HABITATS REGULATIONS ASSESSMENT

STAGE 2 APPRAISAL TO INFORM APPROPRIATE ASSESSMENT

DAERA Future Agricultural Policy Proposals for Northern Ireland

NI 2340 DAERA FAPP
sHRA Stage 2
F02
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Contents

1 INTRODUCTION

1.1 Background

This Habitats Regulations Assessment (HRA) Stage 2 appraisal for Appropriate Assessment has been prepared by RPS on behalf of the Department of Agriculture, Environment and Rural Affairs (DAERA) and examines whether or not the proposed Future Agricultural Policy Proposals (FAPP) for Northern Ireland, are likely to give rise to adverse effects on the integrity of sites protected as part of the UK National Site Network (SPAs and SACs in Northern Ireland) in addition to relevant Natura 2000 sites within the Republic of Ireland (RoI).

The report has been prepared to assist DAERA in their role as a Competent Authority in fulfilling their duties in accordance with Regulation 43 of the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended).

These regulations transpose *inter alia* Articles 6(3) and 6(4) of Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora, and remain relevant following the UK's departure from the EU. This approach is in line with the Conservation (Natural Habitats, etc.) Regulations (Amendment) (Northern Ireland) (EU Exit) Regulations 2019. Terminology used in this report is in line with guidance published by DAERA in light of changes to the status of European sites following the UK's departure from the EU (DAERA 2020).

It is intended that the findings of this plan level Stage 2 appraisal for Appropriate Assessment will identify the potential for measures within the FAPP to give rise to adverse effects upon the integrity of the relevant sites and to identify where the proposed policies can be amended, as a form of high-level mitigation, or where further measures are required at implementation, to address any potential impacts upon the integrity of sites as required.

1.2 Outcome of HRA Stage 1 Screening Appraisal

This HRA Stage 2 appraisal for Appropriate Assessment, is produced following the completion of a HRA Stage 1 screening appraisal of the FAPP, which identified the potential for the project to give rise to likely significant effects upon a range of SACs and SPAs in both Northern Ireland and RoI.

Likely significant effects upon the identified SACs and SPAs were predicted as follows,

- The possibility of likely significant Water Quality and Habitat Deterioration effects could not be discounted for the identified European Sites.
- The possibility of likely significant Habitat Deterioration arising through aerial emission effects could not be discounted for the identified European Sites.
- The possibility of likely significant Habitat Deterioration arising through afforestation and agroforestry could not be discounted for the identified European Sites.

1.3 Overlap with Strategic Environmental Assessment of the FAPP 2022

A Strategic Environmental Assessment (SEA) of the FAPP 2022 is being carried out concurrently with HRA. The purpose of SEA is to identify and evaluate a range of environmental consequences that may occur as

a result of the implementation of the FAPP and to give interested parties an opportunity to comment on the perceived or actual environmental effects.

There is a degree of overlap between the requirements of the SEA and HRA and in accordance with best practice, an integrated process of data sharing has been carried out, such as sharing of baseline data and mapping of UK National or European Sites, sharing of the potential ecological effects of the FAPP.

It is also noted that there are issues relevant to the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended) that are not strictly related to HRA but can be addressed under SEA, including and the management of features of the landscape which are of major importance for wild fauna and flora and essential for the migration, dispersal and genetic exchange of wild species (Article 10 of the Habitats Directive), and the regime of strict protection for Annex IV species (European Protected Species) under Article 12 of the Habitats Directive.

EC (2021) advises that there are several advantages to streamlining SEA and appropriate assessments in that they can, for instance, help to better understand the relationships between different environmental factors, avoid duplication of assessments, contribute to making more efficient use of resources needed to carry out the assessments, and enable better coordination in permitting procedures.

Key elements for effective streamlining of appropriate assessment and SEA include:

- close cooperation between responsible authorities;
- adequate scoping, which is a common practice in the SEA procedure;
- close cooperation and proper information exchange between the experts preparing the SEA and the experts conducting the appropriate assessment (e.g. information about noise, air, water, soil issues by the respective expert to the expert in biodiversity);
- quality control by the competent authority;
- clear and distinct conclusions for each of the streamlined assessment procedures.

1.4 Appropriate Assessment

Regulation 43 of the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended) states:

> *"(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."*

In simple terms, a plan must be screened for appropriate assessment to ascertain whether or not likely significant effects on the UK national site network i.e. Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar sites; can be excluded. If not, the plan must be subject to appropriate assessment.

2 METHODOLOGY

2.1 Guidance on Appropriate Assessment

Northern Ireland Environment Agency (NIEA) is an Executive Agency of the Department of Agriculture, Environment and Rural Affairs (DAERA). It has published guidance notes on Habitat Regulations Assessment for Competent Authorities (EHS, 2002 and DAERA, 2020).

These guidelines have been followed in the preparation of this report. The following list identifies these and other pertinent guidance documents:

- Communication from the Commission on the Precautionary Principle., Office for Official Publications of the European Communities, Luxembourg (EC, 2000a);
- Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg (EC, 2000b);
- Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC. Office for Official Publications of the European Communities, Brussels (EC, 2001);
- Habitats Regulations Guidance Notes for Competent Authorities. Environment and Heritage Service. Belfast (EHS, 2002) [*not available online*]
- Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission; (EC, 2007);
- The Appropriate Assessment of Plans in Northern Ireland. RSPB, Belfast (RSPB, 2008);
- Interpretation Manual of European Union Habitats. Version EUR 28. European Commission (EC, 2013);
- European Commission Notice C(2018) 7621 'Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC', Office for Official Publications of the European Communities, Luxembourg (EC, 2019);
- Institute of Air Quality Management 'A guide to the assessment of air quality impacts on designated nature conservation sites (Version 1.1)' (IAQM, 2020); and
- Guidance explaining The Conservation (Natural Habitats, etc.) (Amendment) (Northern Ireland) (EU Exit) Regulations 2019 (DAERA, 2020).
- European Commission Notice C(2021) 6913 'Assessment of plans and projects in relation to Natura 2000 sites - Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC', Office for Official Publications of the European Communities, Luxembourg (EC, 2021).

2.2 Approach

2.2.1 Stages of the Appropriate Assessment Process

An appropriate assessment is a three-stage process:

- The first stage involves a screening for appropriate assessment;
- The second stage arises where, having screened the proposed development, the competent authority determines that an appropriate assessment is required, in which case it must then carry out that appropriate assessment; and
- The third stage is a derogation procedure where adverse effects upon the integrity of a site remain, but the project must nonetheless proceed for imperative reasons of overriding public interest.

According to European Commission guidance documents 'Assessment of plans and projects significantly affecting Natura 2000 sites' (EC, 2001) and the 'Managing Natura 2000 sites: The Provisions of Article 6 of the 'Habitats' Directive 92/43/EEC' (EC, 2019), the obligations arising under Article 6 establish a stepwise procedure for Habitats Regulations Appraisal as follows, and as illustrated in Box 1.

The first part of this procedure consists of a pre-assessment stage ('screening') to determine whether, firstly, a plan or project is directly connected with or necessary to the management of the site, and secondly, whether it is likely to have a significant effect on the site; it is governed by the first sentence of Article 6(3).

The second part of the procedure, governed by the second sentence of Article 6(3), relates to the appropriate assessment and the decision of the competent national authorities.

A third part of the procedure (governed by Article 6(4) comes into play if, despite a negative assessment, it is proposed not to reject a plan or project but to give it further consideration. In this case Article 6(4) allows for derogations from Article 6(3) under certain conditions.

The extent to which the sequential steps of Article 6(3) apply to a given plan or project depends on several factors, and in the sequence of steps, each step is influenced by the previous step. The order in which the steps are followed is therefore essential for the correct application of Article 6(3).

Each step determines whether a further step in the process is required. If, for example, the conclusion at the end of a Stage 1 screening appraisal is that significant effects on European sites can be excluded, there is no requirement to proceed to the next step. The steps are illustrated in **Figure 2.1**, extracted from EC (2021).

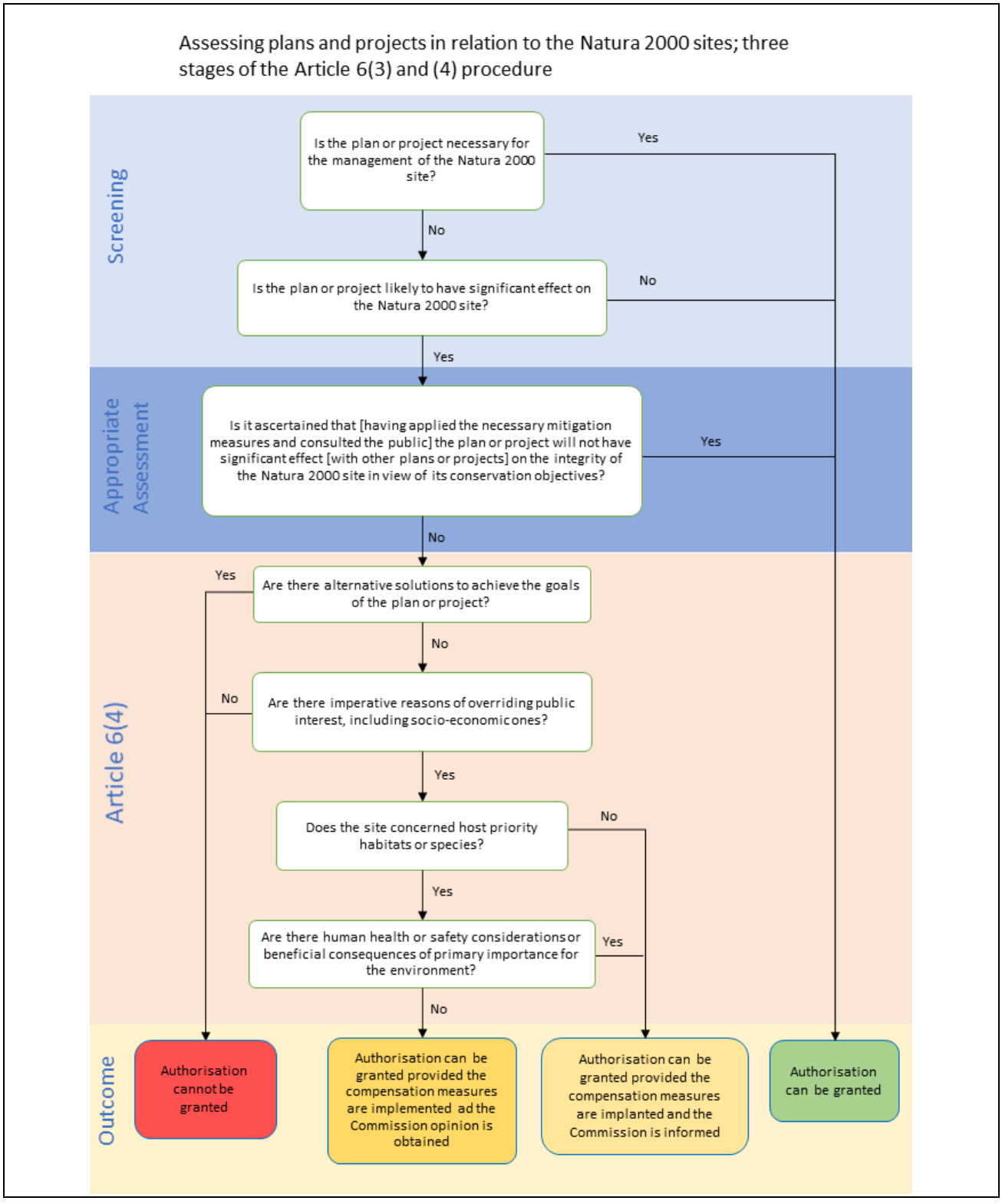

Figure 2.1: Step-wise procedure of Appropriate Assessment (from EC, 2021)

2.2.2 Likely Significant Effect

The Commission's 2018 Notice (EC, 2019) advises that the appropriate assessment procedure under Article 6(3) is triggered not by the certainty but by the likelihood of significant effects, arising from plans or projects regardless of their location inside or outside a protected site. Such likelihood exists if significant effects on the site cannot be excluded. The significance of effects should be determined in relation to the specific features and environmental conditions of the site concerned by the plan or project, taking particular account of the site's conservation objectives and ecological characteristics.

The threshold for a Likely Significant Effect (LSE) is treated in the screening exercise as being above a *de minimis* level. A *de minimis* effect is a level of risk that is too small to be concerned with when considering ecological requirements of an Annex I habitat or a population of Annex II species present on a European site necessary to ensure their favourable conservation condition. If low level effects on habitats or individuals of species are judged to be in this order of magnitude and that judgment has been made in the absence of reasonable scientific doubt, then those effects are not considered to be LSEs.

Case law of the CJEU has confirmed that a significant effect is triggered when:

- there is a probability or a risk of a plan or project having a significant effect on a European site;
- the plan is likely to undermine the site's conservation objectives; and
- a significant effect cannot be excluded on the basis of objective information.

The requirement that the effect in question be 'significant' exists in order to lay down a *de minimis* threshold. Plans or projects that have no appreciable effect on a European site are thereby excluded. If all plans or projects capable of having any effect whatsoever on the site were to be caught by Article 6(3), activities on or near the site would risk being impossible by reason of legislative overkill.

2.2.3 Consideration of *ex-situ* effects

EC (2019) advises that Member States, both in their legislation and in their practice, allow for the Article 6(3) safeguards to be applied to any development pressures, including those which are external to European sites but which are likely to have significant effects on any of them.

The CJEU developed this point when it issued a ruling in case C-461/17 ("Brian Holohan and Others v An Bord Pleanála") that determined inter alia that Article 6(3) of Directive 92/43/EEC must be interpreted as meaning that an appropriate assessment must on the one hand, catalogue the entirety of habitat types and species for which a site is protected, and, on the other, identify and examine both the implications of the proposed project for the species present on that site, and for which that site has not been listed, and the implications for habitat types and species to be found outside the boundaries of that site, provided that those implications are liable to affect the conservation objectives of the site.

In that regard, consideration has been given in this assessment to implications for habitats and species located both inside and outside of the European sites considered in the screening appraisal with reference to those sites' Conservation Objectives where effects upon those habitats and/or species are liable to affect the conservation objectives of the sites concerned.

2.2.4 Mitigation Measures at Screening Stage

In determining whether or not likely significant effects will occur or can be excluded in the Stage 1 appraisal, measures intended to avoid or reduce the harmful effects of the proposed development on European sites,

(i.e. “mitigation measures”) or best practice measures were not taken into account. This approach is consistent with up-to-date EU guidance (EC, 2019; EC, 2021) and the case law of the CJEU.

EC (2001) states that “*project and plan proponents are often encouraged to design mitigation measures into their proposals at the outset. However, it is important to recognise that the screening assessment should be carried out in the absence of any consideration of mitigation measures that form part of a project or plan and are designed to avoid or reduce the impact of a project or plan on a Natura 2000 site*”. This direction in the European Commission’s guidance document is unambiguous in that it does not permit the inclusion of mitigation at screening stage.

In April 2018, the Court of Justice of the European Union issued a ruling in case C-323/17 People Over Wind & Peter Sweetman v Coillte Teoranta (“People Over Wind”) that Article 6(3) of Directive 92/43/EEC must be interpreted as meaning that, in order to determine whether it is necessary to carry out, subsequently, an appropriate assessment of the implications, for a site concerned, of a plan or project, it is not appropriate, at the screening stage, to take account of the measures intended to avoid or reduce the harmful effects of the plan or project on that site. The judgment in People Over Wind is further reinforced in EC (2019) and EC (2021) which refers to CJEU Case C-323/17.

It is noted that for the FAPP, which in part aims to improve ecological impacts associated with agricultural activity across Northern Ireland, includes policies which comprise a broad form of mitigation for the unmitigated impacts potentially associated with agriculture in the absence of such a policy in future. Mitigation measures for the purposes of HRA would require additional measures to those set out within the FAPP, which would reduce or eliminate, where relevant, the already reduced impacts of agricultural activity arising as a result of the FAPP, which may nevertheless give rise to adverse impacts upon the integrity of UK National or European Sites.

2.2.5 UK Departure from the EU

It is recognised that following the United Kingdom's departure from the European Union, SACs and SPAs in the UK are no longer considered "Natura 2000 sites" for the purpose of an assessment pursuant to Article 6(3) of the Habitats Directive. However, pursuant to the UK's Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, those sites still retain the same protection under UK law as they did prior to the UK's exit from the EU.

In the circumstances, and consistent with the UK’s obligations as a signatory to the Bern Convention on the Conservation of European Wildlife and Natural Habitats, to which the Birds and Habitats Directives give effect, and in order to ensure the highest level of protection for the species and habitats protected by those Directives, the following assessment includes a full assessment of relevant RoI sites forming part of the Natura 2000 network of sites protected under those Directives.

This will enable the competent authority to ensure that there will no adverse effect on the integrity of those RoI sites and the UK national site network.

2.2.6 In Combination Effects

Article 6(3) of the Habitats Directive and Article 43 of the Conservation (Habitats Etc.) Regulations requires that in-combination effects with other plans or projects are also considered. As set out in the Commission’s 2018 Notice (EC, 2019), significance will vary depending on factors such as magnitude of impact, type, extent, duration, intensity, timing, probability, cumulative effects and the vulnerability of the habitats and species concerned. Whilst the Directive does not explicitly define which other plans and projects are within

the scope of the in-combination provision of Article 6(3), it is important to note that the underlying intention of this provision is to take account of cumulative impacts, and these will often only occur over time.

In that context, one can consider plans or projects which are completed, approved but uncompleted, or proposed. EC (2019) specifically advises that "*as regards other proposed plans or projects, on grounds of legal certainty it would seem appropriate to restrict the in-combination provision to those which have been actually proposed, i.e. for which an application for approval or consent has been introduced*".

EC (2021) additionally advises that –

- an in-combination assessment is often less detailed at the screening stage than in the appropriate assessment;
- there is still a need to identify all other plans or projects that could give rise to cumulative impacts with the plan or project in question and
- if this analysis cannot reach definitive conclusions, it should at least identify any other relevant plans and projects that should be scrutinised in more detail during the appropriate assessment.

2.2.7 Plan Level Appropriate Assessment

Recent guidance published by the European Commission (EC 2021), sets out a number of pertinent points in respect of the undertaking of Appropriate Assessment of high-level plans, and states the following,

"…*there are also certain particularities in the assessment of plans…. These particularities pertain to possible limitations and constraints and suitable approaches that can be used to overcome the difficulties and uncertainties linked with a lack of detailed information or insufficient definition of all the elements, components and actions of the plan.*

The level of detail of the plan itself will determine the scope and extent of the appropriate assessment, but in all cases the assessment must aim to identify sensitive or vulnerable areas or other potential risks or conflicts with Natura 2000 sites so that these can be taken into account at later stages in the planning process.

The assessment should be proportionate to the geographical scope, to the plan's level of detail and to the nature and extent of the likely effects. In some cases, it may not be possible to analyse in detail all the possible impacts on individual sites at this stage."

It is further stated that the requirements of a plan-level appropriate assessment are as follows:

- To identify the main potential impacts to the European Site network;
- To Identify possible broad mitigation measures; and
- To identify potential alternatives; and
- To identify potential cumulative impacts.

It is further stated that,

"*For strategic plans where it is not possible to identify effects on individual sites, the analysis should as a minimum focus on potential impacts and major risks; site-specific effects will then need to be analysed at project level. In such cases, the appropriate assessment should focus at least on determining the Natura 2000 sites that could be adversely affected as well as any EU protected habitats and species that could be*

affected (also outside Natura 2000), effects on connectivity, fragmentation and other effects at the network scale. This should serve to orientate the scope and focus of the assessment of individual projects."

2.3 Information Sources Consulted

The following general sources of information have been consulted for background environmental information.

- Information provided by the DAERA on the FAPP;
- Northern Ireland Environment Agency – online European Site information www.daera-ni.gov.uk;
- National Parks and Wildlife Service – online European site information www.npws.ie;
- UK Article 17 Reports, 2019, JNCC. Article 17 Habitats Directive Report 2019 (Habitats) | JNCC - Adviser to Government on Nature Conservation;
- UK Article 12 Report, 2019, JNCC. Eleventh Article 12 UK Birds Directive Report (2019): Annex A – General Report | JNCC Resource Hub;
- Ireland's most recent Article 17 Reports 2019, National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht www.npws.ie/publications/article-17-reports;
- Ireland's Article 12 submission to the EU Commission on the *Status and Trends of Bird Species (2008-2012)*;
- Geological Survey of Ireland (GSI) – geology, soils and hydrogeology www.gsi.ie;
- Environmental Protection Agency (EPA) – EPA Maps https://gis.epa.ie/EPAMaps/;
- CORINE (Co-Ordinated Information on the Environment) data series was established by the European Community (EC) www.epa.ie/soilandbiodiversity/soils/land/corine/;
- Information on river basin districts / catchments – https://www.catchments.ie/;

2.4 Consultation

The FAPP has been produced in close consultation with the DAERA organised Agri-policy Stakeholder Group. This group is comprised of a range of relevant associations relevant to the FAPP and its potential impacts including the Ulster Farmers Union, the Northern Ireland Meat Exporters Association, the Dairy Council Northern Ireland, the Northern Ireland Food and Drink Association, The Northern Ireland Agricultural Producers Association and the Northern Ireland Environment Link – made up of RSPB, Ulster Wildlife and National Trust.

In November 2021, an SEA Scoping Report was provided to the specific environmental authorities including Shared Environmental Services, The Natural Environment Division of DAERA and other relevant consultees. This SEA scoping report included reference to the parallel and integrated AA process.

In recognition of the potential for transboundary effects, contact was initiated at scoping stage with the relevant representatives in the Republic of Ireland. A number of responses were received during the SEA Scoping phase including some that had direct bearing upon the AA process.

3 THE PROPOSED FUTURE AGRICULTURAL POLICY PROPOSALS FOR NORTHERN IRELAND

3.1 Existing Agricultural Policy and financial support in Northern Ireland

The EU Common Agricultural Policy (CAP) has been significant in terms of its financial support in sustaining the agriculture industry in Northern Ireland. Direct financial support of €327 million per annum has been provided to farmers in Northern Ireland through Pillar 1 of the CAP, as decoupled support paid on a per hectare basis, supporting the economic viability of the industry and its competitive trading position. The income support provided by the CAP has represented a substantial contribution to the total income achieved within the industry, with direct CAP support accounting for 87% of the cumulative total income[1] of the Northern Ireland agricultural industry over the past five years. Some sectors of the industry, and the industry as a whole for two of these years, would have been in a position of financial loss in the absence of this financial support.

Leaving the EU provides the opportunity to redesign the agricultural support arrangements to better meet the needs of Northern Ireland. Agricultural support policy is a matter decided by the devolved administrations, and DAERA has an opportunity to develop the most appropriate approach for the agriculture sector of Northern Ireland moving forward. UK retained law and the Agriculture Act 2000 (Schedule 6) provides the primary powers for future schemes in Northern Ireland following the UK's exit from the EU. Primary powers are also contained in the Agriculture Act (Northern Ireland) 1949.

3.2 Development of Future Agricultural Policy Proposals for Northern Ireland

3.2.1 Identification of Key Outcomes

The FAPP is being developed by DAERA to outline the future of agricultural policy and financial support in Northern Ireland following the UK's exit from the EU. In August 2021, DAERA published the Future Agricultural Policy Framework Portfolio for Northern Ireland[2], setting out the framework by which this would be achieved.

DAERA has identified four key desired outcomes that together constitute the long-term vision for Northern Ireland's agricultural industry, as follows:

1) An industry that pursues **increased productivity** in international terms as a means to sustained profitability, closing the productivity gap which has been opening up with other major suppliers.
2) An industry that is **environmentally sustainable** in terms of its impact on, and guardianship of, air and water quality, soil health and biodiversity while making its fair contribution to

[1] https://www.daera-ni.gov.uk/publications/statistical-review-ni-agriculture-2007-onward

[2] https://www.daera-ni.gov.uk/sites/default/files/publications/daera/21.22.086%20Future%20Agriculture%20Framework%20final%20V2.PDF

achieving net zero carbon targets. This outcome is an integral part of the new Green Growth Strategy and associated Climate Action Plan which will be the Department's initial route map to climate action, green jobs and a clean environment.

