policy.

Strategic Policy 10 - Environmental Resilience and Protection

This relates to environmental resilience in relation to climate change, flood risk, environmental protection and waste management. Overall it seeks to be protective of the environment. Many of the DMs that constrain development will have no likely significant effect and therefore were screened out. DM 46 is largely protective through constraining development, including storage of hazardous substances, however it allows for some forms of development in floodplains including mineral extraction and recreational facilities so it was screened in.

4.2 Potential Impacts of Development

Potential development impacts are listed in Table 2. The left-hand column describes generic impacts and the right-hand column discusses if and how each may arise from the draft Plan Strategy. To assist further assessment the findings of Table 2 were then grouped into seven main categories of impacts as follows, and as indicated in the table:

- **Habitat Loss (HL):** Direct habitat loss in an international site or loss of supporting habitat such as fields used by whooper swans.
- **Direct Disturbance (DD):** This includes noise, vibration or light disturbance during construction or operation, or the presence of people on land developed for recreational use.
- **Indirect Disturbance (ID):** Disturbance beyond development sites arising from increased levels of recreation including water sports.
- **Introduced Species (IS):** The introduction of invasive species, non-native, competitive or predatory species or of diseases of key species.
- **Aerial Emissions (AE):** Aerial emissions may arise from industry, transport or agricultural intensification.
- **Water Pollution (WP):** Deterioration of, or failure to improve, water quality due to direct runoff of pollutants, including fuel, chemicals and sediments, from development during construction or operation or indirect pollution due to the inadequacy of wastewater treatment facilities.
- **Hydrological Change (HC):** Alteration of the hydrology of sensitive habitats and species by either increasing or decreasing runoff or water percolation into aquifers.

Table 2: Potential Development Impacts in Relation to International Sites

Potential Impacts	Activities arising from draft Plan Strategy
Loss, fragmentation, damage of habitats and / or species	
Construction activities associated with the LDP could lead to the loss, fragmentation (or obstruction of movement) or damage of habitats and / or species through:	
<ul style="list-style-type: none"> • Direct land take and / or land clearance and the use of machinery/materials. (HL) 	Due to the presence of international sites in or adjacent to the council there is potential for development pressure on sites. This could include direct land take or indirect effects through changes to coastal processes on Belfast Lough or Lough Neagh.
<ul style="list-style-type: none"> • Direct and indirect impacts resulting from the construction and operation of built development and required infrastructure. (HL) 	
<ul style="list-style-type: none"> • Impacts caused during repair and maintenance activities for built development and required infrastructure. (HL) 	This could arise during redevelopment of buildings or facilities within international sites.
<ul style="list-style-type: none"> • Direct impacts associated with mineral development in the plan area. (HL) 	Potential impact should this be permitted within an international site.
<ul style="list-style-type: none"> • Removal, fragmentation or physical changes to important connectivity features could create barrier effects to species, alter habitat availability or ecological functioning or result in changes in breeding, roosting, commuting and foraging behaviour. (HL) 	Potential loss of habitat for selection features beyond international sites for example swan fields.
Disturbance: physical, noise, lighting	
Noise or activity during construction and operational activities could have adverse impacts on sensitive species (marine mammals and birds in particular). (DD)	Potential noise or vibration disturbance to site selection features during construction from e.g. piling.
Increased lighting from construction or additional built development could: create barrier effects to species; result in changes in species breeding, roosting, commuting and foraging behaviour; or increase predation. (DD)	Potential light disturbance from e.g. floodlighting
Biological Disturbance: invasive species, human disturbance	
Sensitive habitats and species may experience adverse impacts from the introduction of invasive species, non-native, competitive or predatory species through construction activities and associated machinery, movement of soils and waste or from garden escapes. (IS)	New development has the potential to introduce invasive or non-native species or cause their spread to other sites.
Increased human activity (including recreation; increase in pet ownership; increased incidence in fires) close to sensitive habitats and species may cause disturbance that could impact negatively on these features and lead to displacement of sensitive species from certain locations. (ID)	Potential for disturbance during operation, for example as a result of facilitating or promoting recreational activity.
Contamination of land	
Waste arising from the operation of developments associated with the LDP could cause contamination of land which could have a direct detrimental impact on sensitive habitats	Some development may generate waste as a by product of construction or operation.

Potential Impacts	Activities arising from draft Plan Strategy
or species or indirect impacts if subsequent emissions to water occur. (WP)	
Emissions by air	
The construction and operation of developments associated with the LDP (in particular industrial developments) have the potential to generate chemical and dust emissions and could make a contribution to acid rain or nutrient deposition resulting in significant adverse impacts to animals and sensitive habitats for example they could cause localised smothering of vegetation or potential health issues in animals e.g. birds. (AE)	Aerial emissions primarily arise from industry, transport and agricultural intensification therefore the potential for aerial pollution cannot be excluded. Aerial emissions may be subject to and addressed by other regulations however they are also a material consideration for development management.
Increased traffic generation could lead to increased air pollution and greenhouse gas emissions which could have localized impacts on sensitive habitats or species. (AE)	Although active travel and public transport are promoted where feasible, population and economic growth are likely to drive a net increase in traffic. This has potential for impacts for international sites and features that are close to main roads.
Emissions by water and changes to hydrology	
There is potential for an increased transport of chemical contaminants reaching the aquatic environment during the construction and operation of development associated with the LDP. This could range from transportation of fuels to cleaning or wastewater treatment materials and associated drainage and discharges into watercourses. Changes to water quality can have harmful effects on fish, invertebrates, and vegetation, e.g. as a result of lowered oxygen levels. (WP)	Construction activities have the potential to create pathways for pollution. The historical use of brownfield land and emphasis on redevelopment means that there is a risk of release of contaminants during construction which could cause pollution to habitats and species. There are standard approaches that can be required by planning conditions for assessing the risk of contamination and carrying out remediation. Discharges to the water environment during construction and/or operation will be subject to consent under other regulations.
Surface run off and sediment release from construction works and operational activities associated with the LDP can increase sediment deposition and turbidity within aquatic systems. This can adversely impact on associated wildlife by causing shading effects that can inhibit plant and algal growth and smother organisms thereby limiting productivity and survival. (WP)	A major sediment release could have a conceivable impact on adjacent wetland habitats or other site selection features.
Water abstraction from streams or lakes required for construction and operation of developments associated with the LDP could have physical impacts on water levels, fish species at intakes, affect populations of fish or alter the configuration or availability of breeding gravels. (HC)	There is evidence that water supply will be sufficient for the life of the plan therefore there is not predicted to be a need to expand water supply sources to support proposed development. Any development that requires non-mains water could have a localised effect

Potential Impacts	Activities arising from draft Plan Strategy
	and will require an abstraction licence which will be subject to HRA.
Construction and operation of development associated with the LDP could alter the hydrology of sensitive habitats and species by either increasing or decreasing runoff or water percolation into aquifers. (HC)	Some international sites depend on groundwater therefore there is potential for impacts on their hydrology.
Increased demands on wastewater treatment works or for septic tanks could lead to increased nutrient enrichment of waterbodies which could change water quality and increase eutrophication. This in turn could have a harmful effect on the ecological functioning of these systems. (WP)	There is insufficient infrastructure or network capacity to treat wastewater in some settlements which will be a constraint on development. Alternatives to mains sewerage will have to be assessed by the appropriate competent authority.

All of the proposals that were screened in, as recorded in Appendix 5, were reviewed in relation to Table 2. This confirmed that the seven categories of impacts described above account for all of the impacts that could arise from the draft Plan Strategy. These are further discussed in Sections 5 and 7 and recommendations on avoiding or reducing these impacts included.

4.3 Pathways to International Sites

In identifying the long-list of international sites to be considered, sites within or adjacent to the plan area, sites connected by ecological pathways, sites within 15km and sites connected by infrastructure were included. These are illustrated in Maps 2 - 4 in Appendix 6. This section reviews the pathways between the plan area and those international sites in more detail, taking account of the plan proposals, potential impacts identified above and site information.

Sites within or adjacent

These are international sites which are within or directly adjacent to the plan area. The only international site entirely within our council area is Rea's Wood and Farr's Bay SAC at the North East of Lough Neagh. The landward boundary of Lough Neagh and Lough Beg and Belfast Lough SPAs and Ramsar sites overlaps our council area. It also includes open water in Lough Neagh and Lough Beg and the intertidal area in Belfast Lough. Belfast Lough Open Water SPA is adjacent to the council area.

Ecological pathways

Ecological pathways include connections by ecological corridors such as river systems; hydrological links between the Council area and peatland or wetland sites; and supporting habitats for species including whooper swan and hen harrier. All sites entirely or partly within the council area have an ecological link with adjacent land.

The primary ecological pathway is hydrological through watercourses, lakes and estuaries. Map 5 in Appendix 6 illustrates the major river basins within our Borough. The majority of the Borough drains into the Neagh Bann basin. Metropolitan Newtownabbey and its surrounds drain into Belfast Lough.

Within 15km

This screening criteria is a very precautionary one which allows consideration of all sites within 15km of the Council area. DEFRA/EPA Guidance on air emission risk assessment² was referred to in the absence of local guidance on screening distances. That guidance advises that projects should consider European sites within 15km for coal or oil fired power stations and 10km for other developments that cause potentially polluting aerial emissions.

Infrastructural connection

Infrastructural connectivity is related to the potential linkage of sites to the Council area by infrastructure services such as water abstraction or wastewater discharges. Infrastructure can also include facilities that enable public access such as footpaths and boat ramps.

It is the responsibility of NI Water to ensure that a safe supply of drinking water for the population is maintained. The Borough receives its potable water from the following Water Treatment Works (WTW): Dunore Point WTW; Killylane WTW; Dungonnell WTW; and Dorisland WTW with the majority being supplied from Lough Neagh. There is therefore an infrastructure connection with Lough Neagh and Lough Beg SPA and Ramsar site. Killylane and Dungonnell are both within the Antrim Hills SPA therefore there is also an infrastructural connection to this site. These existing installations are expected to be sufficient to supply the Borough throughout the LDP period. The lack of water supply is not considered to be a likely constraint on development.

In the Borough there are six Wastewater treatment works (WwTW) located at: Antrim, Ballyclare, Cranfield, Moneyglass, Roughfort and Whitehouse. These discharge to a number of points within the wider Lough Neagh catchment and also to Belfast Lough through Whitehouse WwTW. More detail on water supply and treatment for the Borough can be found in Evidence Paper 11: Public Utilities 2019.

4.3.1 Outcome of Stage 1

On review of the long-list of international sites, it was found that 8 of the 28 sites identified in the long-list could be eliminated because they are beyond the distance where aerial emissions could have an effect and have no other connection with the plan area which could result in a conceivable impact. These sites, listed in Table 3, are eliminated from the need for further assessment. As there is no pathway for effects on these sites there is no need to consider in combination effects on them from other projects or plans.

² <https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit#screening-for-protected-conservation-areas>

Table 3: International Sites Eliminated from Further Assessment

Site Name	Connection with Council Area						Screening Comment
	Within / Adjacent	Ecological	By Infra-structure	Within 15km	Within 10km	Distance (km)	
Murlough SAC		•				76	More than 50km away along the coast and beyond screening distance for common (harbour) seal
Ballynahone Bog SAC				•		11.5	Outside council area and too far away for impacts from aerial emissions, no other pathway.
Ballynahone Bog Ramsar				•		11.5	
Garron Plateau SAC				•		14.3	
Garron Plateau Ramsar				•		14.3	
Dead Island Bog SAC				•		12	
Wolf Island Bog SAC				•		14.2	
Peatlands Park SAC				•		13.7	

The screening of all sites found that significant effects could not be entirely ruled out for the remaining 20 sites. These sites all have a pathway to the plan area. Some, such as Larne Lough SPA and Ramsar, have multiple designations. Table 4 provides an overview of the sites screened in, the features for which they are designated, the pathways through which there are potential impacts on sites and features, and what those potential impacts could be.

Table 4: International sites and Features to be Further Assessed and Potential Impacts

Site Name	Pathways	Features	Habitat Loss	Direct Disturbance	Indirect Disturbance	Introduced Species	Aerial Emissions	Water Pollution	Hydrological Change
Antrim Hills SPA	Direct, Aerial, Disturbance	Hen Harrier, Merlin	•	•	•		•		
Belfast Lough Open Water SPA	Hydrological, Aerial, Disturbance	Wintering populations of Great Crested Grebe			•	•	•	•	
Belfast Lough Ramsar	Direct, Aerial, Hydrological, Disturbance	Common Redshank , Black-tailed Godwit	•	•	•	•	•	•	•
Belfast Lough SPA	Direct, Aerial, Hydrological, Disturbance	Wintering Redshank, Black-tailed Godwit and Bar-tailed Godwit and Breeding Common Tern and Arctic Tern.	•	•	•	•	•	•	•
Copeland Islands SPA	Hydrological, Disturbance	Breeding Arctic Tern and Manx Shearwater	•		•			•	
Curran Bog SAC	Aerial	Active raised bog; Degraded raised bog still capable of regeneration					•		
East Coast (Northern Ireland) Marine pSPA	Hydrological, Disturbance	Wintering populations of Great Crested Grebe, Red-throated Diver and Eider Duck. Rafting Manx Shearwater and foraging Sandwich, Common and Arctic Tern in the breeding season originating from adjoining tern colonies.	•		•			•	
Larne Lough Ramsar	Hydrological, Disturbance	Regularly supports internationally important numbers of light-bellied Brent geese in winter. Supports an important assemblage of vulnerable and endangered Irish Red Data Book bird species.	•		•			•	
Larne Lough SPA	Hydrological, Disturbance	Breeding Common Tern, Roseate Tern, Sandwich Tern and Mediterranean Gull	•		•			•	
Lough Neagh and Lough Beg Ramsar	Direct, Aerial Hydrological, Disturbance,	Wetlands, rare plant and animal species, waterfowl, waders, pollan	•	•	•	•	•	•	•

Site Name	Pathways	Features	Habitat Loss	Direct Disturbance	Indirect Disturbance	Introduced Species	Aerial Emissions	Water Pollution	Hydrological Change
Lough Neagh and Lough Beg SPA	Direct, Aerial Hydrological, Disturbance,	Breeding Common tern and Great Crested Grebe, wintering waterfowl, waders	•	•	•	•	•	•	•
Montiagh's Moss SAC	Aerial	Marsh Fritillary Butterfly					•		
North Channel SAC	Hydrological, Disturbance	Harbour porpoise	•	•	•		•	•	
Outer Ards Ramsar	Hydrological, Disturbance	Wintering Golden Plover, Light-bellied Brent Goose, Ringed Plover, Turnstone	•		•			•	
Outer Ards SPA	Hydrological, Disturbance	Breeding Arctic Tern; Wintering Golden Plover, Light-bellied Brent Goose, Ringed Plover, Turnstone	•		•			•	
Rea's Wood and Farr's Bay SAC	Direct, Aerial Hydrological, Disturbance,	Alluvial forests with alder and ash	•	•	•	•	•	•	•
Skerries and Causeway SAC	Hydrological, Disturbance	Harbour porpoise	•	•	•		•	•	
Strangford Lough Ramsar	Hydrological, Disturbance	Wetland features including fringing saltmarsh; vulnerable and endangered wetland plants and animals including marine sponges and sea urchins; Eel grass beds on the mudflats; waterfowl, wintering and breeding birds including those listed for the SPA.	•		•			•	
Strangford Lough SPA	Hydrological, Disturbance	Breeding Arctic Tern, Common Tern and Sandwich Tern; Wintering Bar-tailed Godwit	•		•			•	
The Maidens SAC	Hydrological, Disturbance	Grey Seal	•	•	•		•	•	

5 Protective Measures in the draft Plan Strategy

5.1.1 Introduction

Environmental considerations and constraints have already shaped the draft Plan Strategy through consideration of baseline information on international sites at the POP and through the process of sustainability appraisal. Measures incorporated in the draft Plan Strategy are described here. Recommendations for the adopted Plan Strategy and subsequent Local Policies Plan (LPP) and development management stages are included in Section 7.

Case law requires that mitigation is not considered at screening and that it should be considered through appropriate assessment. None of the policies have been screened out on the basis of mitigation. The review of the plan proposals in Appendix 5 includes the protective measures detailed in policies or in the amplification in support of them. The protective measures that have been incorporated in the draft Plan Strategy, as detailed in Appendix 5, are summarized here. This demonstrates those policies that directly or indirectly protect international sites. The protective measures and recommendations will help ensure that prospective applicants are aware of potential constraints and planners can consider impacts of designations at LPP and of individual planning applications at development management.

5.1.2 Strategic Objectives

The plan Strategic Objectives include one to protect the natural environment:

Promote biodiversity and conserve the natural assets of our countryside, coast and loughs.

5.1.3 Growth Strategy and Spatial Planning Framework

Strategic Policy 1: Sustainable Development seeks to manage growth of settlements and in the countryside in a sustainable manner and specified at SP 1.3:

The Council will also be guided by the precautionary principle that where there are significant risks of damage to the environment, its protection will be paramount, unless it has been adequately demonstrated that there are imperative reasons of overriding public interest.

5.1.4 Implementation of the Plan Strategy

The draft Plan Strategy makes clear in 'How to use this document' that a number of the policies apply as appropriate to all development. This means that policy DM 37, that explicitly protects international sites, applies to all development.

Developers should note that under the 'plan led' system introduced by the Planning (NI) Act 2011, the Local Development Plan is the primary consideration for decision making on all new development schemes. Proposals will therefore be required to accord with the provisions of the Plan unless, exceptionally, other material considerations indicate otherwise.

The Strategic and Detailed Management Policies contained in this Plan Strategy set out the main policy considerations that the Council will take into account in its assessment of planning applications. As a

consequence they should be read together as more than one policy is likely to apply to the particular development in question.

5.1.5 Policies that directly protect international sites

Any new development will be subject to legislative requirements, including the need to comply with the requirements of the Habitats Regulations. Turning to our draft Plan Strategy, Strategic Policy 8: Natural Heritage is protective of the natural environment including international sites and acknowledges:

SP 11.7 The most important natural heritage assets in our Borough, such as national and international sites and priority habitats and species are subject to statutory designation and protection under European and UK law.

DM 37 – Designated Sites of Nature Conservation Importance directly protects international sites and applies to all development:

International Designations

DM 37.1 The Council will only support development that, either individually or in combination with existing and/or proposed plans or projects, is not likely to have a significant effect on an existing or proposed SPA, existing or candidate SAC, Sites of Community Importance, or a listed or proposed RAMSAR Site.

DM 37.2 In cases where development is likely to have a significant effect (either alone or in combination) or reasonable scientific doubt remains, the Council will undertake an appropriate assessment of the implications of the development for the site's conservation objectives. Proposals will only be approved where the appropriate assessment has ascertained that there will be no adverse effect on the integrity of the site and where necessary planning conditions will be imposed for appropriate mitigation measures.

DM 37.3 A development that could adversely affect the integrity of an international site may only be approved in exceptional circumstances, as laid down in the relevant statutory provisions.

DM 37 incorporates the International Designations policies of the SPPS (6.175 – 6.178), detail on these is provided in Appendix 3.

DM 38: Protected Species affords protection to European protected species and DM 39: Habitats, Species & Features of Natural Heritage Importance affords protection to priority and other habitats and species. These policies can protect selection features found outside international sites. Where the policy constrains development adjacent to international sites it may also provide a buffering effect.

Strategic Policy 9 : Natural Resources provides a framework for protection and use of mineral reserves and for renewable energy. SP 9.2 includes:

9.2 (b) ... a presumption against unconventional hydrocarbon extraction, until such times as there is sufficient and robust evidence regarding all the potential environmental impacts of such extraction;
9.2 (c) ... a presumption against minerals development that would affect the following environmentally sensitive sites / designations unless it can be demonstrated, that there is a regional need for the proposed mineral that outweighs the importance of the site: ... Sites

of Nature Conservation Importance (International, National and Local sites).

DM 43: Minerals Development enables minerals development but is qualified:

DM 43.2 The following matters have to be 'addressed to the satisfaction of the Council: (a) Disturbance and disruption from noise, blasting and vibration and potential pollution of land, air and water; (c) The impact on ... areas of nature heritage assets during and after development; (d) The impact on surface and ground water resources, drainage and fishery interests.

5.1.6 LDP Spatial Designations

Some of the spatial designations to be brought forward through the LDP are relevant to international sites. Strategic Landscape Policy Areas (SLPAs) comprise our Borough's most important landscapes recognised for their scenic quality and environmental value. Precise boundaries will be brought forward in the LPP and this will include consideration of evidence about supporting habitat for site selection features.

Six SLPAs are identified including Drumadarragh Hill, an upland area within the range of hen harrier and merlin from Antrim Hills SPA, and Lough Neagh and Lough Beg and their shoreline which will include the SPA and Ramsar site.

DM 40: Landscape Protection largely constrains development on land adjacent to Lough Neagh and Lough Beg and in Local Landscape Policy Areas. It allows for some development, for example, low intensity recreational use or tourism proposals; uses directly related to agriculture or forestry; proposals related to geothermal energy or the extraction of regionally important minerals within the Lough Neagh & Lough Beg Strategic Landscape Policy Area. The exceptions are qualified as follows:

DM 40.3 (e) There is no adverse impact on the historic environment or natural heritage assets.

DM 40.6 (e) Proposals related to geothermal energy or the extraction of regionally important minerals which demonstrate a sustainable approach to development that will not impact adversely on the features or environmental assets of the Lough or its environs.

SP 8.2 allows for identifying Sites of Local Nature Conservation Importance (SLNCIs) and Local Landscape Policy Areas (LLPAs) in the Local Policies Plan. DM 37.5 and DM 40.7 apply respectively and may provide indirect protection where SLNCIs or LLPAs are designated adjacent to an international site.

The coast of our Borough extends 7.5 km along Belfast Lough. The Council recognises that this coastal area is a biologically diverse ecosystem and an important natural heritage asset that regularly supports significant numbers of wintering birds and waders reflected in the multiple international and national environmental designations applying to Belfast Lough, which is a Ramsar site, SPA and an ASSI. The Council recognises the importance of this coastal area and will therefore seek to protect and enhance this zone. The detailed boundary of the Belfast Lough Coastal Policy Area will be designated in the Local Policies Plan.

5.1.7 Other protective policies

It is helpful to consider protective measures incorporated in the draft Plan Strategy in relation to the potential impacts that were identified in Section 4. A number of the

policies include statements that either specifically or generally serve to protect international sites and their features from these impacts. For example DM 2.1 specifies that proposals 'will not adversely affect the environment', DM 2.6 highlights that proposals must be subject to 'normal environmental considerations'.

Habitat Loss

In addition to the requirements of DM 37, DM 41: Coastal Protection constrains coastal development to exceptional circumstances however does not totally exclude it so impacts cannot be ruled out. The potential of development to affect coast dynamics is recognized and proposals should demonstrate:

11.43...potential impacts on the coastal dynamics of the area, including environmental/climate change and flood risk ... have been considered and addressed.

Under DM 45.5 the Council provides a Spatial Framework for wind energy development. Group 1 are areas where wind turbines will not be acceptable and Council will operate a presumption against proposals for new wind turbines on active peatland, SLPAs and the Coastal Policy Area (CPA). These include Lough Neagh and Lough Beg and Drumnadarragh Hill SLPAs and Belfast Lough CPA for which precise boundaries will be brought forward in the Local Policies Plan. This policy will provide a high degree of protection to international sites.

Group 2 are Areas of significant protection in which '... proposals will only be appropriate in circumstances where any significant effects on the amenity and qualities of these areas can be substantially overcome by siting, design and other forms of mitigation.' DM 45.1 highlights that development must be compatible with other policies and development must '...avoid or address any unacceptable adverse impacts including: (e) ecological impact (including impact on peatland hydrology); (g) impact on local natural resources, including air quality, water quality ...'

These policies will constrain development and help avoid habitat loss.

Direct Disturbance and Indirect Disturbance

There is potential for disturbance to arise during construction or operation of new development and a risk of a conflict between promoting activity tourism and disturbance of site selection features. This is addressed by recognising the risk and caveating policy.

Strategic Policy 2: Employment:

5.25 'The Council acknowledges however that to support and enhance our Borough's tourism sector careful management is required to ensure that the key historic environment and natural heritage assets which it relies upon are not compromised by inappropriate or unsympathetic development.'

DM 9 does include reference to Lough Neagh and the potential for activity tourism however it is qualified:

DM 9.10 'Developers will be required to submit a supporting statement to accompany all proposals for tourism development that demonstrates how the proposal meets the following criteria: (a) The development is compatible with policies to safeguard and enhance the historic environment and natural heritage assets...'

Introduced Species

No policies directly address introduced species however those that require all environmental aspects to be considered will allow for consideration of potential impacts of introduced species as will the requirement for planning applications to comply with DM 37 and the Habitats Regulations.

Aerial Emissions

Aerial emissions from development include those from livestock housing or the management of manure, slurry or litter. The draft Plan Strategy draws attention to this issue and DM 4.4 states that:

'Development proposals involving intensive farming or animal husbandry must demonstrate that they will not result in any significant adverse environmental effects, particularly in relation to ammonia production.'

Water Pollution

The need to avoid water pollution is identified specifically in DM 15 and DM 50 and these will reduce the risk of adverse effects on those international sites hydrologically connected to the plan area. The policies in the Environmental Resilience and Protection group contribute to reducing pollution. For example DM 46 constrains development in flood plains and DM 52 controls remediation of contaminated land.

DM 15: Development Relying on Non-Mains Sewerage:

DM 15.2 The Council will only support development proposals relying on non-mains sewerage, where it can be demonstrated that this will not create or add to a pollution problem.

DM 15.2 The Council will require development proposals to be supported by sufficient information on the means of sewerage to allow a proper assessment of such proposals to be made. In those areas identified as having a pollution risk, development proposals relying on non-mains sewerage will only be permitted in exceptional circumstances.

Policy DM 50: Pollution:

DM 50.1 The Council will only support development proposals with the potential to cause significant pollution in terms of noise, air, water and light emissions where a detailed assessment report, on the levels, character and transmission of the potential pollution is undertaken by the developer. The report must demonstrate that the development will not have a significant adverse impact on local amenity or the environment and detail how any pollution arising will be appropriately mitigated.

DM 52: Contaminated Land:

DM 52.1 The Council will only support development proposals on potentially contaminated land, where it can be demonstrated: (a) through a site investigation and risk assessment that the site is in a condition suitable for the proposed development and is not causing significant pollution of the environment; and (b) where necessary, effective remediation measures are agreed to ensure the site is made

suitable for the new use and that appropriate disposal and/or treatment of any hazardous material takes place.

DM 53: Waste Management and Disposal Facilities allows for new or extended waste management facilities however it is caveated:

DM 53.2 'It must be demonstrated that the proposal will bring an overall net social, environmental and economic benefit without having a likely significant adverse effect: ...(b) in terms of air, water, noise or light pollution; (c) on the historic environment and natural heritage assets...'

DM 47: Surface Water Drainage and Sustainable Drainage Systems (SuDS) promotes use of sustainable drainage systems which can provide protection in terms of water quality. DM 47.2 Requires a Drainage Assessment for development above certain thresholds and '(c) Where surface water run-off from the development proposed may adversely impact upon other development or important features of the natural or historic environment'. Drainage assessments can help inform HRAs.

Hydrological Change

Hydrological change as a result of this plan could affect shoreline habitats of Rea's Wood and Farr's Bay SAC and Lough Neagh and Lough Beg SPA. There are no plan policies relating specifically to hydrology as it could affect these sites however DM 37 will require consideration of potential impacts on the hydrology of international sites.

5.1.8 Monitoring and Review

Section 14 of the draft Plan Strategy sets out the monitoring of our plan which is related to the Strategic Policies. The Indicative Monitoring Framework for monitoring SP8: Natural Heritage to protect the natural environment includes:

- *Changes to designation of natural heritage assets.*
- *Condition of natural heritage assets within the Borough.*
- *The number of development proposals permitted impacting on natural heritage assets contrary to advice received from DAERA Natural Environment Division.*

Other indicators that can inform development pressures include the amount of capacity available in WWTWs; number of new homes completed; development proposals permitted for renewable energy and minerals extraction. Condition of international sites is monitored by DAERA, typically on a six year cycle, therefore updates on the condition assessment of site selection features should be taken into account at each five year plan review.

6 Tests of Likely Significance and Appropriate Assessments

6.1 Introduction to Tests of Likely Significance and Appropriate Assessments

The test of likely significance and appropriate assessment are two discreet HRA steps which are sometimes presented in separate sections. In this report the two steps are presented together for the convenience of the reader. This section therefore presents the tests of likely significance, which informed the sites short-listed in Section 4, followed by the appropriate assessment for those sites.

6.1.1 Context for Conservation Objectives

EU Member States have responsibility under the Habitats and Birds Directives to ensure that all habitats and species of Community Interest are maintained or restored to Favourable Conservation Status (FCS). Natura 2000 sites have a role to play in achieving this overall objective as the most important core sites for these species and habitats. Each site must therefore be managed in a way that ensures it contributes as effectively as possible to helping the species and habitats for which it has been designated reach a favourable conservation status.

In accordance with Article 6.1 of the Habitats Directive, Member States are required to implement, on each site, the necessary conservation measures which correspond to the ecological requirements of the protected habitat types and species of Community Interest present. DAERA has commissioned management plans for many international sites. Those that are available will be taken into account when this HRA is finalised.

Member States must also prevent any damaging activities that could significantly disturb those species and habitats (Article 6.2) and protect the site from new plans and projects that are potentially damaging or likely to have a significant effect on a Natura 2000 site (Article 6.3, 6.4).

To ensure that each Natura 2000 site contributes fully to reaching this overall target of FCS, it is important to set clear conservation objectives for each individual site. These define the desired state for each of the species and habitat types for which the site was designated. Conservation objectives are not published for Ramsar sites therefore the conservation objectives for the SPA were referred to.

Conservation Objectives have a role in:

- Conservation planning and management by guiding management to maintain habitats and species in, or restore them to, favourable condition;
- Assessing plans and projects, as required under article 6(3) of the habitats directive in light of the site's conservation objectives; and
- Monitoring and reporting by providing the basis for assessing the condition of a feature, the factors that affect it and the actions required.

Favourable Condition is defined as 'the target condition for an interest feature in terms of the abundance, distribution and/or quality of that feature within the site'. The most recent condition assessment for site selection features was referred to in preparing this report.

6.1.2 Sources of information Northern Ireland sites

The appropriate assessments draw on or refer to source documents as detailed below. Digital maps for all sites can be viewed on the DAERA Natural Environment Map Viewer³ or downloaded from its digital datasets web page⁴. Maps are also provided in Appendix 6 to illustrate the relationship with the plan area.

Special Areas of Conservation

An overview of each SAC can be found on the JNCC website at its section on UK Protected Sites⁵. Under 'General Site Character' there is a link to the Natura 2000 standard data form for that SAC. Further detail is provided on this website about the Annex I habitats and Annex II species that are a primary reason for selection of the site. It also explains why the site is important and provides a link to information about that habitat in the UK context. Further information for each SAC can be found online through the DAERA Protected Areas page⁶. On each site page the link to guidance and literature allows the Reasons for designation, Conservation Objectives and site map to be accessed.