3) An industry that displays **improved resilience** to external shocks (such as market and currency volatility, extreme weather events, etc.) which are ever more frequent and to which the industry has become very exposed.
4) An industry which operates within an integrated, profitable, efficient, sustainable, competitive and **responsive supply chain**, with clear transmission of market signals and an overriding focus on high quality food and the end consumer.

The future of agricultural support in Northern Ireland will be designed to deliver on these four key outcomes. They are synergistic, whereby improvement in one outcome has the potential for positive effects upon one or more of the other outcomes, and with the aim that improvement in one outcome should not come at the expense of detriment in others.

3.2.2 Identification of FAPP Workstreams

The FAPP has been established as an overarching strategic programme, to develop a portfolio of measures and cross cutting initiatives that can address the four key desired outcomes identified in the Future Agricultural Policy Framework Portfolio, and oversee the transition from existing schemes to new approaches and support systems for Northern Ireland. These comprise thirteen workstreams that have been established in order to collate evidence, identify gaps, and develop policy proposals and design principles. These workstreams are not standalone policy instruments, and may be implemented at different timescales.

The main components of the FAPP for the foreseeable future are eight main product workstreams, as follows:

1) Workstream 1 - Resilience Measure;
2) Workstream 2 - Headage Sustainability Package;
3) Workstream 3 - Farming for Nature Package;
4) Workstream 4 - Farming for Carbon;
5) Workstream 5 - Investment Measure;
6) Workstream 6 - Knowledge Measures;
7) Workstream 7 - Generational Renewal; and
8) Workstream 8 - Supply Chain Measures.

In addition, five cross-cutting initiatives have been identified, that aim to underpin achievement of the overall objectives, as follows:

9) Workstream 9 - Soil testing and LiDAR;
10) Workstream 10 - Livestock Genetics and Data;
11) Workstream 11 - Controls and Assurance;
12) Workstream 12 - Metrics, Monitoring and Evaluation; and
13) Workstream 13 – Environmental Assessment
14) Workstream 14 - Horticulture

The FAPP presents the main issues identified for these workstreams, and the policy proposals and design principles being developed within these, with the aim of addressing the desired key outcomes.

3.3 Description of Policy Proposals

3.3.1 Workstream 1 – Resilience Measure

Workstream 1 outlines two main future policy proposals relating to resilience of the sector, as follows:

1. **Resilience Measure Policy Proposal 1:** Farm resilience will be addressed via a Resilience Measure: a relatively simple area-based resilience payment to provide a basic safety net, whilst also delivering environmental outcomes.

Conditions / Design Principles of the Policy Proposal

- All land-based agriculture and horticulture eligible;
- Payment will be area-based and use entitlements;
- All farmland, except for hard features will be eligible;
- Funding will be for 'Active Farmers', with removal of grass selling businesses / those maintain land in GAEC as their sole activity;
- There will be progressive capping of payments above £60,000;
- The minimum claim size will increase to 10ha;
- Resilience support entitlements can be leased, transferred or sold; and
- Must meet Farm Sustainability Standards and environmental management actions including: soil testing and LiDAR; Nutrient Management Planning based on soil testing and LiDAR; recording of sire data to support the Livestock Genetics and Data programme.

2. **Resilience Measure Policy Proposal 2:** Farm resilience will be addressed via a Crisis Framework that will enable the Department to assess potential risks and determine the most appropriate intervention for a specific crisis.

Principles of the Policy Proposal

- A threshold at which Government action will be considered;
- Any required action will be targeted; and
- Any action will be temporary.

3.3.2 Workstream 2 – Headage Sustainability Package

Workstream 2 outlines two main future policy proposals relating to the support of suckler cow producers, as follows:

1. **Headage Sustainability Package Policy Proposal 1:** Support will be made available to suckler cows which meet the set out conditions.

Conditions / Design Principles of the Policy Proposal:

- Farm businesses with suckler cows will be eligible to apply.
- Payment quotas will be calculated on an individual farm level based on a historic reference period.
- A stocking density will not be applied under this measure at this stage but will be kept under review.
- Claimants to take management measures to reduce the age at first calving for suckler cows.

- Claimants to take management measures to reduce the calving interval for suckler cows.
- A retention period will apply for suckler cows being claimed.

2. **Headage Sustainability Package Policy Proposal 2:** Support will be made to clean beef animals slaughtered in accordance with a Beef Transformation Scheme.

Conditions / Design Principles of the Policy Proposal:

- Support under the Scheme will be confined to clean beef animals born and bred in NI and registered on APHIS.
- Claimants to take management measures to reduce the age of clean beef animals at slaughter. A minimum age at slaughter is proposed, as is a potential tiered approach to the maximum age at slaughter.

3.3.3 Workstream 3 – Farming for Nature Package

Workstream 3 outlines the future policy proposals that aim to better deliver on environmental outcomes and create the right conditions to build an agricultural industry that is environmentally sustainable, as follows:

1. **Farming for Nature Package Policy Proposal 1:** A new Farming for Nature Package will be used to support farmers to make substantial contributions to environmental improvements and sustainability, while continuing to pursue increased productivity, improved resilience and operating within an effective functioning supply chain supply chain.

Conditions / Design Principles of the Policy Proposal:

- Schemes must be capable of delivering transformational change at a landscape level.
- Farm businesses receiving the Resilience Payment / other land managers will be eligible for schemes.
- A minimum land area of 3 ha is proposed for eligibility.
- Environmental payments will seek to recognise and reward public goods provided by farmers/land managers who achieve a verified level of environmental performance through delivery of identified outcomes. There will be no individual business cap on payments.
- Schemes will be outcome based.
- An appropriate time horizon will be adopted for schemes.
- Participants in schemes will be incentivised to work collaboratively.
- Scheme performance will be robustly monitored and evaluated.

2. **Farming for Nature Package Policy Proposal 2:** The initial focus of the Farming for Nature Package should be on reversing the trends in nature decline through retaining, maintaining, restoring and creating habitats that are important for species diversity and improving connectivity between habitat areas.

Initial consideration will be given to the following habitats/measures:

- Hedge creation and management plans;
- Restoration of dry stone walls and stone ditches;
- Maintenance and management of field margins;
- Management measures to encourage pollinator strips;
- Management of riparian buffer strips;

- Management of winter stubble and provision of wild bird cover;
- Planting and integration of native trees across the farmed landscape, including: tree plantations around livestock yards; Integration of trees within crop or livestock farming systems;
- Restoration or creation of species-rich grasslands;
- Ponds;
- Conversion of improved grasslands and croplands to herbal leys and 'hospital fields' for biodiversity; and
- Non-native species management.

3. **Farming for Nature Package Policy Proposal 3:** Conservation Management Plans for SACs will have a tailored approach, including innovative partnership delivery models and incentivisation of collective action within SACs.

4. **Farming for Nature Package Policy Proposal 4:** A series of 'Test and Learn' pilots will be developed, focused on the maintenance, restoration and creation of the habitats listed above in the farmed landscape.

3.3.4 Workstream 4 – Farming for Carbon

Workstream 4 outlines the initial policy proposals being considered to reduce carbon/GHG, as follows:

1. **Farming for Carbon Policy Proposal 1:** Reducing numbers of non-productive livestock, with released land used alternatively, e.g. managed for environmental outcomes, forestry and bioenergy feedstocks.

2. **Farming for Carbon Policy Proposal 2:** Development of a challenge fund model to test enteric methane reducing feed additives in Northern Ireland conditions and, if successful, and the market matures sufficiently, ensuring these additives are routinely incorporated in ruminant concentrate diets.

3. **Farming for Carbon Policy Proposal 3:** Directing genetic selection programmes to drive a reduction in the carbon footprint of ruminant livestock.

4. **Farming for Carbon Policy Proposal 4:** Use of urease inhibitor treated fertilisers to reduce N_2O emissions.

5. **Farming for Carbon Policy Proposal 5:** Encouragement of appropriate timing of slurry and fertiliser application practices to reduce N_2O emissions.

6. **Farming for Carbon Policy Proposal 6:** Soil management to optimise the growth of mixed species swards.

7. **Farming for Carbon Policy Proposal 7:** DAERA will engage with stakeholders on the design of possible schemes to incentivise the farming of carbon as a business enterprise.

8. **Farming for Carbon Policy Proposal 8:** A Scheme to encourage and facilitate the re-wetting and sustainable management of peatlands is likely to be co-developed with stakeholders under the umbrella of the Northern Ireland Peatland Strategy.

9. **Farming for Carbon Policy Proposal 9:** Potential development of biomethane and hydrogen circular economy initiatives.

Conditions / Design Principles of the Policy Proposal:

The following key principles are proposed for development of these measures:

- Scientifically and independently verifiable;
- Co-designed with industry stakeholders;
- Cognisant of the need to engage the upstream and downstream sectors to help drive improvements
- Designed to encourage large scale uptake; and
- Complemented by appropriate, proportionate regulation

3.3.5 Workstream 5 – Investment Measure

Workstream 5 outlines the future policy proposal relating to support for on-farm capital investment, as follows:

1. **Investment Measure Policy Proposal 1**: The following design principles will be considered for future capital support: evidence of market failure; measures to address causes of market failure; addressing key environmental and societal issues; alignment with DAERA policy objectives; appropriate type of support; realistic achievement of intended outcomes; measureable outcomes for public good; careful scheme design.

3.3.6 Workstream 6 – Knowledge Measures

Workstream 6 outlines the future policy proposal relating to knowledge transfer and innovation, as follows:

1. **Knowledge Measures Policy Proposal 1:** DAERA proposes the development of a suite of knowledge transfer and innovation programmes.

Conditions / Design Principles of the Policy Proposal:

- Aligned with the Department's policy position and principles;
- Evidence-based and informed by the evaluation of current NIRDP Knowledge Transfer and Innovation schemes being delivered by CAFRE;
- Focused on delivery of an improvement of productivity, environmental sustainability, resilience and supply chain integration;
- Integrated to ensure other DAERA programmes/schemes have a strong knowledge and innovation link
- Effectively targeted.

3.3.7 Workstream 7 – Generational Renewal

Workstream 7 outlines the future policy proposal relating to generational renewal in the sector, as follows:

1. **Generational Renewal Policy Proposal 1:** DAERA proposes the development and delivery of a Generational Renewal Programme which comprises policy interventions around knowledge and incentives. This proposes a Succession Planning Facilitation Service.

The Succession Planning Facilitation Service would include:

- Development and delivery of a three phased programme;
- Education to ensure the successor has an appropriate level 3 qualification;

- Capacity building for the successor with a particular focus on leadership, technical, environmental and business training;
- Appropriate incentives when agreed actions / objectives are met;
- Access to support and guidance for future-proofing the business; and
- Links to other support services, particularly for the retiring farmer.

3.3.8 Workstream 8 – Supply Chain Measures

Workstream 8 outlines the future policy proposals relating to the supply chain, as follows:

1. **Supply Chain Measures Policy Proposal 1:** Improving information flow and transparency - helping to create the information infrastructure that drives transparency, confidence and the effective transmission of market signals amongst supply chain partners.

2. **Supply Chain Measures Policy Proposal 2:** Addressing Fragmentation **-** providing support, where needed, to help sectors address blockages to collaboration and co-operation between supply chain actors. Providing the tools (education, mechanisms to encourage co-operation, regulation) to help sectors improve supply chain integration and co-ordination.

3. **Supply Chain Measures Policy Proposal 3:** Using the supply chain to achieve better strategic outcomes **-** to identify, agree and align behind the achievement of strategic objectives, such as a sustainability agenda for Northern Ireland agri-food which is supported by all actors in the food chain and which creates a positive narrative for the industry as it responds to social and market drivers.

3.3.9 Workstream 9 - Soil testing and LiDAR

Workstream 9 outlines the future policy proposal relating to soil testing and LiDAR, as follows:

1. **Soil Testing and LiDAR Policy Proposal 1:** DAERA will run a Soil Nutrient Health Scheme (SNHS) to provide a baseline on soil nutrient health and carbon stocks and it will be a condition of the Resilience payment that farmers will participate in this Scheme when offered to them.

Conditions / Design Principles of the Policy Proposal:

- The Scheme will include Northern Ireland-wide soil sampling and analysis on farms and a LiDAR survey of Northern Ireland. The resulting data will be processed to produce field level nutrient and run-off maps and quantify the amount of carbon stored in soils and in above ground biomass.
- Baseline data collected has potential to inform, shape and monitor development of: future agricultural policy; a knowledge transfer tool relating to nutrient management and tree/hedge management; More precisely targeted spatially dependant environmental interventions; and a carbon baseline from which to inform future policy development.
- Data will be a resource for farmers to make informed management decisions which will benefit productivity.
- Data will facilitate improvements to the water environment.
- Data will assist the achievement of environmental sustainability, including the scope for agricultural land to contribute to the reduction of GHG emissions and increase carbon capture.

3.3.10 Workstream 10 - Livestock Genetics and Data

Workstream 10 outlines the future policy proposals relating to livestock genetics and data use, as follows:

1. **Livestock Genetics and Data Policy Proposal 1:** To support the industry-led ruminant genetics programme it is proposed that, within the Resilience Payment, there will be a requirement to register the sires of all calves born.

2. **Livestock Genetics and Data Policy Proposal 2:** To support the industry-led ruminant genetics programme it is proposed that, within the Headage Sustainability Package, there will be a future requirement to provide specified data from suckler cows (still to be agreed) to the ruminant genetics programme.

3. **Livestock Genetics and Data Policy Proposal 3:** To support the industry-led ruminant genetics programme it is proposed that knowledge transfer programmes are established.

4. **Livestock Genetics and Data Policy Proposal 4:** Provision of assistance to farm businesses to utilise the data coming from the livestock genetics and data programme to drive better economic and environmental performance from their ruminant enterprises.

3.3.11 Workstream 11 - Controls and Assurance

Workstream 11 outlines the future policy proposals relating to controls and assurance, as follows:

1. **Controls and Assurance Policy Proposal 1:** DAERA proposes to replace the current Cross Compliance system with the simplified 'Farm Sustainability Standards.

2. **Controls and Assurance Policy Proposal 2:** DAERA is seeking to ensure that its penalty system for non-compliance with the new Farm Sustainability Standards is effective but fair.

3. **Controls and Assurance Policy Proposal 3:** DAERA proposes to make all agricultural land eligible for payment except for hard features (e.g. buildings, yards, laneways, etc.) under future area-based schemes.

3.3.12 Workstream 12 - Metrics, Monitoring and Evaluation

Workstream 12 outlines the future policy proposal relating to metrics, monitoring and evaluation of the programme, as follows:

1. **Metrics, Monitoring and Evaluation Policy Proposal 1:** The high-level overarching metrics proposed for the FAPP are: Net GHG emissions for Northern Ireland agriculture and LULUCF; TFP for Northern Ireland Agriculture; Nitrogen and Phosphorus balances; Ammonia emissions from farming; Indicator species; Gross Value added from agriculture and food processing; and Net farm income derived from the market.

Conditions / Design Principles of the Policy Proposal:

- The overarching metrics have been selected to capture the four programme outcomes and provide a means to measure against those.
- Development of the metrics will include establishing baselines and trends and may also require benchmarking with other regions.
- Where possible existing metrics will be used but there is an expectation that new metrics might need to be developed where appropriate metrics do not exist.

- The initial high level crosscutting metrics reflect the four Programme outcomes, however there will be appropriate metrics developed within each workstream going forward with input required from each workstream lead.

3.3.13 Workstream 13 – Environmental Assessments

Workstream 13 comprises the environmental assessments to be undertaken for the draft FAPP, as follows:

- Rural needs considerations;
- Equality considerations;
- Regulatory Impact Assessment (RIA);
- Strategic Environmental Assessment (SEA); and
- Habitat Regulations Assessment (HRA).

This workstream does not set out any policy proposals and therefore will not be subject to assessment within the Stage 2 Habitats Regulations Assessment.

3.3.14 Workstream 14 – Horticulture

Workstream 14 outlines the future policy proposals relating to the horticulture sector, as follows:

1. **Horticulture Policy Proposal 1:** A focus on production horticulture, defined as plant propagation and cultivation to produce food / edible crops, ornamental crops and other crops (i.e. those grown for use as pharmaceutical plant products or as plant based ingredients in processed foods).

2. **Horticulture Policy Proposal 2:** Developing programmes through a collective process involving key stakeholders, other government departments and social partners.

3. **Horticulture Policy Proposal 3:** Creating improved supply chain integration through incentivising collaboration and co-operation within the supply chain where fragmentation exists and scale is a supply barrier.

4. **Horticulture Policy Proposal 4:** Assisting in building collaborative partnerships to access Research and Development and Innovation that will benefit production horticulture growers from wherever this is available.

5. **Horticulture Policy Proposal 5:** Providing access to cutting-edge knowledge transfer and innovation support programmes to ensure those working in the industry have the required knowledge and skills to enable them to maximise market opportunities, and deliver the desired outcomes of the Framework.

6. **Horticulture Policy Proposal 6:** Facilitating learning from others through industry/supply chain visits and supporting clusters for shared/peer learning.

7. **Horticulture Policy Proposal 7**: Optimising precision of data used in decision making tools/models through data projects and incentivised high value data collation.

8. **Horticulture Policy Proposal 8**: Supporting businesses transition through knowledge and support for adoption of new technology.

3.4 Scope of the FAPP for Northern Ireland

3.4.1 Geographic Extent of the FAPP

The FAPP is a national level programme for agricultural policy in Northern Ireland. As such, the assessment will primarily focus on activities occurring at a national to regional scale, while having careful regard to any likely significant environmental effects of a transboundary nature to receptors in the Republic of Ireland.

3.4.2 Temporal Extent of the FAPP

The FAPP is proposed to cover the period from 2023/24 onwards. It is proposed that the FAPP will be reviewed periodically.

3.4.3 Environmental Assessments

The FAPP and further policies which may arise from this framework, will be subject to the appropriate level of assessment, including SEA and HRA, as detailed in this document.

3.5 Proposed Workstream Policies

Table 3.1 below, sets out the policies which are envisaged to be further formulated on the basis of the FAPP workstreams, as discussed above. While these policies are not yet finalised and may be subject to change it is anticipated that they are highly indicative of the likely outcomes of the FAPP and as such it is on this basis that they are included and assessed, as required.

Table 3.1: Policies envisaged through the FAPP workstreams and cross-cutting elements.

Workstream	Policy Proposal	Conditions / Design Principles	Code	Linked Policies
Resilience Measure (RM)	1. Farm resilience will be addressed via a Resilience Measure: a relatively simple area based resilience payment to provide a basic safety net, whilst also delivering environmental outcomes.	• All land based agriculture and horticulture eligible. • Payment will be area based and use entitlements. • All farmland, except for hard features will be eligible. • Funding will be for 'Active Farmers', with removal of grass selling businesses / those maintain land in GAEC as their sole activity. • There will be progressive capping of payments above £60,000. • The minimum claim size will increase to 10ha. • Resilience support entitlements can be leased, transferred or sold. • Must meet Farm Sustainability Standards and environmental management actions including: soil testing and LiDAR; Nutrient Management Planning based on soil testing and LiDAR; recording of sire data to support the Livestock Genetics and Data programme.	RM1	STL1 LGD1 CA1/CA2
	2. Farm resilience will be addressed via a Crisis Framework that will enable the Department to assess potential risks and determine the most appropriate intervention for a specific crisis.	• Principles of the Crisis Framework will be: a threshold at which Government action will be considered; any required action will be targeted; any action will be temporary.	RM2	KM1
Headage Sustainability Package (HSP)	1. Support will be made available to suckler cows which meet the set out conditions.	• Farm businesses with suckler cows will be eligible to apply. • Payment quotas will be calculated on an individual farm level based on a historic reference period. • A stocking density will not be applied under this measure at this stage but will be kept under review. • Claimants to take management measures to reduce the age at first calving for suckler cows	HSP1	LGD2

Workstream	Policy Proposal	Conditions / Design Principles	Code	Linked Policies
		• Claimants to take management measures to reduce the calving interval for suckler cows. • A retention period will apply for suckler cows being claimed.		
	2. Support will be made to clean beef animals slaughtered in accordance with a Beef Transformation Scheme.	• Support under the Scheme will be confined to clean beef animals born and bred in NI and registered on APHIS. • Claimants to take management measures to reduce the age of clean beef animals at slaughter. TA minimum age at slaughter is proposed, as is a potential tiered approach to the maximum age at slaughter.	HSP2	LGD2 (future)
Farming for Nature Package (FNP)	1. A new Farming for Nature Package will be used to support farmers to make substantial contributions to environmental improvements and sustainability, while continuing to pursue increased productivity, improved resilience and operating within an effective functioning supply chain supply chain.	• Schemes must be capable of delivering transformational change at a landscape level. • Farm businesses receiving the Resilience Payment / other land managers will be eligible for schemes. • A minimum land area of 3 ha is proposed for eligibility. • Environmental payments will seek to recognise and reward public goods provided by farmers/land managers who achieve a verified level of environmental performance through delivery of identified outcomes. There will be no individual business cap on payments. • Schemes will be outcome based. • An appropriate time horizon will be adopted for schemes. • Participants in schemes will be incentivised to work collaboratively. • Scheme performance will be robustly monitored and evaluated.	FNP1	RM1 STL1 IM1 KM1 FCM1-6 CA1-2
	2. The initial focus of the Farming for Nature Package should be on reversing the trends in nature decline through retaining, maintaining, restoring and creating habitats that are important for species	Initial consideration will be given to the following habitats/measures: • Hedge creation and management plans; • Restoration of dry stonewalls and stone ditches; • Maintenance and management of field margins;	FNP2	

Workstream	Policy Proposal	Conditions / Design Principles	Code	Linked Policies
	diversity and improving connectivity between habitat areas.	• Management measures to encourage pollinator strips; • Management of riparian buffer strips; • Management of winter stubble and provision of wild bird cover; • Planting and integration of native trees across the farmed landscape, including: tree plantations around livestock yards; Integration of trees within crop or livestock farming systems; • Restoration or creation of species-rich grasslands; • Ponds; • Conversion of improved grasslands and croplands to herbal leys and 'hospital fields' for biodiversity; • Non-native species management		
	3. Conservation Management Plans for SACs will have a tailored approach, including innovative partnership delivery models and incentivisation of collective action within SACs.		FNP3	
	4. A series of 'Test and Learn' pilots will be developed, focused on the maintenance, restoration and creation of the habitats listed above in the farmed landscape.		FNP4	
Farming for Carbon Measures (FCM) (Note, these could maybe be consolidated into one)	1. Reducing numbers of non-productive livestock, with released land used alternatively, e.g. managed for environmental outcomes, forestry and bioenergy feedstocks.	The following key principles are proposed for development of these measures: • Scientifically and independently verifiable; • Co-designed with industry stakeholders; • Cognisant of the need to engage the upstream and downstream sectors to help drive improvements • Designed to encourage large scale uptake; and • Complemented by appropriate, proportionate regulation.	FCM1	STL1 RM1 HSP1 HSP2 FNP1-4 LGD4 IM1 KM1

Workstream	Policy Proposal	Conditions / Design Principles	Code	Linked Policies
				GR1 MME1
	2. Development of a challenge fund model to test enteric methane reducing feed additives in Northern Ireland conditions and, if successful, and the market matures sufficiently, ensuring these additives are routinely incorporated in ruminant concentrate diets.		FCM2	
	3. Directing genetic selection programmes to drive a reduction in the carbon footprint of ruminant livestock.		FCM3	
	4. Use of urease inhibitor treated fertilisers to reduce N_2O emissions.		FCM4	
	5. Encouragement of appropriate timing of slurry and fertiliser application practices to reduce N_2O emissions.		FCM5	
	6. Soil management to optimise the growth of mixed species swards.		FCM6	
	7. DAERA will engage with stakeholders on the design of possible schemes to incentivise the farming of carbon as a business enterprise.		FCM7	
	8. A Scheme to encourage and facilitate the re-wetting and sustainable management of peatlands is likely to be co-developed with stakeholders under the umbrella of the Northern Ireland Peatland Strategy.		FCM8	
	9. Potential development of biomethane and hydrogen circular economy initiatives.		FCM9	
Investment Measure (IM)	1. The following design principles will be considered for future capital support:		IM1	RM1 FNP1-4

Workstream	Policy Proposal	Conditions / Design Principles	Code	Linked Policies
	evidence of market failure; measures to address causes of market failure; addressing key environmental and societal issues; alignment with DAERA policy objectives; appropriate type of support; realistic achievement of intended outcomes; measurable outcomes for public good; careful scheme design.			
Knowledge Measures (KM)	1. DAERA proposes the development of a suite of knowledge transfer and innovation programmes.	The following key principles are proposed for development of these measures: • Aligned with the Department's policy position and principles; • Evidence-based and informed by the evaluation of current NIRDP Knowledge Transfer and Innovation schemes being delivered by CAFRE; • Focused on delivery of an improvement of productivity, environmental sustainability, resilience and supply chain integration; • Integrated to ensure other DAERA programmes/schemes have a strong knowledge and innovation link • Effectively targeted.	KM1	RM2 FPN1-4 STL1 LGD1
Generational renewal (GR)	1. DAERA proposes the development and delivery of a Generational Renewal Programme which comprises policy interventions around knowledge and incentives. This proposes a Succession Planning Facilitation Service.	The Succession Planning Facilitation Service would include: GR1 • Development and delivery of a three phased programme; • Education to ensure the successor has an appropriate level 3 qualification; • Capacity building for the successor with a particular focus on leadership, technical, environmental and business training; • Appropriate incentives when agreed actions / objectives are met; • Access to support and guidance for future-proofing the business; and		

Workstream	Policy Proposal	Conditions / Design Principles	Code	Linked Policies
		• Links to other support services, particularly for the retiring farmer.		
Supply Chain Measures (SCM)	1. Improving information flow and transparency - helping to create the information infrastructure that drives transparency, confidence and the effective transmission of market signals amongst supply chain partners.		SCM1	
	2. Addressing Fragmentation - providing support, where needed, to help sectors address blockages to collaboration and co-operation between supply chain actors. Providing the tools (education, mechanisms to encourage co-operation, regulation) to help sectors improve supply chain integration and co-ordination.		SCM2	
	3. Using the supply chain to achieve better strategic outcomes - to identify, agree and align behind the achievement of strategic objectives, such as a sustainability agenda for Northern Ireland agri-food which is supported by all actors in the food chain and which creates a positive narrative for the industry as it responds to social and market drivers.		SCM3	
Soil Testing and LiDAR (STL)	1. DAERA will run a Soil Nutrient Health Scheme (SNHS) to provide a baseline on soil nutrient health and carbon stocks and it will be a condition of the Resilience payment that farmers will participate in this Scheme when offered to them.	• The Scheme will include Northern Ireland-wide soil sampling and analysis on farms and a LiDAR survey of Northern Ireland. The resulting data will be processed to produce field level nutrient and run-off maps and quantify the amount of carbon stored in soils and in above ground biomass. • Baseline data collected has potential to inform, shape and monitor development of: future agricultural policy; a	STL1	RM1 KM1 FNP1-4 FCM1-9

Workstream	Policy Proposal	Conditions / Design Principles	Code	Linked Policies
		knowledge transfer tool relating to nutrient management and tree/hedge management; More precisely targeted spatially dependant environmental interventions; and a carbon baseline from which to inform future policy development. • Data will be a resource for farmers to make informed management decisions which will benefit productivity. • Data will facilitate improvements to the water environment. • Data will assist the achievement of environmental sustainability, including the scope for agricultural land to contribute to the reduction of GHG emissions and increase carbon capture.		
Livestock Genetics and Data (LGD)	1. To support the industry-led ruminant genetics programme it is proposed that, within the Resilience Payment, there will be a requirement to register the sires of all calves born.		LGD1	RM1
	2. To support the industry-led ruminant genetics programme it is proposed that, within the Headage Sustainability Package, there will be a future requirement to provide specified data from suckler cows (still to be agreed) to the ruminant genetics programme.		LGD2	HSP2 (future)
	3. To support the industry-led ruminant genetics programme it is proposed that knowledge transfer programmes are established.		LGD3	KM1
	4. Provision of assistance to farm businesses to utilise the data coming from the livestock genetics and data programme to drive better economic and environmental		LGD4	KM1

Workstream	Policy Proposal	Conditions / Design Principles	Code	Linked Policies
	performance from their ruminant enterprises.			
Controls and assurance (CA)	1. DAERA proposes to replace the current Cross Compliance system with the simplified 'Farm Sustainability Standards.	• Farm Sustainability Standards will apply to the Resilience Measure, as it will act as the 'gateway' to most other support schemes for farm businesses, and to the Farming for Nature measures. • Several SMRs/GAECs will be exclude from the Farm Sustainability Standards, where there have been no/minimal non-compliances. • The Farm Sustainability Standards proposed are: FSS1 Protection of Waters from Pollution; FFS2 Protection of Habitats and Biodiversity FFS3 Protection of Landscape and Heritage; FFS4 Livestock food and feed / herd and flock health and biosecurity; FFS5 Welfare and Protection of Farmed Livestock (including Transport); FFS6 Livestock Identification and Traceability.	CA1	RM1 FNP1-4
	2. DAERA is seeking to ensure that its penalty system for non-compliance with the new Farm Sustainability Standards is effective but fair.	• Moving from the 'penalty culture' to using knowledge/education to explain the importance of compliance. • Considering the introduction of Fixed Penalty Notices. • Potential for a link to broader knowledge and skills instead of a monetary penalty. • Discretion over guidance instead of penalty for minor non-compliance. • Review and revision of penalty matrices and concepts of severity, extent, permanence, reoccurrence and intentionality/negligence under the future penalty system.	CA2	
	3. DAERA proposes to make all agricultural land eligible for payment except for hard features (e.g. buildings, yards, laneways, etc.) under future area based schemes.		CA3	

Workstream	Policy Proposal	Conditions / Design Principles	Code	Linked Policies
Metrics, Monitoring and Evaluation (MME)	1. The high level overarching metrics proposed for the FAPP are: Net GHG emissions for Northern Ireland agriculture and LULUCF; TFP for Northern Ireland Agriculture; Nitrogen and Phosphorus balances; Ammonia emissions from farming; Indicator species; Gross Value added from agriculture and food processing; and Net farm income derived from the market.	• The overarching metrics have been selected to capture the four programme outcomes and provide a means to measure against those. • Development of the metrics will include establishing baselines and trends and may also require benchmarking with other regions. • Where possible existing metrics will be used but there is an expectation that new metrics might need to be developed where appropriate metrics do not exist. • The initial high level crosscutting metrics reflect the four Programme outcomes, however there will be appropriate metrics developed within each workstream going forward with input required from each workstream lead.	MME1	
Horticulture (H)	1. A focus on production horticulture, defined as plant propagation and cultivation to produce food / edible crops, ornamental crops and other crops (i.e. those grown for use as pharmaceutical plant products or as plant based ingredients in processed foods).		H1	
	2. Developing programmes through a collective process involving key stakeholders, other government departments and social partners.		H2	
	3. Creating improved supply chain integration through incentivising collaboration and co-operation within the supply chain where fragmentation exists and scale is a supply barrier.		H3	
	4. Assisting in building collaborative partnerships to access Research and		H4	

Workstream	Policy Proposal	Conditions / Design Principles	Code	Linked Policies
	Development and Innovation that will benefit production horticulture growers from wherever this is available.			
	5. Providing access to cutting-edge knowledge transfer and innovation support programmes to ensure those working in the industry have the required knowledge and skills to enable them to maximise market opportunities, and deliver the desired outcomes of the Framework.		H5	KM1
	6. Facilitating learning from others through industry/supply chain visits and supporting clusters for shared/peer learning.		H6	KM1
	7. Optimising precision of data used in decision making tools/models through data projects and incentivised high value data collation		H7	KM1
	8. Supporting businesses transition through knowledge and support for adoption of new technology.		H8	KM1

3.6 Aspects of the Future Agricultural Policy Proposals to be Assessed

Aspects of the FAPP measures for implementation, which are described in detail above, are considered in this assessment. Table 3.2, below, sets out the parts and schedules of the FAPP and identifies those to be considered as part of this appropriate assessment and the rationale for their inclusion or otherwise.

Table 3.2: Elements of the FAPP assessed in the Stage 2 appraisal for Appropriate Assessment

Workstream/Cross-cutting Element	Assessed within this NIS
Resilience Measure, inc. Crisis Framework.	Yes. This part of the FAPP relates to alterations to farm subsidies with potential to impact upon framing practises across Northern Ireland and as such potential to give rise to LSEs on European Sites. This part is therefore considered below.
Headage Sustainability Package	Yes. This part of the FAPP specifies altered subsidies to farmers, with potential to impact upon farming practises across Northern Ireland and as such potential to give rise to LSEs on European Sites. This part is therefore considered below.
Farming for Nature Package	Yes. This part of the FAPP specifies proposed incentives for ecologically beneficial farming practises with potential to give rise to LSEs on European Sites. This part is therefore considered below.
Farming for Carbon Measures	Yes. This part of the FAPP specifies proposed incentives for farming practises giving rise to reduced greenhouse gas emissions and where possible carbon sequestration. Such changes have potential to give rise to LSEs on European Sites. This part is therefore considered below.
Investment Measure	Yes. This part of the FAPP specifies proposed investments in agriculture. Such investments have potential to influence farming practises and therefore give rise to LSEs on European Sites. This part is therefore considered below.
Knowledge Measures	Yes. This part of the FAPP is for the creation of a future programme of knowledge measures for farmers. Such knowledge measures have potential to influence farming practises and therefore give rise to LSEs on European Sites. This part is therefore considered below.
Generational Renewal	Yes. This part of the FAPP is for the production of a generational renewal programme. Such a programme has potential to influence farming practises and therefore give rise to LSEs on European Sites. This part is therefore considered below.
Supply Chain Measures	Yes. While this part of the FAPP, which comprises largely business development and informational measures, is unlikely to give rise to significant changes in land management on farms, there is some potential for changes to crop selection and changes to efficiency of crop usage and therefore some limited potential for the measures to give rise to LSEs on European Sites. This part is therefore considered below
Soil Testing and LiDAR	Yes. This part of the FAPP is for a programme of soil testing and LiDAR survey across Northern Ireland. Such a programme has potential to influence farming practises and therefore give rise to LSEs on European Sites. This part is therefore considered below.
Livestock Genetics and Data	Yes. This part of the FAPP is for a programme of livestock record keeping and its subsequent use for farm management and efficiency. Such a programme has potential to influence farming practises and therefore give rise to LSEs on European Sites. This part is therefore considered below.

Controls and Assurance	Yes. This part of the FAPP is for a programme of control measures for agriculture across Northern Ireland, replacing the previous framework. Such a programme has potential to influence farming practises and therefore give rise to LSEs on European Sites. This part is therefore considered below.
Metrics Monitoring and Evaluation	Yes. This part of the FAPP is for a programme of metrics for monitoring agriculture across Northern Ireland. Such metrics have potential to influence farming practises and therefore give rise to LSEs on European Sites. This part is therefore considered below.
Environmental Assessment	No. This part of the FAPP is for a programme of environmental assessments which will be subsequently undertaken of the derivative policies and programmes arising from the FAPP. As such there is no potential for adverse effects arising as a result of further environmental assessment.
Horticulture	Yes. This part of the FAPP is for a programme of measures designed to encourage and improve horticulture in Northern Ireland. Such proposals have potential to influence farming practises and therefore give rise to LSEs on European Sites. This part is therefore considered below.

4 OVERVIEW OF THE RECEIVING ENVIRONMENT

Northern Ireland has obligations under UK and Domestic law to protect and conserve biodiversity. This relates to habitats and species both within and outside designated sites. Nationally, Ireland has developed a Biodiversity Strategy (DAERA 2015) to address issues and halt the loss of biodiversity, in line with national and international commitments. The overall vision in the Biodiversity Strategy is to halt biodiversity loss through engagement with a number of high-level challenges.

4.1 Identification of European and Zone of Influence

In Northern Ireland SPAs and SACs are part of the UK National Site Network and formerly a part of the Natura 2000 network. They are referred to as UK National or European Sites, as per current DAERA guidance. In the Republic of Ireland, sites within the Natura 2000 Network are referred to as European sites and comprise SACs and SPAs. In both NI and RoI SACs are designated on account of the supported Qualifying interests (QIs) which are limited to habitats and species which are listed on Annex I and Annex II of the Habitats Directive respectively. SPAs however are concerned with the protection of specific Special Conservation Interests (SCIs) limited to populations of Annex I bird species and the associated habitats of importance for these populations.

In identifying the Zone of Influence (ZoI) for the appropriate assessment of the FAPP, a number of considerations were taken into account, notably the national and strategic nature of the FAPP; the relationship of listed qualifying interests of SACs and SPAs within NI and those in RoI which are understood to have connectivity with agricultural land in Northern Ireland.

The AA screening appraisal considered that since the FAPP was a national programme that all the European Sites within Northern Ireland, in addition to those in Republic of Ireland within 15km of the border or lying downstream from agricultural lands in Northern Ireland were considered. For consistency, the ZoI for the Appropriate Assessment adopts the same approach.

In Northern Ireland there are 59 SACs which are designated for one or more of 46 habitat types and 11 species. These are largely terrestrial or freshwater sites, however a number lie offshore including those designated on account of the supported reef and sandbank habitats and supported marine mammal populations.

In the Republic of Ireland, within 15km of the border and/or downstream of agricultural lands within NI, there are 27 SACs which are designated for one or more of 55 habitat types (Annex I of the Directive) and 14 species (Annex II of the Directive), of which one or more are included as qualifying interests. These are entirely terrestrial or coastal sites.

SPAs are designated for the protection of endangered species of wild birds including listed rare and vulnerable species, regularly occurring migratory species as well as wetland habitats that support such species. Currently there are 17 SPAs designated within Northern Ireland and 10 SPAs designated within the relevant areas of the Republic of Ireland.

Table **4.1** provides a summary breakdown of the European sites in Northern Ireland and the relevant areas of the Republic of Ireland. While many are obvious based on their location, other links are more circumspect. The SAC and SPA designated sites within the ZoI are listed in **Appendix I**. **Figure 4-1** illustrates the distribution of the SACs and SPAs in relation to the FAPP study area. It is acknowledged that the number of European sites designated, and their boundaries, are subject to change over time and must therefore be verified on an ongoing basis.

Table 4.1: European Sites within the Zone of Influence of the FAPP in ROI and Northern Ireland

European Sites	Northern Ireland	Republic of Ireland (within the ZoI)
Special Areas of Conservation (SAC)	**59**	**27**
Special Protection Area (SPA)	**17**	**10**

4.2 Conservation Objectives

Site-specific conservation objectives (SSCO) aim to define favourable conservation condition for a particular habitat or species at a Natura 2000 site. Maintaining habitats and species in a favourable conservation condition then contributes to the wider objective to maintain those most vulnerable habitats and species at favourable status throughout their range within the Natura 2000 network.

At an individual site level, SSCO specify whether the objective is to maintain or to restore favourable conservation condition of the habitat or species, and they set out attributes and targets that define the objectives. It is the aim of the relevant departments in NI and RoI to produce SSCO for all European sites in due course. The SSCO for European Sites are set out to ensure that the qualifying features of that site are maintained or restored to a favourable conservation condition / conservation status.

A summary of the conservation objectives which have been set for each site is included at Tables 1 and 2 of **Appendix I**.

It is noted that the existing conservation condition of some habitats and species is unfavourable at present for various reasons, including because of exceedance in environmental quality parameters. This is discussed further in the next section.

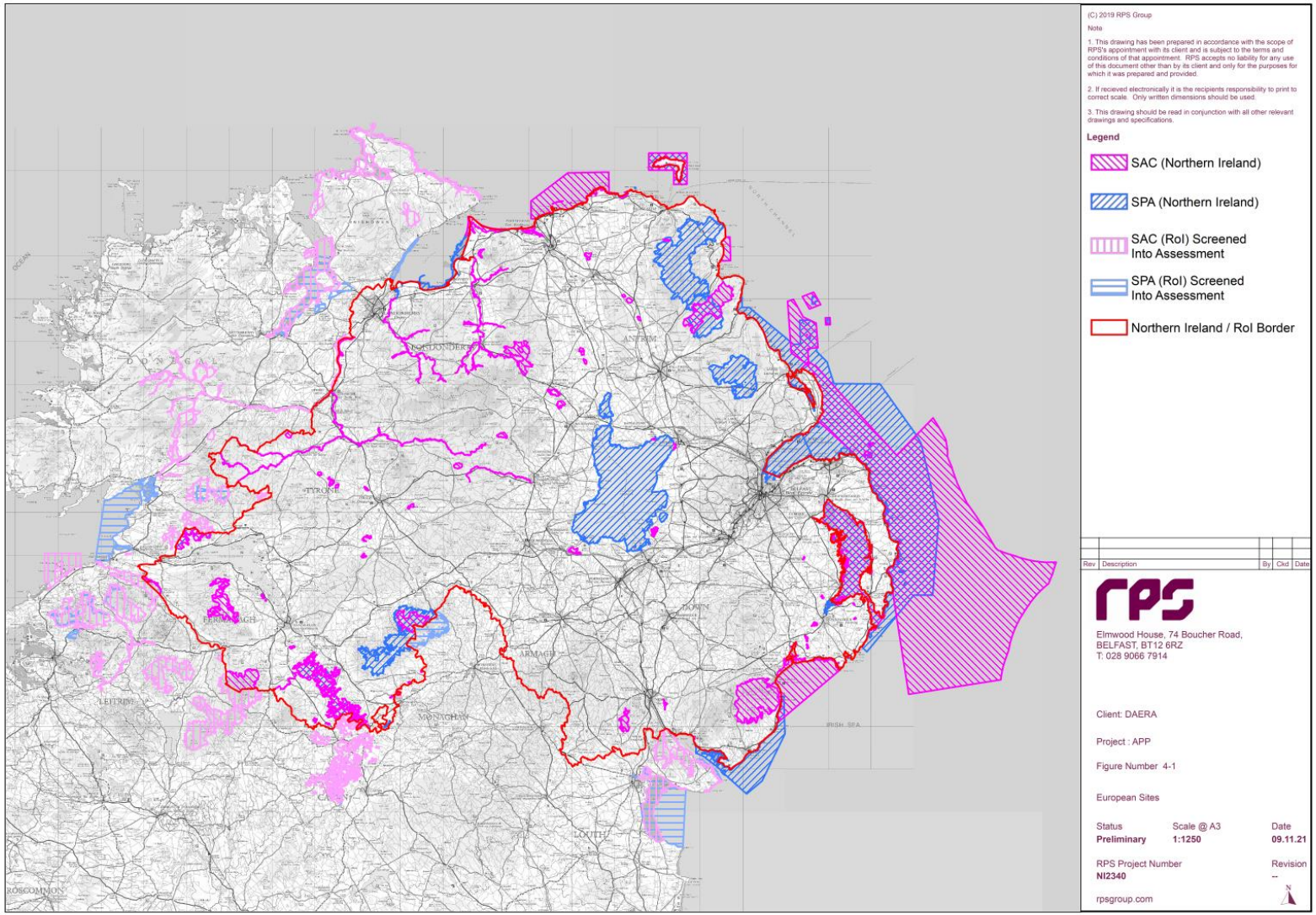

Figure 4-1: Distribution of the relevant SACs and SPAs in relation to the FAPP

4.3 Conservation Status of EU Protected Habitats and Species

Under the Habitats Directive, each Member State is obliged to undertake surveillance of the conservation status of the natural habitats and species in the Annexes and under Article 17, to report to the European Commission every six years on their status and on the implementation of the measures taken under the Directive. While this obligation no longer applies to Northern Ireland, the most recent Article 17 Report was published by the JNCC in 2019 (JNCC 2019) and as such provides the most recent summary of the conservation condition of the habitats and species which are qualifying features of SACs within Northern Ireland.

The 2019 Article 17 Report (DAERA 2019) identifies the conservation status of the qualifying Annex I habitats and Annex I species within SACs in Northern Ireland.

For the 2019 submission, the report recorded 2% of habitats as '*favourable'*, 20.4% as '*Unfavourable inadequate'*, 59.2% as '*Unfavourable Bad*' and 18.4% as '*Unknown*'. In regard to species, of the 28 species assessed (included non-qualifying species) 12 were considered to be at '*favourable*' conservation status, 3 at '*inadequate'* conservation status, 2 at '*bad'* conservation status and 11 '*unknown*'.

In the Republic of Ireland National Parks and Wildlife Service (NPWS) published an Article 17 report detailing the conservation status in Ireland of habitats and species listed in the EU Habitats Directive, in 2019.

For the 2019 submission, the Republic of Ireland's Article 17 Report recorded 15% of habitats as '*favourable'*, 46% as '*inadequate*' and 39% as '*bad*'. In regard to species 57% were assessed as '*favourable*', 15% as '*inadequate*', 15% as '*bad*' and 13% as '*unknown*' or considered to be vagrant species

Among the key findings of both reports were:

- Many habitats are in unfavourable status. Many are still declining albeit with some positive actions underway while almost half are demonstrating ongoing declines;
- The main pressures to habitats are from grazing; pollution of watercourses; drainage / cutting of peatlands and wetlands; invasive species; recreation; [urbanisation; fertilizer application; and road building among others];
- Some of the coastal and marine habitats are considered to be improving, and to have better prospects, due in part to implementation of existing environmental legislation;
- The status of raised bogs in Ireland as a whole is '*bad*'; and the trend is for an ongoing decline as restoration is necessary to cause improvement.
- Grasslands, such as orchid-rich grasslands and hay meadows, have undergone significant losses over the last decade, with 31% and 28% of the area monitored reported as being lost.
- Blanket bog is also assessed as '*bad*'; the report notes that, as one of the main impacts on this habitat is grazing, impacts also occur through on-going deleterious effects such as peat cutting, erosion, drainage and burning;
- Although some of our woodlands are rated as '*bad*' because they are patchy and fragmented, improvements have been noted due to afforestation, the planting of native species, the removal of alien species and control of overgrazing.
- Many freshwater habitats are considered unfavourable due to nutrient loading within the catchment.
- Losses of limestone pavement has been recorded outside the SAC network, however the BurrenLIFE and Burren Farming for Conservation Programme have significantly improved the quality of pavement and its associated habitats.
- Otter, pine marten and many bat species have also been assessed as '*favourable*' with evidence of an expanding range;
- Salmon (*Salmo salar*) is showing signs of improvement but some other fish remain at '*bad*' status; and

- Freshwater pearl mussel is '*bad*' and declining.

Similarly, the requirements for reporting under Article 12 of the Birds Directive (2009/147/EC) are every six years.

The Northern Ireland Article 12 submission is encapsulated within that of the wider UK. The most recent report submitted in 2019, covers 264 species which includes breeding, wintering and passage Annex I bird species. Significant long-term decreases have been recorded in a relatively large proportion of species including northern gannet *Morus bassanus,* common goldeneye *Bucephala clangula,* sandwich tern *Thallasseus scandvicensis* among a large number of others with some species showing minor increases.

The Republic of Ireland's Article 12 submission to the EU Commission on the *Status and trends of bird species (2008-2012)*[3] covers 196 species which includes breeding, wintering and passage species. The report details that some species have undergone significant declines in their long-term breeding population trend: corncrake *Crex crex,* curlew *Numenius arquata,* lapwing *Vanellus vanellus* and redshank *Tringa totanus*. The hen harrier (*Circus cyaneus*) shows a long-term population trend decrease. The results confirm that there is a need for measures to halt the declines noted above, most of which are due largely to changes in farming practices and intensity, and also the increase of activity in extensively farmed uplands through forests and wind farm construction.

The assessment and outlook is pessimistic overall. Biodiversity losses and habitat changes continue on an international scale. EU conservation status reporting indicates generally declining trends and unfavourable status for many habitats, with 85% having unfavourable status. Many species are faring better, but 15% are in decline at EU level, mostly freshwater species. Agricultural activities remain the key pressure. The outlook is very poor, with climate change adding to challenges and cumulative impacts.

The 2018 report, Sustainable Development in the European Union, warned of the worrying decline in nature globally, with species extinction rates accelerating. The UN stating that biodiversity is in crisis. In Ireland, the majority of the most ecologically important habitats are reported to be of inadequate or bad conservation status. Agricultural practices account for 70% of the negative impacts on habitats. Most species are considered to be stable however a number of key species are declining. Aquatic species and bees are reported to be most at risk. Pressures from changes to land use, intensification of agriculture, pollution and climate change, as well as the impacts of a growing economy, are likely to bring additional pressures on a number of species and habitats in Ireland. Based on the poor conservation status of many important habitats and some species, considerable efforts and resources will be required to improve their status, both within and outside protected areas.