Special Protection Areas

A link to the Natura 2000 standard data form for each SPA can be found on the JNCC website at its section on UK protected sites. Further information for each site can be found through the DAERA Protected Areas page. On each site page the link to guidance and literature allows the SPA citation document and Conservation Objectives to be accessed.

Ramsar sites

A link to the Information Sheet on Ramsar Wetlands (RIS) for each Ramsar site can be found on the JNCC UK Protected Sites page. Further information for each site can be found through the DAERA Protected Areas page. On the DAERA site page the link to guidance and literature allows the Ramsar citation document and map to be accessed.

Condition Assessment

DAERA has compiled and made available a spreadsheet, 'Condition of Features in ASSIs and N2Ks'. This details the most recent condition assessment for features, usually with an explanation of the reason why a feature is in unfavourable condition. This spreadsheet was referred to in completing all appropriate assessments. DAERA also provided unpublished condition assessment reports for some individual sites and some site selection features such as hen harrier.

6.1.3 Sites to be assessed

Of the 20 sites, where there is a potential pathway for effects from the plan area, it was possible to group some for further assessment so that eight assessments were

³ DAERA (2018) 'Natural Environment Map Viewer' Available at: <https://www.daera-ni.gov.uk/services/natural-environment-map-viewer> (accessed 23/01/2019).

⁴ DAERA (2018) 'Download Digital Datasets' Available at <https://www.daera-ni.gov.uk/articles/download-digital-datasets> (accessed 23/01/2019).

⁵ <http://jncc.defra.gov.uk/page-1458>

⁶ <https://www.daera-ni.gov.uk/landing-pages/protected-areas>

carried out. In the case of Lough Neagh and Lough Beg the SPA and Ramsar site assessments were combined; assessments for all those sites associated with Belfast Lough were also combined. The resulting list of assessments was as follows.

- Rea's Wood and Farr's Bay SAC
- Lough Neagh and Lough Beg SPA and Ramsar Site
- Belfast Lough and Associated SPAs and Ramsar Sites
- Harbour Porpoise Sites (Skerries and Causeway SAC & North Channel SAC)
- The Maidens SAC
- Antrim Hills SPA
- Montiaghs Moss SAC
- Curran Bog SAC

The appropriate assessments took account of the mitigation included within the draft Plan Strategy. Where appropriate, recommendations are made for additional measures, to be addressed before the Plan Strategy is adopted, in the LPP or through development management. These recommendations will assist in the identification of potential pathways to, impacts on, and mitigation to protect international sites and their selection features and will help avoid adverse effects on site integrity.

6.1.4 Presentation

As there was a significant amount of information to present about sites and features, tables are included where they provide greater clarity. In some cases, due to changes in the accuracy of mapping, there are discrepancies between designation areas even though the site boundaries are the same. The areas quoted are those in the citation documents. The site threats in conservation objectives and adverse activities in condition assessments are referred to, some of these are standard reporting terms which are broad. Cumulative impacts are considered in Stage 2: Appropriate Assessment.

6.2 Rea's Wood and Farr's Bay SAC

Status:	Designated Special Area of Conservation	Site Code:	UK0030244
Year:	2005	Area:	38.02 ha
Map:	Appendix 6, Map 6		

STAGE 1: TEST OF LIKELY SIGNIFICANCE

6.2.1 Summary Site Description

Rea's Wood and Farr's Bay woodlands and wetlands have developed on a series of shorelines exposed by successive lowerings of Lough Neagh. The former lakebed has an undulating terrain consisting of raised ridges and wet, occasionally flooded hollows, with a resulting variation in the type of woodland cover. The present foreshore supports inundation willow/alder woodland along the shore and alder swamp woodland in the permanently flooded hollows behind, whilst the drier ridges support base-rich ash woodland. The diversity of woodland types is reflected in the rich flora and fauna, which includes a large number of rare species. The boundary rationale and management considerations are detailed in the Conservation Objectives.

6.2.2 Location and connectivity with the plan area

The SAC has two component on the North East shore of Lough Neagh and is entirely within the council area. The Rea's wood portion is within Lough Neagh and Lough Beg SPA while the Farr's Bay portion also extends slightly beyond the SPA.

6.2.3 Plan Designations

Rea's Wood slightly overlaps Antrim Development Limit. The SAC is in the area indicated as Lough Neagh and Lough Beg (including shoreline) Strategic Landscape Policy Area to be defined at LPP.

6.2.4 Selection Features

Feature type	Feature	Global Status	Size/extent/population
Habitat	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, <i>Alnion incanae</i> , <i>Salicion alvae</i>)	B	26 ha

6.2.5 Conservation Objectives

The Conservation Objective for this site is:

- The SAC selection feature component objectives for the Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, *Alnion incanae*, *Salicion alvae*) are:
 - Maintain and expand the extent of existing swamp woodland. (There is an area of wetland and damp grassland which have the potential to develop into carr woodland)
 - Maintain and enhance swamp woodland species diversity and structural diversity

- Maintain the diversity and quality of habitats associated with the swamp woodland, e.g. fen, swamp, especially where these exhibit natural transition to swamp woodland.
- Seek nature conservation management over adjacent forested areas outside the ASSI where there may be potential for woodland rehabilitation.
- Seek nature conservation management over suitable areas immediately outside the ASSI where there may be potential for woodland expansion.

6.2.6 Main Threats, Pressures and Activities with Impacts on the Site

Both on-site and off-site activities can potentially affect the site. The following is a summary of the most likely factors that are either affecting the site, or could affect it in the future: Woodland Clearance; Dead Wood Removal; Changes in Water Level; Drainage of Swamp Woodland; Fly-tipping; Nitrogen Deposition; Changes to surrounding land use; Climate Change. Proposals to increase water extraction from the Lough will lower the summer water level but is unlikely to affect winter levels.

6.2.7 Sensitivities of Selection Features to plan

Potential impacts arising from the Plan Strategy, as identified in Section 5, are listed in the following table which identifies those that could affect the selection features of this site.

Potential Impacts Arising From Plan	Pathway for Impact to affect this site?	Comment	Features that may be affected
Habitat Loss	On site development, recreational pressures	Development within the site could cause direct loss of habitat. Rea's Wood has public access which can lead to some damage through users going off the main path. Increased water based recreation, wave action or other processes could affect the shoreline.	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i>
Direct Disturbance	None	The selection feature is not vulnerable to disturbance.	NA
Indirect Disturbance			
Introduced Species	Yes	Introduced exotic species are widespread, particularly in Rea's Wood and some are spread via water therefore eradication is difficult.	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i>
Aerial Emissions	Aerial	Potential nitrogen deposition from intensive agriculture could cause degradation or loss of habitat.	
Water Pollution	Yes	There is drainage onto the site from watercourses, some of which arise in Antrim. The SAC is also	

Potential Impacts Arising From Plan	Pathway for Impact to affect this site?	Comment	Features that may be affected
		inundated by Lough Neagh which is another potential source of pollution.	
Hydrological Change	Adjacent/nearby development, changes in the level of Lough Neagh.	Increasing drainage through the site could lead to drying out of swamp woodland. Proposals to increase water extraction from the Lough could lower the summer water level again but is unlikely to affect winter levels.	

6.2.8 Screening conclusion

Under the precautionary approach it was deemed that appropriate assessment is required for this site to consider the impacts of habitat loss, introduced species, aerial emissions, water pollution and hydrological change on alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion alvae*) as a site selection feature.

STAGE 2: APPROPRIATE ASSESSMENT

6.2.9 Site specific evidence sources

- Rea's Wood and Farr's Bay SAC Conservation Objectives V2, 01/04/2015
- ASSIs: Rea's Wood and Farr's Bay; Lough Neagh

6.2.10 Condition assessment

The most recent condition assessment, in 2011, found the condition to be Unfavourable: No Change. This was reported as being due to: invasive species (including bracken or scrub); water quality (including silt, water pollution (direct or diffuse), run-off, nutrient enrichment, eutrophication etc).

6.2.11 Impacts that may arise as a result of the plan

This section considers those impacts which are most likely to arise as a result of the Plan Strategy in more detail in relation to the main threats, pressures and activities with impacts on the site identified in the conservation objectives.

Development within the site could cause direct loss of habitat. Rea's Wood has public access which can lead to some damage through users going off the main path. There are water recreation facilities adjacent to Rea's Wood and increased water based recreation, wave action or other processes could affect the shoreline. Development on or adjacent to the site could introduce further non-native or invasive species or spread those already present.

Excess nitrogen deposition can directly damage plants and also favour the growth of competitive plants leading to changes in ecosystem structure or function and to a reduction in biodiversity. The 3 year average of nitrogen deposition for 2015-2017 is

28.4 kg N/ha/yr⁷. The 3 year average 2015-2017 ammonia concentration is 2.42µg/m³ which exceeds the critical level for this habitat of 1µg/m³.

Construction in support of intensive agriculture can increase nitrogen deposition from the development site or as a result of land spreading of litter, slurry, manure or digestate. Road development leading to a significant increase in traffic could increase the deposition of nitrogen from traffic however there are no major roads close to this site.

Any changes in local land-use e.g. drainage, road improvements, afforestation, agricultural intensification and development may be detrimental to the SAC. The draft Plan Strategy does not explicitly promote any form of development adjacent to the SAC however Lough Neagh is identified as a venue for activity tourism. Any applications that may come forward would have to be assessed through project level HRA.

6.2.12 Potential Impacts on Site Integrity in the Absence of Mitigation

The following integrity of site checklist indicates the impacts that the draft Plan Strategy could have in the absence of protective measures.

Does the plan have the potential to:	Yes/No
<ul style="list-style-type: none"> cause delays in progress towards achieving the conservation objectives of the site? 	Yes
<ul style="list-style-type: none"> interrupt progress towards achieving the conservation objectives of the site? 	Yes
<ul style="list-style-type: none"> disrupt those factors that help to maintain the favourable conditions of the site? 	Yes
<ul style="list-style-type: none"> interfere with the balance, distribution and density of key species that are the indicators of the favourable condition of the site? 	Yes
Other indicators: Does the plan have the potential to:	Yes/No
<ul style="list-style-type: none"> cause changes to the vital defining aspects (e.g. nutrient balance) that determine how the site functions as a habitat or ecosystem? 	Yes
<ul style="list-style-type: none"> change the dynamics of the relationships (between, for example, soil and water or plants and animals) that define the structure and/or function of the site? 	Yes
<ul style="list-style-type: none"> interfere with predicted or expected natural changes to the site (such as water dynamics or chemical composition)? 	Yes
<ul style="list-style-type: none"> reduce the area of key habitats? 	Yes
<ul style="list-style-type: none"> reduce the population of key species? 	Yes
<ul style="list-style-type: none"> change the balance between key species? 	Yes
<ul style="list-style-type: none"> reduce diversity of the site? 	Yes
<ul style="list-style-type: none"> result in disturbance that could affect population size or density or the balance between key species? 	Yes
<ul style="list-style-type: none"> result in fragmentation? 	No
<ul style="list-style-type: none"> result in loss or reduction of key features (e.g. tree cover, tidal exposure, annual flooding , etc.)? 	Yes

6.2.13 Controls in place to address threats

Any new development would be subject to legislative requirements and environmental assessment including the need to comply with the requirements of

⁷ <http://www.apis.ac.uk/>

the Habitats Regulations. The protective measures described in Section 5 are incorporated in the draft Plan Strategy and will also have effect.

6.2.14 Mitigation to address threats

The following recommendations, detailed in Section 7, will address potential impacts from development for recreation, intensive agriculture or which might affect hydrology or exacerbate the effects of introduced species.

1. International Sites – Evidence;
2. Cumulative Effects;
3. Screening – General; and
4. Screening – Aerial Emissions.
5. International Sites – Recreation;
10. International Sites – Disturbance Operation.

Combined with incorporated measures in the draft Plan Strategy these address the potential impacts identified above.

6.2.15 Cumulative and In Combination Effects

Cumulative effects within the Plan Strategy could arise on this site from development within the Antrim development limit, recreation or tourism projects and intensive agriculture. There are no road schemes proposed adjacent to the site which will increase the capacity for traffic and generate additional aerial emissions.

Mitigation is incorporated in the draft Plan Strategy, which highlights the need for and requires HRA. Case specific HRA will include consideration of in combination effects. In particular consideration of recreational pressure on the site or off shore will be important. The in combination effects of intensive agriculture will also require close scrutiny in the HRA.

While water supply is sufficient to meet the requirements of the draft Plan Strategy wider plans that affect the level of Lough Neagh could affect the hydrology of this site. Hydrology could also be affected by development adjacent to the site.

The assessment found that, with mitigation in place, there will be no adverse effect on site integrity from the draft Plan Strategy. The need to consider and assess further in combination effects from other projects or plans will be reviewed before the HRA is finalised.

6.2.16 Appropriate Assessment Conclusion

The evidence gathered and assessment undertaken does not enable us to conclude reasonably and objectively that the implementation of the plan, in the absence of mitigation, will not adversely affect selection features or the integrity of this site. Mitigation measures are therefore required to ensure that the plan will not have any effect on the integrity of these sites. These mitigation measures are identified above. Their incorporation in the Plan Strategy is discussed in Section 5 and additional measures are discussed in Section 7.

6.2.17 Adverse Effect on Site Integrity (AESI) Finding

Feature	AESI before mitigation	AESI after mitigation
Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, <i>Alnion incanae</i> , <i>Salicion alvae</i>)	Potential AESI	No AESI

It is therefore concluded that the draft Plan Strategy, in conjunction with incorporated mitigation as detailed in Section 5 and the recommendations in Section 7, will not have an adverse effect on site integrity of Rea's Wood and Farr's Bay SAC.

6.3 Lough Neagh and Lough Beg SPA and Ramsar Site

Status:	Classified Special Protection Area	Site Code:	UK9020091
Year:	1996	Area:	40857 ha*
Status:	Designated Ramsar Site	Site Code:	UK12016
Year:	1976	Area:	50166 ha
Map:	Appendix 6, Map 7		

*based on Standard Data Form (Conservation Objectives 41188 ha)

STAGE 1: TEST OF LIKELY SIGNIFICANCE

6.3.1 Summary Site Description

Lough Neagh and Lough Beg SPA

Lough Neagh is a large, shallow, eutrophic lake contained within Counties Antrim, Down, Londonderry and Tyrone. Lough Neagh is the largest freshwater lake in the UK and is one of the top ten sites in the UK for wintering waterfowl (based on annual mean numbers). The SPA also includes the smaller lakes, Lough Beg and Portmore Lough. The main habitats within the SPA are open water with beds of submerged aquatic vegetation, species-rich wet grassland, reedbed, islands, swamp, fen and carr woodland. The SPA supports internationally important numbers of wintering waterfowl and is internationally important for a number of wildfowl species including Whooper Swan, Bewick's Swan, Pochard, Tufted Duck, Scaup and Goldeneye. It is also internationally important for breeding Common Tern. Adjoining agriculturally improved areas utilised by swans have not been included but are important as supporting habitat. The boundary rationale and management considerations are detailed further in the Conservation Objectives.

Lough Neagh and Lough Beg Ramsar Site

The Ramsar site extends significantly beyond the SPA around Shane's Castle and Randalstown Forest. Otherwise there are smaller variations in the boundaries with the Ramsar site generally being more extensive than the SPA however there are a few areas where the SPA extends beyond the Ramsar site. In addition to the bird features of the SPA the Ramsar criteria include the open water, wetland habitats, rare plant and invertebrate species and the fish pollan.

6.3.2 Location and connectivity with the plan area

Lough Neagh and Lough Beg SPA

The Council includes approximately 40% of the open water of Lough Neagh and the south eastern corner of Lough Beg as well as the shoreline within the council area. The majority of the council area is within the Lough Neagh and Lough Beg catchments.

Lough Neagh and Lough Beg Ramsar Site

The location is as for the SPA with slight variations in the boundaries south of Sixmilewater and between Randalstown and Toome. The Ramsar site also incorporates Shane's Castle Demense and Randalstown Forest.

6.3.3 Plan Designations

Lough Neagh and Lough Beg SPA

The development limits of Antrim and Toome are immediately adjacent to the SPA and in places slightly overlap it. The local towns of Crumlin and Randalstown are within 3km and there are a number of hamlets within 5km. Some industrial land zoned in Antrim is within 1km or adjacent to the Sixmilewater. The lignite resource area South West of Crumlin, Antrim is adjacent to and partially overlapping the SPA.

Lough Neagh and Lough Beg Ramsar Site

As for Lough Neagh however the development limit of Randalstown is adjacent to the Ramsar site.

6.3.4 Selection Features

Lough Neagh and Lough Beg SPA

Feature Type	Feature	Population at designation	SPA Review population	
			1990s	2000s
Species	Common Tern breeding population (pairs)	200	185	93
	Great Crested Grebe breeding population	New feature	500	311
	Great Crested Grebe passage population	New feature	2440	No data
	Whooper Swan wintering population	923	1031	1504
	Bewick's Swan wintering population	251	136	1
	Golden Plover wintering population	Not listed	5298	6550
	Great Crested Grebe wintering population	741	1821	862
	Pochard wintering population	32165	26341	8250
	Tufted Duck wintering population	23476	22372	6897
	Scaup wintering population	2557	3798	5019
	Goldeneye wintering population	12479	10776	3961
Assemblage species	Little Grebe wintering population	390	465	347
	Cormorant wintering population	781	728	1368
	Greylag Goose wintering population	129	176	1080
	Shelduck wintering population	165	159	140
	Wigeon wintering population	3447	3117	1830
	Gadwall wintering population	114	166	151
	Teal wintering population	1868	1596	1202
	Mallard wintering population	4982	5256	3786
	Shoveler wintering population	173	148	54
	Coot wintering population	6676	6993	1895
	Lapwing wintering population	Not listed	6899	5728
Waterfowl assemblage	Waterfowl Assemblage wintering populationa (Component species: Whooper Swan, Bewick's Swan, Golden Plover, Great Crested Grebe (wintering) Pochard, Tufted Duck, Scaup, Goldeneye, Little Grebe, Cormorant, Greylag Goose, Shelduck, Wigeon, Gadwall, Teal, Mallard, Shoveler, Coot, Lapwing)	79915	99221	No data

Lough Neagh and Lough Beg Ramsar Site

Ramsar Criterion 1: A particularly good representative example of natural or near-natural wetlands. Lough Neagh is a relatively shallow body of water supporting beds of submerged aquatic vegetation fringed by associated species-rich damp grassland, reedbeds, islands, fens, marginal swampy woodland and pasture. Other interesting vegetation types include those associated with pockets of cut-over bog, basalt rock outcrops and boulders, and the mobile sandy shore.

Ramsar Criterion 2: Supports an appreciable assemblage of rare, vulnerable or endangered species or sub-species of plant or animal or an appreciable number of individuals of any one of these species. The site supports over 40 rare or local vascular plants which have been recorded for the site since 1970, the most notable are eight-stamened waterwort *Elatine hydropiper*, marsh pea *Lathyrus palustris*, Irish lady's tresses *Spiranthes romanzoffiana*, alder buckthorn *Frangula alnus*, narrow small-reed *Calamagrostis stricta* and holy grass *Hierochloa odorata*. The Lough and its margin are also home to a large number of rare or local invertebrates, including two aquatic and two terrestrial molluscs, a freshwater shrimp *Mysis relicta*, eight beetles, five hoverflies, seven moths and two butterflies. Of the rare beetles recorded two, *Stenus palposus* and *Dyschirius obscurus*, have their only known Irish location around the Lough. The Lough also supports twelve species of dragonfly.

Ramsar Criterion 3: This site is of special value for maintaining the genetic and ecological diversity of a region because of the quality and peculiarities of its flora and fauna. The site regularly supports substantial numbers of individuals from particular groups of waterfowl which are indicative of wetland values, productivity and diversity. In addition, this site is of special value for maintaining the genetic and ecological diversity of Northern Ireland because of the quality and peculiarities of its flora and fauna. A large number of plants and animal species are confined or almost confined to this area within Northern Ireland.

Ramsar Criterion 4: This site is of special value as the habitat of plants or animals at a critical stage of their biological cycles. The site supports an important assemblage of breeding birds including the following species with which occur in nationally important numbers: great crested grebe *Podiceps cristatus*, gadwall *Anas strepera*, pochard *Aythya ferina*, tufted duck *Aythya fuligula*, snipe *Gallinago gallinago* and redshank *Tringa totanus*. Other important breeding wetland species include shelduck *Tadorna tadorna*, teal *Anas crecca*, shoveler *Anas clypeata*, lapwing *Vanellus vanellus* and curlew *Numenius arquata*.

Ramsar Criterion 5: Assemblages of international importance: Species with peak counts in winter: 86,639 waterfowl (5 year peak mean 1998/99-2002/2003)

Ramsar Criterion 6: Species/populations occurring at levels of international importance. Qualifying Species/populations (as identified at designation):

Species with peak counts in spring/autumn:

- Tundra swan, *Cygnus columbianus bewickii*, NW Europe
- Species with peak counts in winter:
- Whooper swan, *Cygnus cygnus*, Iceland/UK/Ireland
- Common pochard, *Aythya ferina*, NE & NW Europe
- Tufted duck, *Aythya fuligula*, NW Europe
- Greater scaup, *Aythya marila marila*, W Europe
- Common goldeneye, *Bucephala clangula clangula*, NW & C Europe

Species/populations identified subsequent to designation for possible future consideration under criterion 6.

Species with peak counts in spring/autumn:

- Great cormorant , *Phalacrocorax carbo carbo*
- Mute swan , *Cygnus olor*, Britain

Contemporary data and information on waterbird trends at this site and their regional (sub-national) and national contexts can be found in the Wetland Bird Survey report, which is updated annually. See www.bto.org/survey/webs/webs-alerts-index.htm.

Ramsar Criterion 7: The site supports a population of pollan *Coregonus autumnalis*, one of the few locations in Ireland and one of the two known locations in the UK (the other is Lower Lough Erne). It is one of the most important species in Ireland in terms of faunal biodiversity since it occurs nowhere else in Europe, and the Irish populations are all well outside the typical range – the Arctic Ocean drainages of Siberia, Alaska and north-western Canada, where it is known as the Arctic cisco.

6.3.5 Conservation Objectives

The Conservation Objective for this site is:

- To maintain each feature in favourable condition.

The SPA selection feature objectives are:

- To maintain or enhance the population of the qualifying species
- Fledging success sufficient to maintain or enhance population
- To maintain or enhance the range of habitats utilised by the qualifying species
- To ensure that the integrity of the site is maintained,
- To ensure there is no significant disturbance of the species and
- To ensure that the following are maintained in the long term:
 - Population of the species as a viable component of the site
 - Distribution of the species within site
 - Distribution and extent of habitats supporting the species
 - Structure, function and supporting processes of habitats supporting the species

The SPA selection feature component objectives are as above and:

Common Tern and Great Crested Grebe

1. Fledging success sufficient to maintain or enhance population

Waterfowl Assemblage wintering population

2. No significant decrease in population against national trends

Habitat

3. To maintain or enhance the area of natural and semi-natural habitats used or potentially usable by Feature bird species subject to natural processes
4. Maintain the extent of main habitat components subject to natural processes
5. Maintain or enhance sites utilised as roosts

6.3.6 Main Threats, Pressures and Activities with Impacts on the Site

Both on-site and off-site activities can potentially affect the site. The following is a summary of the most likely factors that are either affecting the site, or could affect it in the future: impacts on adjoining habitat; boating activity – commercial; boating activity – recreational; coastal (shoreline) protection schemes; cull of fledglings/young; drainage; enhanced bird competition; fishing - commercial or recreational; habitat extent - open water; habitat quality - open water; habitat extent and quality – breeding; introduced species; power cables; predation; recreational activities; research activities; sand dredging – commercial; system dynamics; water abstraction; water level control; wildfowling.

6.3.7 Sensitivities of Selection Features to plan

Potential impacts arising from the Plan Strategy, as identified in Section 5, are listed in the following table which identifies those that could affect the selection features of this site.

Potential Impacts Arising From Plan	Pathway for Impact to affect this site?	Comment	Features that may be affected
Habitat Loss	Yes	Development on or adjacent to site leading to direct or indirect damage to habitat features.	All
Direct Disturbance	Yes	Recreational activity on open water or in SPA/Ramsar. This could be a particular issue if water based recreation is increased around Antrim as the Torpedo platform is main breeding site for common tern.	All
Indirect Disturbance	Yes	Recreational activity or other development adjacent to SPA/Ramsar or supporting habitat.	All
Introduced Species	Yes	Spread of species during construction works or through recreational activity.	All
Aerial Emissions	Yes	Potential nitrogen deposition from intensive agriculture could cause degradation or loss of habitat.	All
Water Pollution	Yes	The majority of the council area is in the Lough Neagh and Lough Beg catchment.	All
Hydrological Change	Yes	Could lead to habitat deterioration	All

6.3.8 Screening conclusion

Under the precautionary approach it was deemed that appropriate assessment is required for this site to consider the impacts of habitat loss, direct disturbance,

indirect disturbance, introduced species, aerial emissions, water pollution and hydrological change on the site selection features and supporting habitat.

STAGE 2: APPROPRIATE ASSESSMENT

6.3.9 Site specific evidence sources

Lough Neagh and Lough Beg SPA Conservation Objectives V2.0, 01/04/2015

Lough Neagh and Lough Beg Ramsar Information Sheet V3.0, 13/06/2008

ASSIs: Lough Beg, Portmore Lough, Lough Neagh

6.3.10 Condition assessment

Lough Neagh and Lough Beg SPA Condition Assessment 2014

Species	Year 1	Year 2	Year 3	Year 4	Year 5	CSM	5 yr mean	% CSM	Status
Common Tern (B)	94	79	118	96	98	59	97	164.41	Favourable
Golden Plover	6475	3129	7097	4047	1539	1626	4457.4	274.13	Favourable
Bewick's Swan	0	0	0	0	0	23	0	0.00	Unfavourable
Whooper Swan	515	535	637	388	248	283	464.6	164.17	Favourable
Goldeneye	2993	4626	3684	3003	3437	6700	3548.6	52.96	Unfavourable
Great Crested Grebe (W)	236	1181	733	947	1030	110	825.4	750.36	Favourable
Great Crested Grebe (P)	634	676	nc	561	941	438	703	160.50	Favourable
Pochard	8878	8902	5770	9183	5027	19588	7552	38.55	Unfavourable
Scaup	4348	5587	6335	2989	2257	1215	4303.2	354.17	Favourable
Shelduck	131	87	193	188	126	107	145	135.51	Favourable
Tufted Duck	6336	5845	4995	9167	7669	17972	6802.4	37.85	Unfavourable
Waterbird assemblage	47771	48575	43168	43462	35837	75215	43762.6	58.18	Unfavourable

Lough Neagh and Lough Beg Ramsar Site

The following is the condition assessment reported for other features that are monitored for ASSIs in the Ramsar site.

Ramsar Feature	ASSI Name	Most recent CA	Most recent Year	Adverse activity
Breeding bird assemblage	Lough Beg	Favourable: Un-classified	12/02/2008	NA
Breeding bird assemblage	Portmore Lough	Favourable: Un-classified	12/02/2008	NA
Breeding bird assemblage (wet woodland)	Lough Neagh	Favourable: Un-classified	12/02/2008	NA
Breeding wader assemblage	Lough Beg	Unfavourable: Un-classified	31/08/2012	Other - not specified

Ramsar Feature	ASSI Name	Most recent CA	Most recent Year	Adverse activity
Breeding wader assemblage	Lough Neagh	Unfavourable: Un-classified	31/07/2012	Other - not specified
Breeding waterbird assemblage	Lough Neagh	Favourable: Un-classified	30/06/2012	
Fens	Lough Neagh	Unfavourable: No-change	11/08/2011	Under-grazing
Freshwater and estuarine fish assemblage	Lough Neagh	Unfavourable: Un-classified	26/03/2008	Water quality (including silt, water pollution (direct or diffuse), run-off, nutrient enrichment, eutrophication etc.)
Higher plant assemblage	Lough Beg	Favourable: Un-classified	14/06/2002	NA
Higher plant assemblage	Lough Neagh	Unfavourable: Un-classified	11/08/2011	Water quality (including silt, water pollution (direct or diffuse), run-off, nutrient enrichment, eutrophication etc.)
Invertebrate assemblage	Lough Beg	Unfavourable: Un-classified	27/09/2007	Water quality (including silt, water pollution (direct or diffuse), run-off, nutrient enrichment, eutrophication etc.)
Invertebrate assemblage	Lough Neagh	Favourable: Un-classified	12/09/2007	NA
Invertebrate assemblage	Portmore Lough	Favourable: Un-classified	27/06/2007	NA
Mallard (Winter)	Lough Neagh	Favourable: Un-classified	31/03/2012	NA
Purple Moor-grass and rush pastures	Lough Beg	Favourable: Un-classified	13/08/2014	NA
Purple Moor-grass and rush pastures	Lough Neagh	Unfavourable: No-change	11/08/2011	Agricultural operations (e.g. ploughing, fertiliser, pesticides)
Reedbeds and swamps	Lough Neagh	Unfavourable: No-change	11/08/2011	Water quality (including silt, water pollution (direct or diffuse), run-off, nutrient enrichment, eutrophication etc.)
Wet woodland	Lough Neagh	Unfavourable: No-change	11/08/2011	Invasive species (including bracken or scrub), Water quality (including silt, water pollution (direct or diffuse), run-off, nutrient enrichment, eutrophication etc.)

6.3.11 Impacts that may arise as a result of the plan

This section considers those impacts which are most likely to arise as a result of the Plan Strategy in more detail in relation to the main threats, pressures and activities with impacts on the site identified in the conservation objectives.

Lough Neagh and Lough Beg SPA

Specific management issues for the SPA that could arise are sourced from the conservation objectives. They are as follows however not all threats or actions are within the scope of development planning:

Issue	Threat/comments	Local considerations	Action
Adjoining habitat	Particularly important for swans and geese as well as providing high tide roost locations. Significant changes in land management and disturbance are key considerations. Such areas lie without the site making effective management of developments other than those for which planning permission is required, difficult.	Current road development through Toome swan fields the effects of which will be subject to monitoring.	Assess planning applications. Identify key areas and promote site management schemes. Review use of Wildfowl Refuges. Consider the collective impact.
Boating activity – commercial	Disturbance and potential for impact from commercial vessels.	No evidence of a significant impact on the selection features of Lough Neagh	Formal consultation likely relating to new schemes. Consider the collective impact.
Boating activity – recreational	Disturbance and potential for impact especially from jet skis. Generally relevant to particularly sensitive areas within site.	A major concern during the breeding season, particularly around the Torpedo platform at Six Mile Water.	Liaise with appropriate authority with codes of good practice, zoning and use of by-laws as necessary. Consider the collective impact.
Coastal (shoreline) protection schemes	Where there is no history of this, it impacts on natural beach systems with loss of habitat.	There is ad hoc dumping around the shoreline, in places this is in response to erosion.	Liaise with planning authority and other parties with an involvement in coastal management.
Drainage	Potential impact on water flooding regime. Potentially significant in relation to adjoining habitat if it leads to reduction in traditional areas of flooding.	Routine watercourse maintenance programme by DfI Rivers is referred to DAERA for comment.	Identify key areas and promote site management schemes to protect and enhance site features. Consider the collective impact.
Enhanced bird competition	Activities onsite or offsite that influences or results in a shift in balance of species utilising a site.	General issue of gulls during breeding season. Historical high numbers of Black-headed Gull may have been related to access to feeding on a dumpsite (Denny's), now closed.	Liaise with planning authority. Review wider countryside changes.