It's likely that pressures due to climate change, agricultural system changes and invasive species will remain the same or increase unless action is undertaken.

4.4 Existing Threats and Pressures to EU Protected Habitats and Species

Under Article 17 of the Habitats Directive, Member States are obliged to identify threats and pressures to QIs/ SCIs using a standard set of criteria. A threat is defined as an '*Activity expected to have an impact on a species/habitat type in the future*' and a pressure is defined as an '*Activity impacting a species/habitat type during the reporting cycle*'. These identified threats and pressures are still documented for European sites within NI as they predate the withdrawal of the UK from the EU.

Threats and pressures considered to be most relevantly linked either directly or indirectly to the FAPP were extracted from the full list of threats and pressures. The headline category considered relevant to the FAPP is agriculture but the main list is presented below.

- Agriculture;
- Forestry;

[3] http://ec.europa.eu/environment/nature/knowledge/rep_birds/index_en.htm (Accessed February 2021)

- Transportation and service corridors;
- Urbanisation, residential and commercial development;
- Mining, extraction of materials and energy production;
- Biological resource use other than agriculture & forestry;
- Pollution;
- Natural System modifications;
- Natural biotic and abiotic processes (without catastrophes);
- Geological events, natural catastrophes; and
- Climate change.

Under Article 17 of the Habitats Directive, Member States are also obliged to identify threats and pressures to individual qualifying features using a standard set of criteria. Threats are defined as '*Factors expected to act in the future after the current reporting period*' within the '*current six-year reporting period*', and pressures are defined as '*Acting now and/or during (any part of or all of) the current reporting period*', within the '*future to reporting periods*.'[4]

Threat and pressure categories identified from the most recent Article 17 Reports were considered in regard to the FAPP. Examples of potential threats and pressures derived from these categories are detailed in Table 4.2**.**

Table 4.2: Threat/ Pressure Categories, Notes, and Terrestrial Examples (based on Article 17 Reports, 2019)

Threat/Pressure Categories	Notes on Sub-categories	Example Threat/Pressure with regard to the FAPP
Agriculture	Includes land conversion, grazing, abandonment, burning, enrichment, drainage and associated pollution	The FAPP proposes a range of changes to agricultural activity and the associated support framework. It is envisaged that the proposed changes will have potential to give rise to a range of positive impacts in respect of the environment such as through the appropriate buffering of watercourses. Such a measure would potentially give rise to reduced surface water and nutrient run-off from agricultural land in addition to other benefits for freshwater SACs. However, baseline water quality data indicates that only 31% of river sites in Northern Ireland have good or better status concentrations.
Sylviculture, Forestry	Includes land conversion, grazing, forestry management practices such as clear felling, removal of dead wood, burning, enrichment, drainage and associated pollution	Pollution impacts from forestry sources on surface water, soil and biodiversity are similar to agriculture. Impacts of forestry which may be relevant to the FAPP are the potential for land conversion through inappropriate planting of forestry, including native species woodland, and associated changes to terrestrial and freshwater sites.
Mining, extraction of materials and energy production	Includes renewable abiotic energy use inclusive of geothermal power, solar, wind and tidal energy production.	Given the nature of the proposed FAPP, it is not considered that the programme would have potential to give rise to any threats and pressures in respect of this category.
Transportation and service corridors	Includes roads, paths, shipping lanes and associated light and noise pollution	Habitat and species disturbance and pollution from transportation systems (e.g. shipping and transportation impacts on marine environment including those related

[4] Reference Portal for reporting under the Article 17 of the Habitats Directive *Explanatory Notes & Guidelines for the period 2013-2018* http://cdr.eionet.europa.eu/help/habitats_art17. Accessed August 2021.

Threat/Pressure Categories	Notes on Sub-categories	Example Threat/Pressure with regard to the FAPP
		to agricultural exports which currently account for approximately 14% of all Northern Irish exports).
Urbanisation, residential and commercial development	Includes urbanisation, industrialisation, recreation and associated pollution	Given the nature of the proposed FAPP, it is not considered that the programme would have potential to give rise to any threats and pressures in respect of this category.
Biological resource use other than agriculture & forestry	Includes hunting, poisoning, fishing, pollution arising from aquaculture and removal of terrestrial plants	Given the nature of the proposed FAPP, it is not considered that the programme would have potential to give rise to any threats and pressures in respect of this category.
Pollution	Includes to surface waters, groundwater, marine water pollution, air borne, soil, excess energy, noise and light	As noted, there is unequivocal evidence from reports by DAERA and others that agriculture in Northern Ireland is causing surface water and groundwater pollution and subsequent damage to ecosystems and biodiversity.
Natural System modifications	Includes fires, landfill/land reclamation, removal of sediments, abstractions and siltation	Given the nature of the proposed FAPP, it is not considered that the programme would have potential to give rise to any threats and pressures in respect of this category.
Natural biotic and abiotic processes (without catastrophes)	Includes erosion, succession, competition and predation	Habitat removal/destruction and changes in population dynamics. Intensification of agricultural practices and other proposed measures may result in such threats.
Geological events, natural catastrophes	Includes storms, floods and fire	Given the nature of the proposed FAPP, it is not considered that the programme would have potential to give rise to any threats and pressures in respect of this category.
Climate change	Includes temperature rise, drought, sea level rise and increased precipitation	Habitat destruction/alteration of climate change impacts on marine and terrestrial environment. Predicted changes in precipitation and temperatures may alter future farming practices affected by the FAPP.

5 STAGE 1: SCREENING APPRAISAL FOR APPROPRIATE ASSESSMENT

In order to comply with the requirements of Article 43(1) of the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended), the process of screening for HRA was undertaken at an earlier stage in the drafting of the FAPP**.** The HRA Stage 1 screening appraisal assessed the potential for the FAPP to result in LSEs on any European Sites within the UK National Site network and Natura 2000 network in RoI, either alone or in combination with other plans and projects.

The Stage 1 screening appraisal report prepared concluded that an Appropriate Assessment of the FAPP was required for the following reasons:

- The FAPP is not directly connected with or necessary to the management of a European Site; and
- LSEs on some European Sites could not be excluded at the screening stage.

Therefore, adopting the precautionary principle, it was concluded that a Stage 2 appraisal for HRA should be undertaken.

6 STAGE 2 APPRAISAL FOR APPROPRIATE ASSESSMENT

6.1 Introduction

The assessment considers the potential for adverse effects[5] that implementation of the FAPP could have on the integrity of any European site, with respect to its conservation objectives, structure and function. EC guidance (EC 2021) states that the integrity of a site involves its ecological functions and the decision as to whether it is adversely affected should focus on, and be limited to, the site's conservation objectives. As noted earlier in this document, in the absence of geographic specificity of measures contained within the FAPP and given the strategic and large-scale nature of the FAPP, the focus has been on the broad intention of conservation objectives more so than site specific conservation objectives. The addition of detail at lower-level consenting or project-level tiers will be necessary to apply site specific conservation objectives to any effect.

The potential effects have been assessed in the absence of any mitigation measures and also with reference to the precautionary principle. It is noted that the development of the FAPP has benefited from some integration of SEA/ AA expertise to highlight and address concerns on an ongoing basis as the FAPP has been finalised.

This is in line with the Conservation Regulations which promote a hierarchy beginning with avoidance before considering mitigation and compensatory measures.

6.2 Approach to Assessment

In line with the relevant guidance, this stage of the Appropriate Assessment consists of three main steps:

- **Impact Prediction:** where the likely impacts of the NAP are examined. A source-pathway-receptor model has been used to assess potential for impact;
- **Assessment of Effects:** where the effects of the NAP are assessed as to whether they have any adverse effects on the integrity of European Sites as defined by conservation objectives; and
- **Mitigation Measures:** where mitigation measures are identified to ameliorate any adverse effects on the integrity of any European Site.

6.3 Impact Prediction

The methodology for the assessment of impacts is derived from the *Assessment of Plans and Projects in relation to Natura 2000 Sites* (EC, 2021)[6]. When describing changes/activities and impacts on ecosystem structure and function, the types of impacts that are commonly presented include:

- Direct and indirect effects;
- Short and long-term effects;
- Construction, operational and decommissioning effects; and
- Isolated, interactive and cumulative (or 'in-combination') effects.

A 'source-pathway-receptor' approach has been applied for this assessment:

- The **source** relates to the principles and priorities outlined in the FAPP which have the potential to adversely impact European sites, e.g. emissions to water from agriculture.
- The **pathway** relates to how implementation of the FAPP can potentially impact European sites, e.g. habitat loss/ fragmentation, disturbance to species, impacts to water quality.

[5] Effects considered include direct, indirect, short term, long term, temporary, permanent and cumulative.

[6] Assessment of Plans and Projects in relation to Natura 2000 sites; Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, European Commission

- The **receptor** is the UK National Site and Natura 2000 networks.

6.3.1 Context for Impact Prediction

The impact prediction is based against the current environmental baseline of the relevant designated sites, including water quality of freshwater ecosystems, in addition to the current agricultural policy, in respect of its potential to impact upon these sites.

Against this baseline, the development and implementation of the FAPP, may be considered to be positive in terms of its impacts on European Sites as it sets out the requirements for agricultural activities with the purpose of greater beneficial outcomes.

However, the measures within the FAPP may have potential to impact on European Sites given the nature of the measures proposed. As the FAPP is focussed at a national strategic level, the potential is not for direct or location-specific impacts but rather high-level indirect impacts arising as a result of the various measures. **Section 5.3.2** identifies the main potential ecological impacts that could arise for European sites from the implementation of the FAPP measures.

6.3.2 Impact Identification

The Stage 1 Screening appraisal has identified the potential for a number of principle pathways for likely significant effects to occur to European Sites as a result of the proposed FAPP, these include:

- Water quality and habitat deterioration arising as a result of agricultural run-off;
- Habitat deterioration through airborne ammonia and nitrogen compound deposition; and
- Habitat deterioration through afforestation and agroforestry practises.

In addition to these identified LSEs there is further potential for impacts associated with aerial noise, visual and physical disturbance arising through agricultural activity associated with the proposed measures in proximity to those designated sites.

The EU Commission has published a 2019 report on the links between the Birds and Habitat Directives and the Nitrates Directive[7], which is considered to be of direct relevance to potential impacts associated with nitrogen outputs to freshwater ecosystems which may arise as a result of the FAPP. The report identifies that while aquatic flora require nitrates for growth, in general aquatic fauna do not. While natural background levels of nitrates in water usually do not have a direct effect on aquatic fauna, once concentrations increase above natural background, this can cause excessive growth in aquatic flora which changes the water ecosystem characteristics by reducing light availability, increasing amounts of organic matter and causing an unstable amount of dissolved oxygen. This brings aquatic ecosystem functioning in imbalance and leads to eutrophication.

The eutrophication mechanism leads to a chain reaction, notably a change in the structure of biological communities and trophic networks, as well as changes in biogeochemical cycles. Such conditions endanger many aquatic fauna, leading in the long-term to reduced reproduction, leaving of the area or death, as well as potential extreme changes in habitats.

The report also provides the following non-exhaustive list of surface water and groundwater dependent habitats and species that are specifically or exceptionally vulnerable to nitrogen:

Surface water-dependent	**Groundwater-dependent**
• Natural dystrophic lakes and ponds; • Lagoons; • Blanket bog (active only); • Bog woodland; • *Margaritifera margaritifera* (freshwater pearl mussel); • Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia);	• Petrifying springs with tufa formation (*Cratoneurion*); • *Hamatocaulis (drepanocladus) vernicosus* (slender green feather-moss); • *Machairs*; • Alkaline fens; • Calcareous fens with *Cladium Mariscus* and species of *Caricion davallianae*;

[7] FAQ note on the links between the Nature Directives and the Nitrates Directive, European Commission (2019). Link: https://ec.europa.eu/environment/nature/natura2000/management/docs/Web_Cover_Nature_Directives.pdf

• Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.; • Natural eutrophic lakes with Magnopotamion or Hydrocharition type vegetation; and	• Transition mires and quaking bogs; and • *Turloughs*.

A summary of the main potential ecological impacts that could arise from the implementation of the FAPP and the measures arising from it are based on the above and presented below for use in the impact prediction.

Permanent and/or temporary habitat loss, fragmentation or deterioration: Habitat loss or destruction is caused where there is complete removal of a habitat type, for example arising from the intensification or expansion of agricultural activity which may alter the existing habitat. Habitat fragmentation results from the incremental loss of small patches of habitat within a larger landscape. Fragmentation can also result from impediments to the natural movements of species (such as through a polluted watercourse). This is relevant where important corridors for movement or migration are disrupted. Habitat deterioration results in the diminishment of habitat quality and a loss of important habitat functions. It can arise from the introduction of invasive species, toxic contamination from diffuse or point sources or physical alteration (e.g. arising from poor farm management), and changes to the physical structure of habitats.

Disturbance to key species: Disturbance to key species within a European Site is likely to increase where there is an increased source of disturbance (e.g. noise, vibration, lighting, emissions, human presence) such as through certain farming practices. The FAPP includes for a range of high-level alterations or new approaches to existing agricultural practices in respect of farm management, including the protection of water courses and the provision of policies encouraging the creation of semi-natural habitat which may occur in proximity to European sites. The activities have limited scope for impacts through human activity, noise, visual disturbance, vibration and lighting however the potential for nitrate emissions to water as well as ammonia emissions to air have potential for disturbance to key species.

Reduction in species densities: Species mortality can result from direct mortality of species and also via direct or indirect alteration to breeding/resting habitat. In addition, species mortality can occur when conditions/habitat underpinning survival of the species are altered, e.g. through water quality deterioration or the removal of ecological corridors and these are discussed under the other relevant headings in this section such as with respect to habitat degradation, e.g. downstream impacts on estuarine feeding/roosting for wildfowl and waders. Proposed afforestation or agroforestry policies could have potential to give rise to adverse impacts upon nearby sites through altered hydrological conditions, displacement of ground-nesting bird species and other potential indirect effects.

Changes in key indicators of conservation value (water quality etc): This is relevant where there may be an impact on the hydrological/hydrogeological connection to a European site or on water quality. This could be via point source or diffuse pollution from agricultural activities that alter surface or subsurface water flow. In terms of potential for alteration of water quality, the impact(s) may be *in-situ* or *ex-situ* (i.e. downstream and outside the immediate area) and can include the release of nitrates, suspended solids or other discharges from land such as land used for agricultural activities. Alterations to subsurface water flow or groundwater can result in impact to groundwater dependent habitats such as petrifying springs and fens.

Climate change: Climate change has major indirect impacts on biodiversity through its interaction with other stressors, in particular habitat fragmentation and loss; over-exploitation; pollution of air, water and soil; and spread of invasive species. Climate change predictions for Northern Ireland show significant projected decreases in mean annual, spring and summer precipitation amounts and an increase in extreme storm activity over Ireland by mid-century. Such changes are extremely likely to give rise to significant changes in ecological conditions within European Sites throughout Northern Ireland and may have potential to be exacerbated through agricultural practises associated with the FAPP.

In-combination effects: A series of individually modest impacts may, 'in-combination', produce a significant effect. The underlying intention of this in-combination provision is to take account of combined effects, and these will often only occur over time. In that context, one must consider plans or projects which are completed; in preparation; or approved but uncompleted. Where there is a series of small, but potentially adverse effects occurring within or adjacent to a European Site, consideration should be made as to their combined effects.

6.3.3 Impact Prediction

In line with the methodology for impact prediction outlined above, the main ecological impacts that could potentially arise from the principles and priorities outlined in the FAPP are summarised in **Table 6.1** and discussed in the following sections. In-combination impacts are assessed separately in **Section 6**.

It is acknowledged that the FAPP is a high-level document and as such prediction of effects at individual European sites is not practical as the FAPP lacks the necessary spatial detail to give context to the extent or significance of any potential effects. As such, the potential for effects is raised within the confines of the FAPP with a view to appropriately informing lower levels of planning where the necessary spatial detail is available and identifying the mitigation measures that must be in place for lower tier plans and projects to ensure the protection of the European sites.

It is also noted that any projects emerging from the delivery of the principles and priorities identified within the FAPP will themselves be required to conform with the regulatory provision of Strategic Environmental Assessment (SEA), Environmental Impact Assessment (EIA), Habitats Regulations Assessment (HRA), Ecological Impact Assessment (EcIA), environmental risk assessments, and planning regulations/requirements.

Table 6.1: Main Ecological Impacts that could potentially arise from the measures outlined in the FAPP

Impact Source	Impact Identification	Impact Prediction
Resilience Measure, inc. Crisis Framework.	• Habitat loss or destruction; • Habitat fragmentation or degradation; • Disturbance to habitats/species; • Species mortality; • Alterations to water quality and/or water movement; • Introduction or spread of invasive species.	• All impacts identified associated with proposed resilience measures and crisis framework would have potential to give rise to significant effects on the conservation status of Annex I habitats which lie downstream of agricultural activities, or other sensitive Annex I habitats within proximity to agricultural lands, through altered agricultural activities. • The identified impacts would have potential to give rise to impacts upon the conservation status of Annex II species habitats if the proposed programme of measures is insufficient or inadequately implemented or enforced. • Impacts arising as a result of proposed resilience measures in a particular location may be temporary and short-term or permanent and long-term, however short-term localised effects are likely to contribute to overall diffuse impacts over the long-term.
Headage Sustainability Package	• Habitat loss or destruction; • Habitat fragmentation or degradation; • Disturbance to habitats/species; • Species mortality; • Alterations to water quality and/or water movement; and • Alterations to air quality.	• All impacts identified associated with proposed headage sustainability package would have potential to give rise to significant effects on the conservation status of Annex I habitats which lie downstream of agricultural activities, or other sensitive Annex I habitats within proximity to agricultural lands, through altered agricultural practises. • The identified impacts would have potential to give rise to impacts upon the conservation status of Annex II species habitats if the proposed programme of measures is insufficient or inadequately implemented or enforced. • Impacts arising as a result of proposed headage sustainability package in a particular location may be temporary and short-term or permanent and long-term, however short-term localised effects are likely to contribute to overall diffuse impacts over the long-term.
Farming for Nature Package	• Habitat degradation or improvement; • Disturbance to habitats/species; • Species mortality; • Alterations to water quality and/or water movement; • Introduction or spread of invasive species.	• All impacts identified associated with proposed farming for nature measures would have potential to give rise to significant effects on the conservation status of Annex I habitats which lie downstream of agricultural activities, or other sensitive Annex I habitats within proximity to affected agricultural lands, through altered agricultural activities. • The identified impacts would have potential to give rise to impacts upon the conservation status of Annex II species habitats if the proposed programme of measures is insufficient or inadequately implemented or enforced.

Impact Source	Impact Identification	Impact Prediction
		• Impacts arising as a result of proposed farming for nature measures in a particular location may be temporary and short-term or permanent and long-term, however short-term localised effects are likely to contribute to overall diffuse impacts over the long-term.
Farming for Carbon Measures	• Habitat loss or destruction; • Habitat degradation; • Disturbance to habitats/species; and • Species mortality.	• All impacts identified associated with proposed farming for carbon measures would have potential to give rise to significant effects on the conservation status of Annex I habitats which lie downstream of agricultural activities, or other sensitive Annex I habitats within proximity to affected agricultural lands, through altered agricultural activities. • The identified impacts would have potential to give rise to impacts upon the conservation status of Annex II species habitats if the proposed programme of measures is insufficient or inadequately implemented or enforced. • Impacts arising as a result of proposed farming for carbon measures in a particular location may be temporary and short-term or permanent and long-term, however short-term localised effects are likely to contribute to overall diffuse impacts over the long-term.
Investment Measure	• Habitat loss or destruction; • Habitat fragmentation or degradation; • Disturbance to habitats/species; • Species mortality; • Alterations to water quality and/or water movement; • Alterations to air quality; and • Introduction or spread of invasive species.	• All impacts identified associated with proposed investment measures would have potential to give rise to significant effects on the conservation status of Annex I habitats which lie downstream of agricultural activities, or other sensitive Annex I habitats within proximity to affected agricultural lands, through altered agricultural activities. • The identified impacts would have potential to give rise to impacts upon the conservation status of Annex II species habitats if the proposed programme of measures is insufficient or inadequately implemented or enforced. • Impacts arising as a result of proposed investment measures in a particular location may be temporary and short-term or permanent and long-term, however short-term localised effects are likely to contribute to overall diffuse impacts over the long-term.
Knowledge Measures	• Habitat degradation; • Disturbance to habitats/species; • Species mortality; and • Introduction or spread of invasive species.	• All impacts identified associated with proposed knowledge measures would have potential to give rise to significant effects on the conservation status of Annex I habitats which lie downstream of agricultural activities, or other sensitive Annex I habitats within proximity to affected agricultural lands, through altered agricultural activities. • The identified impacts would have potential to give rise to impacts upon the conservation status of Annex II species habitats if the proposed programme of measures is insufficient or inadequately implemented or enforced. • Impacts arising as a result of proposed knowledge measures in a particular location may be temporary and short-term or permanent and long-term, however short-term localised effects are likely to contribute to overall diffuse impacts over the long-term.
Generational Renewal	• Habitat loss or destruction; • Habitat fragmentation or degradation; • Disturbance to habitats/species; • Species mortality; • Alterations to water quality and/or water movement; and • Alterations to air quality.	• All impacts identified associated with proposed generational renewal measures would have potential to give rise to significant effects on the conservation status of Annex I habitats which lie downstream of agricultural activities, or other sensitive Annex I habitats within proximity to affected agricultural lands, through altered agricultural activities. • The identified impacts would have potential to give rise to impacts upon the conservation status of Annex II species habitats if the proposed programme of measures is insufficient or inadequately implemented or enforced. • Impacts arising as a result of proposed generational renewal measures in a particular location may be temporary and short-

Impact Source	Impact Identification	Impact Prediction
		term or permanent and long-term, however short-term localised effects are likely to contribute to overall diffuse impacts over the long-term.
Supply Chain Measures	• Habitat loss or destruction; • Habitat fragmentation or degradation; • Disturbance to habitats/species; • Species mortality; • Alterations to water quality and/or water movement; and • Alterations to air quality.	• All impacts identified associated with proposed supply chain measures would have potential to give rise to significant effects on the conservation status of Annex I habitats which lie downstream of agricultural activities, or other sensitive Annex I habitats within proximity to affected agricultural lands, through altered agricultural activities. • The identified impacts would have potential to give rise to impacts upon the conservation status of Annex II species habitats if the proposed programme of measures is insufficient or inadequately implemented or enforced. • Impacts arising as a result of proposed supply chain measures in a particular location may be temporary and short-term or permanent and long-term, however short-term localised effects are likely to contribute to overall diffuse impacts over the long-term.
Soil Testing and LiDAR	• Habitat loss or destruction; • Habitat fragmentation or degradation; • Disturbance to habitats/species; • Species mortality; • Alterations to water quality and/or water movement; and • Alterations to air quality.	• All impacts identified associated with proposed soil testing and LiDAR measures would have potential to give rise to significant effects on the conservation status of Annex I habitats which lie downstream of agricultural activities, or other sensitive Annex I habitats within proximity to affected agricultural lands, through altered agricultural activities. • The identified impacts would have potential to give rise to impacts upon the conservation status of Annex II species habitats if the proposed programme of measures is insufficient or inadequately implemented or enforced. • Impacts arising as a result of proposed soil testing and LiDAR measures in a particular location may be temporary and short-term or permanent and long-term, however short-term localised effects are likely to contribute to overall diffuse impacts over the long-term.
Livestock Genetics and Data	• Habitat loss or destruction; • Habitat fragmentation or degradation; • Disturbance to habitats/species; • Species mortality; • Alterations to water quality and/or water movement; and • Alterations to air quality.	• All impacts identified associated with proposed livestock genetics and data measures would have potential to give rise to significant effects on the conservation status of Annex I habitats which lie downstream of agricultural activities, or other sensitive Annex I habitats within proximity to affected agricultural lands, through altered agricultural activities. • The identified impacts would have potential to give rise to impacts upon the conservation status of Annex II species habitats if the proposed programme of measures is insufficient or inadequately implemented or enforced. • Impacts arising as a result of proposed livestock genetics and data measures are likely to contribute to overall diffuse impacts over the long-term.
Controls and Assurance	• Habitat loss or destruction; • Habitat fragmentation or degradation; • Disturbance to habitats/species; • Species mortality; • Alterations to water quality and/or water movement; and • Alterations to air quality.	• All impacts identified associated with proposed controls and assurance measures would have potential to give rise to significant effects on the conservation status of Annex I habitats which lie downstream of agricultural activities, or other sensitive Annex I habitats within proximity to affected agricultural lands, through altered agricultural activities. • The identified impacts would have potential to give rise to impacts upon the conservation status of Annex II species habitats if the proposed programme of measures is insufficient or inadequately implemented or enforced. • Impacts arising as a result of proposed control and assurance measures in a particular location may be temporary and short-term or permanent and long-term, however short-term

Impact Source	Impact Identification	Impact Prediction
		localised effects are likely to contribute to overall diffuse impacts over the long-term.
Metrics Monitoring and Evaluation	• Habitat loss or destruction; • Habitat fragmentation or degradation; • Disturbance to habitats/species; • Species mortality; • Alterations to water quality and/or water movement; and • Alterations to air quality	• All impacts identified associated with proposed metrics, monitoring and evaluation would have potential to give rise to significant effects on the conservation status of Annex I habitats which lie downstream of agricultural activities, or other sensitive Annex I habitats within proximity to affected agricultural lands, through altered agricultural activities. • The identified impacts would have potential to give rise to impacts upon the conservation status of Annex II species habitats if the proposed programme of measures is insufficient or inadequately implemented or enforced. • Impacts arising as a result of proposed metric monitoring and evaluation are likely to contribute to overall diffuse impacts over the long-term.
Horticulture	• Habitat loss or destruction; • Habitat fragmentation or degradation; • Disturbance to habitats/species; • Species mortality; • Alterations to water quality and/or water movement; and • Alterations to air quality	• All impacts identified associated with proposed horticulture measures would have potential to give rise to significant effects on the conservation status of Annex I habitats which lie downstream of agricultural activities, or other sensitive Annex I habitats within proximity to affected agricultural lands, through altered agricultural activities. • The identified impacts would have potential to give rise to impacts upon the conservation status of Annex II species habitats if the proposed programme of measures is insufficient or inadequately implemented or enforced. • Impacts arising as a result of proposed horticulture measures in a particular location may be temporary and short-term or permanent and long-term, however short-term localised effects are likely to contribute to overall diffuse impacts over the long-term.