Issue	Threat/comments	Local considerations	Action
Fishing – commercial or recreational	Minimal disturbance consideration but may represent 'competition' for piscivorous birds. Represents a net loss to the system in terms of biomass.	Important long-established commercial eel, coarse fish and salmonid fishery. Concern regarding diving duck taken as by- catch in nets either accidentally or deliberately.	Liaise with DAERA and fishing authorities as required. Liaise with commercial fishing interests and angling clubs as required. Netting of diving duck as a Wildlife Order offence –action is dependent on evidence.
Habitat extent – open water	Loss likely to be limited but expansion of commercial port facilities can impact on key localities.	Not a concern.	Assess planning applications. Consider the collective impact.
Habitat quality – open water	Alteration of habitat quality through diminution of water quality or invasive species.	Water quality is a concern with progressive eutrophication. Longer term improvement in water quality will reduce productivity and may affect waterfowl populations.	Assess planning applications. Deal with invasive alien species by preventing their spread or reducing their impact. Liaise with Environmental Protection as required with regard to water quality issues and pollution incidents. Consider the collective impact.
Habitat extent and quality-breeding	Alteration of habitat area or quality through inappropriate use or absence of site management.	Terns mainly breed on Torpedo Platform near Six Mile Water, but also on some islands.	Assess needs of breeding species. Liaise with owner or appropriate authority to adjust or introduce site management.
Introduced species	Range of threats from loss of habitat, feeding competition, disease, hosting species presenting a threat outside of the site.	Roach and Ruddy Duck are present, Zebra Mussel must be considered a real threat.	Liaise with appropriate authority. Consider feasibility of elimination. Participate in national/international initiatives.
Power cables	Specifically a problem in relation to swans and geese. Threat is through impact. Need to consider flight lines, as well as feeding and loafing areas, which ideally should be avoided.	Generally lines in the area are well marked. Assess all new proposals and existing network in relation to swan usage.	Liaise with NIE. Minimum need is for line marking based on best current practice. Consider the collective impact.
Predation.	Mainly of concern on bird breeding sites.	Impact from large gulls is deemed to be a problem. Care to be taken as breeding Lesser Black-backed Gull are notable.	Must be dealt with as part of wider countryside management considerations. Carry out appropriate site management.

Issue	Threat/comments	Local considerations	Action
Recreational activities.	Disturbance is the main consideration. Breeding birds, especially seabirds, are vulnerable to disturbance as absence of adults can often result in predation or chilling of young with a reduction/loss in fledging success.	Breeding birds are particularly vulnerable to disturbance. Cumulative disturbance impacts (e.g. boating, sand dredgers, wildfowling, walkers, dogs etc.) may also be a significant factor for wintering bird populations	Liaise with local authorities and other managing parties.
Sand dredging - commercial	Issue presently limited to Lough Neagh and subject to current (2015) detailed evaluation	Restricted in area but possibly impacting the more diverse invertebrate assemblages. Possibly a limited disturbance issue.	Liaise with commercial operators, planning authority and other regulatory authorities.
System dynamics	Cuts across many other issues. Dynamic systems, especially coastal, can be affected by many factors especially engineered structures and significant changes in dominant wind direction or storm frequency. Many systems may indeed still be undergoing responses to historical developments e.g. partial reclamation, seawall construction. Changes may include alteration in sediment grade, shifts in patterns of erosion and deposition etc. Consequences for habitat and species utilisation of the site can be profound.	Historical lowering of the lough level reduced considerably the area subject to flooding but also would have had implications for shore and nearshore morphology particularly the dynamics of sand bar and river mouth shoal complexes. Ongoing sand exploitation could alter lough bed substrate and influence near shore sediment mobility.	Human induced change should be minimised. Assess planning applications and liaise with other relevant authorities. Ad hoc dumping and removal of natural materials should be managed. Major natural shifts in system behaviour may be identified through analysis of aerial photographs and site monitoring. Major and consistent changes to patterns of habitat distribution and bird utilisation of the site should be noted.
Water abstraction	Potential impact on water flooding regime. Potentially significant in relation to adjoining habitat if it leads to reduction in traditional areas of flooding.	Lough Neagh is a major source of drinking water with ongoing abstraction together with proposals for increased volumes taken.	Liaise with Water Service and Rivers Agency.

Issue	Threat/comments	Local considerations	Action
Wildfowling	Has direct effect through bag sizes/bag species and wider disturbance issue. Issue of regulated (through recognised shooting clubs) and ad hoc shooters. Lead shot on grazing lands.	Generally a good relationship with main gun clubs. Overall perception is that lough is heavily shot.	Liaise with relevant shooting bodies to define areas for wildfowling, the development of Wildfowlers Codes of Good Practice and encourage bag returns. Support pressure to stop use of lead shot. Review use of Wildfowl Refuges. Consider the collective impact.

Nitrogen deposition is not cited as an impact on the SPA feature in the conservation objectives however, APIS does provide guideline values for supporting habitat. Excess nitrogen deposition can directly damage plants and favour the growth of competitive plants leading to changes in ecosystem structure or function and to a reduction in biodiversity. Construction in support of intensive agriculture can increase nitrogen deposition from the development site or because of land spreading of litter, slurry, manure or digestate.

Lough Neagh and Lough Beg Ramsar Site

Adverse Factor Category	Description of the problem	On/Off -Site	Action
Eutrophication	The Lough drains some 40% of Northern Ireland and has been subject to severe eutrophication as a result of increased nutrient inputs from agricultural run-off and general domestic sewage from catchment housing and other developments.	On-site	Phosphate stripping at appropriate sewage treatment works had begun to address the issue of eutrophication, but the nutrient problem has now been demonstrated to be predominantly due to non-point, agricultural, sources. Water Catchment Management Plan will be developed in context of the Water Framework Directive.
Pollution – agricultural fertilisers			

6.3.12 Potential Impacts on Site Integrity in the Absence of Mitigation

The following checklist indicates the impacts that the draft Plan Strategy could have in the absence of protective measures.

Does the plan have the potential to:	Yes/No
<ul style="list-style-type: none"> • cause delays in progress towards achieving the conservation objectives of the site? • interrupt progress towards achieving the conservation objectives of the site? • disrupt those factors that help to maintain the favourable conditions of the site? • interfere with the balance, distribution and density of key species that are the indicators of the favourable condition of the site? 	Yes Yes Yes Yes
Other indicators: Does the plan have the potential to:	Yes/No
<ul style="list-style-type: none"> • cause changes to the vital defining aspects (e.g. nutrient balance) that determine how the site functions as a habitat or ecosystem? • change the dynamics of the relationships (between, for example, soil and water or plants and animals) that define the structure and/or function of the site? • interfere with predicted or expected natural changes to the site (such as water dynamics or chemical composition)? • reduce the area of key habitats? • reduce the population of key species? • change the balance between key species? • reduce diversity of the site? • result in disturbance that could affect population size or density or the balance between key species? • result in fragmentation? • result in loss or reduction of key features (e.g. tree cover, tidal exposure, annual flooding , etc.)? 	Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes

6.3.13 Controls in place to address threats

Any new development would be subject to legislative requirements and environmental assessment including the need to comply with the requirements of the Habitats Regulations. The protective measures described in Section 5 are incorporated in the draft Plan Strategy and will also have effect.

6.3.14 Mitigation to address threats

The following recommendations, detailed in Section 7, will address the risk of habitat loss, disturbance, introduced species, aerial emissions and water pollution.

1. International Sites – Evidence;
2. Cumulative Effects;
3. Screening – General; and
4. Screening - Aerial Emissions.
5. International Sites – Recreation;
6. Waterfowl Supporting Habitat/Flight Paths;
7. Wastewater Treatment;
9. International Sites – Disturbance Construction;
10. International Sites – Disturbance Operation.

Combined with incorporated measures in the draft Plan Strategy these address the potential impacts identified above.

6.3.15 Cumulative and In Combination Effects

Cumulative impacts could arise from drainage works, recreational activity, sand extraction, commercial fishing or development in our Borough or neighbouring councils. The landscape scale Lough Neagh and Lough Beg Vision Project, illustrated on Map 7, are working to restore and protect wetlands some of which are in or adjacent to the SPA and Ramsar site. There is potential for conflict between

planning and this project, therefore consideration should be given to this project in defining the Lough Neagh and Lough Beg (including shoreline) Strategic Landscape Policy Area.

A draft HRA was prepared to assess planning application LA03/2017/0310/F from Lough Neagh Sand Traders Ltd for the extraction, transportation and working of sand and gravel from Lough Neagh. The assessment considered potential impacts on the features/supporting habitats of Lough Neagh and Lough Beg SPA/Ramsar which included: disturbance to SPA/Ramsar features, degradation of SPA. In considering such impacts in light of the conservation objectives for the sites, the appropriate assessment concluded that, provided certain requirements are conditioned in any planning approval, the proposal would not have an adverse effect on site integrity of Lough Neagh and Lough Beg SPA/Ramsar.

This assessment found that, with mitigation in place, there will be no adverse effect on site integrity as a result of the draft Plan Strategy. The need to consider and assess further in combination effects from other projects or plans, including those of adjacent councils, will be reviewed before the HRA is finalised.

6.3.16 Appropriate Assessment Conclusion

The evidence gathered and assessment undertaken does not enable us to conclude reasonably and objectively that the implementation of the plan, in the absence of mitigation, will not adversely affect selection features or the integrity of this site. Mitigation measures are therefore required to ensure that the Plan Strategy will not have any adverse effect on the integrity of these sites. Their incorporation in the Plan Strategy is discussed in Section 5 and additional measures are discussed in Section 7.

6.3.17 Adverse Effect on Site Integrity (AESI) Finding

Feature	AESI before mitigation	AESI after mitigation
Common Tern breeding population	Potential AESI	No AESI
Great Crested Grebe breeding population	Potential AESI	No AESI
Great Crested Grebe passage population	Potential AESI	No AESI
Whooper Swan wintering population	Potential AESI	No AESI
Bewick's Swan wintering population	Potential AESI	No AESI
Golden Plover wintering population	Potential AESI	No AESI
Great Crested Grebe wintering population	Potential AESI	No AESI
Pochard wintering population	Potential AESI	No AESI
Tufted Duck wintering population	Potential AESI	No AESI
Scaup wintering population	Potential AESI	No AESI
Goldeneye wintering population	Potential AESI	No AESI
Waterbird assemblage (wintering)	Potential AESI	No AESI
Wetlands (Ramsar Criterion 1)	Potential AESI	No AESI
Rare plant and invertebrates (Ramsar Criterion 2)	Potential AESI	No AESI
Diversity waterfowl, flora, fauna (Ramsar Criterion 3)	Potential AESI	No AESI
Breeding birds (Ramsar Criterion 4)	Potential AESI	No AESI
Wintering waterfowl (Ramsar Criterion 5)	Potential AESI	No AESI

Feature	AESI before mitigation	AESI after mitigation
Important bird populations (Ramsar Criterion 6)	Potential AESI	No AESI
Pollan (Ramsar Criterion 7)	Potential AESI	No AESI

It is therefore concluded that the draft Plan Strategy, in conjunction with incorporated mitigation as detailed in Section 5 and the recommendations in Section 7, will not have an adverse effect on site integrity of Lough Neagh and Lough Beg SPA and Ramsar Site.

6.4 Belfast Lough and Associated SPAs and Ramsar Sites

Eleven sites have bird features that use Belfast Lough for feeding, loafing or rafting (Map 9). Therefore a combined appropriate assessment was carried out for the following sites.

Site Name:	Belfast Lough SPA	Site Code:	UK9020290
Status:	Classified Special Protection Area	Area:	432.14 ha
Year:	1998		
Site Name:	Belfast Lough Ramsar	Site Code:	UK12002
Status:	Designated Ramsar Site	Area:	432.14 ha
Year:	1998		
Site Name:	Belfast Lough Open Water SPA	Site Code:	UK9020290
Status:	Classified Special Protection Area	Area:	5592.99 ha
Year:	2009		
Site Name:	Copeland Islands SPA	Site Code:	UK9020291
Status:	Classified Special Protection Area	Area:	201.20 ha
Year:	2009		
Site Name:	Larne Lough SPA	Site Code:	UK9020042
Status:	Classified Special Protection Area	Area:	398 ha
Year:	1997		
Site Name:	Larne Lough Ramsar	Site Code:	UK12013
Status:	Designated Ramsar Site	Area:	395.94 ha
Year:	1997		
Site Name:	Outer Ards SPA	Site Code:	UK9020271
Status:	Classified Special Protection Area	Area:	4753.82 ha
Year:	2002		
Site Name:	Outer Ards Ramsar	Site Code:	UK12018
Status:	Designated Ramsar Site	Area:	1154.16 ha
Year:	2005		
Site Name:	Strangford Lough SPA	Site Code:	UK9020111
Status:	Classified Special Protection Area	Area:	15580 ha
Year:	1998		
Site Name:	Strangford Lough Ramsar	Site Code:	UK12021
Status:	Designated Ramsar Site	Area:	15581.3 ha
Year:	1998		
Site Name:	East Coast (NI) Marine pSPA	Site Code:	UK9020320
Status:	Proposed Marine Special Protection Area	Area:	96668.34 Ha
Year:	NA		

STAGE 1: TEST OF LIKELY SIGNIFICANCE

6.4.1 Summary Site Description

The site location and character is described here and site selection features are presented in the table following the descriptions. The boundary rationale and management considerations are detailed further in the Conservation Objectives.

Belfast Lough SPA

Belfast Lough is a large intertidal sea lough situated at the mouth of the River Lagan on the east coast of Northern Ireland. The inner part of the lough comprises a series of mudflats and lagoons. The outer lough is restricted to mainly rocky shores with some small sandy bays. Marine areas below mean low water are not included.

During the breeding season the area regularly supports:

- Common tern 5.8 % of the all-Ireland population (5 year mean 2010 - 2014),
- Arctic tern 1.5% of the all-Ireland population (5 year mean 2010 - 2014).

Over winter the area regularly supports:

- Bar-tailed godwit 1.2 % of the all-Ireland population (5 year mean 2010/11 - 2014/15). Over winter the area regularly supports:
- Redshank (Eastern Atlantic - wintering) 1.4% of the biogeographic population (5 year peak mean 1991/92 - 1995/96),
- Black-tailed godwit 2.2% of the biogeographic population (2010/11-2014/15).

Belfast Lough Ramsar

The Belfast Lough Ramsar Area boundary is entirely coincident with that of the Belfast Lough SPA. All the features for which it was designated are also qualifying features for the SPA. The same site description therefore applies and it is assumed to be subject to the same threats and conservation objectives.

Belfast Lough Open Water SPA

The Belfast Lough open water area comprises the marine area below the mean low water mark. Seawards it extends to a boundary between the eastern limits on the north and south shores at Kilroot and Horse Rock respectively. Water depths within the site are generally between 1m and 10m. Shallow waters, less than 5m in depth, dominate the area with deeper waters confined to the central area of the lough, east of a line between Greenisland and Cultra.

Over winter the area regularly supports:

- Great crested grebe (North-western Europe - wintering) 0.35% of the NW European population 5-year mean 1996/97-2000/01

Copeland Islands SPA

The Copeland Islands site comprises three islands (Copeland Island, Light House Island and Mew Island), together with associated islets, off the north-east County Down coast and close to the entrance to Belfast Lough.

During the breeding season the area regularly supports:

- Arctic tern (Arctic - breeding/Southern Oceans - wintering) 22.6% of the population in Ireland 5-year mean
- Manx shearwater 1.7% of the World population Total survey 2000-2002

Larne Lough SPA

The sea lough extends from Larne town, southwards to Ballycarry bridge and beyond. The lough includes the extensive inter-tidal mudflats, together with more limited sand, gravel and boulder beaches. The tidal lagoon at Glynn is also included. Adjoining habitat within the site includes saltmarsh and transitional habitats together with limited wet grassland. Swan Island (natural) and Blue Circle Island (artificial) are important tern and gull nesting sites.

During the breeding season the area regularly supports:

- Roseate tern (Europe - breeding) 1.5% of the all-Ireland breeding population (5 year mean 1993-1997)
- Common tern (Northern/Eastern Europe - breeding) 8% of the all-Ireland breeding population (5 year mean 1993-1997)
- Sandwich tern (Western Europe/Western Africa) 4.3% of the all-Ireland breeding population (5 year mean 1993-1997)
- Mediterranean gull 10% of the all-Ireland breeding population (2014 population estimate) (5 year mean 2010-2014).

Over winter the area regularly supports:

- Light-bellied Brent Goose (Canada/Ireland) 1.1% of the biogeographic population (5 year peak mean 1991/92-1995/96).

Larne Lough Ramsar

The Larne Lough Ramsar Area boundary is entirely coincident with that of the Larne Lough SPA. All the features for which it was designated are also qualifying features for the SPA. The same site description therefore applies and it is assumed to be subject to the same threats and conservation objectives.

Outer Ards SPA

The coastal site extends from near Grey Point, Belfast Lough to north of Ballyquintin Point at the southern end of the Ards Peninsula. The site is contiguous with Belfast Lough SPA and Strangford Lough SAC/SPA. It comprises a variety of shoreline types including rock platforms, off-shore islands, boulder, gravel and sand beaches. While the wintering waterfowl utilise the open shore, breeding seabirds (tern species) are present on Cockle Island, Groomsport. A marine area has been included within the SPA adjoining the Cockle Island tern nest site.

During the breeding season the area regularly supports:

- Arctic Tern (Arctic - breeding/Southern Oceans - wintering) 4.7% of the all-Ireland breeding population 5-year mean (period not specified).

Over winter the area regularly supports:

- Golden Plover (North-western Europe - wintering) 1.1% of the all-Ireland population 5 year peak mean 1991/92-1995/96.
- Turnstone (Western Palearctic - wintering) 1.7% of the population 5-year peak mean 1991/92
- Light-bellied Brent Goose (Canada/Ireland) 1.1% of the population 5-year peak mean 1991/92 - 1995/96
- Ringed Plover (Europe/Northern Africa - wintering) 1.2% of the population 5-year peak mean 1991/92 - 1995/96

Outer Ards Ramsar

The Outer Ards Ramsar Area boundary is entirely coincident with that of the Outer Ards SPA. All the features for which it was designated are also qualifying features for the SPA. The same site description therefore applies and it is assumed to be subject to the same threats and conservation objectives.

Strangford Lough SPA

Strangford Lough is a large shallow sea lough with an indented shoreline and a wide variety of marine and intertidal habitats. The west shore has numerous islands typical of flooded drumlin topography. The Lough contains extensive areas of mudflat and also sandflats, saltmarsh and rocky coastline. This is Northern Ireland's most important coastal site for wintering waterfowl, and it is particularly important for breeding terns. Marine areas below mean low water are also included such as the Quoile Pondage nature reserve.

During the breeding season the area regularly supports:

- Common tern (Northern/Eastern Europe - breeding) 19.5% of the all-Ireland breeding population (5 year peak mean 1992/3-1996/7),
- Arctic tern (Arctic - breeding/Southern Oceans - wintering) 8.4% of the all-Ireland breeding population (5 year peak mean 1992/3-1996/7),
- Sandwich tern (Western Europe/Western Africa) 13.5% of the all-Ireland breeding population (5 year peak mean 1992/3-1996/7).

Over winter the area regularly supports:

- Light-bellied brent goose (Canada/Ireland) 52.6% of the population (5 year peak mean 1992/3-1996/7)
- Knot (North-eastern Canada/Greenland/Iceland/North-western Europe) 2.5% of the population (5 year peak mean 1992/3-1996/7),
- Redshank (Eastern Atlantic - wintering) 1.8% of the population (5 year peak mean 1992/3-1996/7).
- An internationally important assemblage of birds.

The Strangford Lough waterfowl assemblage cited components include: Coot, Cormorant, Dunlin, Gadwall, Goldeneye, Great Crested Grebe, Grey Plover, Greylag Goose, Lapwing, Little Grebe, Mallard, Oystercatcher, Pintail, Red-breasted Merganser, Ringed Plover, Shoveler, Teal, Turnstone, Wigeon.

Strangford Lough Ramsar

The Strangford Lough Ramsar Area boundary is entirely coincident with that of the Strangford Lough SPA. All the features for which it was designated are also qualifying features for the SPA. The same site description therefore applies and it is assumed to be subject to the same threats and conservation objectives.

East Coast (Northern Ireland) Marine Proposed SPA

The East Coast (NI) Marine pSPA includes coastal and near shore waters from Ringfad near Carnlough, Co. Antrim in the north, the marine area of Larne Lough, the marine area of Belfast Lough, waters around the Copeland Islands and offshore of the Ards Peninsula to Cloghan Head, near Ardglass in the south. The SPA covers a diverse range of seabed habitats, from extensive coastal fringing reefs to the fine silt of inner Belfast Lough. Within Belfast Lough muds grade into muddy sands toward

the outer Lough, with extensive areas of cobbles and shell debris overlying the muddy sand.

6.4.2 Location and connectivity with the plan area

Belfast Lough SPA and Ramsar site

Belfast Lough SPA and Ramsar site share the same boundary and the council area is either adjacent to or slightly overlaps these international sites. The Borough's coast extends 7.5km along Belfast Lough and is within Metropolitan Newtownabbey and a small part of Greenisland. They include the intertidal area and the ponds between the M5 and the railway line. There may also be roost sites occurring outside the designated site. The SPA includes tidal ponds between the M5 and the railway line which is zoned as a Local Landscape Policy Area.

East Coast (Northern Ireland) Marine SPA (Proposed) and related sites

East Coast (Northern Ireland) Marine SPA (Proposed) is intended to subsume Belfast Lough Open Water SPA and will therefore be within 0.5km and ecologically connected to the plan area. It also adjoins all of the other SPAs and Ramsar sites above. A number of marine areas have been identified as important for a range of foraging tern species originating from adjoining tern colonies designated as part of the following existing Special Protection Areas: Larne Lough SPA, Belfast Lough SPA, Outer Ards SPA, Copeland Islands SPA and Strangford Lough SPA. All of the above marine areas overlap to a greater or lesser extent and East Coast (Northern Ireland) Marine SPA (Proposed) boundary subsumes all of these.

6.4.3 Plan Designations

The SPA includes tidal ponds between the M5 and the railway line which is zoned as a Local Landscape Policy Area. A community greenway is shown along approximately 4km of the southern part of the shoreline. Also transportation lines are important in the form of the M5 and Shore Road as well as the railway line which is inland of the tidal pond. The whole of the SPA is in an Area of Constraint on Mineral Developments. It is also entirely within COU 4/01 Coastal Policy Area. Part of the tidal lagoon and about 2.5km of the coast are identified as existing recreation and open space. The southern part of this coast is SLNCI BHA 15/02 and there is another SLNCI MNY 39/09. Further SLCNIs provide buffers to watercourses draining to Belfast Lough including Three Mile Water. Industry is zoned within 0.5km of Belfast Lough between Greenisland and Metropolitan Newtownabbey. In terms of housing zones some lie within 0.5km

6.4.4 Selection Features

The following table lists the site selection features for sites connected to Belfast Lough. SPA selection features are subject to review and DAERA advised of some updated features in 2015. These are mainly additions but Great Crested Grebe was removed from the features for Belfast Lough SPA as its range was covered in Belfast Lough Open Water.

Site Selection Features for Sites Connected to Belfast Lough

Qualifying interests	B/W	Belfast Lough SPA	Belfast Lough Ramsar	Belfast Lough Open Water SPA	East Coast (NI) Marine pSPA	Outer Ards SPA	Outer Ards Ramsar	Strangford Lough SPA	Strangford Lough Ramsar	Larne Lough SPA	Larne Lough Ramsar	Copeland Islands SPA
Redshank	W	Y	Y					Y	Y			
Ringed plover	W					Y	Y					
Turnstone	W					Y	Y					
Knot	W							Y	Y			
Golden plover	W					Y	Y					
Black-tailed Godwit	W	Y	Y									
Bar-tailed Godwit	W	Y						Y				
Great Crested Grebe	W			Y	Y							
Red-throated Diver	W				Y							
Eider Duck	W				Y							
Shelduck	W							Y				
Waterfowl Assemblage	W							Y	Y			
Light-bellied Brent Goose	W					Y	Y	Y	Y	Y	Y	
Common Tern	B	Y			Y			Y	Y	Y	Y	
Arctic Tern	B	Y			Y	Y		Y				Y
Sandwich tern	B				Y			Y	Y	Y		
Roseate Tern	B									Y	Y	
Mediterranean Gull	B									Y		
Manx Shearwater	B				Y							Y

B - Breeding

W - Wintering

The following table details the population of selection feature species for East Coast (Northern Ireland) Marine SPA (proposed). It is sourced from the conservation objectives at April 2015.

East Coast (Northern Ireland) Marine SPA (proposed)

Feature Type	Feature	Population
Species	Great Crested Grebe wintering population ^a	1646 individuals (5 year average 1995-2000)
Species	Red-throated Diver	142 individuals 5 year mean (2006/07 – 2008/08)
Species	Sandwich Tern	1656 pairs Breeding 5 year mean (2010 - 2014)
Species	Common Tern	908 pairs Breeding 5 year mean (2010 - 2014)
Species	Arctic Tern	1351 pairs Breeding 5 year mean (2010 - 2014)
Species	Manx Shearwater	4800 pairs Breeding 2000–2002
Species	Eider Duck	3126 individuals Wintering 5 year mean (2010/11 – 2014/15)
Habitat ¹	Habitat extent	
Roosting/loafing sites	locations of sites	

Habitat and roost sites are not a selection feature but are a factor and more easily treated as if they were a feature. No data is available for SPA Review population and Common Standards Monitoring baseline. Contemporary data and information on waterbird trends at this site and their regional (sub-national) and national contexts can be found in the Wetland Bird Survey report, which is updated annually. See www.bto.org/survey/webs/webs-alerts-index.htm.

6.4.5 Conservation Objectives

The conservation objectives for the SPAs and their qualifying features are presented in the following table. The feature conservation objectives are the same for the majority of sites however there are some that are specific to sites with breeding species or a waterfowl assemblage. Although habitats are not directly protected under the Birds Directive as a selection feature they are a factor in the condition of bird features therefore DAERA includes objectives relating to habitat extent.

Conservation Objectives for SPAs Connected to Belfast Lough

OBJECTIVE	Belfast Lough SPA	Belfast Lough Open Water SPA	East Coast (NI) Marine pSPA	Outer Ards SPA	Strangford Lough SPA	Larne Lough SPA	Copeland Islands SPA
Conservation Objectives Version	V3	V2	V1 (Draft)	V4	V4	V4	V2
Date (month-year)	04-15	04-15	04-15	04-15	04-15	04-15	04-15
SITE OBJECTIVE							
To maintain each feature in favourable condition.	Y	Y	Y	Y	Y	Y	Y
SPA SELECTION FEATURE OBJECTIVES							
To maintain or enhance the population of the qualifying species	Y	Y	Y	Y	Y	Y	Y
Fledging success sufficient to maintain or enhance population				Y	Y	Y	Y
To maintain or enhance the range of habitats utilised by the qualifying species	Y	Y	Y	Y	Y	Y	Y
To ensure that the integrity of the site is maintained;	Y	Y	Y	Y	Y	Y	Y
To ensure there is no significant disturbance of the species and	Y	Y	Y	Y	Y	Y	Y
To ensure that the following are maintained in the long term:	Y	Y	Y	Y	Y	Y	Y
Population of the species as a viable component of the site	Y	Y	Y	Y	Y	Y	Y
Distribution of the species within site	Y	Y	Y	Y	Y	Y	Y
Distribution and extent of habitats supporting the species	Y	Y	Y	Y	Y	Y	Y
Structure, function and supporting processes of habitats supporting the species	Y	Y	Y	Y	Y	Y	Y

OBJECTIVE	Belfast Lough SPA	Belfast Lough Open Water SPA	East Coast (NI) Marine pSPA	Outer Ards SPA	Strangford Lough SPA	Larne Lough SPA	Copeland Islands SPA
No significant decrease in population against national trends (Manx Shearwater and Arctic Tern)							Y
WATERFOWL ASSEMBLAGE FEATURE OBJECTIVES							
No significant decrease in population against national trends					Y		
Maintain species diversity contributing to the Waterfowl Assemblage					Y		
HABITAT OBJECTIVES							
To maintain or enhance the area of natural and semi-natural habitats used or potentially usable by Feature bird species (X ha intertidal area), subject to natural processes	Y			Y	Y	Y	Y
Maintain the extent of main habitat components subject to natural processes	Y	Y	Y	Y	Y	Y	Y
Roost Sites: Maintain or enhance sites utilised as roosts	Y			Y	Y	Y	
Roosting/loafing sites: Maintain all locations of sites		Y	Y				

Source: DAERA Conservation Objectives

A review of the conservation objectives and pathways between the selection features reveals that of the list of 19 species, not all have a pathway to the designated area. Those that are connected are the five species now listed for Belfast Lough SPA and the additional species listed for East Coast (NI) Marine pSPA. This includes three tern species and Manx Shearwater that all breed in adjacent SPAs and feed in a wider area including East Coast (NI) Marine pSPA. Light-bellied Brent Goose, a feature of three adjacent SPAs and Ramsar sites, feeds primarily on vegetation growing on intertidal mudflats, the most important feeding area being in Strangford Lough, however it is also recorded as using Belfast Lough. Finally, wintering Eider Duck and Red-throated Diver also use the East Coast pSPA waters which include Belfast Lough.

Ringed plover, golden plover and turnstone are waders recorded as wintering in Outer Ards SPA. Their wintering area is east of Bangor and well away from sources of disturbance from the plan area. Any increase in disturbance from the draft Plan Strategy will have a de minimis effect on these species. Knot and shelduck are only listed for Strangford Lough and therefore cannot be impacted. The Strangford Lough waterfowl assemblage cited components include: Coot, Cormorant, Dunlin, Gadwall, Goldeneye, Great Crested Grebe, Grey Plover, Greylag Goose, Lapwing, Little Grebe, Mallard, Oystercatcher, Pintail, Red-breasted Merganser, Ringed Plover, Shoveler, Teal, Turnstone, Wigeon. While some of these species may be found in

Belfast Lough any impacts on the Strangford Lough Wildfowl Assemblage will be de minimis.

Pathway to Plan Area

- Redshank
- Black-tailed Godwit
- Bar-tailed Godwit
- Great Crested Grebe
- Red-throated Diver
- Eider Duck
- Common Tern
- Arctic Tern
- Sandwich tern
- Manx Shearwater
- Roseate Tern
- Mediterranean Gull
- Light-bellied Brent Goose

No Pathway to Plan Area

- Ringed plover
- Turnstone
- Knot
- Golden plover
- Shelduck
- Waterfowl Assemblage

6.4.6 Main Threats, Pressures and Activities with Impacts on the Site

Both on-site and off-site activities can potentially affect the site. The following information is sourced from the Conservation Objectives and gives an indication of potential threats to all site selection features.

Main Threats on the Site in Relation to draft Plan Strategy

Threat	Could Plan Add to Threat?	Feature/s which may be impacted
Adjoining habitat	Yes	All selection features Belfast Lough SPA and Ramsar
Aquaculture	No	
Bait digging – commercial or 'recreational' and shellfish gathering.	No	
Boating activity – commercial	Yes	All sites and selection features
Boating activity – recreational	Yes	All sites and selection features
Dredging	Yes	All sites and selection features
Fishing – commercial or recreational	No	
Habitat extent – inter-tidal	Yes	Redshank and Black-tailed Godwit Belfast Lough SPA and Ramsar
Habitat extent – open water	No	
Habitat quality – inter-tidal	Yes	Redshank and Black-tailed Godwit Belfast Lough SPA and Ramsar
Habitat quality – open water	Yes	All sites and selection features
High tide roosts	Yes	Redshank and Black-tailed Godwit Belfast Lough SPA and Ramsar
Roosting and loafing areas	Yes	Red-throated Diver, Eider Duck, Manx Shearwater
Introduced species	Yes	Redshank and Black-tailed Godwit Belfast Lough SPA and Ramsar
Recreational activities.	Yes	All sites and selection features
Research activities.	No	
System dynamics	Yes	Redshank and Black-tailed Godwit Belfast Lough SPA and Ramsar
Wildfowling	No	

Threat	Could Plan Add to Threat?	Feature/s which may be impacted
Cull of fledglings/ young	No	
Enhanced bird competition	Yes	Breeding Terns, Mediterranean Gulls and Manx Shearwater
Habitat extent and quality-breeding	No	
Predation	No	
Game Bird Management	No	
Grazing regime	No	
Field boundaries on Big Copeland	No	
Alien species	No	
Power cables	No	
Beach cleaning	No	
Beach sand and gravel extraction.	No	
Coastal protection schemes	No	
Seaweed harvesting	No	
Marine renewable energy developments	No	
Sand dredging - commercial	No	

6.4.7 Sensitivities of Selection Features to plan

Potential impacts arising from the Plan Strategy, as identified in Section 5, are listed in the following table which identifies those that could affect the selection features of these sites.

Potential Impacts Arising From Plan	Pathway for Impact to affect this site?	Comment	Features that may be affected
Habitat Loss	Yes	Development on or adjacent to site leading to direct or indirect damage to habitat features	Wintering/breeding birds in Belfast Lough SPA/Ramsar.
Direct Disturbance	Yes	Recreational activity on open water or in SPA	
Indirect Disturbance	Yes	Recreational activity adjacent to SPA or supporting habitat.	Wintering/breeding bird features that feed, breed, roost, loaf or raft in or close to Belfast Lough.
Introduced Species	Yes	Spread of species during construction works or through recreation.	All
Aerial Emissions	Yes	Potential nitrogen deposition from intensive agriculture or traffic could cause degradation or loss of habitat.	All
Water Pollution	Yes	Metropolitan Newtownabbey is in the Belfast Lough catchment.	Wintering/breeding bird features that feed, breed, roost, loaf or raft in or close to Belfast Lough.

Potential Impacts Arising From Plan	Pathway for Impact to affect this site?	Comment	Features that may be affected
Hydrological Change	No	Could not be of an extent that would affect selection features.	NA

6.4.8 Screening conclusion

Under the precautionary approach it was deemed that appropriate assessment is required for these sites to consider the impacts of habitat loss, direct disturbance, indirect disturbance, introduced species, aerial emissions and water pollution on the site selection features and supporting habitat. Under the precautionary approach it was found that all international sites connected to Belfast Lough, other than Outer Ards Ramsar site, will require appropriate assessment. Appropriate assessment is required to assess potential impacts on site integrity in light of the site conservation objectives and selection feature objectives for the sites and species listed in the following table.

STAGE 2: APPROPRIATE ASSESSMENT

6.4.9 Site specific evidence sources

- Belfast Lough SPA, V3, 01/04/2015
- Belfast Lough Open Water SPA, V2, 01/04/2015
- East Coast (NI) Marine pSPA, V1 (Draft), 01/04/2015
- Outer Ards SPA, V4, 01/04/2015
- Strangford Lough SPA, V4, 01/04/2015
- Larne Lough SPA, V4, 01/04/2015
- Copeland Islands SPA, V2, 01/04/2015

6.4.10 Condition assessment

Available information on the condition of selection features is presented in the following table.

Condition Assessment for Site Selection Features

Qualifying interests	B/W	Belfast Lough SPA		Belfast Lough Open Water SPA		Outer Ards SPA		Strangford SPA		Larne Lough SPA		Copeland Islands SPA		East Coast (NI) Marine pSPA	
		Condition	Year	Condition	Year	Condition	Year	Condition	Year	Condition	Year	Condition	Year	Condition	Year
Redshank	W	U	2014 ^A					F	2014 ^A						
Black-tailed Godwit	W	F	2012 ^B												
Bar-tailed Godwit	W	F-M	2012 ^B					F	2014 ^A						
Great Crested Grebe	W	F	2014 ^A	F	2014 ^A									F	2014 ^C
Red-throated Diver	W													N-A ^B	
Eider Duck	W													N-A ^B	
Manx Shearwater	B											F	2014 ^A	F	2014 ^C
Common Tern	B	N-A ^B						F	2014 ^A	F	2014 ^A			F	2014 ^C
Arctic Tern	B	N-A ^B				F	2014 ^A	F	2014 ^A			F	2014 ^A	F	2014 ^C
Sandwich tern	B							F	2014 ^A	F	2014 ^A			F	2014 ^C
Roseate Tern	B									F	2014 ^A				
Mediterranean Gull	B									N-A ^B					

2014^A From Conservation Objectives

N-A^B or 2012^B From Condition of Features in ASSIs and N2Ks Dec 2017, DAERA Unpublished

2014^C Derived from Condition of associated SPAs (no condition assessment for pSPA)

B Breeding

W Wintering

F Favourable: Unclassified

F-M Favourable: Maintained

U Unfavourable

N-A Not Assessed

Sources: DAERA SPA: Monitoring Reports 2013, Unpublished; DAERA Condition of Features in ASSIs and N2Ks 2017, Unpublished.

6.4.11 Impacts that may arise as a result of the plan

This section considers those impacts which are most likely to arise as a result of the Plan Strategy in more detail in relation to the main threats, pressures and activities with impacts on the site identified in the conservation objectives.

Section 11 of the conservation objectives sets out the main threats, pressures, activities with impacts on the site or site features. An extra of those most relevant to planning follows with some added notes of relevance to this council area.

Issue	Threat/comments	Local considerations	Action
Adjoining habitat	Particularly important for high tide roost locations. Significant changes in land management and disturbance are key considerations. Such areas lie without the site making effective management of developments other than those for which planning permission is required, difficult.	Most adjoining habitat utilised by birds other than as roost sites, comprises managed amenity grass. This provides important additional feeding opportunities for selected wader species.	Assess importance of adjoining and distant playing grounds, fields and other feeding areas. Assess impacts from development.
Boating activity – commercial	Disturbance and potential for impact from high-speed liners.	Major shipping channel plus cross-lough activity imminent. The former is long- established. Commercial development in our council area unlikely.	Formal consultation likely relating to new schemes. Need to assess new trans-lough impact. Consider the collective impact.
Boating activity – recreational	Disturbance and potential for impact especially from jet skis. Generally relevant to particularly sensitive areas within site.	Sailing clubs at Carrickfergus, Whiteabbey, Holywood and Cultra. Additional slipways and quays.	Liaise with appropriate authority with codes of good practice, zoning and use of by-laws as necessary. Consider the collective impact.
Coastal protection schemes	Where there is no history of this, it impacts on natural beach systems with loss of habitat.	Much of north and inner shores are heavily engineered. No ongoing coastal erosion problems noted.	Liaise with Planning Service and other parties with an involvement in coastal management.
Dredging	Generally only an issue in relation to commercial shipping channels. Issues include disturbance, remobilisation of contaminated sediment and spoil dumping zones.	Major capital dredging programme ongoing for Belfast Harbour, any dredging required in council area likely to be small scale.	Liaise with port authority and DAERA as required with regard to water quality issues and pollution incidents.
Fishing – commercial or recreational	Minimal disturbance consideration but may represent 'competition' for piscivorous birds. Represents a net loss to the system in terms of biomass.	Most commercial activity related to aquaculture. Recreational fishing not deemed to be a problem.	Liaise with DAERA and fishing authority as required. Liaise with angling clubs as required.
Habitat extent – inter-tidal	Loss of habitats through development, changes in coastal processes. Loss of inter-tidal habitat is a critical issue as this is the feeding	There has been extensive loss of inter-tidal habitat historically. Inner lough mudflats	Assess planning applications. Monitor using aerial photography.

Issue	Threat/comments	Local considerations	Action
	zone for the majority (numbers and species) of birds.	particularly vulnerable.	
Habitat extent – open water	Loss likely to be limited but expansion of commercial port facilities can impact on key localities.	Some open water however transport routes make it unsuitable for development.	Assess planning applications. Consider the collective impact.
Habitat quality – inter-tidal	Alteration of habitat quality through diminution of water quality, invasive species or changes in coastal processes.	Historically impacted by industrial and sewerage effluent.	Assess planning applications. Liaise with Environmental Protection as required with regard to water quality issues and pollution incidents. Consider the collective impact.
Habitat quality – open water	Alteration of habitat quality through diminution of water quality or invasive species.	Historically impacted by industrial and sewerage effluent. Vulnerable to pollution incidents from both industry and shipping.	Assess planning applications. Deal with invasive alien species by preventing their spread or reducing their impact. Liaise with DAERA as required with regard to water quality issues and pollution incidents. Consider the collective impact.
High tide roosts	An essential component of sites hosting waders. Development of adjoining ground or actual traditional roost localities may adversely impact on the sites carrying capacity. Many such sites lie without the site making effective management of developments, other than those for which planning permission is required, difficult.	Localities should be mapped. Loss of wader roost sites within the Inner Lough has been notable.	Assess planning applications. Identify key areas and promote site management schemes. Review use of Wildfowl Refuges. Consider the collective impact.
Recreational activities.	Disturbance is the main consideration although vehicle access may also lead to beach compaction and impacts on beachhead habitats.	Shoreline has been heavily used for recreational activities over long timescale. Cumulative disturbance impacts (e.g. boating, wildfowling, walkers, dogs etc) may be a significant factor for	Liaise with local authorities and other managing parties.

Issue	Threat/comments	Local considerations	Action
		wintering bird populations impacting on both feeding (inter-tidal) and roosting birds	
System dynamics	Cuts across many other issues. Dynamic systems, especially coastal, can be affected by many factors especially engineered structures and significant changes in dominant wind direction or storm frequency. Many systems may indeed still be undergoing responses to historical developments e.g. partial reclamation, seawall construction. Changes may include alteration in sediment grade, shifts in patterns of erosion and deposition etc. Consequences for habitat and species utilisation of the site can be profound.	Main considerations are historical reclamation, especially along the north shore and Sydenham areas, together with widespread coastal engineering works and ongoing development within the Belfast harbour area. Sediment responses may be expected. Changes in water quality have led to an expansion of mussel beds, in turn altering system behaviour. Expanding aquaculture represents an alteration to substrate.	Human induced change should be minimised. Assess planning applications and liaise with other relevant authorities. Ad hoc dumping and removal of natural materials should be managed. Major natural shifts in system behaviour may be identified through analysis of aerial photographs and site monitoring. Major and consistent changes to patterns of habitat distribution and bird utilisation of the site should be noted.

Nitrogen deposition is not cited as an impact on the SPA feature in the conservation objectives however, APIS does provide guideline values for supporting habitat. Excess nitrogen deposition can lead to changes in ecosystem structure or function and to a reduction in biodiversity. Construction in support of intensive agriculture can increase nitrogen deposition from the development site or because of land spreading of litter, slurry, manure or digestate.

6.4.12 Potential Impacts on Site Integrity in the Absence of Mitigation

The following checklist indicates the impacts that the draft Plan Strategy could have in the absence of protective measures.

Does the plan have the potential to:	Yes/No
<ul style="list-style-type: none"> • cause delays in progress towards achieving the conservation objectives of the site? • interrupt progress towards achieving the conservation objectives of the site? • disrupt those factors that help to maintain the favourable conditions of the site? • interfere with the balance, distribution and density of key species that are the indicators of the favourable condition of the site? 	Yes Yes Yes Yes
Other indicators: Does the plan have the potential to:	Yes/No
<ul style="list-style-type: none"> • cause changes to the vital defining aspects (e.g. nutrient balance) that determine how the site functions as a habitat or ecosystem? • change the dynamics of the relationships (between, for example, soil and water or plants and animals) that define the structure and/or function of the site? • interfere with predicted or expected natural changes to the site (such as water dynamics or chemical composition)? • reduce the area of key habitats? • reduce the population of key species? • change the balance between key species? • reduce diversity of the site? • result in disturbance that could affect population size or density or the balance between key species? • result in fragmentation? • result in loss or reduction of key features (e.g. tree cover, tidal exposure, annual flooding , etc.)? 	Yes Yes Yes Yes Yes Yes Yes Yes No Yes

6.4.13 Controls in place to address threats

Any new development would be subject to legislative requirements and environmental assessment including the need to comply with the requirements of the Habitats Regulations. The protective measures described in Section 5 are incorporated in the draft Plan Strategy and will also have effect.

6.4.14 Mitigation to address threats

The following recommendations, detailed in Section 7, will address the risk of habitat loss, disturbance, introduced species, aerial emissions and water pollution.

1. International Sites – Evidence;
2. Cumulative Effects;
3. Screening – General; and
4. Screening - Aerial Emissions.
5. International Sites – Recreation;
6. Waterfowl Supporting Habitat/Flight Paths;
7. Wastewater Treatment;
9. International Sites – Disturbance Construction;
10. International Sites – Disturbance Operation.

Combined with incorporated measures in the draft Plan Strategy these address the potential impacts identified above.

6.4.15 Cumulative and In Combination Effects

Cumulative impacts could arise from development or activities leading to habitat loss, disturbance, introduced species, aerial emissions and deterioration in water quality. This could be caused by land reclamation, coastal defence works, development with insufficient wastewater treatment capacity, recreational activity, commercial fishing or other development in or connected to Belfast Lough.

The assessment found that, with mitigation in place, there will be no adverse effect on site integrity from the draft Plan Strategy. The need to consider and assess further in combination effects from other projects or plans will be reviewed before the HRA is finalised.

6.4.16 Appropriate Assessment Conclusion

The evidence gathered and assessment undertaken does not enable us to conclude reasonably and objectively that the implementation of the plan, in the absence of mitigation, will not adversely affect selection features or the integrity of these sites. Mitigation measures are therefore required to ensure that the plan will not have any effect on the integrity of these sites. These mitigation measures are identified above. Their incorporation in the Plan Strategy is discussed in Section 5 and additional measures are discussed in Section 7.

6.4.17 Adverse Effect on Site Integrity (AESI) Finding

Feature	AESI before mitigation	AESI after mitigation
Redshank	Potential AESI	No AESI
Black-tailed Godwit	Potential AESI	No AESI
Bar-tailed Godwit	Potential AESI	No AESI
Great Crested Grebe	Potential AESI	No AESI
Red-throated Diver	Potential AESI	No AESI
Eider Duck	Potential AESI	No AESI
Manx Shearwater	Potential AESI	No AESI
Common Tern	Potential AESI	No AESI
Arctic Tern	Potential AESI	No AESI
Sandwich tern	Potential AESI	No AESI
Roseate Tern	Potential AESI	No AESI
Mediterranean Gull	Potential AESI	No AESI
Light-bellied Brent Goose	Potential AESI	No AESI

It is therefore concluded that the draft Plan Strategy, in conjunction with incorporated mitigation as detailed in Section 5 and the recommendations in Section 7, will not have an adverse effect on site integrity of the SPAs and Ramsar sites assessed in this appropriate assessment.

6.5 Skerries and Causeway SAC & North Channel SAC (Harbour Porpoise)

Site Name:	Skerries and Causeway SAC	Site Code:	UK0030383
Status:	Designated Special Area of Conservation	Area:	10875.96 ha
Year:	2017		
Site Name:	North Channel SAC	Site Code:	UK0030399
Status:	Designated Special Area of Conservation	Area:	160,367ha/1604km ²
Year:	2019		
Map:	Appendix 6, Map 10		

STAGE 1: TEST OF LIKELY SIGNIFICANCE

6.5.1 Summary Site Description

Skerries and Causeway SAC

The Skerries and Causeway site is located adjacent to the coastline of Portstewart, Portrush, Bushmills and the Giant's Causeway World Heritage Site. The site contains the qualifying Features: Annex I Reef; Annex I Sandbanks which are slightly covered by seawater at all times; Annex I Submerged or partially submerged sea caves; and Annex II Harbour Porpoise.

Much of the reef in this area is sand scoured reef, an unusual type of reef in a Northern Ireland context. This produces a close relationship between the reef and the adjacent sediments: as well as the sand scoured areas of reef and stony reef, there are also large areas of bedrock reef that have a thick veneer of sediment, but still support bedrock epifauna (attached to the bedrock but growing up through the sediment); and conversely, there are also areas of coarse and mixed sediments that support epifauna communities more reminiscent of the reef habitat.

Harbour Porpoise (*Phocoena phocoena*) have been consistently recorded during more than 140 dedicated effort watches at six sites within the proposed boundary. These records span every month of the year, including months outside of the breeding and calving seasons and confirm the continuous presence of harbour porpoise within this area. Continuous or regular presence is graded A (excellent conservation).

North Channel SAC

Located along the eastern coast of Northern Ireland, the North Channel SAC has been identified as an important winter area for harbour porpoise *Phocoena phocoena*, supporting an estimated 1.2% of the UK Celtic and Irish Seas Management Unit population. This site includes locations where some of the largest groups of harbour porpoise have been observed around Northern Ireland. Groups of up to 100 harbour porpoise have been sighted.

Habitats within the site consist mainly of coarse or sandy sediments, with patches of rock and mud. Water depths reach a maximum of 150m along the eastern boundary, but much of the site lies between 10m and 40m. 85% of the site lies in Northern Irish inshore waters (0 – 12 nm from shore). The site covers important winter habitat for harbour porpoise and extends from the coast into offshore waters, overlapping with the Pisces Reef Complex SAC.

Much of the site incorporates shallow depths of less than 40m and the seabed energy layer of EU Seamap indicates that most of the site is of moderate energy. In particular the coastal strip from the Copelands to south of Cloughey on the Northern Irish coast has higher current energy, where it can be expected that eddy activity (turbulence) is higher.

Most of the areas with frequent sightings are in coastal waters. These are often areas where there is a high degree of water mixing, sometimes associated with strong tidal streams. Such areas have high biological productivity, and are often associated with important concentrations of small prey fish. The boundary rationale and management considerations are detailed in the Conservation Objectives for each site.

6.5.2 Location and connectivity with the plan area

Both sites are connected to the plan area via marine waters. The nearest point of the North Channel SAC is 12.5 kms from the plan area via the coastline. Skerries and Causeway SAC is almost 100km away via marine waters. Harbour Porpoise are however found all around the coast of Ireland including Belfast Lough.

In light of the distance to Skerries and Causeway SAC the marine habitat features cannot be affected by the draft Plan Strategy therefore only Harbour Porpoise is considered further.

6.5.3 Plan Designations

There are no plan designations on or around these SACs.

6.5.4 Selection Features

Feature type	Feature	Global Status	Size/extent/population
Species	Harbour Porpoise <i>Phocoena phocoena</i>	C (Skerries and Causeway SAC) B (North Channel SAC)	No fixed number of harbour porpoise above or below which the population would be viable or not as the number naturally varies.

6.5.5 Conservation Objectives

Skerries and Causeway SAC

The Conservation Objectives for this site are:

- To maintain (or restore where appropriate) the
 - Reefs
 - Sandbanks which are slightly covered by sea water all the time, and
 - Submerged and partially submerged sea caves
 - Harbour Porpoise (*Phocoena phocoena*)
- The SAC selection feature component objectives for Harbour Porpoise are:
 - Ensure the species is a viable component of the site.
 - Ensure there is no significant disturbance of the species.
 - Ensure the supporting habitats and processes relevant to harbour porpoises and their prey are maintained.

North Channel SAC

The Conservation Objectives for this site are:

- To avoid deterioration of the habitats of the harbour porpoise or significant disturbance to the harbour porpoise, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to maintaining Favourable Conservation Status (FCS) for the UK harbour porpoise.

The SAC selection feature component objectives for Harbour Porpoise are:

- To ensure for harbour porpoise that, subject to natural change, the following attributes are maintained or restored in the long term:
 1. The species is a viable component of the site.
 2. There is no significant disturbance of the species.
 3. The supporting habitats and processes relevant to harbour porpoises and their prey are maintained.

6.5.6 Main Threats, Pressures and Activities with Impacts on the Site

The following information is sourced from the Conservation Objectives and Advice on Activities for North Channel SAC which are specific to Harbour Porpoise and gives an indication of potential threats to this site selection feature. Those pressures ranked 'high' are known to have the greatest impact relative to other pressures on the population of UK harbour porpoises.'

Key activities and the relative risk of impacts on harbour porpoise throughout UK waters

Activities	Pressures	Impacts	Current relative level of impact	Could Plan Add to Threat?
Commercial fisheries with bycatch of harbour porpoise (predominantly static nets)	Removal of non-target species	Mortality through entanglement/bycatch	High	No
Discharge/run-off from land- fill, terrestrial and offshore industries	Contaminants	Affects on water and prey quality Bioaccumulation through contaminated prey ingestion Health issues (e.g. on reproduction)	High	Yes
Shipping, drilling, dredging and disposal, aggregate extraction, pile driving, acoustic surveys, underwater explosion, military activity, acoustic deterrent devices and recreational boating activity	Anthropogenic underwater sound	Mortality Internal injury Disturbance leading to physical and acoustic behavioural changes (potentially impacting foraging, navigation, breeding, socialising)	Medium	Yes
Shipping, recreational boating, tidal energy installations	Death or injury by collision	Mortality Injury	Medium/Low	Yes

Activities	Pressures	Impacts	Current relative level of impact	Could Plan Add to Threat?
Commercial fisheries (reduction in prey resources)	Removal of target species	Reduction in food availability Increased competition from other species Displacement from natural range	Medium	No

6.5.7 Sensitivities of Selection Features to plan

Potential impacts arising from the Plan Strategy, as identified in Section 5, are listed in the following table which identifies those that could affect the selection features of these sites.

Potential Impacts Arising From Plan	Pathway for Impact to affect this site?	Comment	Features that may be affected
Habitat Loss	Yes	Deterioration of water quality	Harbour porpoise
Direct Disturbance	Yes	From construction works	
Indirect Disturbance	Yes	From recreation – very limited marine access and infrastructure constraints limit scope for large scale development promoting boating activity.	
Introduced Species	None		
Aerial Emissions	Yes	Unlikely to be an extent that alters habitat quality for this species.	Harbour porpoise
Water Pollution	Yes	Yes	
Hydrological Change	No	Development will not have effect on hydrology of open water habitat.	

6.5.8 Screening conclusion

Under the precautionary approach it was deemed that appropriate assessment is required for this site to consider the impacts of direct and indirect disturbance and water pollution on Harbour Porpoise (*Phocoena phocoena*) as a site selection feature.

STAGE 2: APPROPRIATE ASSESSMENT

6.5.9 Site specific evidence sources

- JNCC, March 2019, Harbour Porpoise (*Phocoena phocoena*) Special Area of Conservation: North Channel Conservation Objectives and Advice on Operations.

6.5.10 Condition assessment

The site has recently been designated and therefore has not been subject to condition assessment.

6.5.11 Impacts that may arise as a result of the plan

Harbour Porpoise is a mobile species that can be found in high densities across the North Channel SAC with sightings at various points along the east coast. Discharges and contaminants to the water/marine environment can come from many sources – landfill, agriculture, forestry, construction sites, coastal/marine development/activities, shipping, renewables and the leisure/recreation industry too. All of these sources also lead to various types of disturbance including noise, light, litter and people. The effect of these on water quality and existing disturbance levels, could affect the physiological and behavioural activity of Harbour Porpoise during breeding, feeding and resting cycles as well as their general health and well-being through impacts on the food chain.

Physical disturbance from recreational activity and vessel strikes can also be an issue in coastal areas where high densities of porpoises coincide with high densities of boat traffic, particularly during the summer season.

Harbour Porpoise *Phocoena phocoena* appears to favour the continental shelf and may make seasonal movements to the coast. This inshore movement appears to be connected with the feeding of calves in shallow waters. During this time they have a very intense 'social' life. The highest number of births occurs during June and July. The young to adult ratio is at its highest level during this period. As the end of summer approaches, young and adult individuals appear to range more widely together.

Harbour Porpoise *Phocoena phocoena* occur in elevated densities in the North Channel SAC, particularly during the winter months (October – March). The seasonality in porpoise density within the site should be considered in the assessment of impacts and proposed management.

6.5.12 Potential Impacts on Site Integrity in the Absence of Mitigation

The following integrity of site checklist indicates the impacts that the draft Plan Strategy could have in the absence of protective measures.

Does the plan have the potential to:	Yes/No
<ul style="list-style-type: none"> • cause delays in progress towards achieving the conservation objectives of the site? • interrupt progress towards achieving the conservation objectives of the site? • disrupt those factors that help to maintain the favourable conditions of the site? • interfere with the balance, distribution and density of key species that are the indicators of the favourable condition of the site? 	Yes Yes No Yes
Other indicators: Does the plan have the potential to:	Yes/No
<ul style="list-style-type: none"> • cause changes to the vital defining aspects (e.g. nutrient balance) that determine how the site functions as a habitat or ecosystem? • change the dynamics of the relationships (between, for example, soil and water or plants and animals) that define the structure and/or function of the site? • interfere with predicted or expected natural changes to the site (such as water dynamics or chemical composition)? • reduce the area of key habitats? • reduce the population of key species? • change the balance between key species? • reduce diversity of the site? • result in disturbance that could affect population size or density or the balance between key species? • result in fragmentation? • result in loss or reduction of key features (e.g. tree cover, tidal exposure, annual flooding , etc.)? 	No No No Yes Yes No No Yes No No

6.5.13 Controls in place to address threats

Any new development would be subject to legislative requirements and environmental assessment including the need to comply with the requirements of the Habitats Regulations. The protective measures described in Section 5 are incorporated in the draft Plan Strategy and will also have effect.

6.5.14 Mitigation to address threats

The following recommendations, detailed in Section 7, will address the risk of habitat loss, disturbance, aerial emissions and water pollution.

1. International Sites – Evidence;
2. Cumulative Effects;
3. Screening – General; and
4. Screening - Aerial Emissions.
5. International Sites – Recreation;
9. International Sites – Disturbance Construction;
10. International Sites – Disturbance Operation.

Combined with incorporated measures in the draft Plan Strategy these address the potential impacts identified above.

6.5.15 Cumulative and In Combination Effects

Those policies that potentially could increase water pollution, recreation on Belfast Lough or disturbance close to shore during construction could have a cumulative effect. All development arising from the Plan Strategy would be subject to policies requiring these impacts to be assessed and that will include consideration of in combination impacts with other plans or projects.

The assessment found that, with mitigation in place, there will be no adverse effect on site integrity from the draft Plan Strategy. The need to consider and assess further in combination effects from other projects or plans will be reviewed before the HRA is finalised.

6.5.16 Appropriate Assessment Conclusion

The evidence gathered and assessment undertaken does not enable us to conclude reasonably and objectively that the implementation of the plan, in the absence of mitigation, will not adversely affect selection features or the integrity of this site. Mitigation measures are therefore required to ensure that the plan will not have any effect on the integrity of these sites. These mitigation measures are identified above. Their incorporation in the Plan Strategy is discussed in Section 5 and additional measures are discussed in Section 7.

6.5.17 Adverse Effect on Site Integrity (AESI) Finding

Feature	AESI before mitigation	AESI after mitigation
Harbour Porpoise (<i>Phocoena phocoena</i>)	Potential AESI	No AESI

It is therefore concluded that the draft Plan Strategy, in conjunction with incorporated mitigation as detailed in Section 5 and the recommendations in Section 7, will not have an adverse effect on site integrity of Skerries and Causeway SAC and North Channel SAC.

6.6 The Maidens SAC (Grey Seal)

Status:	Designated Special Area of Conservation	Site Code:	UK0030384
Year:	2017	Area:	7461.3ha
Map:	Appendix 6, Map 10		

STAGE 1: TEST OF LIKELY SIGNIFICANCE

Grey seal are referred to in the Ramsar Information Sheet for Strangford Lough however DAERA has advised that this site has been primarily designated for its wetland features and birds and the only mammal listed as nationally important is the otter. Therefore the only Northern Irish marine site which should be screened in for grey seals is the Maidens.

6.6.1 Summary Site Description

The Maidens SAC is a group of rocky reefs detached from the coast, northeast of Larne, Northern Ireland. The primary reason for the designation of The Maidens as an SAC is for the Annex I habitat Reef. A small area to the south of East Maiden island has been shown by diving surveys to be shallow stable sandy gravels (partially sheltered by East and West Maiden islands) that includes maerl and other long lived species and this small area has therefore been classed as Annex I Sandbanks slightly covered by sea water all of the time. Grey Seals (Annex II) are not the primary feature of The Maidens SAC. However, these relatively remote rocks, islands and the waters surrounding them in the North Channel are well located for accessing good feeding grounds and important for providing haul-out sites, resting sites and foraging areas for Grey Seals, with a maxima count of 70 adults recorded in a July 2000 survey. The boundary rationale and management considerations are detailed in the Conservation Objectives.

6.6.2 Location and connectivity with the plan area

The Maidens SAC is approximately 27km north from the plan area via marine waters. The draft Plan Strategy will not have any impact on the reef or sandbank habitats due to the distance to the SAC. However, Grey Seal *Halichoerus grypus* is a mobile species able to use haul out sites for resting or breeding within the Belfast Lough area. DAERA advises that plans or projects within 135km of a site designated for Grey Seal should be assessed for impacts on the species. A few Grey Seals are reported to occur within the Belfast Harbour area and they forage across the wider marine area. This creates an ecological link between the SAC and the plan area therefore Grey Seal is as an SAC feature that requires further assessment.

6.6.3 Plan Designations

There are no plan designations on or around The Maidens SAC.