6.3.4 Key Existing Mechanisms of relevance for the FAPP

There are a number of national policy and legislative mechanisms already in place of relevance to the FAPP in relation to both water quality as well as agriculture. These may be summarised as follows:

- The Water Framework Directive (2000/60/EC) introduced a comprehensive river basin management planning system to help protect and improve the ecological health of our rivers, lakes, estuaries and coastal and groundwaters.
- The Nitrates Directive forms an integral part of the Water Framework Directive. These, while no longer applicable to Northern Ireland, have been transposed into domestic legislation and therefore are applied through the Nutrient Action Plan (NAP) Regulations 2019-2022 and the Water Environment Regulations 2017.

6.3.4.1 Water Quality Policy

The Water Framework Directive (WFD) (2000/60/EC) came into force in December 2000 and is transposed into Northern Irish legislation through the Water Environment (Water Framework Directive) Regulations 2017 and subsequent Water (Amendment) (Northern Ireland) (EU Exit) Regulations 2019. The Regulations establish a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater. The key environmental protection objectives are:

- Prevent deterioration of the status of all bodies of surface water and groundwater;
- Protect, enhance and restore all bodies of surface water and groundwater with the aim of achieving good status by the end of 2027 at the latest;

- Protect and enhance all artificial and heavily modified bodies of water, with the aim of achieving good ecological potential and good surface water chemical status; and
- Achieve compliance with the requirements for designated protected areas.

The mechanism under the WFD by which these objectives are to be achieved is through the adoption and implementation of River Basin Management Plans (RBMP) and Programmes of Measures (PoM) as outlined under Article 13 of the WFD. The 2nd cycle RBMP covers the period 2015-2021 and its Programme of Measures are being implemented by local authorities. The 3rd Cycle Plan will have regard to progress made over the 2nd Cycle period.

The linkages between the WFD and the Habitats and Birds Directives (BHD) have been outlined in a document published by the European Commission in 2011[8]. The document states:

> '*Any Natura 2000 site with water-dependent (ground- and/or surface water) Annex I habitat types or Annex II species under the Habitats Directive or with water-dependent bird species of Annex I or migratory bird species of the Birds Directive, and, where the presence of these species or habitats has been the reason for the designation of that protected areas, has to be considered for inclusion in the register of protected areas under WFD Article 6. These are summarised as "water-dependent Natura 2000 sites*'.

The report notes that '*there is a need to identify the water related requirements to achieve favourable conservation status of habitats and species dependent on water'*; the focus therefore for Natura 2000 sites is on those dependent on water and on the water related requirements. The report also states that, according to WFD Article 4.1(c), the WFD objective of good status may need to be complemented by additional objectives in order to ensure that conservation objectives for protected areas are achieved. For example, if a certain concentration of a nutrient is needed to achieve good ecological status and a more stringent value is needed to achieve a site's conservation objectives, then the latter applies.

The Department of Agriculture, Environment and Rural Affairs (DAERA) is responsible in Northern Ireland for producing a River Basin Management Plan. As with Ireland's RBMP, Northern Ireland has moved into its third cycle of plan making for 2021-2027 and the draft plan is out for public consultation covering the Neagh Bann, North Eastern and North Western River Basin Districts. Coordination is ongoing between the two jurisdictions and will further align over the course of the consultation periods for both documents.

In April 2019, the new Nutrient Action Programme (NAP) Regulations for Northern Ireland were made for the period 2019-2022. The new Regulations replace the Nitrates Action Programme and Phosphorus Regulations 2015-2018. The NAP Regulations apply to all agriculture land in Northern Ireland. Compliance with the NAP is one of the Cross Compliance Statutory Management Requirements. Therefore, farmers claiming Basic Payment Scheme and other direct payments are required to comply with the NAP Regulations. The measures relating to the Phosphorus Regulations are now included in the new NAP. This means that the Cross Compliance Verifiable Standards will now also apply to the land application of chemical phosphorus.

6.3.4.2 Current Agricultural Policies

In assessing the potential effects of the FAPP, context of the existing frameworks of support available to farmers is of some relevance. Currently support and enforcement of standards in agriculture is administered through a range of mechanisms, namely the Basic Payment Scheme (BPS), Greening payments (which from 2021 were incorporated into the BPS payment system), young farmers payment, the formation of a regional reserve and cross-compliance. Cross-compliance is enforced and administered through the requirement for applicants to meet a number of statutory management requirements (SMRs) and maintaining the land for which support is paid, in good agricultural and environmental condition (GAEC).

[8] *Links between the Water Framework Directive (WFD 2000/60/EC) and Nature Directives (Birds Directive 2009/147/EC and Habitats Directive 92/43/EEC). Frequently asked Questions. EC 2011*

SMRs cover the environment, climate change, public health, animal health and plant health and animal welfare. GAECs cover protection and management of water, protection of soil and carbon stock and minimum level of maintenance with regard to retention of landscape features and avoiding the deterioration of habitats.

6.4 European Sites

This appropriate assessment considers European sites designated in the UK national site network, under the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended), in addition to those sites within the Republic of Ireland designated under the Habitats Directive (Directive 92/43/EEC).

The proposed programme, which is not connected or necessary to the management of any European site, has previously been screened against those European sites for which a pathway of effect can be reasonably established between a receptor and the source of an effect.

As set out above the geographical scope of the project, which relates to agricultural activity undertaken across Northern Ireland has potential to give rise to potential effects upon UK National Sites across the country. Furthermore the project has potential to give rise to potential transboundary effects upon European sites within RoI which lie in close proximity to the NI/RoI border or those sites which lie downstream of and hydrologically linked to agricultural lands within NI.

The screening appraisal, undertaken using this zone of influence, could not rule out likely significant effects arising to any of the European sites screened into the assessment. As set out above, at **Table 4.1**, Northern Ireland supports 59 SACs and 17 SPAs while the Republic of Ireland, within the ZoI of the FAPP, supports 27 SACs and 10 SPAs. These sites, their qualifying interests, conservation objectives and current conservation status and trend, both within NI and RoI are detailed at **Appendix I** and **II**.

While it is noted that a large proportion of European Sites within Northern Ireland and the Republic of Ireland will be potentially affected by measures within the FAPP, in order to address the specific vulnerability of such sites to these potential impacts it is considered that further consideration of the qualifying features of the sites, their conservation objectives and their relative sensitivity is required. This further consideration is set out below in the context of the identified impact pathways which have been identified within the HRA screening appraisal of the programme.

6.4.1 Impacts Associated with Agricultural Run-off

Of the qualifying features for which all SACs and SPAs in Northern Ireland and the Republic of Ireland, some are considered to be particularly sensitive to elevated nitrogen concentrations within surface and groundwaters potentially arising as a result of agricultural activities to be affected by the FAPP.

Effects upon the freshwater environment may be associated with agricultural run-off resultant of policies arising from the programme. This run-off is generated by various agricultural activities including the spreading of organic manures including livestock manures such as slurry, farmyard manure and dirty water and other organic manures including anaerobic digestate, sewage sludge and other waste and compost; in addition to the spreading of chemical fertilisers typically any combination of nitrogen, phosphorus and potassium fertilisers. These materials are typically applied to agricultural lands, including areas of improved grassland, arable and horticultural lands.

Run-off may also arise as a result of inappropriate storage of manure, silage and silage effluent.

These materials may enter the freshwater environment typically surface waterbodies in proximity to the lands to which such materials are applied or stored, as a result of the natural downhill movement of surface waters, exacerbated by high rainfall, steep slopes, saturated and impermeable soils and inappropriate spreading or storage practices.

An excessive supply of nutrients to water bodies, particularly nitrogen and phosphorus, can lead to eutrophication, whereby these elevated concentrations result in accelerated growth of plants and algae. This reduces oxygen levels in the system, which can cause a loss of sensitive species and impact upon the ecological status of the water body. Elevated nutrient concentrations, arising from both point (e.g. sewage discharges) and diffuse (e.g. agricultural run-off) anthropogenic sources, represent the most significant threat

to water quality within freshwater and coastal marine SACs in Northern Ireland. In freshwaters, phosphorus is usually the limiting nutrient for plant and algal growth, whereas in marine waters nitrogen is generally the limiting nutrient.

It is well documented that eutrophication arising as a result of agricultural inputs to the freshwater environment is an issue of primary concern for a range of habitats and the species which are dependant upon such habitats as recognised as a primary objective of the implementation of the Water Framework Directive (WFD) (200/60/EC). A number of species included at Annex II of the Habitats Directive and forming qualifying interests of SACs in NI are noted as being particularly sensitive to such inputs. These include freshwater pearl mussel *Margaritifera margaritifera,* a qualifying interest of four of the sites screened into this assessment. The species experiences decreased recruitment, decreased growth and adult mortality as a result of increased levels of nitrate and phosphate (Bauer 1988 & 1992).

Salmonids, including the Annex II species Atlantic Salmon *Salmo salar* which is listed as a qualifying interest for ten screened in European Sites, are also particularly sensitive to the effects of eutrophication with direct effects including increased mortality (Jarvie et al. 2005), environmental toxicity through lowered pH levels and associated increased in harmful pathogens (Snieszko 1974) and indirect effects such as decreased food availability as a result of decreased macroinvertebrate abundance (Ortiz and Pulg 2007 and Friberg et al. 2010). Such impacts upon salmon populations may result in subsequent impacts upon other species, including freshwater pearl mussel for which salmon is an important host species during its larval stage and the Annex II species Otter, which forms a QI species for 15 European sites screened into this assessment, for which salmon and other salmonids represent important prey species.

White-clawed crayfish *Austropotamobius pallipes* forms a QI for four SACs screened into this assessment. This aquatic Annex II species has been shown to be vulnerable to effects associated with eutrophication (Demers and Reynolds 2002, Haddaway et al. 2014).

Other freshwater Annex II species which form QIs for the European Sites screened into the assessment include sea lamprey, brook lamprey and river lamprey, which are QIs of Lough Gill SAC. This site is not hydrologically linked to agricultural lands within Northern Ireland and as such will not be affected by inputs arising through agricultural run-off, however they may be subject to impacts associated with nutrient enrichment arising as a result of airborne deposition, as discussed below.

Previous studies have identified 23 Annex I Habitats and Annex II Species within Northern Ireland which are noted as being water dependant[9]. Of these 16 Annex I habitats and six Annex II species were identified within European sites within the ZoI of the FAPP. In addition to these water-dependant qualifying features a further two qualifying features were added to consideration within this assessment, namely the annex II species: otter and white-clawed crayfish. These habitats and species and the number of SACs for which they represent qualifying features, within the project ZoI are set out below at **Table 6.2**. Where conservation objectives, including attributes and targets have been referred to, these have been taken from the most detailed information available, either from documentation published by DAERA or NPWS.

Based on available Article 17 reporting for both Northern Ireland and RoI, as set out at **Appendix II**, the vast majority of these qualifying features are in sub-favourable condition, with many of these habitats also exhibiting a negative trend. In the majority of cases identified threats include those arising through nutrient inputs from agriculture.

In addition to water dependant habitats and species which are particularly vulnerable to the potential effects arising as a result of the FAPP, it is noted that a range of further Annex I habitats and Annex II species, inclusive of the vast majority of qualifying features are also sensitive, to a lesser extent, to surface and groundwater impacts associated with agriculture. The potential for adverse effects on these qualifying features would therefore also arise as a result of inputs associated with the FAPP.

In respect of SPAs, these sites and their special conservation interests are generally less vulnerable to the effects of nutrient enrichment, via surface and groundwater or via airborne deposition, than SACs. This is

[9] *Curtis, T., Downes, S. & Ni Chathain, B. (2009) The ecological requirements of water-dependent habitats and species designated under the Habitats Directive. Biology and Environment: Proceedings of the Royal Irish Academy. 109B, 261–319.*

due to the nature of the qualifying features which are only indirectly affected by nutrient enrichment of freshwater, marine or terrestrial habitats on which the Annex I bird species may be reliant. No SPAs in Northern Ireland have been set specific conservation objectives which relate to nutrient enrichment or other agricultural run-off effects. Long-term indirect effects may however still occur.

Table 6.2: Water Dependent QIs and European Sites

Water Dependent QI	Total Number of European Sites with the ZoI		Type of Water Dependency	Conservation objectives with specific reference to impacts associated with agricultural run-off (Y/N)	Specific targets set for impacts associated with agricultural run-off (Y/N)	Conservation objectives with indirect relevance to impacts associated with agricultural run-off (Y/N)	Relevant Conservation Objective (DAERA or NPWS)		
	Northern Ireland	Republic of Ireland					Attribute	Target	Notes
[1029] *Margaritifera margaritifera (*Freshwater pearl mussel)	3	1	Largely surface water dependant	N	N/A	Y	Water quality: macroinvertebrate and phytobenthos (diatoms)	Restore water quality- macroinvertebrates: EQR greater than 0.90; phytobenthos: EQR greater than 0.93	These EQRs correspond to high ecological status for these two Water Framework Directive biological quality elements. They represent high water quality with very low nutrient concentrations (oligotrophic conditions).
[1092] *Austropotamobius pallipes* (White-clawed crayfish)	1	3	Surface water dependant	Y	N	Y	Water quality	No decline	White-clawed crayfish is not considered very sensitive of water quality but the species is intolerant of low pH and poorest water quality and lack of calcareous influence.
[1095] *Petromyzon marinus* (Sea lamprey)	0	1	Surface water dependant	N	N/A	N	N/A	N/A	N/A
[1096] *Lampetra planeri* (Brook lamprey)	0	1	Surface water dependant	N	N/A	N	N/A	N/A	N/A
[1099] *Lampetra fluviatilis* (River lamprey)	0	1	Surface water dependant	N	N/A	N	N/A	N/A	N/A

Water Dependent QI	Total Number of European Sites with the ZoI		Type of Water Dependency	Conservation objectives with specific reference to impacts associated with agricultural run-off (Y/N)	Specific targets set for impacts associated with agricultural run-off (Y/N)	Conservation objectives with indirect relevance to impacts associated with agricultural run-off (Y/N)	Relevant Conservation Objective (DAERA or NPWS)		
	Northern Ireland	Republic of Ireland					Attribute	Target	Notes
[1106] *Salmo salar* (Atlantic salmon)	5	3	Surface water dependant	N	N/A	Y	Water quality	At least Q4 at all sites sampled by EPA	Q values based on triennial water quality surveys.
[1150] Coastal lagoons	1	4	Surface and seawater dependant	Y	Y	Y	Water quality: Dissolved Inorganic Nitrogen (DIN)	Annual median DIN within natural ranges and less than 0.15mg/L	Target based on Roden and Oliver, 2010).
[1355] *Lutra lutra* (Otter)	6	7	Surface and seawater dependant	N	N/A	N	N/A	N/A	N/A
[1528] *Saxifraga hirculus* (Yellow/Marsh saxifrage)	1	0	Largely groundwater dependant	N	N/A	N	N/A	N/A	N/A
[21A0] Machairs	0	2	Largely groundwater dependant	N	N/A	N	N/A	N/A	N/A
[3110] Oligotrophic waters containing very few minerals of sandy plains (*Litttorelletalia)*	0	4	Largely surface water dependant	Y	Y	Y	Water quality: nutrients	Restore the concentration of nutrients in the water column to sufficiently low levels to support the habitat and its	As a nutrient-poor habitat, oligotrophic and Water Framework Directive (WFD) 'high' status targets apply. Where a lake has nutrient concentrations that are lower than these targets, there should be no decline within class, i.e. no upward trend in nutrient concentrations. For lake habitat 3110, annual average

Water Dependent QI	Total Number of European Sites with the ZoI		Type of Water Dependency	Conservation objectives with specific reference to impacts associated with agricultural run-off (Y/N)	Specific targets set for impacts associated with agricultural run-off (Y/N)	Conservation objectives with indirect relevance to impacts associated with agricultural run-off (Y/N)	Relevant Conservation Objective (DAERA or NPWS)		
	Northern Ireland	Republic of Ireland					Attribute	Target	Notes
								typical species.	Total Phosphorus (TP) concentration should ≤10µg/l TP, average annual total ammonia concentration should be ≤0.040mg/l N and annual 95th percentile for total ammonia should be ≤0.090mg/l N. See also the European Communities Environmental Objectives (Surface Waters) Regulations 2009.
[3130] Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or *Isoeto-Nanojuncetea*	4	1	Surface water dependant	Y	Y	Y	Water quality: nutrients	Restore the concentration of nutrients in the water column to sufficiently low levels to support the habitat and its typical species.	Lake habitat 3130 is associated with high water quality, with low dissolved nutrients. It is naturally more productive than 3110, probably reflecting higher concentrations of nutrients such as calcium, rather than P alone. 3130 may reach favourable condition slightly above the oligotrophic boundary for nutrients, but in the absence of habitat-specific targets, the targets are Water Framework Directive (WFD) 'High Status' or oligotrophic (OECD, 1982). The "good-moderate" boundary is too enriched to support the habitat. Annual average Total phosphorus (TP) concentration should be ≤10µg/l TP, average annual total ammonia should be ≤0.04mg/l and and annual 95th percentile for total ammonia should be ≤0.090mg/l N. Where

Water Dependent QI	Total Number of European Sites with the ZoI		Type of Water Dependency	Conservation objectives with specific reference to impacts associated with agricultural run-off (Y/N)	Specific targets set for impacts associated with agricultural run-off (Y/N)	Conservation objectives with indirect relevance to impacts associated with agricultural run-off (Y/N)	Relevant Conservation Objective (DAERA or NPWS)		
	Northern Ireland	Republic of Ireland					Attribute	Target	Notes
									nutrient concentrations are lower there should be no upward trend.
[3140] Hard oligo-mesotrophic waters with benthic vegetation of *Chara spp.*	1	1	Largely groundwater dependant	Y	Y	Y	Water quality: nutrients	Restore the concentration of nutrients in the water column to sufficiently low levels to support the habitat and its typical species.	Lake habitat 3140 is associated with high water quality, with low dissolved nutrients. Some forms of the habitat appear to be naturally more productive than others, e.g. the machair form may be naturally more nutrient-rich. The default target for typical marl lakes is Water Framework Directive (WFD) 'High Status' or oligotrophic (OECD, 1982). Annual average Total phosphorus (TP) concentration should be ≤10µg/l TP, average annual total ammonia should be ≤0.04mg/l and and annual 95th percentile for total ammonia should be ≤0.090mg/l N. Where nutrient concentrations are lower there should be no upward trend.
[3150] Natural eutrophic lakes with *Magnopotamium*- or *Hydrocharition*-type vegetation	2	1	Both surface and groundwater dependant	Y	Y	Y	Water quality: nutrients	Restore the concentration of nutrients in the water column to sufficiently low levels to support the habitat and its	As a relatively productive habitat, mesotrophic and Water Framework Directive 'good' status targets apply. Where a lake has nutrient concentrations that are lower than these targets, there should be no decline within class, i.e. no upward trend in nutrient concentrations. For lake habitat 3150, annual average TP concentrations should be ≤20µg/l TP,

Water Dependent QI	Total Number of European Sites with the ZoI		Type of Water Dependency	Conservation objectives with specific reference to impacts associated with agricultural run-off (Y/N)	Specific targets set for impacts associated with agricultural run-off (Y/N)	Conservation objectives with indirect relevance to impacts associated with agricultural run-off (Y/N)	Attribute	Relevant Conservation Objective (DAERA or NPWS)	
	Northern Ireland	Republic of Ireland						Target	Notes
								typical species.	average annual total ammonia concentration should be ≤0.065mg/l N and annual 95th percentile for total ammonia should be ≤0.14mg/l N.
[3160] Natural dystrophic lakes and ponds	5	3	Surface water dependant	Y	Y	Y	Water quality: nutrients	Maintain the concentration of nutrients in the water column to sufficiently low levels to support the habitat and its typical species	As a nutrient poor habitat, oligotrophic and Water Framework Directive 'high' status targets apply. Where a lake has nutrient concentrations that are lower than these targets, there should be no decline within class, i.e. no upward trend in nutrient concentrations. For 3160 lakes and ponds, annual average TP concentrations should be ≤5µg/l TP, average annual total ammonia concentration should be ≤0.04mg/l N and annual 95th percentile for total ammonia should be ≤0.09mg/l N.
[3180] Turloughs (Ireland)	1	1	Largely groundwater dependant	Y	Y	Y	Soil nutrient status: nitrogen and phosphorus	Maintain/restore nutrient status appropriate to soil types and vegetation communities	Waldren (2015) found mean total nitrogen (TN) at Coolcam of 4,983mg/kg TN and total phosphorus (TP) of 245mg/kg TP
[3260] Watercourses of plain to montane levels with the *Ranunculion*	5	1	Largely surface water dependant	Y	Y	Y	Water quality: nutrients	Maintain the concentration of nutrients in the water column	Mean annual total ammonia must be ≤ 0.040 mg/l N for high status and ≤ 0.065 mg/l N for good status, and the annual 95th percentile must be ≤ 0.090 mg/l N (high) and ≤ 0.140 mg/l

Water Dependent QI	Total Number of European Sites with the ZoI		Type of Water Dependency	Conservation objectives with specific reference to impacts associated with agricultural run-off (Y/N)	Specific targets set for impacts associated with agricultural run-off (Y/N)	Conservation objectives with indirect relevance to impacts associated with agricultural run-off (Y/N)	Relevant Conservation Objective (DAERA or NPWS)		
	Northern Ireland	Republic of Ireland					Attribute	Target	Notes
fluitantis and *Callitricho-batrachion* vegetation								necessary to support the typical species and vegetation composition of the habitat.	N (good). Mean molybdate reactive phosphorus must be ≤ 25 µg/l P (high) or ≤ 35 µg/l P (good) and the annual 95th percentile must be ≤ 45 µg/l P (high) and ≤ 75 µg/l P (good).
[7130] Blanket bogs (active only)	8	8	Largely rainwater dependant	N	N/A	N	N/A	N/A	N/A
[7140] Transition mires and quaking bogs	3	4	Groundwater dependant	Y	N	Y	Ecosystem function: soil nutrients	Maintain soil pH and nutrient status within natural ranges	Relevant nutrients and their natural ranges are yet to be defined. However, nitrogen deposition is noted as being relevant to this habitat in NPWS (2013). See also Bobbink and Hettelingh (2011)
[7210] Calcareous fens with *Cladium mariscus* and species of the *Carex davalliana*	1	1	Groundwater dependant	Y	Y	Y	Ecosystem function: water quality	Maintain appropriate water quality, particularly nutrient levels, to support the natural structure and functioning of the habitat	Fens receive natural levels of nutrients (e.g. iron, magnesium and calcium) from water sources. However, they are generally poor in nitrogen and phosphorus with the latter tending to be the limiting nutrient
[7220] Petrifying springs with tufa	1	4	Groundwater dependant	Y	Y	Y	Water quality - nitrate level	No increase from baseline nitrate level	Target based on data from McGarrigle et al. (2010). See Lyons and Kelly (2016) for further details

Water Dependent QI	Total Number of European Sites with the ZoI		Type of Water Dependency	Conservation objectives with specific reference to impacts associated with agricultural run-off (Y/N)	Specific targets set for impacts associated with agricultural run-off (Y/N)	Conservation objectives with indirect relevance to impacts associated with agricultural run-off (Y/N)	Attribute	Relevant Conservation Objective (DAERA or NPWS)	
	Northern Ireland	Republic of Ireland						Target	Notes
formation (*Cratoneurion*)								and less than 10mg/l	
[7230] Alkaline fens	4	4	Groundwater dependant	Y	N	Y	Ecosystem function: water quality	Maintain appropriate water quality, particularly nutrient levels, to support the natural structure and functioning of the habitat	Fens receive natural levels of nutrients (e.g. iron, magnesium and calcium) from water sources. However, they are generally poor in nitrogen and phosphorus, with the latter tending to be the limiting nutrient
[91D0] Bog woodland	3	1	Surface and rainwater dependant	N	N/A	N	N/A	N/A	N/A
[91E0] Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-padion, Alnion incanae, Salicion albae*)	2	1	Largely surface water dependant	N	N/A	N	N/A	N/A	N/A

6.4.2 Impacts Associated with Airborne Nutrient Deposition

Further to the potential for surface and groundwater impacts, the majority of SACs in Northern Ireland are designated on account of a supported Annex I habitat of a type sensitive to atmospheric ammonia, with critical levels assigned to these habitats of 1µg/m3 (Kelleghan et al. 2019). These critical levels have been assigned on the basis of best available data (Cape et al. 2009) however this value may not be conservative enough when assessing the potential impacts of deposition of airborne nutrient compounds including NOx and ammonia (Bobbink et al. 2010). Effects may arise in respect of all SACs which lie in proximity to agricultural activities related to the FAPP which give rise to airborne ammonia emissions.