6.6.4 Selection Features

Feature type	Feature	Global Status	Size/extent/population
Habitat	Reef	A	2550 ha
Habitat	Sandbanks which are slightly covered by sea water all the time	B	200 ha
Species	Grey Seal <i>Halichoerus grypus</i>	C	50 individuals

6.6.5 Conservation Objectives

The Conservation Objective for this site is:

- To maintain (or restore where appropriate) the
 - Reefs
 - Sandbanks which are slightly covered by sea water all the time
 - Grey Seal *Halichoerus grypus*

The SAC selection feature component objectives for the reefs are:

- Maintain and enhance, as appropriate the extent of the reefs
- Allow the natural processes which determine the development, structure, function and distribution of the habitats associated with the reefs, to operate appropriately.
- Maintain and enhance, as appropriate, the viability, distribution and diversity of typical species within this habitat.

The SAC selection feature component objectives for the reefs are:

- Maintain the extent and volume of sandbanks which are slightly covered by sea water all the time, subject to natural processes.
- Allow the natural processes which determine the development, structure and extent of sandbanks which are slightly covered by sea water all the time, to operate appropriately.
- Maintain and enhance, as appropriate, the viability, distribution and diversity of typical species within this habitat.

The SAC selection feature component objectives for the Grey Seal *Halichoerus grypus* are:

- Maintain (and if feasible enhance) population numbers and distribution of Grey Seal.
- Maintain and enhance, as appropriate, physical features used by Grey Seals within the site.

6.6.6 Main Threats, Pressures and Activities with Impacts on the Site

Both on-site and off-site activities can potentially affect the site. The following is a summary of the most likely factors that are either affecting the site, or could affect it in the future: Aggregate/maerl extraction; Agriculture and Forestry operations; Aquaculture – Finfish; Aquaculture – Shellfish; Coastal / Marine development and infrastructure maintenance; Discharge of commercial effluent/sewage; Disposal of dredge spoil; Commercial Fishing – mobile gear – dredging and bottom trawling; Commercial Fishing – pelagic mid water trawling; Commercial Fishing – static gear (creel/pot fishing); Marine Traffic – Boat maintenance and antifoulant use; Marine Traffic – commercial and recreational vessels; Marine traffic – boat anchorages and moorings; Marine Renewables;

Scientific Research; Geological surveys and military exercises; Wildlife watching trips; Climate Change. Only some of these may relate to planning on land.

6.6.7 Sensitivities of Selection Features to plan

Potential impacts arising from the Plan Strategy, as identified in Section 5, are listed in the following table which identifies those that could affect the selection features of this site.

Potential Impacts Arising From Plan	Pathway for Impact to affect this site?	Comment	Features that may be affected
Habitat Loss	Yes	Linked to coastal development, marine renewables and climate change.	Loss of Grey Seal haul out sites used for breeding, pupping and resting.
Direct Disturbance	Yes	Linked to coastal development, disposal of dredge spoil, marine traffic, marine renewables and wildlife watching trips.	Impacts on Grey Seal haul out sites used for breeding, pupping and resting.
Indirect Disturbance	Yes	Linked to coastal development, dredge disposal, marine traffic, marine renewables and wildlife watching trips.	Impacts on Grey Seal haul out sites used for breeding, pupping and resting.
Introduced Species	None	Too distant for any affect.	
Aerial Emissions	Yes	No	None
Water Pollution	Yes	Sources include agriculture and forestry, coastal development, discharge of effluent/sewage, disposal of spoil.	If water quality deteriorates there could be a reduction on prey species.
Hydrological Change	No	Development will not have effect on hydrology of open water habitat.	

6.6.8 Screening conclusion

Under the precautionary approach it was deemed that appropriate assessment is required for this site to consider the impacts of indirect disturbance on Grey Seal *Halichoerus grypus* as a site selection feature.

STAGE 2: APPROPRIATE ASSESSMENT

6.6.9 Site specific evidence sources

- The Maidens SAC Conservation Objectives V2, 20/03/2017
- ASSI: The Maidens

6.6.10 Condition assessment

None available. Culloch et al, 2017, reviewed Northern Ireland seal count data from 1992 to 2017. There are two count sections in Belfast Lough – North and South. Grey Seals were recorded at South Belfast Lough in 1998 (maximum count 6 adults) and 2014 (1). They were recorded more regularly at North Belfast Lough with 3 to 6 adults recorded from 2003 to 2006. The only count year since 2009 was 2015 when 11 adults

were the maximum survey count. No pups were recorded at either section. Due to access issues few counts were undertaken at The Maidens SAC. While there appears to be an overall increase in Grey Seal adults and pups in Northern Ireland over the report period the reliability of the data is affected by low count effort in early and recent years.

6.6.11 Impacts that may arise as a result of the plan

This section considers those impacts which are most likely to arise as a result of the Plan Strategy in more detail in relation to the main threats, pressures and activities with impacts on the site identified in the conservation objectives.

The draft plan strategy may have a number of direct or indirect effects on Grey Seal. Although a small portion of Belfast Lough adjoins the plan area it is possible that, if present, Grey Seals could be disturbed by construction or maintenance activity. The potential for a cumulative effect from water pollution from discharges or the need for dredging exists which could lead to deterioration of habitat and prey. An indirect effect of development in the plan area could be an increase in boating, watersports or wildlife watching which could disturb Grey Seals feeding in or hauled out in Belfast Lough. Impacts such as aquaculture and fishing are not under the control of planning and no proposals are put forward for marine renewables in the plan area.

6.6.12 Potential Impacts on Site Integrity in the Absence of Mitigation

The following integrity of site checklist indicates the impacts that the draft Plan Strategy could have in the absence of protective measures.

Does the plan have the potential to:	Yes/No
<ul style="list-style-type: none"> • cause delays in progress towards achieving the conservation objectives of the site? • interrupt progress towards achieving the conservation objectives of the site? • disrupt those factors that help to maintain the favourable conditions of the site? • interfere with the balance, distribution and density of key species that are the indicators of the favourable condition of the site? 	Yes Yes Yes Yes
Other indicators: Does the plan have the potential to:	Yes/No
<ul style="list-style-type: none"> • cause changes to the vital defining aspects (e.g. nutrient balance) that determine how the site functions as a habitat or ecosystem? • change the dynamics of the relationships (between, for example, soil and water or plants and animals) that define the structure and/or function of the site? • interfere with predicted or expected natural changes to the site (such as water dynamics or chemical composition)? • reduce the area of key habitats? • reduce the population of key species? • change the balance between key species? • reduce diversity of the site? • result in disturbance that could affect population size or density or the balance between key species? • result in fragmentation? • result in loss or reduction of key features (e.g. tree cover, tidal exposure, annual flooding , etc.)? 	No No Yes Yes Yes No No Yes No No

6.6.13 Controls in place to address threats

Any new development would be subject to legislative requirements and environmental assessment including the need to comply with the requirements of the Habitats Regulations. The protective measures described in Section 5 are incorporated in the draft Plan Strategy and will also have effect. Planners are already advised to consult DAERA on all development close to the coast.

6.6.14 Mitigation to address threats

The following recommendations, detailed in Section 7, will address the risk of habitat loss, disturbance and water pollution.

1. International Sites – Evidence;
2. Cumulative Effects;
3. Screening – General; and
4. Screening - Aerial Emissions.
5. International Sites – Recreation;
7. Wastewater Treatment;
9. International Sites – Disturbance Construction;
10. International Sites – Disturbance Operation.

Combined with incorporated measures in the draft Plan Strategy these address the potential impacts identified above.

6.6.15 Cumulative and In Combination Effects

Those policies that potentially could increase water pollution, recreation on Belfast Lough, disturbance close to shore during construction or loss of inter tidal habitat could have a cumulative effect. All development arising from the Plan Strategy would be subject to policies requiring these impacts to be assessed and that will include consideration of in combination impacts with other plans or projects.

The assessment found that, with mitigation in place, there will be no adverse effect on site integrity from the draft Plan Strategy. The need to consider and assess further in combination effects from other projects or plans will be reviewed before the HRA is finalised.

6.6.16 Appropriate Assessment Conclusion

The evidence gathered and assessment undertaken does not enable us to conclude reasonably and objectively that the implementation of the plan, in the absence of mitigation, will not adversely affect selection features or the integrity of this site. Mitigation measures are therefore required to ensure that the plan will not have any effect on the integrity of these sites. These mitigation measures are identified above. Their incorporation in the Plan Strategy is discussed in Section 5 and additional measures are discussed in Section 7.

6.6.17 Adverse Effect on Site Integrity (AESI) Finding

Feature	AESI before mitigation	AESI after mitigation
Grey Seal	Potential AESI	No AESI

It is therefore concluded that the draft Plan Strategy, in conjunction with incorporated mitigation as detailed in Section 5 and the recommendations in Section 7, will not have an adverse effect on site integrity of The Maidens SAC.

6.7 Antrim Hills SPA

Status:	Classified Special Protection Area	Site Code:	UK9020301
Year:	2006	Area:	27,092.69 ha
Map:	Appendix 2, Map 2		

STAGE 1: TEST OF LIKELY SIGNIFICANCE

6.7.1 Summary Site Description

The Antrim Hills site comprises two land units: the northern, larger section extends between Carnanmore and Soarne's Hill, including Ballypatrick Forest, Slieveanorra Forest, Breen Wood and Glenariff/Cleggan Forest, mainly including land above the 220m contour the southern section comprises the area bounded by Capanagh, Ballyboley and Douglas Top. Both sections are delimited principally by physical boundaries closest to merged radii extending 2.5km from nest sites used by hen harriers between 1997 and 2004.

The site encompasses all lands within these boundaries, excluding wholly-improved pasture, arable land, buildings and associated lands. It includes coniferous plantations, blanket bog, wet and dry heath, grass moor, scrub, inland cliff and limited semi-improved agricultural grassland. The principal interests are the breeding populations of hen harrier and merlin.

All Hen Harrier nesting areas in the Antrim Hills used since 1997 are incorporated within the SPA. In order to provide adequate foraging areas, the boundary is based on a foraging radius of 2.5km around all confirmed and probable nest sites recorded in 1997, 1998 and 2004. The Hen Harrier-based boundary of the Antrim Hills SPA is also considered to provide adequate nesting and foraging habitat for Merlins. The SPA area does not include all lands used by foraging Hen Harrier (or possibly Merlin) during the breeding season. Foraging ranges of individual birds are known to exceed 10km. The boundary rationale and management considerations are detailed further in the Conservation Objectives. This SPA partially overlaps with Garron Plateau SAC and Ramsar site.

6.7.2 Location and connectivity with the plan area

The SPA is outside the council area but the nearest point of the southern section of SPA is within 200m and selection features may have supporting habitat in council area. Ballynure, Ballyclare and three hamlets are within 5km.

6.7.3 Plan Designations

Green Belt (COU1) of BMAP2015 extends to this part of the council area.

6.7.4 Selection Features

Note habitat is not a selection feature however it is considered as the selection features are dependent on it. No

Feature Type (i.e. habitat or species)	Feature	Population at time of designation (SPA)	SPA Review population
Species	Hen Harrier breeding population	25 pairs	No data
Species	Merlin breeding population	8 pairs	No data
Habitat	Habitat extent		
Habitat	Habitat quality		

6.7.5 Conservation Objectives

The Conservation Objective for this site is:

- To maintain each feature in favourable condition.

The SPA selection feature objectives are:

- To maintain or enhance the population of the qualifying species
- Fledging success sufficient to maintain or enhance population
- To maintain or enhance the range of habitats utilised by the qualifying species
- To ensure that the integrity of the site is maintained
- To ensure there is no significant disturbance of the species and
- To ensure that the following are maintained in the long term:
 - Population of the species as a viable component of the site
 - Distribution of the species within site
 - Distribution and extent of habitats supporting the species
 - Structure, function and supporting processes of habitats supporting the species

The SPA selection feature component objectives are as above and:

Hen Harrier breeding population and Merlin breeding population

6. Fledging success sufficient to maintain or enhance population

6.7.6 Main Threats, Pressures and Activities with Impacts on the Site

Both on-site and off-site activities can potentially affect the site. The following is a summary of the most likely factors that are either affecting the site, or could affect it in the future: habitat extent and quality - natural and semi-natural habitat; forestry areas: habitat, nest sites (forest management and disturbance); predation; research activities.

6.7.7 Sensitivities of Selection Features to plan

Potential impacts arising from the Plan Strategy, as identified in Section 5, are listed in the following table which identifies those that could affect the selection features of this site.

Potential Impacts Arising From Plan	Pathway for Impact to affect this site?	Comment	Features that may be affected
Habitat Loss	Yes	Development on or adjacent to site leading to direct or indirect damage to supporting habitat outside the SPA	Hen Harrier and Merlin
Direct Disturbance	Yes	Recreational activity in supporting habitat.	
Indirect Disturbance	Yes	Recreational activity adjacent to SPA or supporting habitat.	
Introduced Species	Yes	Spread of species during construction works or through recreation that decrease available habitat.	

Potential Impacts Arising From Plan	Pathway for Impact to affect this site?	Comment	Features that may be affected
Aerial Emissions	Yes	Potential nitrogen deposition from intensive agriculture or traffic could cause degradation or loss of habitat.	
Water Pollution	No	No pathway to impact SPA, unlikely to affect the supporting habitat	NA
Hydrological Change	Yes	Drainage on supporting habitat could lead to habitat deterioration	Hen Harrier and Merlin

6.7.8 Screening conclusion

Under the precautionary approach it was deemed that appropriate assessment is required for this site to consider the impacts of habitat loss, direct disturbance, indirect disturbance, introduced species, aerial emissions and hydrological change on the site selection features and supporting habitat.

STAGE 2: APPROPRIATE ASSESSMENT

6.7.9 Site specific evidence sources

- Antrim Hills SPA Conservation Objectives V3.0, 01/04/2015
- ASSIs: Breen Wood ASSI/SAC, Cleggan Valley ASSI, Garron Plateau ASSI/SAC, Glenariff ASSI and Tievebullagh ASSI

6.7.10 Condition assessment

Species	1998	2004	2010	CSM	5 yr mean	% CSM	Status
Hen Harrier	17	25	17	17	17	100	Favourable

Species	1998-1991	2000-2005	2008	2010	CSM	5 yr mean	% CSM	Status
Merlin	6-7	8	8	7	6	7.5	125	Favourable

6.7.11 Impacts that may arise as a result of the plan

This section considers those impacts which are most likely to arise as a result of the Plan Strategy in more detail in relation to the main threats, pressures and activities with impacts on the site identified in the conservation objectives.

Specific management issues for the SPA that could arise are as follows.

Issue	Threat/comments	Local considerations	Action
Habitat extent and quality – natural and semi-natural habitat	Reduction of habitat area or quality through inappropriate use or absence of site management including reclamation for agricultural purposes.	Parts of site are SACs and ASSIs so management will seek to achieve appropriate vegetation community structure. Evidence suggests Hen Harrier and Merlin favour managed forest within the site for nesting. Habitat management objective should be to encourage nesting in natural and semi-natural habitats	Assess needs of breeding species. Liaise with owner or appropriate authority to adjust or introduce site management if necessary.
Forestry areas – habitat	<p>In general an expansion of forest represents a loss of foraging habitat. Objective should be to prevent loss of foraging habitat through expansion of forestry.</p> <p>Mixed age stands of forest are however of value for nest selection and in providing some foraging. Existing rotation policy appears to offer good balance between areas supporting felled, young and old plantation.</p>	<p>Existing guidance should prevent any planting on peatland. Marginal semi-improved grasslands may come under threat from afforestation</p> <p>Balance of forestry management actions should be assessed against the site as a whole.</p>	Liaise with Forest Service and private forestry sector.
Forestry areas – nest sites - forest management	Forestry activities should be compatible with needs of breeding birds.	The importance of forested areas for nesting birds cannot be underestimated. Existing forest practise should ensure management does not interfere with birds through the critical breeding period. To be informed by nest location data.	Liaise with Forest Service, private forestry sector, RSPB and other groups/individuals with information on nest sites.

Issue	Threat/comments	Local considerations	Action
Forestry areas – nest sites - disturbance	Disturbance to nesting birds through non-forestry activities on forestry property. Breeding birds, especially are vulnerable to disturbance as absence of adults can often result in predation or chilling of young with a reduction/loss in fledging success.	Selection of routes e.g. for public access or motorcar trials must take the needs of breeding birds into account.	Liaise with Forest Service, private forestry sector, local authorities and other relevant parties.
Predation	Mainly of concern on bird breeding sites.	Thought to be a significant factor in determining Hen Harrier breeding success.	Must be dealt with as part of wider countryside management considerations. Carry out appropriate site management.
Research activities	Census and ringing activities especially have the potential to impact on bird populations, particularly at breeding sites. These are however necessary for population monitoring and developing a better understanding of species ecology.	Assessed as part of regular programme of raptor monitoring.	Census and ringing activities to be undertaken by competent individuals, appropriately trained. In case of ringers, appropriate license must be held.

Nitrogen deposition is not cited as an impact on the SPA feature in the conservation objectives however, APIS does provide guideline values for supporting habitat. Excess nitrogen deposition can directly damage plants and favour the growth of competitive plants leading to changes in ecosystem structure or function and to a reduction in biodiversity. Construction in support of intensive agriculture can increase nitrogen deposition from the development site or because of land spreading of litter, slurry, manure or digestate.

6.7.12 Potential Impacts on Site Integrity in the Absence of Mitigation

The following checklist indicates the impacts that the draft Plan Strategy could have in the absence of protective measures.

Does the plan have the potential to:	Yes/No
<ul style="list-style-type: none"> • cause delays in progress towards achieving the conservation objectives of the site? • interrupt progress towards achieving the conservation objectives of the site? • disrupt those factors that help to maintain the favourable conditions of the site? • interfere with the balance, distribution and density of key species that are the indicators of the favourable condition of the site? 	Yes Yes Yes Yes
Other indicators: Does the plan have the potential to:	Yes/No
<ul style="list-style-type: none"> • cause changes to the vital defining aspects (e.g. nutrient balance) that determine how the site functions as a habitat or ecosystem? • change the dynamics of the relationships (between, for example, soil and water or plants and animals) that define the structure and/or function of the site? • interfere with predicted or expected natural changes to the site (such as water dynamics or chemical composition)? • reduce the area of key habitats? • reduce the population of key species? • change the balance between key species? • reduce diversity of the site? • result in disturbance that could affect population size or density or the balance between key species? • result in fragmentation? • result in loss or reduction of key features (e.g. tree cover, tidal exposure, annual flooding , etc.)? 	Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes

6.7.13 Controls in place to address threats

Any new development would be subject to legislative requirements and environmental assessment including the need to comply with the requirements of the Habitats Regulations. The protective measures described in Section 5 are incorporated in the draft Plan Strategy and will also have effect.

6.7.14 Mitigation to address threats

The following recommendations, detailed in Section 7, will address the risk of habitat loss, disturbance, introduced species, aerial emissions and water pollution.

1. International Sites – Evidence;
2. Cumulative Effects;
3. Screening – General; and
4. Screening - Aerial Emissions.
5. International Sites – Recreation;
8. Hen Harrier Range;
9. International Sites – Disturbance Construction;
10. International Sites – Disturbance Operation.

Combined with incorporated measures in the draft Plan Strategy these address the potential impacts identified above.

6.7.15 Cumulative and In Combination Effects

The land adjacent to the SPA is all enclosed farmland that is unlikely to be important supporting habitat for selection features. Drumnadarragh Hill approximately 5km south west of the SPA has upland habitat which could provide supporting habitat. Wind energy development in this area would have potential to cause damage to supporting habitat or to increase the risk of mortality through collision. Drumnadarragh Hill is however identified as a SLPA and under DM 45.5 is an area

where wind turbines will not be acceptable. Recommendation 8 requires updated information on hen harrier ranges which will help inform the precise boundary of the SLPA.

The assessment found that, with mitigation in place, there will be no adverse effect on site integrity from the draft Plan Strategy. The need to consider and assess further in combination effects from other projects or plans will be reviewed before the HRA is finalised.

6.7.16 Appropriate Assessment Conclusion

The evidence gathered and assessment undertaken does not enable us to conclude reasonably and objectively that the implementation of the plan, in the absence of mitigation, will not adversely affect selection features or the integrity of this site. Mitigation measures are therefore required to ensure that the plan will not have any effect on the integrity of these sites. These mitigation measures are identified above. Their incorporation in the Plan Strategy is discussed in Section 5 and additional measures are discussed in Section 7.

6.7.17 Adverse Effect on Site Integrity (AESI) Finding

Feature	AESI before mitigation	AESI after mitigation
Hen Harrier	Potential AESI	No AESI
Merlin	Potential AESI	No AESI

It is therefore concluded that the draft Plan Strategy, in conjunction with incorporated mitigation as detailed in Section 5 and the recommendations in Section 7, will not have an adverse effect on site integrity of Antrim Hills SPA.

6.8 Montiaghs Moss SAC

Status:	Designated Special Area of Conservation	Site Code:	UK0030214
Year:	2005	Area:	151.39 ha
Map:	Appendix 6, Map 3		

STAGE 1: TEST OF LIKELY SIGNIFICANCE

6.8.1 Summary Site Description

Montiaghs Moss is a cutover lowland raised bog, consisting of an intricate mosaic of peat ramparts, trenches, pools and drains, interspersed with grassland, alder and willow carr and tall hedgerows. These habitats support a wide range of plants and animals, including many rarities. The area is particularly notable as one of the longest established colonies of the Marsh Fritillary butterfly in NI. The species was first recorded in 1983, and it is believed that the colony here represents a metapopulation, with a comparatively large core permanent population.

The boundary includes the core peatland area, with all associated semi-natural vegetation (acid grassland, heath, birch and willow scrub, hay meadows, etc), but excludes improved agricultural land. Many of the rare plants occur within the drains, so a significant part of the network of drains has also been included. It would be beneficial to restore semi-natural vegetation to some of the reclaimed agricultural land outside the SAC. The boundary rationale and management considerations are further detailed in the Conservation Objectives.

6.8.2 Location and connectivity with the plan area

The SAC is outside the council area 4km from the nearest point on Lough Neagh and 7km from the nearest point on land.

6.8.3 Plan Designations

There are no plan designations on or around Montiaghs Moss SAC.

6.8.4 Selection Features

Feature type	Feature	Global Status	Size/extent/population
Species	Marsh Fritillary Butterfly <i>Euphydryas aurinia</i>	B	89 webs recorded in Aug/Sept 1999

6.8.5 Conservation Objectives

The Conservation Objective for this site is:

- To maintain (or restore where appropriate) the Marsh Fritillary Butterfly *Euphydryas aurinia* to favourable condition.

The SAC selection feature component objectives for the Marsh Fritillary Butterfly *Euphydryas aurinia* are:

- To maintain (and if feasible enhance) population numbers and distribution.
- To maintain (and if feasible enhance) the extent and quality of suitable Marsh Fritillary breeding habitat, particularly suitable rosettes of the larval food plant *Succisa pratensis*.

6.8.6 Main Threats, Pressures and Activities with Impacts on the Site

Both on-site and off-site activities can potentially affect the SAC features. The following is a summary of the most likely factors that are either affecting the site, or could affect it in the future: grazing (too little or too much); woodland and scrub management – encroachment, control and removal; turbary (and lack of peat cutting); burning; drainage; eutrophication/water quality; dumping; other activities (agricultural reclamation/cultivation/application of fertiliser/additions of manure/slurry/supplementary feeding; nitrogen deposition; changes to surrounding land use.

6.8.7 Sensitivities of Selection Features to plan

Potential impacts arising from the Plan Strategy, as identified in Section 5, are listed in the following table which identifies those that could affect the selection features of this site.

Potential Impacts Arising From Plan	Pathway for Impact to affect this site?	Comment	Features that may be affected
Habitat Loss	No		NA
Direct Disturbance	No		
Indirect Disturbance	No		
Introduced Species	No		
Aerial Emissions	Aerial	Potential nitrogen deposition from intensive agriculture could cause degradation or loss of habitat.	Marsh Fritillary Butterfly <i>Euphydryas aurinia</i>
Water Pollution	No		NA
Hydrological Change	No		

6.8.8 Screening conclusion

Under the precautionary approach it was deemed that appropriate assessment is required for this site to consider the impacts of aerial emissions on Marsh Fritillary Butterfly *Euphydryas aurinia* as a site selection feature.

STAGE 2: APPROPRIATE ASSESSMENT

6.8.9 Site specific evidence sources

- Montiaghs Moss SAC Conservation Objectives V2, 01/04/2015
- ASSI: Montiaghs Moss

6.8.10 Condition assessment

The most recent condition assessment, in 2008, found the condition to be Unfavourable: Unclassified. This was reported as being due to Invasive species (including bracken or scrub).

6.8.11 Impacts that may arise as a result of the plan

This section considers those impacts which are most likely to arise as a result of the Plan Strategy in more detail in relation to the main threats, pressures and activities with impacts on the site identified in the conservation

Excess nitrogen deposition can directly damage plants and also favour the growth of competitive plants leading to changes in ecosystem structure or function and to a reduction in biodiversity. The 3 year average 2015-2017 of 20.86 kg N/ha/yr is well above the lower critical load of 15 kg N/ha/yr for *Molinia caerulea* meadows (upper critical level is 15 kg N/ha/yr)⁸. The 3 year average 2015-2017 ammonia concentration was 2.87 µg/m³ which exceeds the critical level for this habitat identified by DAERA of 1 µg/m³.

Construction in support of intensive agriculture can increase nitrogen deposition from the development site or as a result of land spreading of litter, slurry, manure or digestate. Road development leading to a significant increase in traffic could increase the deposition of nitrogen from traffic.

Any changes in local land-use e.g. drainage, road improvements, afforestation, agricultural intensification and development may be detrimental to the SAC. The draft Plan Strategy does not promote any form of development adjacent to the SAC. Any applications that may come forward would have to be assessed through project level HRA.

6.8.12 Potential Impacts on Site Integrity in the Absence of Mitigation

The following integrity of site checklist indicates the impacts that the draft Plan Strategy could have in the absence of protective measures.

⁸ <http://www.apis.ac.uk/>

Does the plan have the potential to:	Yes/No
<ul style="list-style-type: none"> • cause delays in progress towards achieving the conservation objectives of the site? 	Yes
<ul style="list-style-type: none"> • interrupt progress towards achieving the conservation objectives of the site? 	Yes
<ul style="list-style-type: none"> • disrupt those factors that help to maintain the favourable conditions of the site? 	Yes
<ul style="list-style-type: none"> • interfere with the balance, distribution and density of key species that are the indicators of the favourable condition of the site? 	Yes
Other indicators: Does the plan have the potential to:	Yes/No
<ul style="list-style-type: none"> • cause changes to the vital defining aspects (e.g. nutrient balance) that determine how the site functions as a habitat or ecosystem? 	Yes
<ul style="list-style-type: none"> • change the dynamics of the relationships (between, for example, soil and water or plants and animals) that define the structure and/or function of the site? 	Yes
<ul style="list-style-type: none"> • interfere with predicted or expected natural changes to the site (such as water dynamics or chemical composition)? 	Yes
<ul style="list-style-type: none"> • reduce the area of key habitats? 	Yes
<ul style="list-style-type: none"> • reduce the population of key species? 	Yes
<ul style="list-style-type: none"> • change the balance between key species? 	Yes
<ul style="list-style-type: none"> • reduce diversity of the site? 	Yes
<ul style="list-style-type: none"> • result in disturbance that could affect population size or density or the balance between key species? 	No
<ul style="list-style-type: none"> • result in fragmentation? 	Yes
<ul style="list-style-type: none"> • result in loss or reduction of key features (e.g. tree cover, tidal exposure, annual flooding , etc.)? 	Yes

6.8.13 Controls in place to address threats

Any new development would be subject to legislative requirements and environmental assessment including the need to comply with the requirements of the Habitats Regulations. The protective measures described in Section 5 are incorporated in the draft Plan Strategy and will also have effect.

6.8.14 Mitigation to address threats

The following recommendations, detailed in Section 7, will address the risk of aerial emissions.

1. International Sites – Evidence;
2. Cumulative Effects;
3. Screening – General; and
4. Screening - Aerial Emissions.

Combined with incorporated measures in the draft Plan Strategy these address the potential impacts identified above.

6.8.15 Cumulative and In Combination Effects

If there is a proliferation of development leading to ammonia emissions on this site then the cumulative effect. While DM 4 – Agricultural Development enables construction of agricultural buildings DM 4.4 states that:

'Development proposals involving intensive farming or animal husbandry must demonstrate that they will not result in any significant adverse environmental effects, particularly in relation to ammonia production.'

Individual applications will require close scrutiny in the context of HRA and, where necessary, assessed in combination with other projects both within our council area and in other council areas. There are no new road schemes proposed adjacent to the site which will increase the capacity for traffic and associated aerial emissions.

The assessment found that, with mitigation in place, there will be no adverse effect on site integrity from the draft Plan Strategy. The need to consider and assess further in combination effects from other projects or plans will be reviewed before the HRA is finalised.

6.8.16 Appropriate Assessment Conclusion

The evidence gathered and assessment undertaken does not enable us to conclude reasonably and objectively that the implementation of the plan, in the absence of mitigation, will not adversely affect selection features or the integrity of this site. Mitigation measures are therefore required to ensure that the plan will not have any effect on the integrity of these sites. These mitigation measures are identified above. Their incorporation in the Plan Strategy is discussed in Section 5 and additional measures are discussed in Section 7.

6.8.17 Adverse Effect on Site Integrity (AESI) Finding

Feature	AESI before mitigation	AESI after mitigation
Marsh Fritillary Butterfly <i>Euphydryas aurinia</i>	Potential AESI	No AESI

It is therefore concluded that the draft Plan Strategy, in conjunction with incorporated mitigation as detailed in Section 5 and the recommendations in Section 7, will not have an adverse effect on site integrity of Montiaghs Moss SAC.

6.9 Curran Bog SAC

Status:	Designated Special Area of Conservation	Site Code:	UK0030322
Year:	2005	Area:	183.3 ha
Map:	Appendix 6, Map 3		

STAGE 1: TEST OF LIKELY SIGNIFICANCE

6.9.1 Summary Site Description

Curran Bog occurs in the flood-plain of the Moyola River. Despite extensive turf-cutting around its edge, the remaining intact surface retains a high cover of *Sphagnum* bog-mosses (indicating active peat growth) and well-developed surface patterning (i.e. pool, hummock and hollow complexes).

The pool system is a particularly important feature, as these are generally very rare in Northern Ireland lowland raised bogs. The pools vary in shape and size, but are generally linear with a carpet of aquatic *Sphagnum* bog-mosses, particularly *S. cuspidatum*, with lesser amounts of *S. auriculatum* and scattered Bogbean *Menyanthes trifoliata*. Notable species include *Drosera longifolia*, *S. pulchrum*, *S. austinii* and *S. fuscum*.

The cutover area is extensive and has a range of secondary vegetation types, which support a variety of plant and animal communities. The old peat-cuttings around the edge of the intact surface are in differing stages of infilling and show habitat succession after cutting, with areas of scrub, open water pools, regenerating bog vegetation, acid fen and even base-rich swamp and fen.

Curran Bog is also important for invertebrates. There are large numbers of recently-created acid pools, which show few signs of enrichment and support an aquatic fauna typical of acid and base-poor waters. The recorded fauna includes seven species of dragonfly, eight aquatic Heteroptera and twenty-three species of water beetle.

6.9.2 Location and connectivity with the plan area

The SAC is 9.6 km outside the council area.

6.9.3 Plan Designations

There are no plan designations on or around Curran Bog SAC.

6.9.4 Selection Features

Feature type	Feature	Global Status	Size/extent/population
Habitat	Active raised bog	B	25.5 ha
Habitat	Degraded raised bog still capable of regeneration	C	126.9 ha

6.9.5 Conservation Objectives

The Conservation Objective for this site is:

- To maintain (or restore where appropriate) the active raised bog to favourable condition.

The SAC selection feature component objectives for the active raised bog are:

- Maintain the extent of intact lowland raised bog and actively regenerating raised bog vegetation.
- Maintain and enhance the quality of the lowland raised bog community types including the presence of notable species.
- Seek to expand the extent of actively regenerating raised bog vegetation into degraded (non-active) areas of cutover bog.
- Maintain the diversity and quality of other habitats associated with the active raised bog, e.g. acid grassland, fen and swamp, especially where these exhibit natural transition to the raised bog.
- Maintain the hydrology of the raised bog peat mass.
- Seek nature conservation management over suitable areas immediately outside the SAC where there may be potential for lowland raised bog rehabilitation.

6.9.6 Main Threats, Pressures and Activities with Impacts on the Site

Both on-site and off-site activities can potentially affect the site. The following is a summary of the most likely factors that are either affecting the site, or could affect it in the future: peat cutting, burning, drainage, nitrogen deposition, changes to surrounding land use, scrub encroachment, grazing, fly-tipping, shooting, climate change.

6.9.7 Sensitivities of Selection Features to plan

Potential impacts arising from the Plan Strategy, as identified in Section 5, are listed in the following table which identifies those that could affect the selection features of this site.

Potential Impacts Arising From Plan	Pathway for Impact to affect this site?	Comment	Features that may be affected
Habitat Loss	None	Too far for any impact	NA
Direct Disturbance	None		
Indirect Disturbance	None		
Introduced Species	None		
Aerial Emissions	Aerial	Potential nitrogen deposition from intensive agriculture or traffic could cause degradation or loss of habitat.	Active and degraded raised bog
Water Pollution	None	No pathway for any impact	NA
Hydrological Change	None		

6.9.8 Screening conclusion

Under the precautionary approach it was deemed that appropriate assessment is required for this site to consider the impacts of habitat loss, aerial emissions and hydrological change on active raised bog and degraded raised bog still capable of regeneration as site selection features.

STAGE 2: APPROPRIATE ASSESSMENT

6.9.9 Site specific evidence sources

- Curran Bog SAC Conservation Objectives V2.0, 01/04/2015
- ASSI: Curran Bog

6.9.10 Condition assessment

The most recent condition assessment, in 2013, found the condition to be Unfavourable: Recovering. This was reported as being due to water management (including drainage, dredging or alterations to the water table, could be too much water or too little); invasive species (including bracken or scrub).

6.9.11 Impacts that may arise as a result of the plan

This section considers those impacts which are most likely to arise as a result of the Plan Strategy in more detail in relation to the main threats, pressures and activities with impacts on the site identified in the conservation objectives. The main management issue on the site is the removal/blockage of active drains to maintain the bogs hydrology. Drainage works associated with development outside of the site's boundaries could potentially impact upon the bog's hydrology.

Excess nitrogen deposition can directly damage plants and also favour the growth of competitive plants leading to changes in ecosystem structure or function and to a reduction in biodiversity. The 3 year average 2015-2017 of 24.68 kg N/ha/yr is well above the lower and upper critical loads of 5-10 kg N/ha/yr. The 3 year average 2015-2017 ammonia concentration was 3.22 µg/m³ which exceeds the critical level for these habitats of 1 µg/m³. Construction in support of intensive agriculture can increase nitrogen deposition from the development site or as a result of land spreading of litter, slurry, manure or digestate. Road development leading to a significant increase in traffic could increase the deposition of nitrogen from traffic. The current advice from DAERA is that all livestock developments within 7.5km of an international site should be modelled for ammonia distribution therefore the impacts of sites within the council area would not be assessed at this time. If however evidence indicates that developments further than 7.5km from the council area need to be assessed then it may be necessary to assess certain applications through project level HRA.

6.9.12 Potential Impacts on Site Integrity in the Absence of Mitigation

The following checklist indicates the impacts that the draft Plan Strategy could have in the absence of protective measures.

Does the plan have the potential to:	Yes/No
<ul style="list-style-type: none"> • cause delays in progress towards achieving the conservation objectives of the site? • interrupt progress towards achieving the conservation objectives of the site? • disrupt those factors that help to maintain the favourable conditions of the site? • interfere with the balance, distribution and density of key species that are the indicators of the favourable condition of the site? 	Yes Yes Yes Yes
Other indicators: Does the plan have the potential to:	Yes/No
<ul style="list-style-type: none"> • cause changes to the vital defining aspects (e.g. nutrient balance) that determine how the site functions as a habitat or ecosystem? • change the dynamics of the relationships (between, for example, soil and water or plants and animals) that define the structure and/or function of the site? • interfere with predicted or expected natural changes to the site (such as water dynamics or chemical composition)? • reduce the area of key habitats? • reduce the population of key species? • change the balance between key species? • reduce diversity of the site? • result in disturbance that could affect population size or density or the balance between key species? • result in fragmentation? • result in loss or reduction of key features (e.g. tree cover, tidal exposure, annual flooding , etc.)? 	Yes Yes Yes Yes Yes Yes No Yes Yes

6.9.13 Controls in place to address threats

Any new development would be subject to legislative requirements and environmental assessment including the need to comply with the requirements of the Habitats Regulations. The protective measures described in Section 5 are incorporated in the draft Plan Strategy and will also have effect.

6.9.14 Mitigation to address threats

The following recommendations, detailed in Section 7, will address the risk of aerial emissions.

1. International Sites – Evidence;
2. Cumulative Effects;
3. Screening – General; and
4. Screening - Aerial Emissions.

Combined with incorporated measures in the draft Plan Strategy these address the potential impacts identified above.

6.9.15 Cumulative and In Combination Effects

If there is a proliferation of development leading to ammonia emissions on this site then the cumulative effect. While DM 4 – Agricultural Development enables construction of agricultural buildings DM 4.4 states that:

'Development proposals involving intensive farming or animal husbandry must demonstrate that they will not result in any significant adverse environmental effects, particularly in relation to ammonia production.'

Individual applications will require close scrutiny in the context of HRA and, where necessary, assessed in combination with other projects both within our council area and in other council areas. . There are no new road schemes proposed adjacent to the site which will increase the capacity for traffic and associated aerial emissions.

The assessment found that, with mitigation in place, there will be no adverse effect on site integrity from the draft Plan Strategy. The need to consider and assess further in combination effects from other projects or plans will be reviewed before the HRA is finalised.

6.9.16 Appropriate Assessment Conclusion

The evidence gathered and assessment undertaken does not enable us to conclude reasonably and objectively that the implementation of the plan, in the absence of mitigation, will not adversely affect selection features or the integrity of this site. Mitigation measures are therefore required to ensure that the plan will not have any effect on the integrity of these sites. These mitigation measures are identified above. Their incorporation in the Plan Strategy is discussed in Section 5 and additional measures are discussed in Section 7.

6.9.17 Adverse Effect on Site Integrity (AESI) Finding

Feature	AESI before mitigation	AESI after mitigation
Active raised bog	Potential AESI	No AESI
Degraded Raised Bog still capable of Regeneration	Potential AESI	No AESI

It is therefore concluded that the draft Plan Strategy, in conjunction with incorporated mitigation as detailed in Section 5 and the recommendations in Section 7, will not have an adverse effect on site integrity of Curran Bog SAC.

7 Outcome and Recommendations

7.1 Overview

A draft HRA has been carried out to assess impacts of the draft Plan Strategy proposals on international sites that are within or in close proximity to the Council area, or are connected to it by ecological or infrastructural links. Further assessment will be carried out on the Local Policies Plan (LPP) as it is prepared. This will allow assessment of site specific land use proposals and local policies and identification of mitigation, where necessary, to avoid adverse effects on international sites. Planning applications will also need to be considered in relation to the Habitats Regulations to ensure compliance where the regulations apply. The protective measures in Section 5 and recommendations in this section will help ensure that prospective applicants are aware of potential constraints and planners can consider impacts of designations at LPP and of individual planning applications through development management.

A total of 20 international sites could be affected by impacts of proposals brought forward under the draft Plan Strategy. These could arise from habitat loss, direct and indirect disturbance, introduced species, aerial emissions, water pollution or hydrological change. Discussion of these impacts with recommendations for mitigation is below. Some mitigation has already been incorporated in the draft Plan Strategy or will apply to later stages of plan preparation.

7.2 Recommendations

Recommendations follow to address the impacts and potential effects discussed below. Each includes a note of what stage it applies to and any related policies. Some of the recommendations will be implemented before the Plan Strategy is adopted and some are to be implemented at later stages. They will enhance the protection for international sites under the LDP and further reduce the risks of adverse effects on site integrity, including from cumulative effects.

The recommendations proposed to avoid adverse effects on site integrity are detailed in Table 5. The following are relevant to all the sites assessed: 1. International Sites – Evidence; 2. Cumulative Effects; 3. Screening – General; and 4. Screening - Aerial Emissions. Each of the potential impacts arising from the plan are discussed further and related to the recommendations in Table 5.

Table 5: Recommendations for Antrim and Newtownabbey Local Development Plan

Recommendation	Plan Stage
1. International Sites - Evidence: Seek updated information to identify any new evidence about International sites, habitats and species before finalising the HRA for the adopted Plan Strategy and preparing the Local Policies Plan.	Plan Strategy
2. Cumulative Effects: Identify and consider further plans or projects that, in combination, may lead to a cumulative adverse effect on site integrity in the final HRA for the Plan Strategy.	Plan Strategy
3. Screening - General: Screen all developments in close proximity to, or with a pathway to, designated sites or supporting habitat and carry out HRA where necessary.	Plan Strategy (DM 37) Development Management
4. Screening - Aerial Emissions: Implement guidance on screening planning applications for aerial emissions and carry out HRA where necessary.	Plan Strategy (DM 4) Development Management
5. International Sites - Recreation: Where development could increase recreation pressure in any International site potential impacts must be assessed through HRA.	Development Management
6. Waterfowl Supporting Habitat/Flight Paths: Obtain updated information on supporting habitat and flight paths for waterfowl from DAERA, RSPB and others to identify locations where development could cause disturbance or disrupt flight.	Development Management, LPP
7. Wastewater Treatment: Land release should be phased to ensure alignment of housing delivery with planned infrastructure investment and development lead-times. New development cannot proceed until there is evidence of adequate wastewater treatment infrastructure or alternative treatment facilities.	Development Management
8. Hen Harrier Range: Obtain updated information on hen harrier ranges from DAERA to inform locations where development could impact on hen harrier.	Development Management, LPP
9. International Sites – Disturbance Construction: For development close to Belfast Lough assess potential disturbance impacts so that, where necessary, measures can be put in place such as timing of construction and operations and use of Marine Mammals Observers during construction.	Development Management
10. International Sites – Disturbance Operation: Address at development management, through assessment of potential effects and mitigation to avoid or reduce these.	Development Management

7.2.1 Habitat Loss

This represents direct habitat loss in an international site or loss of supporting habitat such as hen harrier foraging areas. Habitat can also become fragmented, for example if development creates a barrier to passage of features. Any application within an international site will have to be carefully sited and designed to minimise impacts and avoid an adverse effect on site integrity. This will be subject to detailed assessment through HRA of the project alone and in combination. Care needs to be taken to avoid encroachment into international sites or damage to supporting

habitat for site selection features such that it could cause an adverse effect on site integrity. Recommendations 1 to 8 will mitigate likely significant effects as a result of habitat loss.

7.2.2 Direct Disturbance

Direct disturbance includes noise, vibration or light disturbance arising from a development site during construction, during operational use of a site, or from the presence of people on land zoned or developed for recreational use. Direct disturbance could arise during construction however, where it may impact on species such as harbour porpoise or whooper swan, works should be planned to avoid causing disturbance at critical times. Recommendations 1, 2, 3, 5, 8, 9 and 10 will mitigate potential impacts of direct disturbance.

7.2.3 Indirect Disturbance

Indirect disturbance occurs beyond a development site but may be caused by activity facilitated or promoted as a result of the development. This could be increased levels of dog walking near a residential area or increased levels of recreation including walking, boating or watersports. It could also come about by impinging on supporting habitat used by a site selection feature such as hen harrier foraging areas. Recommendations 1, 2, 3, 5, 8, 9 and 10 will mitigate potential impacts of indirect disturbance.

7.2.4 Introduced Species

New development has the potential to introduce invasive or non-native species or cause their spread to other sites. The introduction of invasive species, non-native, competitive or predatory species can adversely affect habitats and species. Watercourses and open water enables the spread of invasive species such as giant hogweed and Himalayan balsam which are easily transferred by water if released as a result of development. Invasive species may also be transported to new sites by machinery. Development that introduces new boating may also increase the potential for spread of invasive species such as zebra mussels, or waterborne diseases of protected species, to waters where they are not currently present. Recommendation 3 will mitigate likely significant effects as a result of introduced species as potential impacts will be assessed through HRA.

7.2.5 Aerial Emissions

Deposition of aerial pollutants can damage habitats and species through toxic effects and nutrient enrichment. Aerial emissions arise from industry, transport and agricultural intensification. Nitrogen deposition is identified as a threat for many international sites. Nitrogen from transport is largely deposited close to source, so new road development close to international sites needs to be assessed. There are places in the Council area where main roads are located close to international sites or supporting habitat.

Livestock production is a significant source of nitrogen deposition, particularly in the form of ammonia. For the purposes of screening for this HRA sites within 10km have been considered. The current advice from DAERA is that all livestock developments within 7.5km of an international site should be modelled for ammonia distribution. As understanding of susceptibility of sites and their features to the effects of nitrogen deposition grows, the guidance on modelling and mitigating for ammonia emissions may change. Recommendations 1-4 will mitigate likely significant effects by ensuring

that aerial emissions will be considered for all sites from projects alone and in combination.

7.2.6 Water Pollution

Water pollution causes deterioration of (or failure to improve) water quality, due to direct runoff of pollutants including fuel, chemicals and sediments from development during construction or operation. Indirect pollution may also occur through inadequacy of wastewater treatment infrastructure or network capacity. All planning applications that indicate mains sewage treatment are referred to NI Water to confirm capacity. The conservation objectives for Lough Neagh and Lough Beg however note that longer term improvement in water quality will reduce productivity and may affect waterfowl populations.

Development on brownfield sites may lead to risk of release of contaminants which needs to be assessed and, where necessary, remediation carried out. For individual developments, water quality impacts can be addressed through HRA and by the conditioning of pollution prevention measures through the requirement to submit, for example, a Construction Environmental Management Plan (CEMP) and/or a Construction Method Statement (CMS). Minerals extraction is a potential source of sediment which can have an adverse effect on sensitive aquatic species. Recommendations 1, 2, 3 and 7 will mitigate likely significant effects as a result of water pollution.

7.2.7 Hydrological Change

There is evidence that water supply will be sufficient for the life of the plan therefore there is not predicted to be a need to expand water supply sources to support proposed development. Any development that requires non-mains water could have a localised effect on hydrology or hydrogeology and will require an abstraction licence which will be subject to HRA. Rea's Wood and Farr's Bay SAC depend on inundation therefore may be affected by any development which alters their hydrology. Recommendations 1, 2 and 3 will mitigate likely significant effects as a result of hydrological change.

7.3 In combination and Cumulative Effects

The draft Plan Strategy could enable a proliferation of development leading to a cumulative effect on a site over time. Potential cumulative effects have been identified in each assessment. There are some locations where there is a particular risk that cumulative effects could have an adverse effect on site integrity. Examples are sites that are particularly vulnerable to nitrogen deposition and Lough Neagh and Lough Beg if there is degradation of water quality or wetlands that could affect associated features. Recreation has the potential to have an adverse effect if it is intensified to a degree that it causes erosion, habitat damage or persistent disturbance, or if the watersports season is extended to when wintering birds are present.

For all sites it was found that there are protective measures and overarching policies in the draft Plan Strategy that will ensure that development causing an adverse effect on site integrity cannot be approved. However it will be important that HRAs for individual developments also consider in combination effects before planning permission is granted. Relevant projects and plans will be reviewed before the HRA is finalised to further assess in combination and cumulative effects.

7.4 Conclusions of the HRA

During the HRA process potential risks were identified in so far as they may be reasonably foreseeable and in light of such information as can reasonably be obtained. The appropriate assessments identified that, although effects are uncertain at this strategic stage, potential impacts cannot be ruled out for many plan policies.

Mitigation is included to address potential for adverse effects on site integrity arising from habitat loss, direct and indirect disturbance, introduced species, aerial emissions, water pollution and hydrological change. Associated mitigation measures have been incorporated where appropriate into the draft Plan Strategy as detailed in Section 5, with the aim of avoiding potential impacts. Mitigation that is more appropriate for inclusion at later stages of plan preparation is detailed in Table 5.

Taking the incorporated mitigation measures and recommendations into account, the integrity of site checklist associated with the appropriate assessment of each of the sites which required appropriate assessment can be revised to read:

Integrity of site checklist	
Does the plan have the potential to:	Yes/No
<ul style="list-style-type: none"> • cause delays in progress towards achieving the conservation objectives of the site? • interrupt progress towards achieving the conservation objectives of the site? • disrupt those factors that help to maintain the favourable conditions of the site? • interfere with the balance, distribution and density of key species that are the indicators of the favourable condition of the site? 	No No No No
Other indicators: Does the plan have the potential to:	Yes/No
<ul style="list-style-type: none"> • cause changes to the vital defining aspects (e.g. nutrient balance) that determine how the site functions as a habitat or ecosystem? • change the dynamics of the relationships (between, for example, soil and water or plants and animals) that define the structure and/or function of the site? • interfere with predicted or expected natural changes to the site (such as water dynamics or chemical composition)? • reduce the area of key habitats? • reduce the population of key species? • change the balance between key species? • reduce diversity of the site? • result in disturbance that could affect population size or density or the balance between key species? • result in fragmentation? • result in loss or reduction of key features (e.g. tree cover, tidal exposure, annual flooding , etc.)? 	No No No No No No No No No No No

The evidence gathered and assessment undertaken enables us to conclude reasonably and objectively that, subject to included and proposed mitigation, the implementation of the draft Plan Strategy will not adversely affect the integrity of:

- Antrim Hills SPA
- Belfast Lough Open Water SPA
- Belfast Lough Ramsar
- Belfast Lough SPA
- Curran Bog SAC
- Copeland Islands SPA
- East Coast (NI) Marine pSPA
- Larne Lough Ramsar
- Larne Lough SPA
- Lough Neagh and Lough Beg Ramsar
- Lough Neagh and Lough Beg SPA
- Montiaghs Moss SAC
- North Channel SAC
- Outer Ards Ramsar
- Outer Ards SPA
- Rea's Wood and Farr's Bay SAC
- Skerries and Causeway SAC
- Strangford Lough Ramsar
- Strangford Lough SPA
- The Maidens SAC

The HRA will be reviewed, updated and finalised following public consultation and independent examination of the draft Plan Strategy and published alongside the adopted Plan Strategy.

Appendix 1: References and Evidence Sources

In the absence of specific Northern Ireland guidance on carrying out Habitats Regulations Assessment for plans and programmes reference has been made to other sources of guidance and relevant documents including those listed below:

Air Pollution Information System, Centre for Ecology and Hydrology
<http://www.apis.ac.uk/> (Accessed 10/06/2019)

Assessment of plans and projects significantly affecting Natura 2000 sites, Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (2001), European Commission Environment DG

Culloch, R., Horne, N., & Kregting, L. (2017) A review of Northern Ireland seal count data 1992-2017: Investigating population trends and recommendations for future monitoring. *Unpublished DAERA Report*

DAERA (2015 – 2017) Conservation Objectives (Online) Available at <https://www.daera-ni.gov.uk/landing-pages/protected-areas> (Accessed 10/06/2019)

DAERA (2017) Data Layers for designated and proposed European and Ramsar sites Available at <https://www.daera-ni.gov.uk/articles/download-digital-datasets> (Accessed 10/06/2019)

Department of the Environment Northern Ireland, (2013) *Belfast Metropolitan Plan 2015 Habitats Regulations Assessment* Available at www.planningni.gov.uk/index/policy/development_plans/devplans_az/bmap_2015.htm (Accessed 10/06/2019)

Habitats Regulations Appraisal of Plans Guidance for Plan-Making Bodies in Scotland Version 3.0, (2015) Scottish Natural Heritage (Initially Prepared by David Tyldesley and Associates) (Accessed 10/06/2019)

JNCC (Dates vary) Information Sheet on Ramsar Wetlands (RIS). (Online) Available at <http://jncc.defra.gov.uk/page-1393> (Accessed 10/06/2019)

JNCC (Dates vary) Standard data form generated from the Natura 2000 Database submitted to the European Commission. (Online) Available at <http://jncc.defra.gov.uk/page-161> (Accessed 10/06/2019)

JNCC Standard data forms (2015) generated from the Natura 2000 Database submitted to the European Commission on 22/12/2015. jncc.defra.gov.uk/page-0 (Accessed 10/06/2019)

DAERA Conservation Objectives www.daera-ni.gov.uk/topics/biodiversity-land-and-landscapes/protected-areas (Accessed 10/06/2019)

Spatial NI (2017) Data Layers for Local Government boundaries (Online) Available at <https://www.spatialni.gov.uk/> (Accessed 10/06/2019)

Tyldesley, D., and Chapman, C., (2013) *The Habitats Regulations Assessment Handbook*, November 2019 edition UK: DTA Publications Ltd

Appendix 2: The Habitats Regulations

The Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended), Regulation 43

Assessment of implications for European site

43.—(1) A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which—

(a) is likely to have a significant effect on a European site in Northern Ireland (either alone or in combination with other plans or projects), and

(b) is not directly connected with or necessary to the management of the site,

shall make an appropriate assessment of the implications for the site in view of that site's conservation objectives.

(2) A person applying for any such consent, permission or other authorisation shall provide such information as the competent authority may reasonably require for the purposes of the assessment.

(3) The competent authority shall for the purposes of the assessment consult the Department and have regard to any representations made by it within such reasonable time as the authority may specify.

(4) The competent authority shall, if it considers it appropriate, take such steps as it considers necessary to obtain the opinion of the general public.

(5) In the light of the conclusions of the assessment, and subject to regulation 44, the authority shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site.

(6) In considering whether a plan or project will adversely affect the integrity of the site, the authority shall have regard to the manner in which it is proposed to be carried out or to any conditions or restrictions subject to which it proposed that the consent, permission or other authorisation should be given.

(7) This regulation does not apply in relation to a site which is an European site by reason only of regulation 9(1)(c) (site protected in accordance with Article 5(4)).

Appendix 3: Planning Policies for International Designations

For comparison the more detailed policies for international sites are provided here.

Strategic Planning Policy Statement for Northern Ireland (SPPS) DOE (NI) September 2013

Natural Heritage

Regional Strategic Policy

- The following strategic policy must be taken into account in the preparation of Local Development Plans (LDPs) and in the determination of planning applications.
- Planning authorities should apply the precautionary principle when considering the impacts of a proposed development on national or international significant landscape or natural heritage resources.

International Designations

- Development proposals are restricted where they are likely to impact upon the integrity of European or Ramsar sites as these are afforded the highest form of statutory protection. Such designations should be identified in the LDP.
- Planning permission will only be granted for a development proposal that, either individually or in combination with existing and/or proposed plans or projects, is not likely to have a significant effect on:
 - A European site (Special Protection Area, proposed Special Protection Area, Special Areas of Conservation, candidate Special Areas of Conservation and Sites of Community Importance), or
 - a listed or proposed Ramsar site.
- Where a development proposal is likely to have a significant effect (either alone or in combination) or reasonable scientific doubt remains, the planning authority is required by law to carry out an appropriate assessment of the implications for the site in view of the site's conservation objectives. Only after having ascertained that it will not adversely affect the integrity of the site, can the planning authority agree to the development and impose appropriate mitigation measures in the form of planning conditions.
- A development proposal which could adversely affect the integrity of a European or Ramsar site may only be permitted in exceptional circumstances as laid down in the relevant statutory provisions.

Planning Policy Statement 2 Natural Heritage July 2013

Planning Policy Statement (PPS) 2 Preceded SPPS and provided greater detail in the policy on international sites which more closely mirrors the requirements of the Habitats Regulations. It will be replaced on adoption of the Plan Strategy.

Policy NH 1 - European and Ramsar Sites - International

Planning permission will only be granted for a development proposal that, either individually or in combination with existing and/or proposed plans or projects, is not likely to have a significant effect on:

- A European site (Special Protection Area, proposed Special Protection Area, Special Areas of Conservation, candidate Special Areas of Conservation and Sites of Community Importance), or
- a listed or proposed Ramsar Site

Where a development proposal is likely to have a significant effect (either alone or in combination) or reasonable scientific doubt remains, the Department shall make an appropriate assessment of the implications for the site in view of the site's conservation objectives. Appropriate mitigation measures in the form of planning conditions may be imposed. In light of the conclusions of the assessment, the Department shall agree to the development only after having ascertained that it will not adversely affect the integrity of the site.

In exceptional circumstances, a development proposal which could adversely affect the integrity of a European or Ramsar Site may only be permitted where:

- there are no alternative solutions, and
- the proposed development is required for imperative reasons of overriding public interest, and
- compensatory measures are agreed and fully secured.

As part of the consideration of exceptional circumstances, where a European or Ramsar site hosts a priority habitat or priority species listed in Annex I or II of the Habitats Directive, a development proposal will only be permitted when:

- it is necessary for reasons of human health or public safety or there is a beneficial consequence of primary importance to the environment, or
- agreed in advance with the European Commission.

5.1 Development proposals are restricted where they are likely to impact upon the integrity of European or Ramsar sites as these are afforded the highest form of statutory protection.

5.2 A list of existing international sites and further information can be found at <https://www.daera-ni.gov.uk/protected-areas>.

Appendix 4: The Approach to Habitats Regulations Assessment for Plans

Stage 1: Screening for likely significant effects

Step 1: Deciding whether a plan should be subject to Habitats Regulations Assessment

This involves considering the nature of the plan and its individual proposals to determine whether there is a requirement to carry out a Habitats Regulations Assessment (HRA).

The following questions help determine whether the document being reviewed is a plan in the context of the Directives.

- Is the whole of the plan directly connected with or necessary to the management of an international site for nature conservation purposes?
- Is the plan a strategic development plan, local development plan, supplementary guidance?
- Is the plan a general statement of policy showing only the general political will or intention of the plan making body, and no effect on any particular international site can reasonably be predicted?
- Does the plan contain a programme, or policies, or proposals which could affect one or more particular international sites?

If in the review there is found to be a requirement for HRA those proposals with potential likely significant effects are identified along with the types of impact that they may have. If on the other hand it is found that the plan is not subject to HRA then it is not necessary to progress beyond this step.

Step 2: Identifying the international sites that should be considered in the appraisal

International sites that are within the plan area, within a zone of influence beyond the plan area or connected to the plan area through ecology or infrastructure are identified creating a long-list of sites.

Step 3: Gathering information about the international sites

Information for each site on the long-list identified at Step 2 is compiled to include the designation status, qualifying interests, conservation objectives and site condition. Available information on factors currently affecting sites which may be affected and vulnerabilities to potential effects of the plan may be included.

Step 4: Discretionary discussions on the method and scope of the appraisal

The Statutory Nature Conservation Body, represented by the Northern Ireland Environment Agency (NIEA) of the Department of Agriculture, the Environment and Rural Affairs (DAERA) may be consulted informally to ensure that the information at Step 3 is up to date and reflects known issues for the international sites. This provides the opportunity to invite comment on the scope of the HRA and potential in combination considerations.

Step 5: Screening the draft / proposed plan for likely significant effects

This step is divided into a higher level review of proposals against sites followed by a detailed assessment of proposals and their potential impacts against site qualifying

features. Presentation of this step may vary according to the complexity and spatial scale of the plan under consideration.

5a. Those proposals identified at Step 1 as having potential likely significant effects are assessed in relation to the long-list of sites from Step 2. This is presented as a matrix of potential impacts against sites in which impacts are categorised as having no likely significant effect, a likely significant effect or an uncertain effect. Some of the potential effects identified at Step 1 may be discounted at this stage if there is no pathway by which they could impact on an international site or its selection features or because the location or scale is such that any effect would be de minimis. The outcome of this part is a short list of proposals and a short list of sites for which more detailed assessment is required.

5b. A detailed assessment considers the potential modes of impacts against all site selection features for short listed sites. This identifies whether there are likely significant effects. In light of the Court of Justice of the European Union (CJEU) judgment, *Case C323/17 (People over Wind & Sweetman)* this step does not take account of mitigation incorporated in the plan although it can take account of essential features and characteristics without which the plan could not be implemented.

If there are likely significant effects, either alone or in combination, then the sites and features which may be affected and potential impacts should be summarised in preparation for Stage 2.

Stage 2: Appropriate Assessment and the Integrity Test

Step 6: The appropriate assessment

The summary from Step 5 is the starting point for the appropriate assessment. Step 6 assesses whether any likely significant effect could lead to an adverse effect on site integrity for each site. This may be supported with an Integrity of Site Checklist as follows.

INTEGRITY OF SITE CHECKLIST	
<p>Does the plan have the potential to:</p> <ul style="list-style-type: none"> • cause delays in progress towards achieving the conservation objectives of the site? • interrupt progress towards achieving the conservation objectives of the site? • disrupt those factors that help to maintain the favourable conditions of the site? • interfere with the balance, distribution and density of key species that are the indicators of the favourable condition of the site? 	Yes/No
<p>Other indicators: Does the plan have the potential to:</p> <ul style="list-style-type: none"> • cause changes to the vital defining aspects (e.g. nutrient balance) that determine how the site functions as a habitat or ecosystem? • change the dynamics of the relationships (between, for example, soil and water or plants and animals) that define the structure and/or function of the site? • interfere with predicted or expected natural changes to the site (such as water dynamics or chemical composition)? • reduce the area of key habitats? • reduce the population of key species? • change the balance between key species? • reduce diversity of the site? • result in disturbance that could affect population size or density or the balance between key species? • result in fragmentation? • result in loss or reduction of key features (e.g. tree cover, tidal exposure, annual flooding , etc.)? 	Yes/No

Where it is found that there could be an adverse effect then measures are identified to remove any potential for adverse effects. This may include case-specific policy restrictions or caveats, adding mitigation in a further plan that will deliver the current plan, removing proposals that could have an adverse effect on site integrity, specific mitigation plans or a large scale mitigation strategy which includes measures to mitigate adverse effects of the current plan.