The effects of exposure to ammonia are particularly important for sensitive habitats such as bogs and woodlands. In bogs, sensitive plants are subject to stress from ammonia exposure much faster than they are through wet nitrogen deposition (i.e. at lower nitrogen loads), and exposure can lead to direct damage to sensitive species, changes in community composition, plant water stress, and changes in plant morphology. Owing to their acidic nature, ombrotrophic bogs provide a significant sink for ammonia. In woodlands ammonia can result in direct damage to foliage, and adverse effects such as increased sensitivity to drought, frost, and pest attack, loss of mycorrhiza and fruit bodies, and changes in community composition.

The Air Pollution Information System (APIS)[10] provides a searchable database and information on pollutants and their impacts on habitats and species. This includes indicative values of critical levels of ammonia concentrations for sensitive habitats. This enables a search of designated European sites, and features within, that are receiving ammonia concentrations that are above their critical level. Of the 59 SACs in Northern Ireland, 33 sites have ammonia concentrations that are above the critical level for the habitats present. This relates to the following broad habitat types:

- Raised and blanket bogs (20 sites)
- Valley mires, poor fens and transition mires (3 sites)
- Dry heaths (3 sites)
- Rich fens (3 sites)
- Alluvial woodland (2 sites)
- Alpine and subalpine grasslands (2 sites)
- Arctic, alpine and subalpine scrub habitats (2 sites)
- Non-Mediterranean dry acid and neutral closed grassland (2 sites)
- Northern wet heath (2 sites)
- *Erica tetralix* dominated wet heath (2 sites)
- Acidophilous *Quercus*-dominated woodland (1 site)
- Sub-Atlantic semi-dry calcareous grassland (1 site)
- Marsh fritillary butterfly (1 site – supporting habitat)
- Coastal dune heaths (1 site)

Each of these habitats have a critical level of 1µg NH_3/m^3 (annual mean); at 23 European sites, ammonia levels are over twice this value, and at 11 sites they are over 3 times this concentration.

[10] http://www.apis.ac.uk/

Northern Ireland's Article 17 supporting documentation for the conservation status assessment of features at these sites was examined for any pressures or threats relating to air pollution, and those specified as arising from agricultural activities. Of the 48 habitats for which specific supporting documentation for Northern Ireland was available, 10 habitat assessments specified 'mixed-source air pollution, air-borne pollutants' as a pressure or threat (7 as a high-ranking pressure/threat and 3 as medium-ranking), while 22 habitat assessments specified 'agricultural activities generating air pollution' as a pressure or threat to the habitat (9 at a high-ranking level and 13 at a medium-ranking level). Of the 26 species for which specific supporting documentation for Northern Ireland was available, one specie's assessment (Marsh fritillary butterfly) specified 'agricultural activities generating air pollution' as a pressure or threat to the species (medium-ranking), while four other species (Petalwort, large white-moss, Marsh saxifrage and Pollan) specified 'mixed-source air pollution, air-borne pollutants' as a pressure or threat (all high-ranking).

APIS provides indicative values within nutrient nitrogen critical load ranges for habitats, for use in air pollution impact assessments. This enables a search of European sites, and features within, that are receiving a level of nitrogen deposition that is above their critical load shows the European sites in Northern Ireland with one or more features receiving above their critical nitrogen load. Of the 59 SACs in Northern Ireland, 48 are receiving nitrogen deposition that is above the critical load for the designated habitat or species present.

In addition to the total nitrogen deposition at the site, APIS provides an indication of the source attribution (how the deposition at the site is apportioned between different emission sources), and the relative extent to which these are local or long-range in nature. APIS data indicates the total % of nitrogen deposition at these sites attributable to agricultural activities occurring within Northern Ireland, and the proportional contribution of livestock and fertiliser to this. This indicates that, of the nitrogen deposited at these sites, between 21 and 57% is attributable to agricultural activities taking place within Northern Ireland (a combination of livestock and fertiliser sources).

Table 6.3 European Sites with N Deposition above Critical Loads and Proportion Attributable to NI Agriculture

SAC	Broad Habitat Type/Species Above Critical N Load	% Contribution to site deposition from NI Agriculture*		
		Livestock %	Fertiliser %	Total %
Aughnadadarragh Lough	Marsh fritillary butterfly	41	4	45
Ballykilbeg	Marsh fritillary butterfly	34	2	36
Ballynahone Bog	Raised and blanket bogs	49	3	52
Banagher Glen	Acidophilous Quercus-dominated woodland; Meso- and eutrophic Quercus woodland	45	3	48
Bann Estuary	Coastal stable dune grasslands - acid type; Shifting coastal dunes	40	2	42
Binevenagh	Alpine and subalpine grasslands; Arctic, alpine and subalpine scrub habitats; Non-mediterranean dry acid and neutral closed grassland	48	5	53
Black Bog	Raised and blanket bogs	54	3	57

SAC	Broad Habitat Type/Species Above Critical N Load	% Contribution to site deposition from NI Agriculture*		
		Livestock %	Fertiliser %	Total %
Breen Wood	Raised and blanket bogs; Acidophilous Quercus-dominated woodland	47	3	51
Carn-Glenshane Pass	Raised and blanket bogs	45.9		
Cranny Bogs	Raised and blanket bogs	46	2	48
Cuilcagh Mountain	Permanent dystrophic lakes, ponds and pools; Raised and blanket bogs; Arctic, alpine and subalpine scrub habitats; Northern wet heath: Erica tetralix dominated wet heath; Dry heaths	26	2	28
Curran Bog	Raised and blanket bogs	44	2	46
Dead Island Bog	Raised and blanket bogs	52	3	55
Deroran Bog	Raised and blanket bogs	52	3	55
Derryleckagh	Acidophilous Quercus-dominated woodland; Valley mires, poor fens and transition mires	40	2	42
Eastern Mournes	Raised and blanket bogs; Alpine and subalpine grasslands; Arctic, alpine and subalpine scrub habitats; Northern wet heath: Erica tetralix dominated wet heath; Dry heaths	35	2	37
Fairy Water Bogs	Raised and blanket bogs	50	3	53
Garron Plateau	Permanent oligotrophic waters: Softwater lakes; Permanent dystrophic lakes, ponds and pools; Raised and blanket bogs; Alpine and subalpine grasslands; Valley mires, poor fens and transition mires; Northern wet heath: Erica tetralix dominated wet heath; Rich fens	48	2	50
Garry Bog	Raised and blanket bogs	53	3	56
Hollymount	Acidophilous Quercus-dominated woodland	36	3	38
Largalinny	Acidophilous Quercus-dominated woodland	34	2	37
Lecale Fens	Rich fens	33	2	35
Lough Melvin	Permanent oligotrophic waters: Softwater lakes; Acidophilous Quercus-dominated woodland	20	1	21
Magheraveely Marl Loughs	Rich fens	26	2	27
Magilligan	Coastal stable dune grasslands - acid type	36	3	39
Main Valley Bogs	Raised and blanket bogs	53	3	56

SAC	Broad Habitat Type/Species Above Critical N Load	% Contribution to site deposition from NI Agriculture*		
		Livestock %	Fertiliser %	Total %
Monawilkin	Acidophilous Quercus-dominated woodland	34	2	36
Moneygal Bog	Raised and blanket bogs	43	2	45
Moninea Bog	Raised and blanket bogs	25	2	27
Montiaghs Moss	Marsh fritillary butterfly	42	2	45
Murlough	Coastal stable dune grasslands - acid type; Coastal stable dune grasslands - calcareous type; Non-mediterranean dry acid and neutral closed grassland; Moist to wet dune slacks; Shifting coastal dunes; Coastal dune heaths	32	2	34
North Antrim Coast	Vertigo angustior - Narrow-mouthed whorl snail; Coastal stable dune grasslands - acid type; Coastal stable dune grasslands - calcareous type; Non-mediterranean dry acid and neutral closed grassland; Shifting coastal dunes	44	3	46
Owenkillew River	Raised and blanket bogs; Acidophilous Quercus-dominated woodland	51	3	54
Peatlands Park	Raised and blanket bogs; Acidophilous Quercus-dominated woodland	51	2	53
Pettigoe Plateau	Permanent oligotrophic waters: Softwater lakes; Permanent dystrophic lakes, ponds and pools; Raised and blanket bogs	29	2	31
River Faughan and Tributaries	Acidophilous Quercus-dominated woodland	44	3	47
River Roe and Tributaries	Acidophilous Quercus-dominated woodland	45	3	48
Rostrevor Wood	Acidophilous Quercus-dominated woodland	34	2	36
Slieve Beagh	Permanent dystrophic lakes, ponds and pools; Raised and blanket bogs; Dry heaths	49	3	51
Slieve Gullion	Dry heaths	41	2	43
Strangford Lough	Coastal stable dune grasslands	35	2	37
Teal Lough	Raised and blanket bogs	52	3	55
Tonnagh Beg Bog	Raised and blanket bogs	50	3	52
Tully Bog	Raised and blanket bogs	44	2	46
Turmennan	Valley mires, poor fens and transition mires	41	2	44
Upper Lough Erne	Acidophilous Quercus-dominated woodland	36	3	39

SAC	Broad Habitat Type/Species Above Critical N Load	% Contribution to site deposition from NI Agriculture*		
		Livestock %	Fertiliser %	Total %
West Fermanagh Scarplands	Raised and blanket bogs; Alpine and subalpine grasslands; Meso- and eutrophic Quercus woodland	30	2	32
Wolf Island Bog	Raised and blanket bogs	53	3	56

*Figures are rounded.

6.4.3 Impacts Associated with Afforestation and Agroforestry

Impacts associated with afforestation, including the creation of native species woodland plantations and agroforestry, are less likely to be of the ubiquitous, widespread and diffuse nature of water and air quality effects associated with agriculture, as discussed above. As such impacts would be largely localised to those areas which were subject to planting in addition to some potential for downstream water quality impacts in the long term, due to the requirement for the management of such habitats, as discussed above in respect of water quality and agricultural run-off.

It is considered that only terrestrial Annex I habitats and Annex II species, or Annex I bird species which rely on terrestrial habitats within and in proximity to the respective SAC or SPA would have potential to be adversely affected by afforestation and agroforestry if inappropriately implemented.

It is well known that ground nesting birds, and particularly waders including curlew are vulnerable to impacts associated with afforestation of areas in proximity to suitable breeding habitat (Thompson et al. 1988; Douglas et al. 2014). This is due to the increased potential for predation, through creation of a predators refuge, the opportunity for raptors to observe nesting locations from an elevated stationary position (Hancock et al. 2009) and likely negative selection pressure for breeding sites in proximity to woodlands and forestry associated with such risks. In addition to the loss of marginal agricultural lands, such as marshy grasslands, which are typically selected preferentially for forestation. As such the FAPP, which includes for proposals for the creation of native species woodlands and the implementation of agroforestry practises, would have some potential to give rise to adverse impacts upon sites of importance for breeding wader species if implemented without the appropriate measures.

In addition to impacts upon birds, adverse impacts through forestry planting in inappropriate habitats, including the provision of native species woodlands particularly in areas currently occupied by species-rich grasslands and peatland habitats can occur. Such effects would arise from altered hydrology, light levels, soil status and subsequently floral composition (Sykes et al. 1989).

Northern Ireland's Article 17 supporting documentation for the conservation status assessment of features at these sites was examined for any pressures or threats relating to afforestation. Of the 48 habitats for which specific supporting documentation for Northern Ireland was available, nine habitat assessments mentioned 'afforestation' or 'forestry' as a potential pressure or threat, in many cases these threats were considered historical due to the current forestry regulations which now prevent the planting of commercial forestry on sensitive habitats such as blanket bog or species-rich grassland within SACs. Of the 26 species for which specific supporting documentation for Northern Ireland was available, one species assessment (freshwater pearl mussel) specified 'forestry activities' as a pressure or threat to the species (medium/high-ranking).

6.4.4 Impacts Associated with Disturbance

The FAPP has potential to affect agricultural activities within close proximity to a large number of SACs and SPAs. While agricultural activities would, in the absence of the FAPP, still take place in proximity to such sites the nature of these activities under the current regime would be potentially different from those occurring as a result of the FAPP, which places a greater focus on the potential for environmental improvements, including the provision of buffers along watercourses and tree planting. While such proposals are likely to have beneficial outcomes for European sites, their implementation may have potential to give rise to adverse impacts upon such sites arising as a result of disturbance, such as aerial noise and visual disturbance or physical disturbance of sensitive species.

It is noted that sites and qualifying features vulnerable to such effects, as set out at **Appendix II**, would be limited to those designated on account of their qualifying species, due to the lack of potential for Annex I habitats, or other habitats, to be affected by such disturbance, in the short term.

The Annex II species otter, a qualifying species for 13 SACs within the FAPP ZoI, is known to be vulnerable to human caused disturbance (Macdonald 1983), with habitat selection by the species being significantly influenced by human activities. SPAs designated on account of their supported populations of ground-nesting birds, wintering waders and waterfowl or other species sensitive to human disturbance may also be affected by inappropriate farming practises. Disturbance of wintering waterfowl has been shown to significantly impact their ability to forage effectively and put on the required fat reserves for migration (Owens 1977; West et al. 2002), potentially leading to mortality.

Northern Ireland's Article 17 supporting documentation for the conservation status assessment of features at these sites was examined for any pressures or threats relating to disturbance arising through agriculture. Though no Annex II species were identified as facing significant threats or pressures resulting from such disturbance the FAPP has potential to give rise to long- and short-term disturbance to habitats within and in close proximity to SACs designated on account of otter which could give rise to a portion of an otter's territory. Such an effect would be considered to be significantly adverse at the population level.

6.5 Assessment of the FAPP Policy Proposals

The FAPP policy proposals assessed include for eight main workstreams in addition to five cross-cutting elements which are designed to underpin the objectives of the FAPP, as detailed at Section 3. Each of these elements has some potential, directly or indirectly, to give rise to effects upon European sites across a range of timescales.

As stated previously, it is noted that the FAPP, as a high-level plan, does not deal with location specific elements associated with individual farms or agricultural activities within sub-areas, such as catchments, within Northern Ireland. As such, it is not achievable at this level of assessment to undertake a detailed appraisal of the predicted effects of the proposed FAPP at the level of individual European sites. This assessment will therefore focus upon the overall effects upon European sites which would be predicted to occur as a result of the proposed FAPP policy proposals. This will be undertaken in the context of historical trends in water quality, air quality, the known condition and threats to qualifying features of European sites across Northern Ireland and the relevant areas of RoI and the material changes to be implemented as a result of the implementation of the FAPP as it compares to current agricultural policy. This assessment is undertaken in the context of the UK National Site network and relevant conservation objectives, as discussed above in Section 6.4, particularly in regard to those sites which support qualifying features known to be vulnerable to the effects identified as potentially arising as a result of the FAPP.

Table 6.4 Sets out the assessment the policy proposals presented within the FAPP in the context of potential for adverse impacts on the integrity of relevant European sites in view of the conservation objectives of those sites.

Table 6.4 Assessment of Workstream 1 – Resilience Measure

FAPP Code	FAPP Policy Description	Assessment of Effects	Summary and Requirement for Mitigation
Workstream 1 – Resilience Measure			
RM1	RM1: Farm resilience will be addressed via a Resilience Measure: a relatively simple area-based resilience payment to provide a basic safety net, whilst also delivering environmental outcomes.	The inclusion of all agricultural and horticultural land (with the exception of buildings and hardstanding) as eligible for acreage-based resilience payments will, in contrast to the current system of agricultural subsidies, remove the incentive for farmers to maximise the area of their land in good agricultural and environmental condition (GAEC). This requirement has historically given rise to large scale losses of hedgerows, rough grasslands, scrub and other semi-natural habitats which in some locations provide supporting habitat for Annex II species such as otter, and Annex I bird species within nearby SACs and SPAs respectively and which help to mitigate other agricultural impacts such as nutrient run-off into freshwater SACs and SPAs and can have a buffering effect on airborne nutrient emissions to sensitive habitats such as raised and blanket bogs. Farmers who sell grass only, or those who maintain their land in GAEC only, without actively farming will not be eligible for resilience payments. It is considered that this is likely to be a positive measure, which will reduce the potential for agricultural land to be managed for the purposes of subsidy only. It is envisaged that marginal farmland which is not suitable for profitable farming of livestock or arable or horticultural crops and is not currently used as such, will in the absence of a subsidised incentive no longer be subject to inefficient management to the detriment of semi-natural habitats, where the land could have relatively greater value in terms of its ecological status. Should this be the effect of the policy it is considered that impacts upon SACs and SPAs would be positive, with increased supporting habitat for relevant qualifying species, such as breeding raptors, wintering wader species and potential beneficial effects on impacts associated with agricultural run-off and sedimentation on freshwater SACs. In order to be eligible for resilience payments, claimants will be required to meet farm sustainability standards (FSS) and undertake required actions, such as soil testing and LiDAR survey and nutrient management planning. It is considered that these measures also have potential to give rise to significant positive effects upon European sites, especially those vulnerable to impacts associated with agricultural run-off and nutrient enrichment through increased understanding of nutrient levels and thus a reduction in unnecessary application of organic or chemical fertilisers. The potential effects of soil testing and LiDAR are discussed specifically in the section dealing with this cross-cutting element, below. The proposed minimum claim size for resilience payments is 10ha (24.7 acres). It is considered that this has potential to give rise to adverse effects whereby a holding under this acreage and not eligible for payments, is subsequently not subject to the FSS and other	It is considered that this policy proposal has potential to give rise to a range of positive impacts upon European Sites, subject to appropriate implementation. Potential adverse effects are limited to those associated with regulatory gaps for farms under 10ha in size. Such regulatory gaps may be appropriately addressed through the finalised policy or through reliance on existing legislation, such as the Nutrient Action Plan Regulations (2019-2022, and its derivates).

FAPP Code	FAPP Policy Description	Assessment of Effects	Summary and Requirement for Mitigation
		controls imposed on other farms. While it is noted that livestock farms under 10ha are likely to be fairly uncommon, horticultural holdings are relatively likely to be smaller than 10ha in size. In the absence of controls on smaller holdings there is potential for negative effects through the inappropriate use of chemical and organic fertilisers and poor soil management practises.	
RM2	Farm resilience will be addressed via a Crisis Framework that will enable the Department to assess potential risks and determine the most appropriate intervention for a specific crisis.	This policy proposal relates to the intention to provide a crisis framework of financial support in circumstances which exceed the required threshold. Such measures are proposed to be targeted and temporary in nature. This measure by its very nature is intended to provide support in periods of crisis only, is therefore temporary and unlikely to give rise to significant alterations to farming practises at the routine level. It is considered unlikely that any significant positive or adverse effects upon European Sites would arise as a result of this proposed measure.	No positive or adverse impacts upon European Sites are envisaged due to the targeted and temporary nature of the proposed crisis framework measures.
Workstream 2- Headage Sustainability Package			
HSP1	Support will be made available to suckler cows meet the set-out conditions.	This policy is intended to provide financial support for beef farmers. Payment quotas, to provide a proxy limitation to the number of stock kept on a given farm, will be calculated based on a historical reference. It is considered that this policy, given the imposed financial incentive for limiting stock numbers in line with historical stocking rates, would have little potential to give rise to adverse impacts on any European Sites, in principle. No stocking density cap is proposed in respect of this policy. This cap which may not be required, due to the proxy control through limited financial incentives based on the historical reference, however there is potential for farmers to stock cattle at higher rates than the historical reference and claim only for those falling within this reference. Higher density of stocking could potentially give rise to a range of impacts through associated water and air quality impacts in the absence of controls. The proposals include for the need for monitoring of the effects of this lack of stocking cap in future. Conditions associated with this policy proposal will require claimants to undertake management measures to reduce both the age of first calving for suckler cows and to reduce the interval between calving for suckler cows. Suckler cows would be subject to a retention period (at least 6 months of the year) to prevent abuse of the system. This represents a potentially positive measure which will increase the efficiency of beef production and therefore result in overall reductions of airborne emissions particularly, over the course of the cow's lifetime. Indirect benefits may be delivered through an overall lowering of the nutrient requirement across the NI beef herd and as such a potential reduction in the requirement for artificial fertilisation of land. Much depends on the nature of the implementation of the policy to ensure no unforeseen adverse impacts, such as those arising from higher stocking densities, arise.	This policy has potential to give rise to a number of positive effects upon European sites through increased agricultural efficiency. Potential adverse effects are limited to that associated with the absence of a stocking density cap, which could give rise to increased emissions to air and water and associated impacts upon European sites. It is considered that this will require monitoring to establish how farming behaviours are altered and subsequently remedial measures applied as required. Mitigation may also potentially comprise existing legislative requirements, namely compliance with the NAP Regulations.