Step 7: Amending the plan until there would be no adverse effects on site integrity

Any mitigation identified in Step 6 is incorporated in the plan.

Step 8: Preparing a draft of the HRA Record

This is a draft report which records the HRA and supporting evidence.

Step 9: Consultation

If the HRA is concluded at Stage 1 the HRA Report with a Statement of Finding of No Likely Significant Effects is published. Consultation is not required on this Stage 1 Test of Likely Significance in these circumstances however it is recommended that the record is published as a supporting document for the plan. If the draft plan is subject to consultation a draft Stage 1 HRA Report may be included in the consultation with a note that it will be updated to take account of any changes in the proposals or international sites before the plan is finalised.

If the HRA progresses to Step 8 then DAERA must be consulted on a draft Stage 2 HRA Report (also known as an appropriate assessment). Other stakeholders such as managers of international sites should be consulted where appropriate. Public consultation is not required on the draft Stage 2 HRA Report however it may be included as a supporting document for any public consultation on the draft plan

with a note that it will be updated to take account of any changes in the proposals or international sites before the plan is finalised.

Step 10: Proposed modifications

Representations by DAERA and other consultees are recorded with a note on if and how they have been addressed. Further mitigation identified in Step 9 is incorporated in the plan.

Step 11: Modifying and completing the appraisal record

Steps 6 - 8 are updated to reflect any additional mitigation and adverse effects reviewed. If it is found that there are no adverse effects on site integrity then the HRA may be concluded and a Stage 2 HRA Appropriate Assessment Report published to include a Record of No Adverse Effect on the Integrity of Any international site under the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended).

Stage 3: Alternative Solutions

If Stage 2 Appropriate Assessment finds that there would be an adverse effect on site integrity then alternative solutions which are financially, legally and technically feasible need to be considered further.

Alternative solutions are already considered in preparation of many plans, for example through the Preferred Options Paper for Local Development Plans and in carrying out Strategic Environmental Assessment which requires consideration of reasonable alternatives. Compliance with regional policies and strategies also means that environmental effects will have been taken into account. It is therefore rare for HRAs for LDPs to progress beyond Stage 2.

Stage 4: Imperative reasons of overriding public interest and compensatory measures

In the event that there is an imperative reason of public interest which overrides the risk and harm to sites, and priority features where appropriate, then compensatory measures to protect the overall coherence of the Natura 2000 network must be identified, delivery detailed and the government notified. As already noted it is rare for HRAs for LDPs to progress beyond Stage 2.

Criteria for assessing whether a plan is subject to the Habitats Regulations

At Step 1 above the following criteria are used to assess whether an overall plan and its individual proposals require HRA.

- General Policy Statements

These include:

- General strategic and political aspirations (often includes plan objectives)
- Ambitions which state a direction without details
- General criteria based policies, for example relating to design, social considerations, public safety, which do not relate to measures that may protect or affect international sites.

If the whole plan falls into this category and does not include detail about how it will be delivered then it is reasonable to record that it would not be likely to have a significant effect and not to assess it any further under the Habitats Regulations.

- Plans or projects referred to but not proposed
- 1. Existing projects or plans that will support delivery of the current plan (may include infrastructure plans which have a bearing on the current plan but are not delivered by it)
- 2. Projects or plans in preparation or proposed to be prepared to support the current plan but which are not included within it (these should be considered under the Habitats Regulations by the relevant competent authority).
- 3. Existing projects, plans or programmes which are referenced in the current plan but which do not necessarily support its delivery
- 4. Plans or projects that would be likely to proceed under another plan irrespective of the current plan.

If the current plan will influence other projects or plans, for example by adding detail, then further consideration is required. Development that is an inevitable consequence of the current plan also requires further consideration although this may not be necessary if it has been or will be subject to HRA.

- No likely significant effect
 - 1.1. The proposal or policy is intended to protect the environment and in doing so will not be likely to have a significant negative effect.
 - 1.2. Proposals or policies that will not lead to development or other change or include a presumption against effects on international sites.
 - 1.3. Proposals which may bring about change but could have no conceivable effect for example as there is no pathway to an international site or effects are likely to be positive and could not undermine conservation objectives. Baseline information about international sites should be taken into account to ensure all pathways and links with qualifying features have been considered.
- Proposals too general to assess
 - a. The effect cannot be predicted because the policy is too general and, for example, how and where it will be implemented is unknown.
 - b. Broad proposals where the implementation will be detailed and can be assessed at a later stage

These do not apply if the scale of the proposal or constraints mean it will be difficult to accommodate development without impacting an international site.

- Potential minor effects
- Proposals which may bring about change but that change would be insignificant on its own for example due to distance, duration or scale. These will be reviewed for potential in combination effects.
- Potential significant effects
- Potential negative effects that cannot be confirmed to be insignificant on the basis of objective information without mitigation for which further assessment is required.

Appendix 5: Review of draft Plan Strategy Proposals and Policies

Plan Proposal	Screening		Screening Comment	Protective Measures Specific to Policy
Plan Vision	1	Out	General Policy Statement	NA
SO 1: Promote sustainable growth by managing development in our settlements and countryside to meet the needs of all our citizens both urban and rural.	1	Out	General Policy Statement	NA
A Place of Economic Opportunity				
SO 2: Establish Antrim and Newtownabbey as a premier business location where both existing and new, innovative, cultural and creative enterprise can prosper.	1	Out	General Policy Statement	NA
SO 3: Provide a range and quality of land and premises to facilitate business growth, promote economic diversification and protect our strategically important employment locations.	1	Out	General Policy Statement	NA
SO 4: Promote development and regeneration of our town centres and commercial areas.	1	Out	General Policy Statement	NA
SO 5: Support the development of sustainable tourism and enhanced tourism infrastructure.	1	Out	General Policy Statement	NA
SO 6: Improve accessibility, connectivity and ease of movement to, from and within our Borough and promote sustainable travel choices.	1	Out	General Policy Statement	NA
A Liveable and Vibrant Place				
SO 7: Promote positive placemaking and ensure that high quality new development respects, enhances and integrates with our historic environment and natural heritage.	1	Out	General Policy Statement	NA
SO 8: Ensure a sufficient supply of land for new homes, provide a diverse choice of housing and strengthen community cohesion.	1	Out	General Policy Statement	NA
SO 9: Accommodate and promote well-designed and accessible community, education and health facilities.	1	Out	General Policy Statement	NA
SO 10: Promote the protection and accessibility of our open spaces.	1	Out	General Policy Statement	NA

Plan Proposal	Screening		Screening Comment	Protective Measures Specific to Policy
A Place with a Sustainable Future				
SO 11: Promote biodiversity and conserve the natural assets of our countryside, coast and loughs.	1	Out	General Policy Statement	NA
SO 12: Ensure the responsible use of land and natural resources and promote sustainable energy production to mitigate and adapt to climate change.	1	Out	General Policy Statement	NA
SO 13: Tackle flood risk by making space for water and promote sustainable drainage systems.	1	Out	General Policy Statement	NA
SO 14: Ensure the responsible management of waste and support measures to increase recycling.	1	Out	General Policy Statement	NA
Strategic Policy 1a (SP1.1 - SP1.5): Sustainable Development - Sustainable Development & Development Impact Assessments	4	Out	While the overriding principle is that development should be sustainable this part of SP1 is a presumption in favour of development. Proposal however is too general to assess and delivery will be considered under other policies.	SP 1.3 'The Council will also be guided by the precautionary principle that where there are significant risks of damage to the environment, its protection will be paramount, unless it has been adequately demonstrated that there are imperative reasons of overriding public interest.' Identifies that assessments may be required in support of applications including for air quality and drainage.
Strategic Policy 1b (SP1.6 - SP1.12): Sustainable Development - Spatial Growth Strategy and the Places of our Borough	5,6	In	There are settlements, such as Antrim, Toome, and Metropolitan Newtownabbey immediately adjacent to or with a pathway to international sites. The relationship between international sites and settlements will be considered in the appropriate assessments. Impacts of development in the countryside will be assessed under all applicable DM policies.	SP 1.6 g) 'Afford suitable protection to our Borough's natural and historic environment in accommodating growth...'
Strategic Policy 1c (SP1.13 - SP1.17): Sustainable Development - Delivering Sustainable Outcomes	5,6	In	This provides for mechanisms to guarantee measures will be implemented, some of which, such as sustainable drainage, may be protective of international sites. Decomissioning of development or restoration could have potential significant effects.	SP 1.13 may require contributions from developers to manage or mitigate impact on the environment. SP 1.14 Contributions may be secured towards natural heritage assets.
A Place of Economic Opportunity				

Plan Proposal	Screening		Screening Comment	Protective Measures Specific to Policy
Strategic Policy 2: Employment	5,6	In	Includes Employment lands, agricultural development, Strategic Employment Locations, Local Employment Sites and Sustainable Tourism. The latter highlights some locations at 5.22 including Shane's Castle and Lough Neagh both of which include parts of Lough Neagh and Lough Beg SPA and Ramsar site.	5.25 'The Council acknowledges however that to support and enhance our Borough's tourism sector careful management is required to ensure that the key historic environment and natural heritage assets which it relies upon are not compromised by inappropriate or unsympathetic development.
DM 1: Economic Development – Zoned Sites and Settlements	5,6	In	The SELs all have potential for hydrological pathways to international sites.	None
DM 2: Economic Development – Countryside	5,6	In	Includes farm diversification and potential large scale development. Potential impact depending on location of development.	DM 2.1 specifies that proposal 'will not adversely affect the environment', DM 2.6 highlights must be subject to normal environmental considerations.
DM 3: Economic Development – Incompatible Uses	3	Out	This seeks to avoid conflicting land use.	NA
DM 4: Agricultural Development	5,6	In	This could lead to new development including livestock facilities which may increase emissions of ammonia.	DM 4.4 'Development proposals involving intensive farming or animal husbandry must demonstrate that they will not result in any significant adverse environmental effects, particularly in relation to ammonia production.'
DM 5: Farm Diversification	5,6	In	Potential for effects for example from development generating waste water or leading to recreational disturbance.	None
DM 6: Development within Centres	5,6	In	Development will be in existing urban areas however some are close to international sites and the potential for impacts from redevelopment cannot be ruled out.	None
DM 7: Development outside Centres	5,6	In	Primarily focusses development in settlements however some are close to or have pathways to international sites. Includes some provision for economic development in the countryside. Potential impact depending on location of development.	None
DM 8: Development at The Junction, Antrim	5,6	In	Largely relates to existing developed land however contaminated land could be redeveloped therefore potential impacts on international sites.	None

Plan Proposal	Screening		Screening Comment	Protective Measures Specific to Policy
DM 9: Tourism Development	5,6	In	Includes reference to Lough Neagh and potential for activity tourism. Potential impacts depending on location of development including impacts from recreation.	DM 9.10 'Developers will be required to submit a supporting statement to accompany all proposals for tourism development that demonstrates how the proposal meets the following criteria: (a) The development is compatible with policies to safeguard and enhance the historic environment and natural heritage assets...'
Strategic Policy 3: Transportation & Infrastructure	5,6	In	Recommends need for road improvements on the A26 and A57 however these would be delivered through DfI Roads. Local road schemes could have potential impacts if there are pathways to international sites. Supportive of proposals necessary to maintain, improve or expand existing operational facilities at Belfast International Airport to meet anticipated growth needs and associated car parking which could potentially have a hydrological link to Lough Neagh.	None
DM 10: Access and Parking	5,6	In	Unlikely to have a significant effect however the potential for development with a pathway to a international site cannot be excluded.	None
DM 11: Access to Protected Routes	3	Out	This constrains where access is permitted to protected routes in the interests of safety.	None
DM 12 : Active Travel (Walking and Cycling)	5	In	Promotes provision for active travel, could indirectly cause slight increase in use of routes alongside Belfast Lough.	None
DM 13: Belfast International Airport	5,6	In	Supportive of proposals necessary to maintain, improve or expand existing operational facilities at Belfast International Airport to meet anticipated growth needs and also seeks to avoid conflicting uses around it. Potential impacts depending on the nature and scale of development and pathways for effects on Lough Neagh.	None

Plan Proposal	Screening		Screening Comment	Protective Measures Specific to Policy
DM 14: Public Utilities and Infrastructure	5,6	In	Potential impact depending on location of development.	6.34 refers to protecting the environment and considering alternative routes or sites.
DM 15: Development Relying on Non-Mains Sewerage	5,6	In	Potential impact depending on location of development.	DM 15.1 The Council will only support development proposals relying on non-mains sewerage, where it can be demonstrated that this will not create or add to a pollution problem. DM 15.2 The Council will require development proposals to be supported by sufficient information on the means of sewerage to allow a proper assessment of such proposals to be made. In those areas identified as having a pollution risk, development proposals relying on non-mains sewerage will only be permitted in exceptional circumstances.
DM 16: Telecommunication Facilities and Digital Services	5,6	In	Potential impact depending on location of development however generally small scale.	Includes several caveats such as proposals must '...not result in ... harm to environmentally sensitive features or locations.'
A Vibrant and Liveable Place				
Strategic Policy 4: Homes	5,6	In	This will lead to growth in homes varying from around 1% in villages and hamlets through 7.7% in the countryside, to 28.2% in Antrim and 40% in Metropolitan Newtownabbey. This can put pressure on water supply and waste treatment capacity.	
DM 17: Homes in Settlements	5,6	In	This policy focusses the majority of development in settlements some of which have direct pathways to international sites.	None
DM 18: Residential Development in the Countryside	5,6	In	Potential impact depending on location of development.	None
DM 19: Residential Caravans and Mobile Homes	3	Out	Proposals will be low in number, short term and generally have self contained waste treatment.	NA

Plan Proposal	Screening		Screening Comment	Protective Measures Specific to Policy
DM 20: Traveller Accommodation	5,6	In	Potential impact depending on location of development.	None
DM 21 : Specialist Residential Accommodation	5,6	In	Most likely to be in/adjacent to settlements. Potential impact depending on location of development.	None
DM 22: Residential Extensions and Alterations	5,6	In	Unlikely to have an impact however cannot be discounted if close to an international site.	None
Strategic Policy 5: Community Infrastructure	4	Out	This relates to community infrastructure from health and education through to recreation and open space. Delivery is considered under the DM policies.	NA
DM 23: Protection of Open Space	3	Out	Seeks to protect open space the only exception being '... where it is demonstrated the loss of the open space will have no significant detrimental impact on the amenity, character or biodiversity of an area'	NA
DM 24: Community Facilities	5,6	In	Potential impact depending on location of development.	None
Strategic Policy 6: Placemaking and Good Design	4	Out	Too general to assess, delivery is considered under the DM policiess.	Includes SP 6.3 'This will be achieved by: (c) ensuring new development respects, protects and where possible enhances our historic environment and natural heritage assets'
DM 25: Urban Design	4	Out	This is primarily about how rather than where development takes place.	Includes DM 25.1 'Where relevant, the proposal should: ... (l) promote biodiversity by incorporating sites of wildlife interest ...; (o) promote use of sustainable drainage systems' which may be protective of international sites.
DM 26: Shopfront Design	3	Out	This is about design rather than where or what development takes place.	NA
DM 27: Rural Design and Character	3	Out	This is about siting and integration rather than what development takes place.	NA
DM 28: Amenity Impact	3	Out	This constrains development to avoid conflicts in uses.	NA
DM 29: Advertisements	3	Out	This will not lead to development that could impact on international sites.	NA
Strategic Policy 7: The Historic Environment	4	Out	Too general to assess, delivery will be considered under the DM policies.	NA

Plan Proposal	Screening		Screening Comment	Protective Measures Specific to Policy
DM 30: Archaeology	3	Out	This constrains development to avoid damage to or provide mitigation for archaeological assets.	NA
DM 31: Historic Parks, Gardens and Demesnes	5,6	In	Largely protective however allows some exceptions therefore impacts depend on these. Lough Neagh and Lough Beg Ramsar overlaps Shanes Castle.	None
DM 32: Listed Buildings	5,6	In	Could enable development of industrial heritage, for example on the Sixmilewater River, that is hydrologically connected to international sites.	None
DM 33: Conservation Areas	3	Out	This is about design rather than where or what development takes place.	NA
DM 34: Areas of Townscape Character	3	Out	This is about maintaining or enhancing character rather than where or what development takes place.	NA
DM 35: Enabling Development	5,6	In	Could enable development of industrial heritage that is connected to international sites.	None
DM 36: Vernacular and Locally Important Buildings	5,6	In	Likely to be low number of applications however potential impacts, depending on location of development, cannot be ruled out.	None
A Place with a Sustainable Future				
Strategic Policy 8: Natural Heritage	3	Out	Implements Strategic Objective 11 'Promote biodiversity and conserve the natural assets of our countryside, coast and loughs.' Protective of the natural environment including international sites. Delivery will be considered under the DM policies. Allows for identifying Sites of Local Nature Conservation Importance and Local Landscape Policy Areas in the Local Policies Plan which may have a protective effect depending on location.	11.7 The most important natural heritage assets in our Borough, such as national and international sites and priority habitats and species are subject to statutory designation and protection under European and UK law.'
DM 37: Designated Sites of Nature Conservation Importance	3	In	DM 37.1 - 37.3 only enables development that is not likely to have a significant effect, or will have not adverse effect on site integrity of international sites, or, in exceptional circumstances meets the requirements of the Directives and Habitats Regulations. However, as this policy is explicitly to protect international sites, it must be screened in at this stage.	Policy is protective, implementation is detailed in the amplification 11.13-11.18.

Plan Proposal	Screening		Screening Comment	Protective Measures Specific to Policy
DM 38: Protected Species	3	Out	This affords protection to European protected species some of which are site selection features for international sites and which may also be found on supporting habitat outside International sites.	Policy is protective, implementation is detailed in the amplification 11.25-11.29.
DM 39: Habitats, Species & Features of Natural Heritage Importance	3	Out	This affords protection to priority and other habitats and species some of which are site selection features for international designations and which may also be found on supporting habitat outside international designations. May also provide a buffering effect should the policy inhibit development adjacent to international sites.	Policy is protective, implementation is detailed in the amplification 11.32-35.
DM 40: Landscape Protection	5,6	In	Largely constrains development in land adjacent to Lough Neagh and Lough Beg and Belfast Lough and Local Landscape Policy Areas. Allows however for low intensity recreational use or tourism proposals; uses directly related to agriculture or forestry; proposals related to geothermal energy or the extraction of regionally important minerals within the Lough Neagh & Lough Beg Strategic Landscape Policy Area.	DM 40.6 (e) Only allows: 'Proposals related to geothermal energy or the extraction of regionally important minerals which demonstrate a sustainable approach to development that will not impact adversely on the features or environmental assets of the Lough or its environs.'
DM 41: Coastal Protection	5,6	In	Constrains coastal development to exceptional circumstances however does not totally exclude it so impacts cannot be ruled out.	11.42 highlights coastal international sites. 11.44 states that '...potential impacts on the coastal dynamics of the area, including environmental change and flood risk ... have been considered and addressed.'
DM 42: Trees and Development	3	Out	Seeks to protect trees and promote planting.	NA
Strategic Policy 9 : Natural Resources	5,6	In	Provides framework for protection and use of mineral reserves and for renewable energy.	SP 9.2 includes '(b) ... a presumption against unconventional hydrocarbon extraction, until such times as there is sufficient and robust evidence regarding all the potential environmental impacts of such extraction; (c) ... a presumption against minerals development that would affect the following environmentally sensitive sites /

Plan Proposal	Screening		Screening Comment	Protective Measures Specific to Policy
				designations unless it can be demonstrated, that there is a regional need for the proposed mineral that outweighs the importance of the site: ... Sites of Nature Conservation Importance (International, National and Local sites).'
DM 43: Minerals Development	5,6	In	Enables minerals development therefore potential for impacts depending on location, scale and nature of development.	DM 43.2 The following matters have to be 'addressed to the satisfaction of the Council: (a) Disturbance and disruption from noise, blasting and vibration and potential pollution of land, air and water; (c) The impact on ... areas of nature heritage assets during and after development; (d) The impact on surface and ground water resources, drainage and fishery interests'
DM 44: Mineral Reserve Policy Areas	3	Out	While this constrains development of a potential mineral reserve use of that reserve is not allowed under this policy.	NA
DM 45: Renewable Energy Development	5,6	In	Allows for renewable energy development therefore may have an impact depending on scale, nature and location. However International and National Sites of Nature Conservation Importance are identified as 'Group 2: Areas of significant protection' in which '... proposals will only be appropriate in circumstances where any significant effects on the amenity and qualities of these areas can be substantially overcome by siting, design and other forms of mitigation.'	Highlights that development must be compatible with other policies and development must '...avoid or address any unacceptable adverse impacts including: (e) ecological impact (including impact on peatland hydrology); (g) impact on local natural resources, including air quality, water quality ...'
Strategic Policy 10: Environmental Resilience and Protection	4	Out	Relates to environmental resilience in relation to climate change, flood risk, environmental protection and waste management. Overall seeks to be protective of the environment. Delivery is considered under the DM policies.	NA

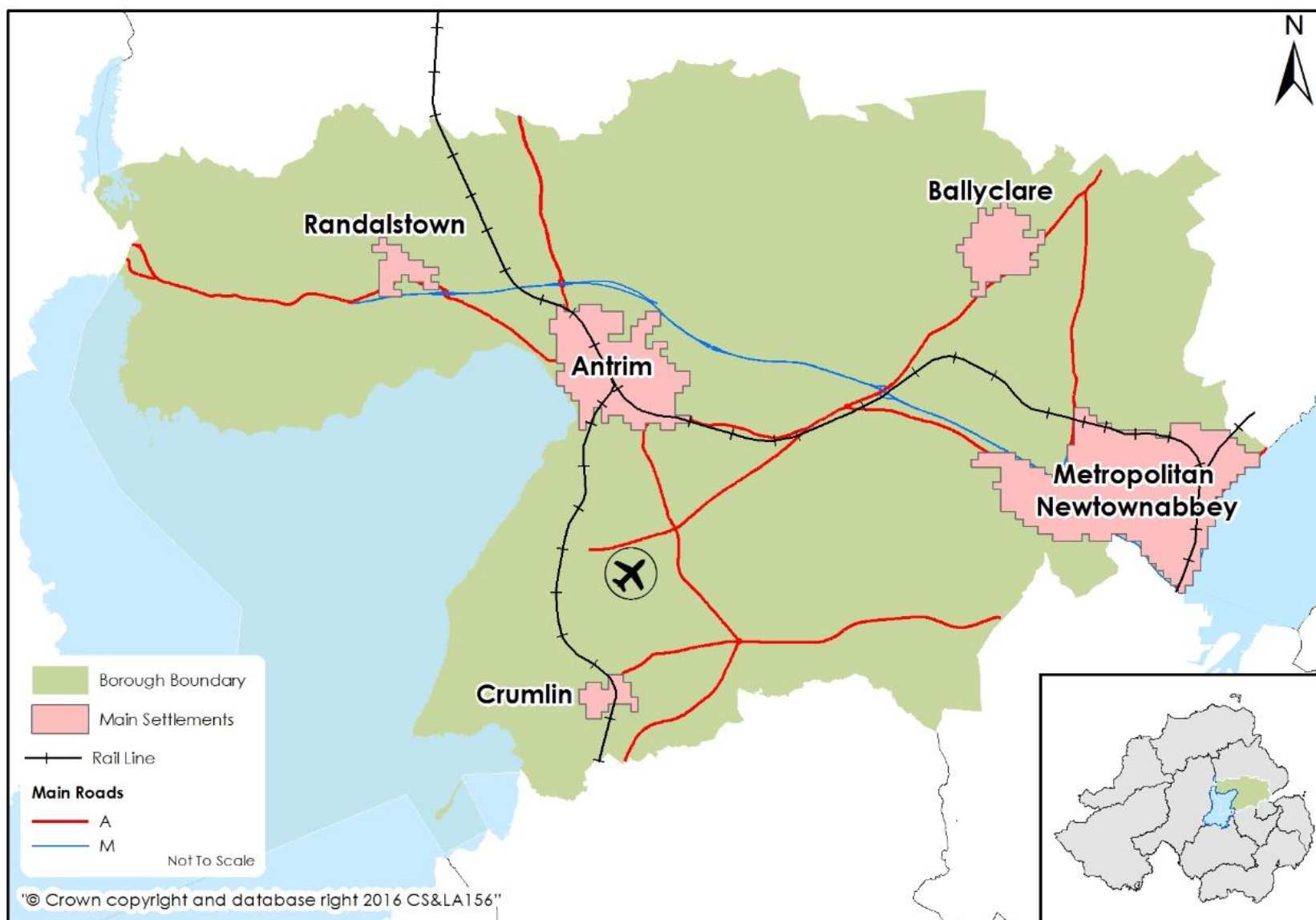
Plan Proposal	Screening		Screening Comment	Protective Measures Specific to Policy
DM 46: The Control of Development in Flood Plains	5,6	In	Largely protective through constraining development including storage of hazardous substances, however allows for some forms of development in floodplains including mineral extraction and recreational facilities.	
DM 47: Surface Water Drainage and Sustainable Drainage Systems (SuDS)	3	Out	Promotes use of sustainable drainage systems which can provide protection in terms of water quality.	DM 47.2 Requires a Drainage Assessment for development above certain thresholds and '(c) Where surface water run-off from the development proposed may adversely impact upon other development or important features of the natural or historic environment'. This can inform HRAs.
DM 48: Reservoir Flood Risk	3	Out	Constrains development in potential flood inundation areas and does not promote development.	NA
DM 49: Artificial Modification of Watercourses	3	Out	This allows for a maximum length of culverting of up to 10m in limited circumstances. There is potential for culverting to result in habitat loss or to create a barrier to migration of salmon or otter however there are no international sites for these features in this council area.	NA
DM 50: Pollution	3	Out	This requires developers to provide a detailed assessment report 'where there is potential to cause significant pollution in terms of noise, air, water and light emissions ... The report must demonstrate that the development will not have a significant adverse impact on local amenity or the environment and detail how any pollution arising will be appropriately mitigated.'	NA
DM 51: Major Hazards	3	Out	This seeks to avoid conflicting land use.	NA
DM 52: Contaminated Land	5,6	In	Allows for development of contaminated land under specified circumstances.	DM 52.1 The Council will only support development proposals on potentially contaminated land, where it can be demonstrated: (a) through a site investigation and risk assessment that the site is in a condition suitable for

Plan Proposal	Screening	Screening Comment	Protective Measures Specific to Policy
			the proposed development and is not causing significant pollution of the environment; and (b) where necessary, effective remediation measures are agreed to ensure the site is made suitable for the new use and that appropriate disposal and/or treatment of any hazardous material takes place.
DM 53: Waste Management and Disposal Facilities	5,6	In Allows for new or extended waste management facilities.	DM 53.2 'It must be demonstrated that the proposal will bring an overall net social, environmental and economic benefit without having a likely significant adverse effect: ... (b) in terms of air, water, noise or light pollution; (c) on the historic environment and natural heritage assets...'
DM 54: Protection of Existing Waste Management Facilities	3	Out This seeks to avoid conflicting land use.	NA

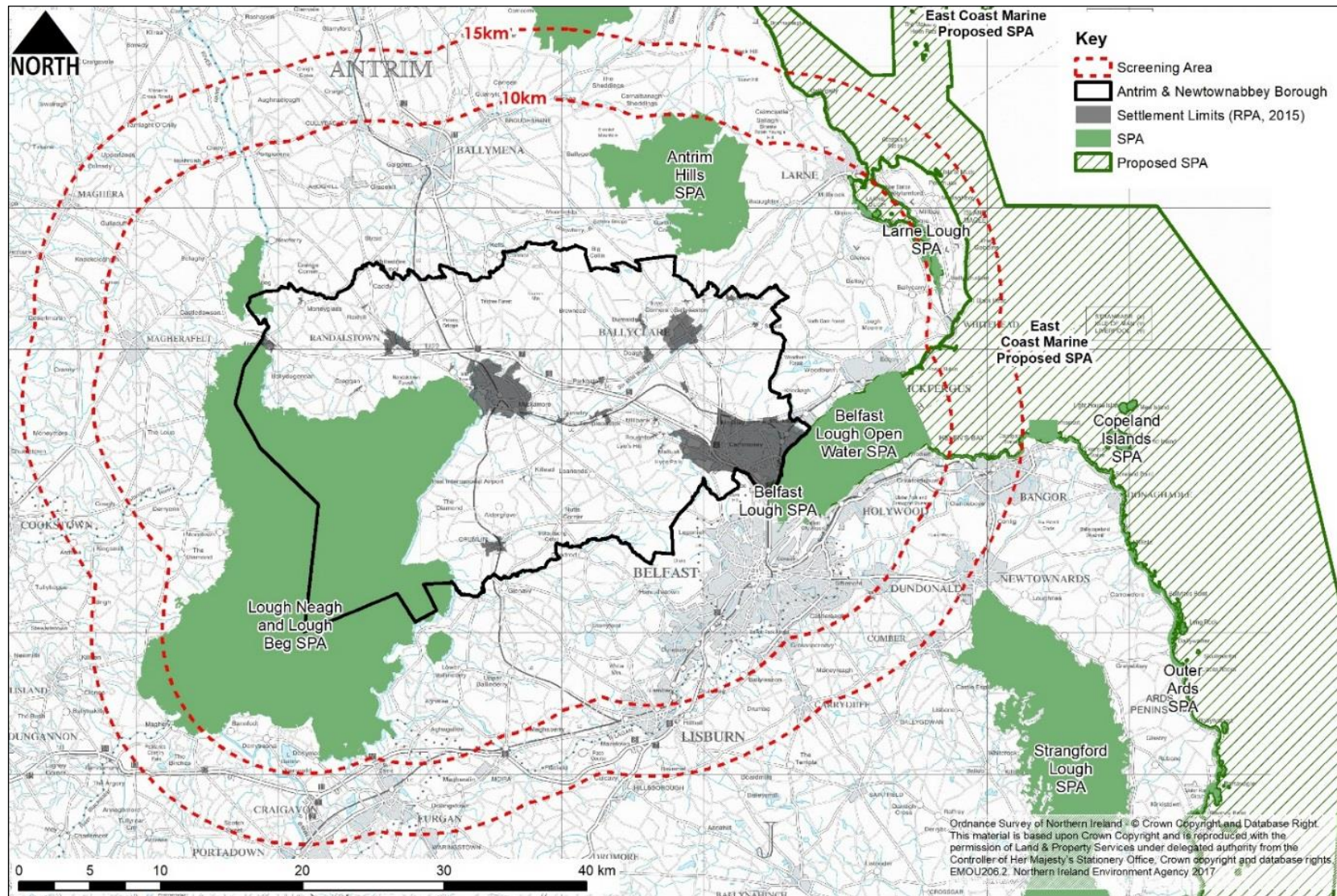
Appendix 6: Maps

- Map 1: The Antrim and Newtownabbey Local Development Plan Area
- Map 2: SPAs in relation to Antrim and Newtownabbey Borough Council
- Map 3: SACs in relation to Antrim and Newtownabbey Borough Council
- Map 4: Ramsar Sites in relation to Antrim and Newtownabbey Borough Council
- Map 5: Major Catchments within the Antrim and Newtownabbey Borough Council area
- Map 6: Rea's Wood and Farr's Bay SAC
- Map 7: Lough Neagh and Lough Beg SPA and Ramsar
- Map 8: Lough Beg Vision RSPB
- Map 9: Belfast Lough and associated international sites
- Map 10: Marine SACs in relation to Antrim and Newtownabbey Borough Council