FAPP Code	FAPP Policy Description	Assessment of Effects	Summary and Requirement for Mitigation
HSP2	Support will be made to clean beef animals slaughtered in accordance with a Beef Transformation Scheme.	As in the case of policy HSP1, proposed policy HSP2 aims to increase productivity and performance efficiency of the beef sector, as well as to help in reducing the carbon footprint of these animals. It proposes that, through a Beef Transformation Scheme, eligible cattle would be finished at an earlier age, to reach their slaughter weight by no later than 24 months. It is considered that this policy would have potential to give rise to significant positive impacts upon European Sites, through increasing the efficiency of beef production and therefore result in overall reductions of airborne emissions particularly, over the course of the cow's lifetime. Indirect benefits may be delivered through an overall lowering of the nutrient requirement across the NI beef herd and as such a potential reduction in the requirement for artificial fertilisation of land. It is noted however that this more efficient system, may not give rise to any reduction in the overall nutrient requirement of farmland, the resultant emissions of cattle or any other positive effects, due to the temporal nature of such changes which would simply result in a shortened rotation of cattle within a holding, with no overall reduction in environmental effects. Negative effects associated with a more intensive rotation of cattle may arise, even where efficiencies are created.	This policy has potential to give rise to a number of positive effects upon European sites through increased agricultural efficiency. Potential adverse effects are limited to unforeseen implications of the policy, which could give rise to increased emissions to air and water and associated impacts upon European sites. It is considered that this will require monitoring to establish how farming behaviours are altered and subsequently remedial measures applied as required. Mitigation may also potentially comprise existing legislative requirements, namely compliance with the NAP Regulations.
Workstream 3 – Farming for Nature Package			
FNP1	A new Farming for Nature Package will be used to support farmers to make substantial contributions to environmental improvements and sustainability, while continuing to pursue increased productivity, improved resilience and operating within an effective functioning supply chain supply chain.	The implementation of the proposed farming for nature package is considered, on the whole, to represent a positive measure with potential to give rise to benefits to a large proportion of SACs and SPAs in Northern Ireland. All farmers and land managers will be eligible, subject to land ownership of over 3ha and derivative schemes are required to deliver landscape scale benefits. Derivative schemes will be targeted to be collaborative, outcome based, set to appropriate timescales and robustly monitored and evaluated. On this basis no adverse impacts to European sites are predicted, however aspects of the package are discussed individually below.	This policy has potential to give rise to a number of positive effects upon European sites through environmental and ecological improvements within, in proximity to and upstream of such sites.
FNP2	The initial focus of the Farming for Nature Package should be on reversing the trends in nature decline through retaining, maintaining, restoring and creating habitats that are important for species diversity and improving connectivity between habitat areas.	This part of the farming for nature package places an emphasis on the initial proposals which include for the restoration/creation of habitats, with a focus on field boundaries including hedgerows, the creation of pollinator strips, watercourse buffers, tree plantations and other management prescriptions. These measures, if implemented correctly have potential to result in significant beneficial effects upon European Sites throughout Northern Ireland, through the creation of supporting habitat for Annex II species and Annex I bird species, the attenuation of surface water run-off, buffering of airborne emissions, control of the spread of invasive species and other positive effects. It is noted however that there is some limited potential for such measures to give rise to adverse effects upon European Sites if inappropriately implemented. Examples include the	Subject to proper implementation it is considered that the proposed policy will give rise to significant beneficial effects upon European sites and the wider landscape. Potential adverse impacts may arise through the creation of inappropriate habitats in proximity or hydrologically linked to SACs and SPAs and care should be taken when evaluating applications for such measures in these locations, preferably on a case-by-case basis. Mitigation can

FAPP Code	FAPP Policy Description	Assessment of Effects	Summary and Requirement for Mitigation
		creation of forestry within an area close to important habitat for wintering waders and waterfowl; the management or creation of habitats in close proximity to an SAC or SPA giving rise to disturbance impacts and for other potential effects on downstream European Sites such as sedimentation, in the short term.	therefore be delivered within the context of the policy and proposed monitoring.
FNP3	Conservation Management Plans for SACs will have a tailored approach, including innovative partnership delivery models and incentivisation of collective action within SACs.	This policy represents a positive measure which is likely, if implemented appropriately, to result in significant beneficial effects upon European Sites. No adverse effects are predicted to be likely to arise as a result of this policy proposal.	This policy represents a positive measure which is likely, if implemented appropriately, to result in significant beneficial effects upon European Sites. No adverse effects are predicted to be likely to arise as a result of this policy proposal and no mitigation is required.
FNP4	A series of 'Test and Learn' pilots will be developed, focused on the maintenance, restoration and creation of the habitats listed above in the farmed landscape.	This policy would involve a progressive and experimental roll-out of policies as set out at FNP2 as such potential impacts associated with that policy also apply here. However, it is noted that this test and learn approach is likely to function as a form of mitigation for potential adverse effects described in relation to that policy and as such this policy is regarded as being wholly positive and inclusive of a form of monitoring for adverse impacts potentially arising as a result of FNP2.	This policy is a positive measure which will act as a form of monitoring and mitigation to prevent potential adverse impacts, as identified under FNP2.
Workstream 4 – Farming for Carbon Measures			
FCM1	Reducing numbers of non-productive livestock, with released land used alternatively, e.g. managed for environmental outcomes, forestry and bioenergy feedstocks.	This policy will be driven by a number of key considerations which should protect the policy from giving rise to potential adverse effects upon European Sites. The policy is considered to be generally positive, and should give rise to an overall reduction in the area of land which is currently farmed, intensively or otherwise. However careful consideration will need to be given to potential negative effects of farming for carbon practises proposed on released land parcels. As discussed above in respect of FNP2, the creation of forestry in inappropriate locations, whether for carbon capture or biodiversity enhancement purposes can give rise to inadvertent adverse effects upon European Sites. Furthermore, other proposed land management activities may also have potential to give rise to similar negative effects.	This policy has potential to give rise to positive impacts to European Sites however adverse impacts may arise where the proposals are improperly implemented. Mitigation can be delivered within the wording of the policy or through the application of further measures and/or a case-by case assessment of potential effects.

FAPP Code	FAPP Policy Description	Assessment of Effects	Summary and Requirement for Mitigation
FCM2	Development of a challenge fund model to test enteric methane reducing feed additives in Northern Ireland conditions and, if successful, and the market matures sufficiently, ensuring these additives are routinely incorporated in ruminant concentrate diets.	It is considered that this policy is largely neutral, with little potential to give rise to positive effects upon European Sites. It is noted however that any feed additive, if employed at a large scale would, in the absence of a sufficient evidence base, have potential to negatively impact European Sites, particularly freshwater sites, due to such additives entering the freshwater environment, either through spillage or following excretion by livestock and subsequent run-off, should such an additive give rise to unforeseen impacts upon metabolic pathways of organisms within that ecosystem.	It is recommended that the use of feed additives and incentivisation of their use, should be carefully considered in light of the available scientific information to establish any potential for adverse impacts upon aquatic ecosystems. Mitigation may include the requirement within such a policy for a robust scientific assessment of such effects prior to implementation or an appropriate level of monitoring.
FCM3	Directing genetic selection programmes to drive a reduction in the carbon footprint of ruminant livestock.	It is considered that this policy represents a neutral measure with little potential to give rise to positive or negative effects upon European Sites.	It is not considered that this policy has potential to give rise to any positive or negative effects upon European Sites. It is therefore envisaged that mitigation is not required.
FCM4	Use of urease inhibitor treated fertilisers to reduce N_2O emissions.	In theory this policy is positive and will potentially give rise to a reduction in localised N_2O emissions. Such an effect would benefit a range of Annex I habitats which are known to be sensitive to nutrient deposition, such as peatlands, species-rich grasslands and woodlands. As set out above in respect of FCM2, the use of chemicals, especially at a landscape scale would have potential to give rise to adverse effects upon European Sites, particularly those designated for their aquatic habitats, due to the potential for such chemicals to enter and potentially accumulate in such ecosystems via agricultural run-off. A study undertaken of the most popularly used of these urease inhibitors, N-(n-butyl) Thiophosphoric Triamide (NBPT) (Byrne et al. 2020) identified that this chemical may have some potential to persist within the natural environment, with a predicted half-life of 26-30 days in soil and 15 days in freshwater. This study also suggests that the chemical is unlikely to bioaccumulate, as noted in respect of fish. It is considered that monitoring should be undertaken, in the absence of a robust scientific evidence base to suggest that adverse impacts will not occur, to assess the ongoing potential effects of such chemicals particularly within the freshwater environment.	This measure may have potential to give rise to positive effects through the reduction of airborne nutrient emissions from agriculture. Adverse effects may arise should urease inhibitors give rise to unforeseen impacts upon natural systems, particularly aquatic. Potential adverse effects can be addressed through reference to scientific study, where it is shown definitively that such chemicals do not give rise to environmental impacts, or through careful monitoring of the potential effects of their application.
FCM5	Encouragement of appropriate timing of slurry and fertiliser application practices to reduce N_2O emissions.	This is considered to be a positive measure which could potentially give rise to significant beneficial effects to European Sites through the reduction of airborne nutrient emissions.	This is considered to be a positive measure which could potentially give rise to significant beneficial effects to European Sites through the reduction of airborne nutrient emissions.
FCM6	Soil management to optimise the growth of mixed species swards.	This policy is considered to be a positive measure, as the use of nitrogen fixing species within the sward will ultimately reduce the requirement for artificial fertilisation of land and associated impacts such as airborne emissions and run-off.	This is considered to be a positive measure which could potentially give rise to significant beneficial effects to European Sites through the reduction of airborne nutrient emissions.

FAPP Code	FAPP Policy Description	Assessment of Effects	Summary and Requirement for Mitigation
FCM7	DAERA will engage with stakeholders on the design of possible schemes to incentivise the farming of carbon as a business enterprise.	This policy is considered likely to be neutral however potential impacts, as addressed above at FCM1 may also be relevant here.	This is considered to be a neutral measure, with little potential to give rise to significant effects upon European Sites.
FCM8	A Scheme to encourage and facilitate the re-wetting and sustainable management of peatlands is likely to be co-developed with stakeholders under the umbrella of the Northern Ireland Peatland Strategy.	This is considered to be a positive measure and while directed toward carbon sequestration, would also likely give rise to significant beneficial effects upon peatland SACs and SPAs in respect of their qualifying interests, through appropriate management.	This is considered to be a positive measure which could potentially give rise to significant beneficial effects to peatland European Sites.
FCM9	Potential development of biomethane and hydrogen circular economy initiatives.	This policy and its potential implications will vary greatly depending upon the nature of the proposed initiatives. Overall it is considered that there is potential for both positive and negative effects and consideration of these should be afforded to any derivative project or initiative.	It is considered that this policy has potential to give rise to both positive and negative effects and consideration of these should be afforded to any derivative project or initiative. Mitigation in the form of further assessment and monitoring is likely to be required.
Workstream 5 – Investment Measure			
IM1	The following design principles will be considered for future capital support: evidence of market failure; measures to address causes of market failure; addressing key environmental and societal issues; alignment with DAERA policy objectives; appropriate type of support; realistic achievement of intended outcomes; measurable outcomes for public good; careful scheme design.	This policy proposal has potential give rise to both negative and positive effects upon European Sites, via a large number of potential pathways arising from the nature of the proposed investments. Consideration of these should be afforded to any derivative investment measure.	It is considered that this policy has potential to give rise to both positive and negative effects and consideration of these should be afforded to any derivative project or initiative. Mitigation in the form of further assessment and monitoring is likely to be required.
Workstream 6 – Knowledge Measures			
KM1	DAERA proposes the development of a suite of knowledge transfer and innovation programmes.	This policy proposal is considered to be positive and should assist in making landowners more aware of their obligations under existing and proposed agricultural legislation and the associated requirement to protect European Sites. It is considered likely that a large proportion of problematic behaviours giving rise to impacts upon European Sites, such as the inappropriate application of artificial fertilisers and organic matter, or the removal of riverside hedgerows, is undertaken as a result of a lack of understanding by landowners. In order for potentially beneficial policy proposals, as discussed above, to be implemented effectively, knowledge of the mechanisms of such policies and their intentions will be necessary for those implementing them.	This policy proposal is considered to be positive and should assist in making landowners more aware of their obligations under existing and proposed agricultural legislation and the associated requirement to protect European Sites.

FAPP Code	FAPP Policy Description	Assessment of Effects	Summary and Requirement for Mitigation
Workstream 7 – Generational Renewal			
GR1	DAERA proposes the development and delivery of a Generational Renewal Programme which comprises policy interventions around knowledge and incentives. This proposes a Succession Planning Facilitation Service.	This policy proposal has potential give rise to both negative and positive effects upon European Sites, via a large number of potential pathways arising from the potential behaviours which may be exhibited by a younger generation of farmers. While some young farmers may be more aware of the need for sustainable or environmentally friendly farming practises others may be more focused on profit generation through intensive land management practises. It is recommended that generational renewal measures should take into account the potential for unforeseen adverse impacts and ensure that younger generations of farmers are informed by knowledge measures, as proposed at KM1, in regard to their environmental obligations.	This policy proposal has potential give rise to both negative and positive effects upon European Sites, via a large number of potential pathways arising from the potential behaviours which may be exhibited by a younger generation of farmers. Mitigation may be addressed through Knowledge Measures and through the wording of derivative policies or projects.
Workstream 8 – Supply Chain Measures			
SCM1	Improving information flow and transparency - helping to create the information infrastructure that drives transparency, confidence and the effective transmission of market signals amongst supply chain partners	This policy is considered to be neutral and unlikely to give rise to any significant positive or negative adverse effects upon any European Site.	This policy is considered to be neutral and unlikely to give rise to any significant positive or negative adverse effects upon any European Site.
SCM2	Addressing Fragmentation - providing support, where needed, to help sectors address blockages to collaboration and co-operation between supply chain actors. Providing the tools (education, mechanisms to encourage co-operation, regulation) to help sectors improve supply chain integration and co-ordination.	This policy is considered to be neutral and unlikely to give rise to any significant positive or negative adverse effects upon any European Site.	This policy is considered to be neutral and unlikely to give rise to any significant positive or negative adverse effects upon any European Site.
SCM3	Using the supply chain to achieve better strategic outcomes - to identify, agree and align behind the achievement of strategic objectives, such as a sustainability agenda for Northern Ireland agri-food which is supported by all actors in the food chain and which creates a positive narrative for the industry as it responds to social and market drivers.	This policy is considered to be neutral and unlikely to give rise to any significant positive or negative adverse effects upon any European Site.	This policy is considered to be neutral and unlikely to give rise to any significant positive or negative adverse effects upon any European Site.

FAPP Code	FAPP Policy Description	Assessment of Effects	Summary and Requirement for Mitigation
Cross-cutting Element - Soil Testing and LiDAR			
STL1	DAERA will run a Soil Nutrient Health Scheme (SNHS) to provide a baseline on soil nutrient health and carbon stocks and it will be a condition of the Resilience payment that farmers will participate in this Scheme when offered to them.	It is considered that this is a positive measure which is likely to give rise to significant beneficial effects upon European sites, particularly freshwater SACs, through a reduction in the application of chemical fertilisers and organic manure and subsequently associated run-off. Positive effects are also likely to occur through a reduction in airborne emissions on nearby sensitive Annex I habitats.	It is considered that this is a positive measure which is likely to give rise to significant beneficial effects upon European sites, particularly freshwater SACs.
Cross-cutting Element - Livestock Genetics and Data			
LGD1	To support the industry-led ruminant genetics programme it is proposed that, within the Resilience Payment, there will be a requirement to register the sires of all calves born.	This policy is considered to be neutral and unlikely to give rise to any significant positive or negative adverse effects upon any European Site.	This policy is considered to be neutral and unlikely to give rise to any significant positive or negative adverse effects upon any European Site.
LGD2	To support the industry-led ruminant genetics programme it is proposed that, within the Headage Sustainability package, there will be a future requirement to provide specified data from suckler cows (still to be agreed) to the ruminant genetics programme	This policy is considered to be neutral and unlikely to give rise to any significant positive or negative adverse effects upon any European Site.	This policy is considered to be neutral and unlikely to give rise to any significant positive or negative adverse effects upon any European Site.
LGD3	To support the industry-led ruminant genetics programme it is proposed that knowledge transfer programmes are established.	This policy is considered to be neutral and unlikely to give rise to any significant positive or negative adverse effects upon any European Site.	This policy is considered to be neutral and unlikely to give rise to any significant positive or negative adverse effects upon any European Site.
LGD4	Provision of assistance to farm businesses to utilise the data coming from the livestock genetics and data programme to drive better economic and environmental performance from their ruminant enterprises.	This policy is considered to be largely neutral and unlikely to give rise to any significant positive or negative adverse effects upon any European Site, however some minor beneficial effects could be delivered through long-term effects associated with greater livestock efficiency.	This policy is considered to be largely neutral and unlikely to give rise to any significant positive or negative adverse effects upon any European Site, however some minor beneficial effects could be delivered through long-term effects associated with greater livestock efficiency.
Cross-cutting Element - Controls and Assurance			
CA1	DAERA proposes to replace the current Cross Compliance system with the simplified 'Farm Sustainability Standards.	The proposed replacement of the current system of agriculture compliance has potential to give rise to significant adverse impacts upon European Sites, should the new proposed FSS fail to offer the same or greater levels of protection for such sites, through the setting of appropriate environmental standards, best practises and enforcement of these.	This policy proposal has potential, if poorly implemented to give rise to significant adverse impacts on European Sites, via a range of potential pathways. It

FAPP Code	FAPP Policy Description	Assessment of Effects	Summary and Requirement for Mitigation
		As discussed at RM1, the proposed FSS will apply to all claimants of the resilience payment and will comprise a range of sector specific requirements, such as protection of watercourses and protection of habitats and biodiversity. It is considered likely that these aspects of the policy proposal will address any potential for impacts upon European Sites, in line with or to a greater degree than current requirements. However the potential for adverse effects will need to be assessed in respect of these standards and monitoring undertaken to ensure that no unintended loopholes are created which allow such effects to occur.	is considered that mitigation can be applied through the wording of the policy in addition to assessment of, and as required alteration of, the proposed new Farm Sustainability Standards.
CA2	DAERA is seeking to ensure that its penalty system for non-compliance with the new Farm Sustainability Standards is effective but fair.	This is considered to be a largely positive measure, which will seek to enforce the new standards. It is considered that there is some potential for penalties which are insufficient to deter behaviours with potential to give rise to significant adverse effects upon European Sites. It is therefore considered that a system of monitoring will be required to ensure that penalties are suitable as deterrents.	This is considered to be a largely positive measure however adverse effects may potentially arise through insufficient deterrent effects associated with penalties. Mitigation may comprise future monitoring of non-compliance and subsequent adaptations to the policy.
CA3	DAERA proposes to make all agricultural land eligible for payment except for hard features (e.g. buildings, yards, laneways, etc.) under future area based schemes.	As discussed above at RM1 it is considered that this policy represents a positive measure which, subject to appropriate implementation, will give rise to significant potential positive effects upon European Sites.	It is considered that this policy represents a positive measure which, subject to appropriate implementation, will give rise to significant potential positive effects upon European Sites.
Cross-cutting Element – Metrics, Monitoring and Evaluation			
MME1	The high-level overarching metrics proposed for the FAPP are: Net GHG emissions for Northern Ireland agriculture and LULUCF; TFP for Northern Ireland Agriculture; Nitrogen and Phosphorus balances; Ammonia emissions from farming; Indicator species; Gross Value added from agriculture and food processing; and Net farm income derived from the market.	It is considered that this policy proposal would have very limited potential to give rise to significant adverse or positive effects upon European Sites as it relates to the use of metrics for measuring and monitoring the outcomes of the programme. It is considered possible however that the use or creation of inappropriate metrics, which do not take into account of all potential impact pathways would have some potential to give rise to adverse effects, through affecting the rest of the programme and associated monitoring and evaluation.	It is considered that this policy is likely to have very limited potential to give rise to significant effects upon European Sites. Adverse impacts may potentially arise through inappropriate metrics influence on the measured outcomes of other policy proposals. This can be addressed through appropriate wording of the policy and post implementation monitoring.
Horticulture			
H1	A focus on production horticulture, defined as plant propagation and cultivation to produce food / edible crops, ornamental crops and other crops (i.e. those grown for use as pharmaceutical	Proposed focus on expanding the horticultural sector has potential to give rise to significant adverse impacts upon European Sites through the potential for associated impacts such as through run-off associated with the application of fertiliser, inappropriate soil management and other potential effects. It is considered that care will need to be exercised in the regulation of horticultural activities to ensure that this expansion does not give rise to adverse effects.	This policy has potential to give rise to significant adverse effect upon European Sites, if inappropriately implemented. Mitigation can be delivered through proposed regulatory controls and

FAPP Code	FAPP Policy Description	Assessment of Effects	Summary and Requirement for Mitigation
	plant products or as plant based ingredients in processed foods).		standards or through the reliance on existing environmental legislation.
H2	Developing programmes through a collective process involving key stakeholders, other government departments and social partners.	This policy is considered to be neutral and unlikely to give rise to any significant positive or negative adverse effects upon any European Site.	This policy is considered to be neutral and unlikely to give rise to any significant positive or negative adverse effects upon any European Site.
H3	Creating improved supply chain integration through incentivising collaboration and co-operation within the supply chain where fragmentation exists and scale is a supply barrier.	This policy is considered to be neutral and unlikely to give rise to any significant positive or negative adverse effects upon any European Site.	This policy is considered to be neutral and unlikely to give rise to any significant positive or negative adverse effects upon any European Site.
H4	Assisting in building collaborative partnerships to access Research and Development and Innovation that will benefit production horticulture growers from wherever this is available.	This policy is considered to be neutral and unlikely to give rise to any significant positive or negative adverse effects upon any European Site.	This policy is considered to be neutral and unlikely to give rise to any significant positive or negative adverse effects upon any European Site.
H5	Providing access to cutting-edge knowledge transfer and innovation support programmes to ensure those working in the industry have the required knowledge and skills to enable them to maximise market opportunities and deliver the desired outcomes of the Framework.	This policy is considered to be neutral and unlikely to give rise to any significant positive or negative adverse effects upon any European Site.	This policy is considered to be neutral and unlikely to give rise to any significant positive or negative adverse effects upon any European Site.
H6	Facilitating learning from others through industry/supply chain visits and supporting clusters for shared/peer learning.	This policy is considered to be neutral and unlikely to give rise to any significant positive or negative adverse effects upon any European Site.	This policy is considered to be neutral and unlikely to give rise to any significant positive or negative adverse effects upon any European Site.
H7	Optimising precision of data used in decision making tools/models through data projects and incentivised high value data collation	This policy is considered to be neutral and unlikely to give rise to any significant positive or negative adverse effects upon any European Site.	This policy is considered to be neutral and unlikely to give rise to any significant positive or negative adverse effects upon any European Site.
H8	Supporting businesses transition through knowledge and support for adoption of new technology.	This policy is considered to be neutral and unlikely to give rise to any significant positive or negative adverse effects upon any European Site. Implications of new technologies and their potential environmental effects, should be afforded individual consideration in respect to their potential to give rise to adverse effects upon European Sites.	This policy is considered to be neutral and unlikely to give rise to any significant positive or negative adverse effects upon any European Site.

6.6 In Combination Effects

The assessment of in-combination effects with other plans or projects is a crucial and often difficult aspect of Article 43 assessment, particularly at a plan or policy level. This step aims to consider the principles and priorities within which the FAPP being developed and to identify at this early stage any possible in-combination effects of the FAPP with other plans and projects and these are shown in **Table 6.4**. In theory, there are many other plans/ projects that interact with or have the potential to combine pressures and threats to European Sites; however, the in-combination assessment is a matter of applying a practical and realistic approach.

In line with EC guidance (2021), a stepwise approach has been taken to consideration of in-combination effects as follows:

- Identify plans / projects that might act in combination;
- Identify the types of effect that might occur;
- Define boundaries of the assessment;
- Identify pathways of effect; and
- Impact prediction and assessment.