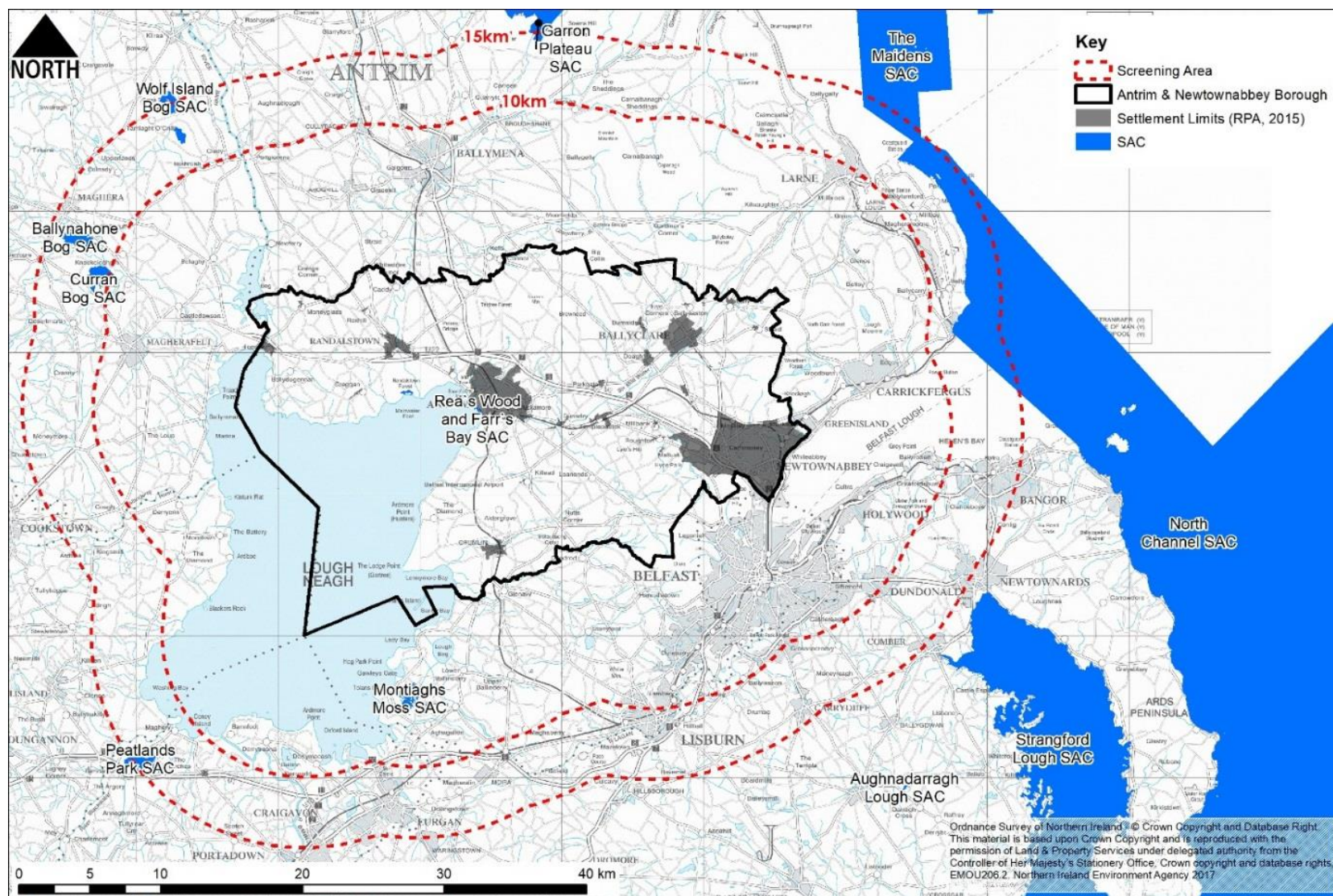
Map 1: The Antrim and Newtownabbey Local Development Plan Area



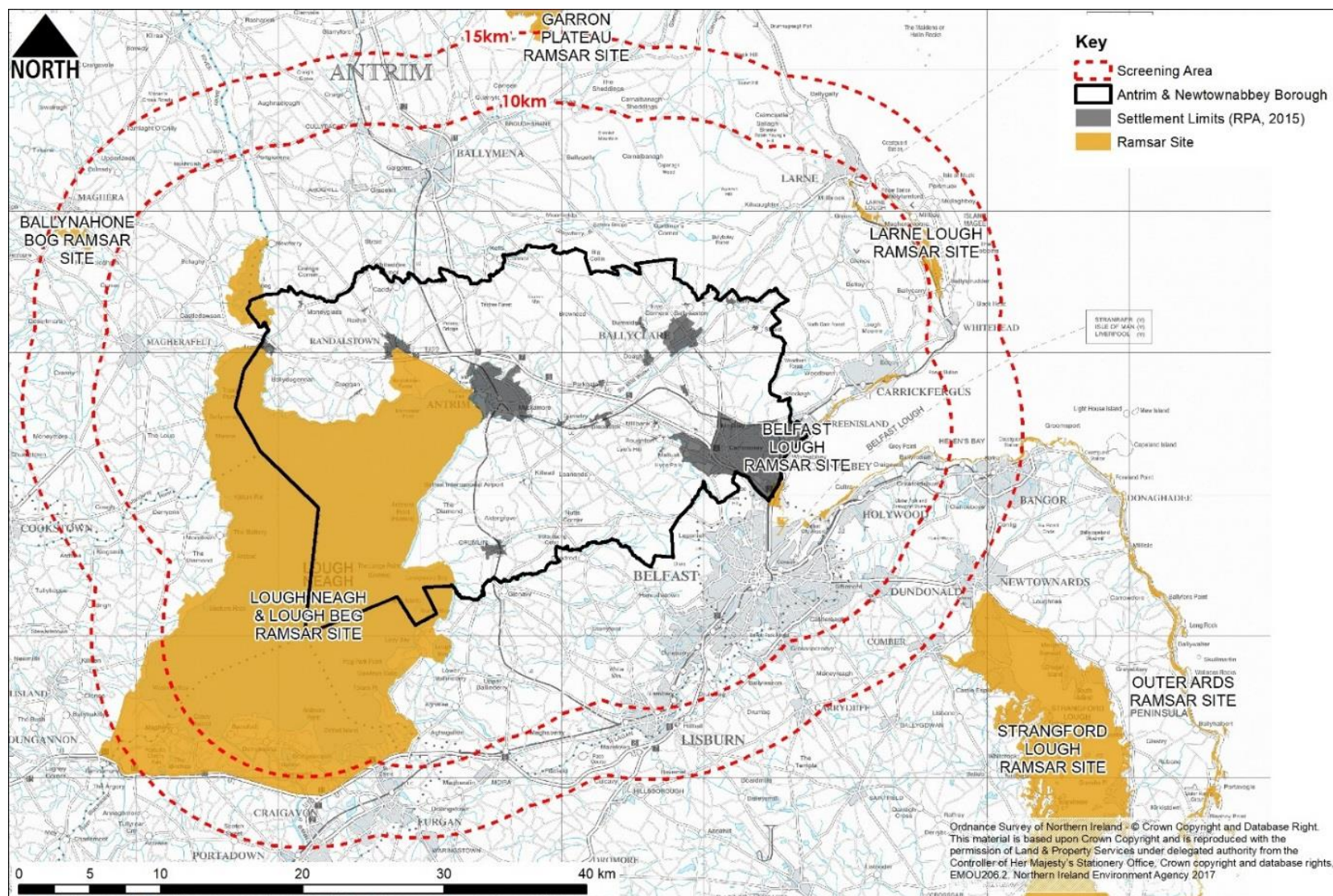
Map 2: SPAs in relation to Antrim and Newtownabbey Borough Council



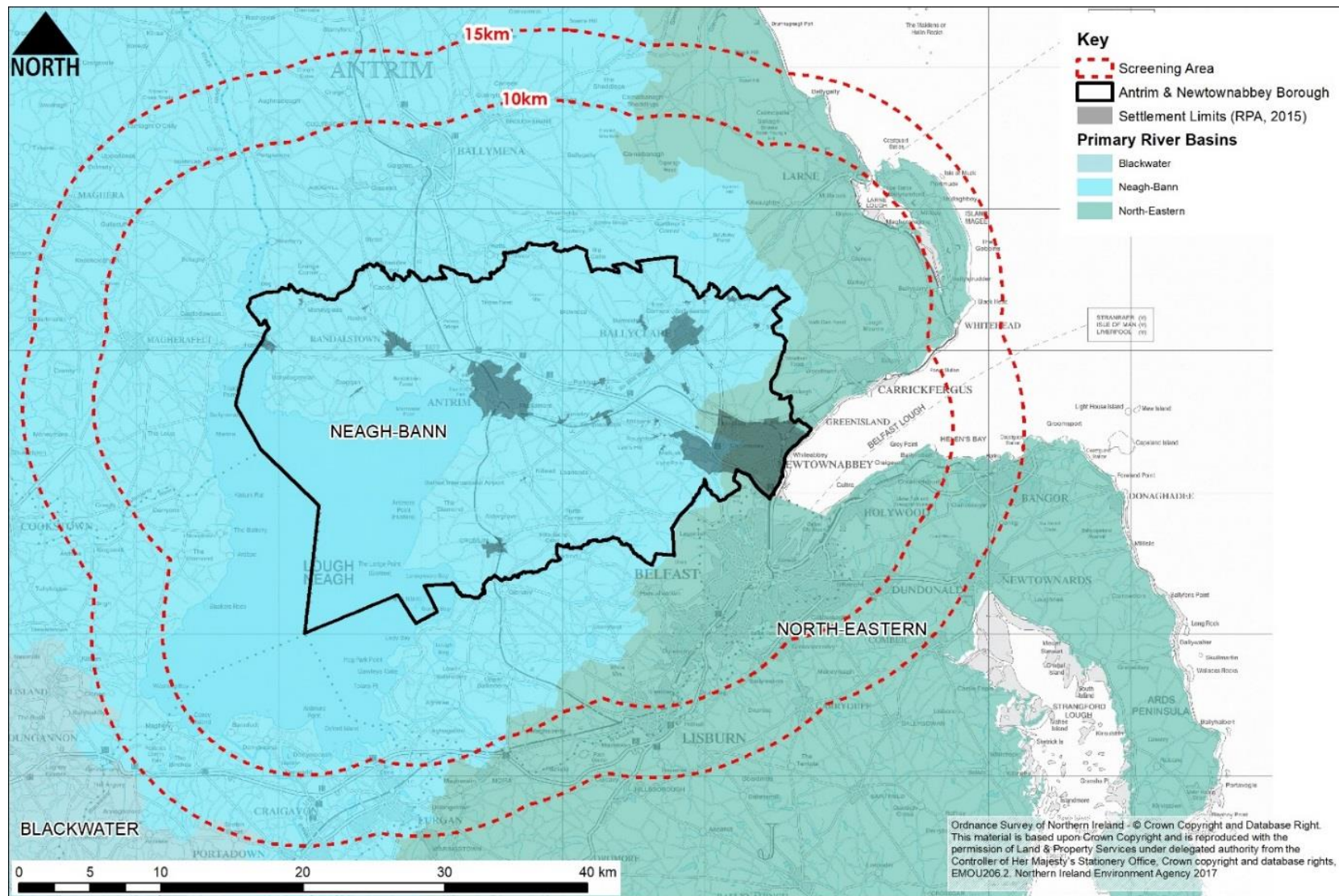
Map 3: SACs in relation to Antrim and Newtownabbey Borough Council



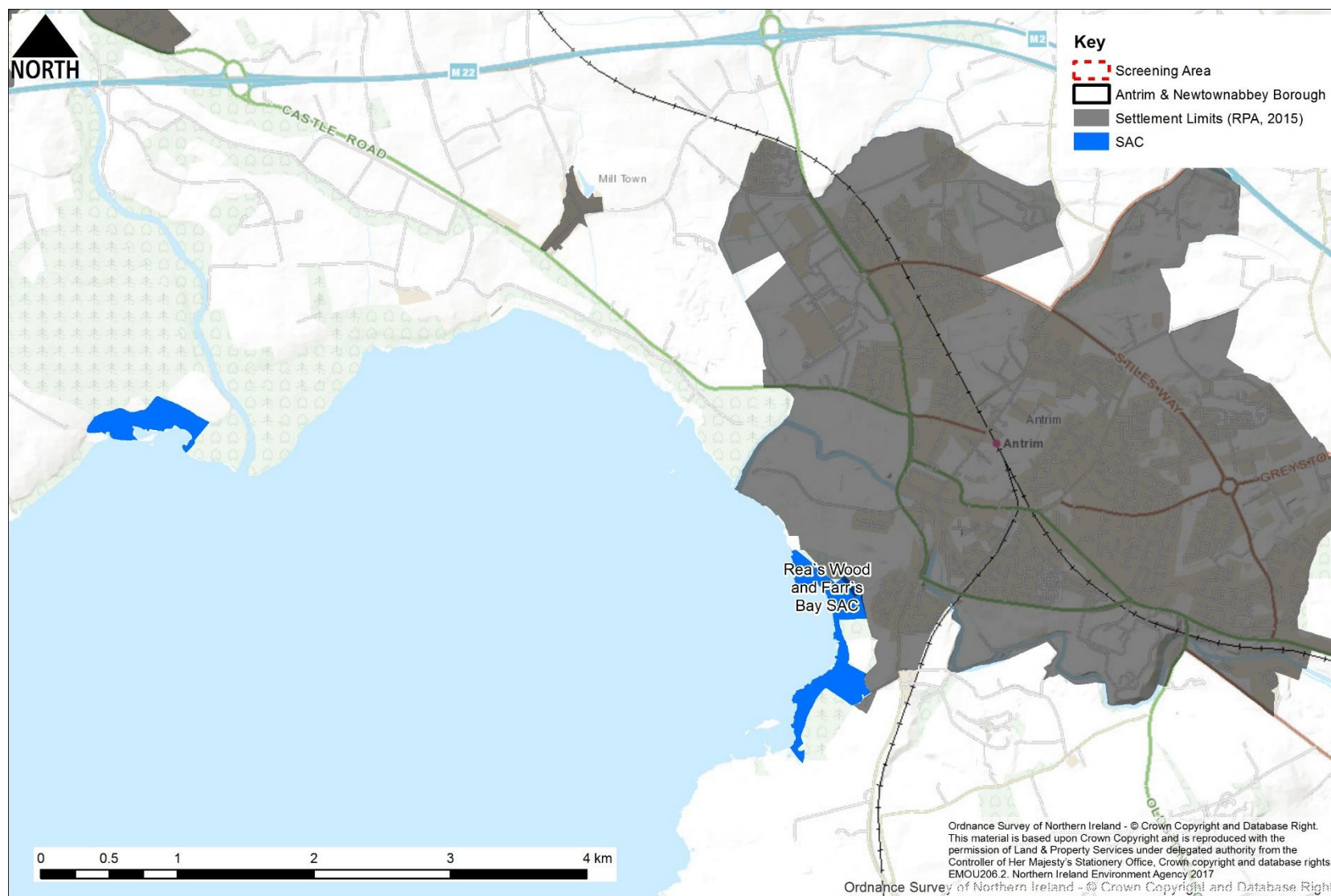
Map 4: Ramsar Sites in relation to Antrim and Newtownabbey Borough Council



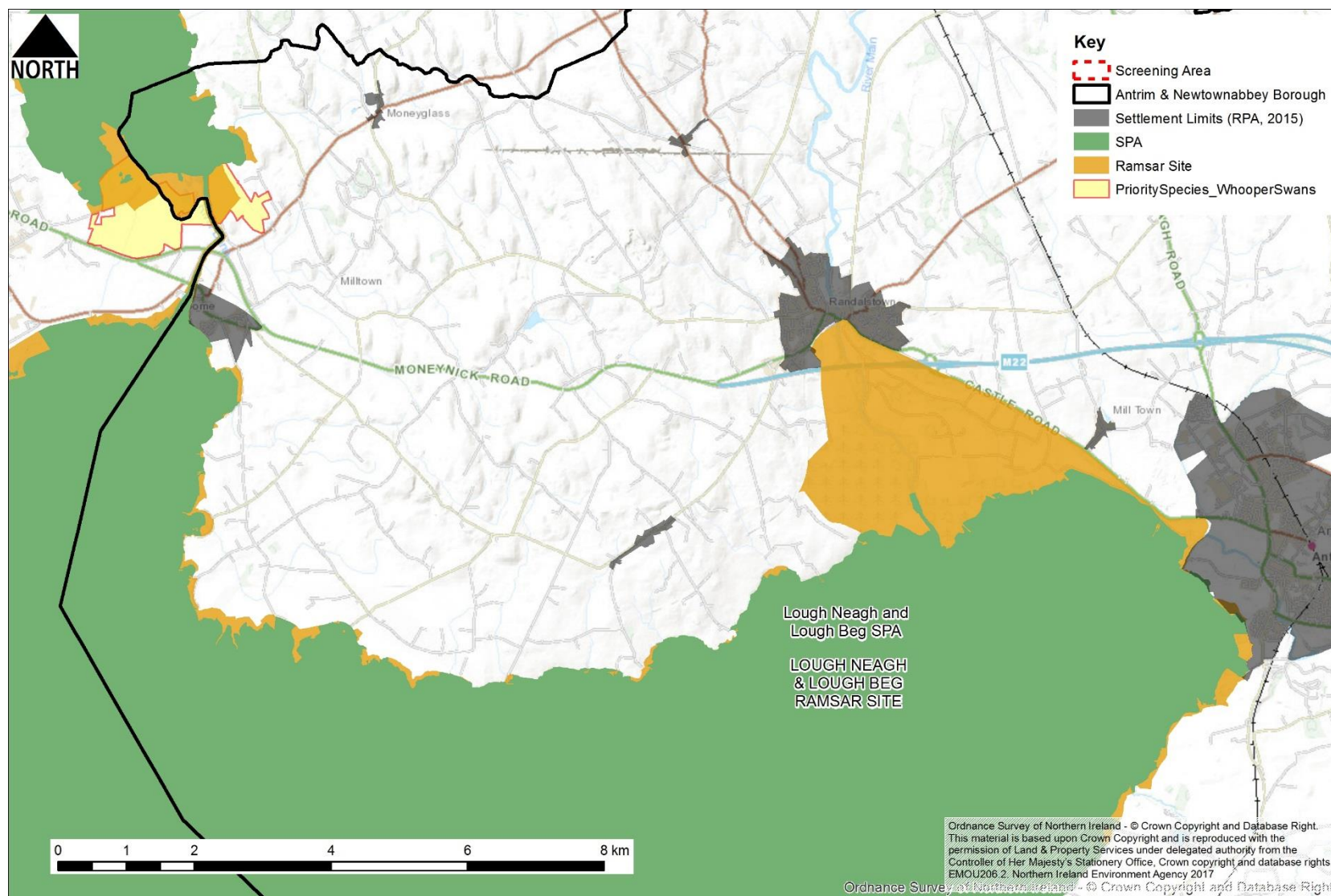
Map 5: Major Catchments within the Antrim and Newtownabbey Borough Council area



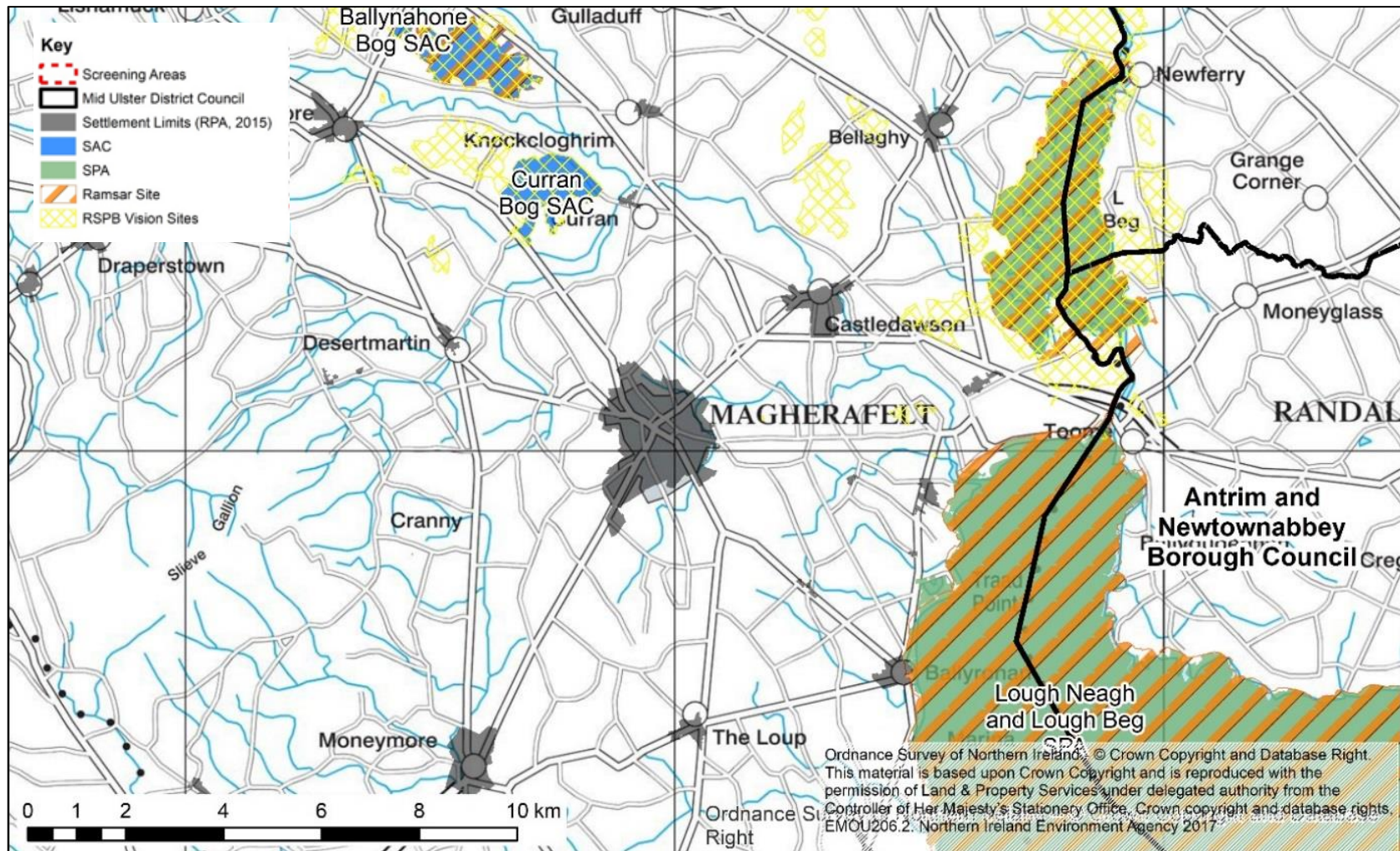
Map 6: Rea's Wood and Farr's Bay SAC



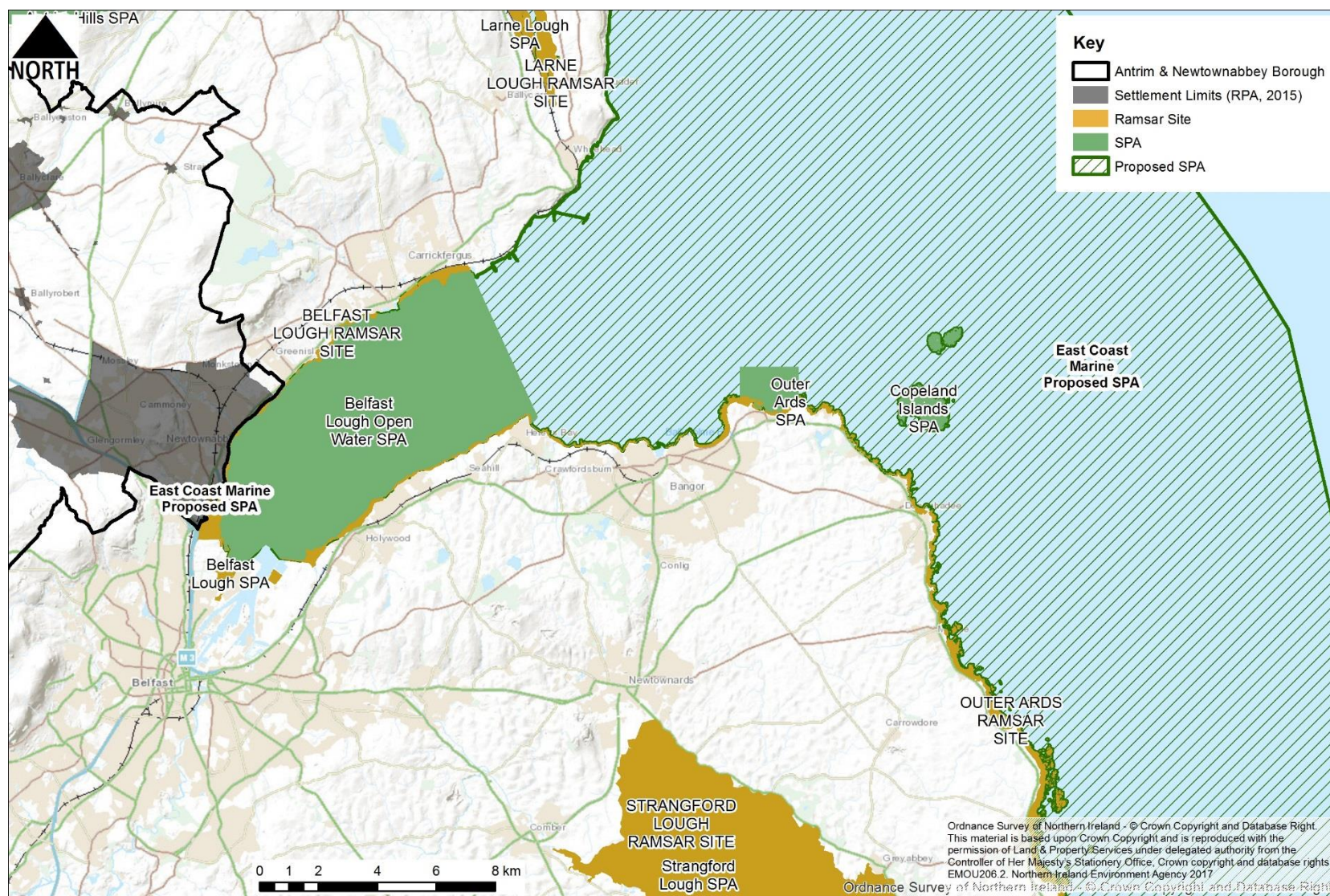
Map 7: Lough Neagh and Lough Beg SPA and Ramsar



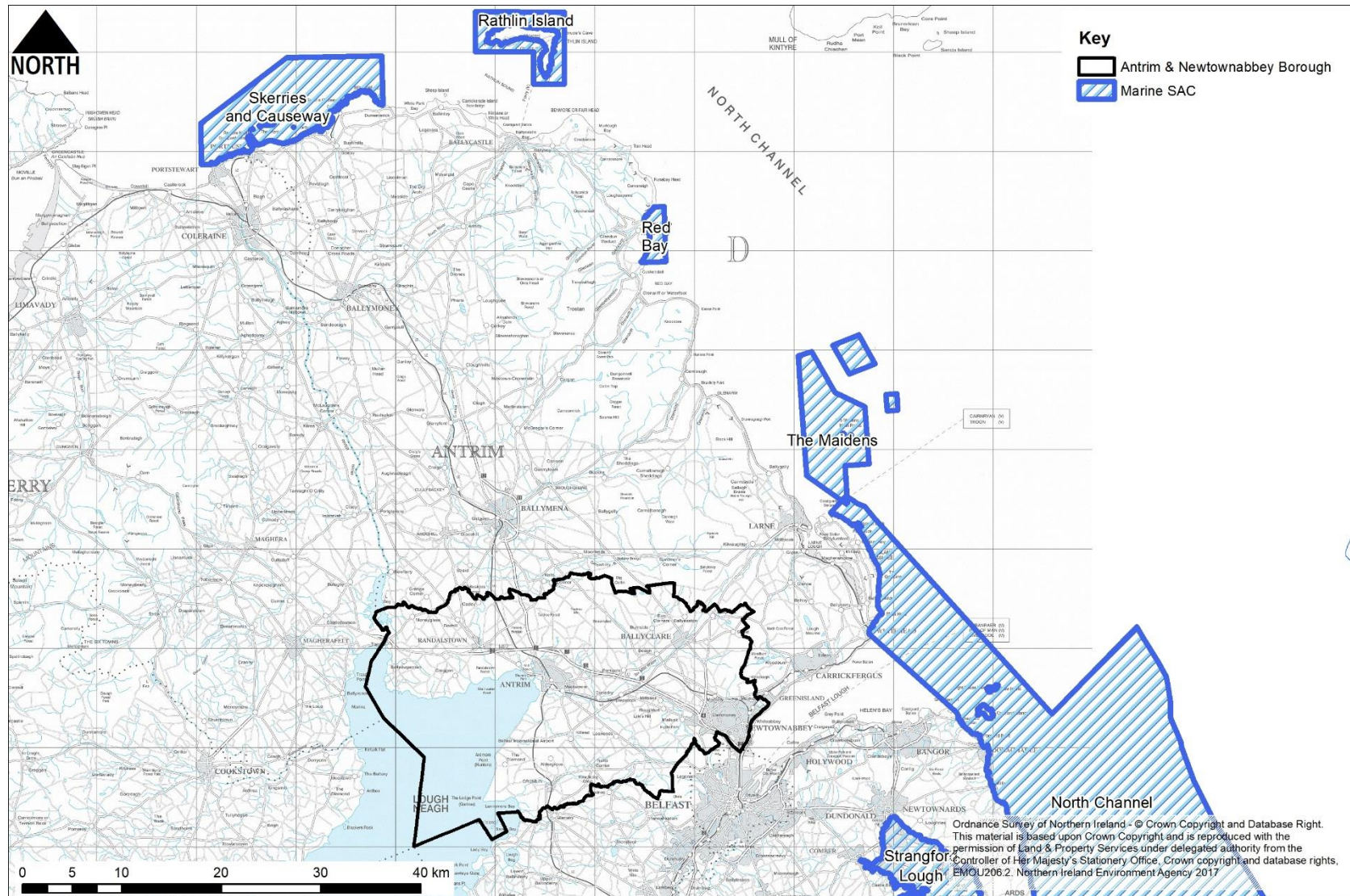
Map 8: Lough Beg Vision RSPB



Map 9: Belfast Lough and associated international sites



Map 10: Marine SACs in relation to Antrim and Newtownabbey Borough Council



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