Table 6.4: Assessment of In-combination Effects

FAPP In Combination with…	Key Types of Effects	Assessment of Effects
Plans (International)		
Paris Agreement (UNFCCC, 2016) To strengthen the global response to the threats of climate change by keeping this century's global temperature rise below 2 degrees Celsius.	• Reduction in practices giving rise to greenhouse gas emissions, including those associated with agriculture.	The Paris agreement and its implications has informed the formation of the FAPP, particularly the farming for carbon workstream. There is no potential for in-combination effects with the FAPP.
EU Green Deal 2050 In response to the challenges facing Europe, the European Green Deal was adopted for the EU in December 2019. Termed a new growth strategy based on clean products and technologies, the European Green Deal is committed to working towards a climate-neutral society by 2050. It has an action plan/ roadmap of actions, of which the key objectives are to: increase the efficient use of resources by moving to a clean, circular economy; as well as to restore biodiversity and cut pollution. It also aims to support innovation of industry to increase circularity.	• Increased resilience in habitats and species; • Improved habitat and species protection; and • Improved air and water quality.	The Common Agriculture Policy (CAP) takes a combined and ambitious approach towards sustainability and aligns agriculture with the European Green Deal, which sets out to create an inclusive, competitive, and environmentally friendly future for Europe. In this regard, the main thrust of the Green Deal is positive and would not be expected to conflict with the FAPP.
EU Farm to Fork Strategy The Farm to Fork Strategy is at the heart of the European Green Deal aiming to make food systems fair, healthy and environmentally-friendly. The Farm to Fork Strategy aims to accelerate the transition to a sustainable food system that should: • Have a neutral or positive environmental impact; • Help to mitigate climate change and adapt to its impacts; • Reverse the loss of biodiversity; • Ensure food security, nutrition and public health, making sure that everyone has access to sufficient, safe, nutritious, sustainable food; and Preserve affordability of food while generating fairer economic returns, fostering competitiveness of the EU supply sector and promoting fair trade.	• Habitat loss or destruction; • Habitat fragmentation or degradation; • Species mortality; • Disturbance to habitats/species; • Alterations to water quality and/or water movement; and • Introduction or spread of invasive species.	The Strategy commits to reducing nutrient losses by at least 50%, while ensuring that there is no deterioration in soil fertility. This will reduce the use of fertilisers by at least 20% by 2030. This EU mandated target for reducing nutrient losses would likely give rise to a reduction in nitrate discharges thus protecting water courses from agricultural activity. In this regard, no likely significant in-combination effects are envisaged.
EU National Emissions Ceiling (NEC) Directive Directive (EU) 2016/2284 (replacing 2001/81/EC) '*on the reduction of national emissions of certain atmospheric pollutants*' sets national emission reduction commitments for Member States and the EU for five important air pollutants: nitrogen oxides, non-methane volatile organic compounds, sulphur dioxide, ammonia and fine particulate matter. The new NEC Directive, which entered	• Habitat loss or destruction; • Habitat fragmentation or degradation; • Disturbance to habitats/species; • Species mortality; and • Alterations to air quality.	Ammonia emissions have been non-compliant with the NEC for 7 out of the last 9 years, driven by driven by increased animal numbers and fertiliser nitrogen use. The main thrust of the Directive is positive and there is potential for positive in combination effects as it supports long term reductions in fugitive losses of nitrogen.

FAPP In Combination with…	Key Types of Effects	Assessment of Effects
into force in December 2016, sets 2020 and 2030 emission reduction commitments for five main air pollutants.		
European Union Biodiversity Strategy to 2020 and revised Biodiversity Strategy to 2030 The new Biodiversity Strategy to 2030 aims to put Europe's biodiversity on the path to recovery by 2030 for the benefit of people, climate and the planet. In the context of the post-COVID-19 pandemic, it aims to build resilience to future threats, including climate change, security of food supplies, forest fires, outbreaks of disease and combating the illegal trade in wildlife. It aims to increase the Natura 2000 network, and will launch an EU restoration plan by the end of 2021. To enable implementation, it also aims to allow better tracking of progress, improving knowledge transfer and emphasising 'respect for nature' in public and business decision-making.	• Increased resilience in habitats and species; • Improved water quality; and • Improved air quality	No risk of likely significant in-combination effects will result as the primary purpose of the Strategy is to halt the loss of habitat and species.
EU 20-20-20 Climate and Energy Package Agreement (2007) Objectives seek to alleviate the impacts of climate change and reduce global emissions of GHGs. The collective EU target of reducing emissions by 20 % by 2020 is to be achieved by: The EU Emissions Trading System, the backbone of the EU mitigation effort, which sets a cap on emissions from the most polluting sectors, including over 11 000 factories, power plants and other installations, including airlines. By 2020, the cap should result in a 21 % reduction relative to 2005 levels.	• Reduction in practices giving rise to greenhouse gas emissions, including those associated with agriculture.	The agreement and its implications has informed the formation of the FAPP, particularly the farming for carbon workstream. There is no potential for in-combination effects with the FAPP.
The European Green Deal 2019 The European Green Deal is a plan to make the EU's economy sustainable. The growth strategy outlines transformation of the EU to a resource-efficient and competitive economy where: There are no net emissions of GHGs by 2050; Economic growth is decoupled from resource use; and No person and no place is left behind. The Deal provides an Action Plan to: Boost the efficient use of resources by moving to a clean circular economy and restore biodiversity and cut pollution.	• Reduction in practices giving rise to greenhouse gas emissions, including those associated with agriculture.	The Green Deal and its implications has informed the formation of the FAPP, particularly the farming for carbon workstream. There is no potential for in-combination effects with the FAPP.
EU Methane Strategy 2020 The EU Methane Strategy forms part of the European Green Deal. It recognises the importance of methane as the second biggest contributor to climate change, and aims to tackle methane emissions to reach 2030 climate targets and the 2050 climate neutrality goal, as well as contributing to the Commission's zero-pollution ambition.	• Reduction in practices giving rise to methane emissions, including those associated with agriculture.	There is no potential for in-combination effects with the FAPP, as the programme also seeks to give rise to a reduction in methane emissions.
EU Strategy on Adaptation to Climate Change	• Alterations to agricultural practises vulnerable to climate change.	There is no potential for in-combination effects with the FAPP.

FAPP In Combination with…	Key Types of Effects	Assessment of Effects
The Adaptation Strategy recognise how important impact assessment is for climate proofing, identifies the key priorities for action and how EU policies can encourage effective adaptation action.		
Forging a climate-resilient Europe – the new EU Strategy on Adaptation to Climate Change 2021[COM(2021)82] The Strategy outlines a long-term vision for the EU to become a climate-resilient society, fully adapted to the unavoidable impacts of climate change by 2050, and complements the EU's goal of becoming climate neutral by this date.	• Alterations to agricultural practises vulnerable to climate change.	There is no potential for in-combination effects with the FAPP.
EU Green Infrastructure Strategy (COM(2013) 249 final) Aims to develop preserve and enhance healthy green infrastructure to help stop the loss of biodiversity and enable ecosystems to deliver their many services to people and nature. The greater the scale, coherence and connectivity of the green infrastructure network, the greater its benefits. The EU Strategy on green infrastructure aims to outline how to deploy such a network and encourages action at all levels.	• Habitat degradation or improvement; • Disturbance to habitats/species; • Species mortality; • Alterations to water quality and/or water movement; and • Release of contaminated material (soils, runoff).	There is no potential for in-combination effects with the FAPP.
WHO Air Quality Guidelines – global update (2005) Objectives seek the elimination or minimisation of certain airborne pollutants for the protection of human health.	• Alterations to air quality and nutrient deposition	There is no potential for in-combination effects with the FAPP, as the programme also seeks to give rise to positive effects upon air quality through proposed agricultural practises and standards.
Ambient Air Quality and Cleaner Air for Europe (CAFE) Directive [2008/50/EC] & 4th Daughter Directive of the Air Quality Framework Directive [2004/107/EC] Sets air quality standards for protection of human health and the environment. Address air pollution at the level of zones, while the complementary NEC Directive addresses total emissions	• Alterations to air quality and nutrient deposition	There is no potential for in-combination effects with the FAPP, as the programme also seeks to give rise to positive effects upon air quality through proposed agricultural practises and standards.
Industrial Emissions Directive [2010/75/EU] Aims to achieve a high level of protection of human health and the environment taken as a whole by reducing harmful industrial emissions across the EU, in particular through better application of Best Available Techniques (BAT)	• Alterations to air quality and nutrient deposition	There is no potential for in-combination effects with the FAPP, as the programme also seeks to give rise to positive effects upon air quality through proposed agricultural practises and standards.
National Emissions reduction Commitments (NEC) Directive [2016/2284/EU] This Directive seeks to limit the national emissions of certain airborne pollutants for the protection of human health and the environment. Implements at the EU level obligations under the Geneva Convention and Gothenburg Protocol.	• Alterations to air quality and nutrient deposition	There is no potential for in-combination effects with the FAPP, as the programme also seeks to give rise to positive effects upon air quality through proposed agricultural practises and standards.
Geneva Convention (1979) on Long-range Transboundary Air Pollution (LRTAP) International agreement with the aim of limiting problems of air pollution on a broad regional basis.	• Alterations to air quality and nutrient deposition	There is no potential for in-combination effects with the FAPP, as the programme also seeks to give rise to positive effects upon air quality through proposed agricultural practises and standards.

FAPP In Combination with…	Key Types of Effects	Assessment of Effects
EU Thematic Strategy for Soil Protection [COM/2006/231] and Report on its implementation [COM/2012/046] Strategy for the protection of soils across the EU. The 2012 report outlines implementation of the Strategy and ongoing activities, the blocking of progress on the proposed framework Directive, current soil degradation trends and future challenges.	• Habitat degradation or improvement; • Alterations to water quality and/or water movement; and • Release of contaminated material (soils, runoff).	There is no potential for in-combination effects with the FAPP, as the programme also seeks to give rise to positive effects upon soil health and potential run-off effects through proposed agricultural practises and standards.
Integrated Pollution Prevention Control Directive [96/61/EC], as amended by Directive 2008/1/EC To achieve a high level of protection of the environment through measures to prevent or, where that is not practicable, to reduce emissions to air, water and land from industrial sources.	• Habitat degradation or improvement; • Alterations to water quality and/or water movement; and • Release of contaminated material (soils, runoff).	There is no potential for in-combination effects with the FAPP, as the programme also seeks to give rise to positive effects upon soil health and potential run-off effects through proposed agricultural practises and standards.
Water Framework Directive (2000/60/EC), (as amended by Decision 2455/2001/EC and Directives 2008/32/EC, 2008/105/EC and 2009/31/EC. Aims to improve water quality and quantity within rivers, estuaries, coasts and aquifers. Aims to prevent the deterioration of aquatic ecosystems and associated wetland by setting out a timetable until 2027 to achieve good ecological status or potential. Member States are required to manage the effects on the ecological quality of water which result from changes to the physical characteristics of water bodies. Action is required in those cases where these “hydro-morphological” pressures are having an ecological impact which will interfere with the ability to achieve WFD objectives. The following Directives have been subsumed into the Water Framework Directive : The Drinking Water Abstraction Directive Sampling Drinking Water Directive Exchange of Information on Quality of Surface Freshwater Directive Shellfish Directive Freshwater Fish Directive Groundwater (Dangerous Substances) Directive Dangerous substances Directive	• Habitat degradation or improvement; • Alterations to water quality and/or water movement; and • Release of contaminated material (soils, runoff).	There is no potential for in-combination effects with the FAPP, as the programme also seeks to give rise to positive effects upon soil health and potential run-off effects through proposed agricultural practises and standards.
Marine Strategy Framework Directive (2008/56/EC) Establishes a framework whereby the necessary measures are undertaken to achieve or maintain good environmental status in the marine environment by the year 2020. Requires the development and implementation of marine strategies in order to protect and preserve the marine environment, prevent its deterioration or, where practicable, restore marine ecosystems in areas where they have been adversely affected. It aims to prevent and reduce inputs in the marine environment, with a view to phasing out pollution as defined in Article 3(8), so as to ensure that there are no significant impacts on	• Habitat degradation or improvement; • Alterations to water quality and/or water movement; and • Release of contaminated material (soils, runoff).	There is no potential for in-combination effects with the FAPP, as the programme also seeks to give rise to positive effects upon soil health and potential run-off effects through proposed agricultural practises and standards.

FAPP In Combination with…	Key Types of Effects	Assessment of Effects
or risks to marine biodiversity, marine ecosystems, human health or legitimate uses of the sea		
Groundwater Directive [80/68/EEC] and Daughter Directive [2006/118/EC] Aims to protect groundwater from pollution by controlling discharges and disposals of certain dangerous substances to groundwater. Made under the Water Framework Directive, the Daughter Directive aims to prevent and limit inputs of pollutants to groundwater.	• Habitat degradation or improvement; • Alterations to water quality and/or water movement; and • Release of contaminated material (soils, runoff).	There is no potential for in-combination effects with the FAPP, as the programme also seeks to give rise to positive effects upon soil health and potential run-off effects through proposed agricultural practises and standards.
Sewage Sludge Directive [86/78/EEC] The Directive promotes the use of sewage sludge in agriculture but regulates its use to prevent harmful effects on soil, vegetation, animals and people.	• Habitat degradation or improvement; • Alterations to water quality and/or water movement; and • Release of contaminated material (soils, runoff).	There is no potential for in-combination effects with the FAPP, as the programme also seeks to give rise to positive effects upon potential run-off effects through proposed agricultural practises and standards.
Nitrates Directive [91/676/EEC] The Directive has the objective of reducing water pollution caused or induced by nitrates from agricultural sources and preventing further such pollution.	• Habitat degradation or improvement; • Alterations to water quality and/or water movement; • Release of contaminated material (soils, runoff); and • Alterations to air quality.	There is no potential for in-combination effects with the FAPP, as the programme also seeks to give rise to positive effects upon potential run-off and airborne nutrient effects through proposed agricultural practises and standards.
Environmental Quality Standards Directive (Directive 2008/105/EC) (also known as the Priority Substances Directive), as amended by Directive 2013/39/EU. Establishes environmental quality standards (EQS) for priority substances and certain other pollutants as provided for in Article 16 of the Water Framework Directive and aims to achieve good surface water chemical status in accordance with the provisions and objectives of Article 4 of the Water Framework Directive.	• Habitat degradation or improvement; • Alterations to water quality and/or water movement; • Release of contaminated material (soils, runoff); and • Alterations to air quality	There is no potential for in-combination effects with the FAPP, as the programme also seeks to give rise to positive effects upon potential run-off and airborne nutrient effects through proposed agricultural practises and standards.
Environmental Liability Directive [2004/35/EC] Establishes a framework for environmental liability based on the 'polluter-pays' principle, to prevent and remedy environmental damage. Relates to environmental damage caused by occupational activities (listed in Annex III), and to any imminent threat of such damage occurring by reason of any of those activities; damage to protected species and natural habitats caused by any occupational activities other than those listed in Annex III, and to any imminent threat of such damage occurring by reason of any of those activities, whenever the operator has been at fault or negligent.	• Habitat degradation or improvement; • Alterations to water quality and/or water movement; • Release of contaminated material (soils, runoff); and • Alterations to air quality	There is no potential for in-combination effects with the FAPP, as the programme also seeks to give rise to positive effects upon potential run-off and airborne nutrient effects through proposed agricultural practises and standards.
A Blueprint to Safeguard Europe's Water Resource [COM(2012/673] The Blueprint aims to improve implementation of existing water policy, to integrate water considerations into other policy areas and	• Habitat degradation or improvement; • Alterations to water quality and/or water movement; and • Release of contaminated material (soils, runoff).	There is no potential for in-combination effects with the FAPP, as the programme also seeks to give rise to positive effects upon potential run-off through proposed agricultural practises and standards.

FAPP In Combination with…	Key Types of Effects	Assessment of Effects
indicate where further measures may be necessary for water efficiency and adaptation to climate change.		
Plans (Northern Ireland)		
Nutrients Action Programme (NAP) 2019-2022 for Northern Ireland These Regulations are made by the Department of Agriculture, Environment and Rural Affairs using powers under section 2(2) of the European Communities Act 1972 (1972 c.68) and Article 32 of the Waste and Contaminated Land (Northern Ireland) Order 1997 (S.I. 1997 No. 2778 (N.I. 19)). The Regulations give further effect to Council Directive 91/676/EEC concerning the protection of waters against pollution caused by nutrients from agricultural sources.	• Habitat degradation or improvement; • Disturbance to habitats/species; • Species mortality; • Alterations to water quality and/or water movement; • Release of contaminated material (soils, runoff); and • Introduction or spread of invasive species.	The Northern Ireland NAP has 100% territorial coverage and DAERA has secured an approval from the EU for the renewal of a nitrates derogation. The programme seeks to target nitrate inputs into ecosystems and the efficient use of fertilisers (e.g. through the use of low emission slurry spreading on larger farms) given the similarity in farming practice, geology and climate. With the required mitigation in the NAP for Northern Ireland, in addition to that proposed as part of the FAPP, no significant adverse in-combination effects are predicted. Potential beneficial in-combination effects could be delivered subject to appropriate implementation.
Biodiversity Strategy for Northern Ireland to 2020 A strategy for Northern Ireland to meet its international obligations and local targets to protect biodiversity. The strategy sets out the proposals for action to help halt the loss of biodiversity and the degradation of ecosystems up to 2020. • Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society • Reduce the direst pressures on biodiversity and promote sustainable development • To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity • Enhance the benefits to all from biodiversity and ecosystem services • Enhance implementation through participatory planning, knowledge management and capacity building.	• Habitat degradation or improvement; • Disturbance to habitats/species; • Species mortality; • Alterations to water quality and/or water movement; • Release of contaminated material (soils, runoff); and • Introduction or spread of invasive species.	There is no potential for in-combination effects with the FAPP, as the programme also seeks to deliver benefits to biodiversity, through proposed agricultural practises and standards. Potential beneficial in-combination effects could be delivered subject to appropriate implementation.
UK Post-2020 Biodiversity Framework Succeeds the UK Biodiversity Action Plan and 'conserving Biodiversity – the UK Approach'. Sets out the UK's response to the CBD's 'Strategic Plan for Biodiversity 2011-2020' and its 20 'Aichi Targets' (2010), and the EU Biodiversity Strategy (2011).	• Habitat degradation or improvement; • Disturbance to habitats/species; • Species mortality; • Alterations to water quality and/or water movement; • Release of contaminated material (soils, runoff); and • Introduction or spread of invasive species	There is no potential for adverse in-combination effects with the FAPP, as the programme also seeks to deliver benefits to biodiversity, through proposed agricultural practises and standards. Potential beneficial in-combination effects could be delivered subject to appropriate implementation
DAERA Conservation Management Plans for SACs (in prep.) Series of Management Plans for SACs in Northern Ireland, determining the pressures and threats to habitats and species at	• Habitat degradation or improvement; • Disturbance to habitats/species;	There is no potential for adverse in-combination effects with the FAPP, as the programme also seeks to deliver

FAPP In Combination with…	Key Types of Effects	Assessment of Effects
the sites, and identifying the management actions required to address these pressures.	• Species mortality; • Alterations to water quality and/or water movement; • Release of contaminated material (soils, runoff); and • Introduction or spread of invasive species	benefits to biodiversity, through proposed agricultural practises and standards. Potential beneficial in-combination effects could be delivered subject to appropriate implementation.
UK National Ecosystem Assessment (2011) Provides a comprehensive overview of the state of the natural environment in the UK and a new way of estimating our national wealth. Northern Ireland covered in Chapter 18.	• Habitat degradation or improvement; • Disturbance to habitats/species; • Species mortality; • Alterations to water quality and/or water movement; • Release of contaminated material (soils, runoff); and • Introduction or spread of invasive species	There is no potential for adverse in-combination effects with the FAPP, as the programme also seeks to deliver benefits to ecosystems, through proposed agricultural practises and standards. Potential beneficial in-combination effects could be delivered subject to appropriate implementation.
Northern Ireland Species Action Plan Freshwater Pearl Mussel, 2005 To assist delivery of the NI Biodiversity Strategy, for the protection and enhancement of NI Priority Species.	• Habitat degradation or improvement; • Disturbance to habitats/species; • Species mortality; • Alterations to water quality and/or water movement; • Release of contaminated material (soils, runoff); and • Introduction or spread of invasive species	There is no potential for adverse in-combination effects with the FAPP, as the programme also seeks to deliver benefits to the Annex II species, freshwater pearl mussel, through proposed agricultural practises and standards. Potential beneficial in-combination effects could be delivered subject to appropriate implementation.
Delivering Our Future, Valuing Our Soils: A Sustainable Agricultural Land Management Strategy (SALMS) For Northern Ireland 2016 Outlines how the ambitions in this strategy could be achieved in a way which improves farm incomes and environmental performance simultaneously.	• Habitat degradation or improvement; • Alterations to water quality and/or water movement; and • Release of contaminated material (soils, runoff).	There is no potential for in-combination effects with the FAPP, as the programme also seeks to give rise to positive effects upon soil health and potential run-off effects through proposed agricultural practises and standards.
Northern Ireland's second Climate Change Adaptation Programme (NICCAP2) 2019 – 2024 The NICCAP2 contains the NICS Departments response to the risks and opportunities relevant to Northern Ireland, as identified in the UK Climate Change Risk Assessment 2017 (CCRA 2017). It sets out preparation for climate change impacts that are already happening and puts in place plans for future impacts.	• Reduction in practices giving rise to greenhouse gas emissions, including those associated with agriculture.	There is no potential for adverse in-combination effects with the FAPP.
(Northern Ireland) Sustainable Energy Action Plan, 2012-2015 and beyond (2012) The Action Plan outlines the various initiatives being undertaken by the Northern Ireland Executive and includes a statement of	• Reduction in practices giving rise to greenhouse gas emissions.	There is no potential for adverse in-combination effects with the FAPP.

FAPP In Combination with…	Key Types of Effects	Assessment of Effects
leadership from the Executive, demonstrating a united and long-lasting commitment to sustainable energy. This Plan builds from the Strategy Energy Frameworks, 2010. Building energy markets. Ensuring security supple. Enhancing sustainability and development of competitive energy markets. Increasing the level of electrify and heat from renewable sources.		
UK Climate Change Risk Assessment (CCRA) Programme 2017 The UK Government is required, under the Climate Change Act, to publish a CCRA every 5 years, setting out the risks and opportunities facing the UK from climate change.	• Reduction in practices giving rise to greenhouse gas emissions.	There is no potential for adverse in-combination effects with the FAPP.
UK National Air Pollution Control Programme (APPCP) 2019 Programme required under The National Emission Ceilings Regulations 2018. The APPCP sets out how the UK can meet the legally binding 2020 and 2030 emission reduction commitments.	• Alterations to air quality and nutrient deposition	There is no potential for adverse in-combination effects with the FAPP, as the programme also sets out potential for positive effects upon air quality through the proposed agricultural measures and standards, subject to implementation.
Making Ammonia Visible (Annex to the SALMS for NI) 2017 The Aim is to satisfy the joint need of bringing ammonia emissions from agriculture down to a level that lets an expanding sector while allowing Priority Habitats to recover.	• Alterations to air quality and nutrient deposition	There is no potential for adverse in-combination effects with the FAPP, as the programme also sets out potential for positive effects upon ammonia emissions through the proposed agricultural measures and standards, subject to implementation.
Environmental Farming Cuts Greenhouse Gases Implementation Plan 2016-2020 Plan for the agriculture and forestry sector to reduce GHG emissions. Focus on supporting the implementation of on-farm efficiency measures designed to reduce the carbon intensity of food products, while simultaneously improving productivity and profitability.	• Reduction in practices giving rise to greenhouse gas emissions, including those associated with agriculture.	There is no potential for adverse in-combination effects with the FAPP.
Rural Development Programme for Northern Ireland 2014-2020 & Annual Implementation Report 2019 The Northern Ireland Rural Development Programme (NIRDP) is supported through Pillar 2 of the EU Common Agricultural Policy (CAP), focussed on improving the structural and environmental performance of agriculture and promoting local/rural development	• Habitat degradation or improvement; • Disturbance to habitats/species; • Species mortality; • Alterations to water quality and/or water movement; • Release of contaminated material (soils, runoff); and • Introduction or spread of invasive species	Subject to the appropriate implementation of the FAPP it is not considered that there is potential for in-combination effects to arise, however in the absence of mitigation or appropriate consideration of potential adverse effects upon European Sites, adverse in-combination effects may occur and cannot be excluded.
Strategic Planning Policy Statement for Northern Ireland 2015 This planning policy sets out the Department's 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 Local Development Plans, and are also material to all decisions on individual planning applications and appeals.	• Habitat degradation or improvement; • Disturbance to habitats/species; • Species mortality; • Alterations to water quality and/or water movement; • Release of contaminated material (soils, runoff); and	The SPPS has been subject to SEA and mitigation measures recommended. Subject to the appropriate implementation of the FAPP it is not considered that there is potential for in-combination effects to arise, however in the absence of mitigation or appropriate consideration of potential adverse effects upon European Sites, adverse in-combination effects may occur and cannot be excluded.

FAPP In Combination with…	Key Types of Effects	Assessment of Effects
	• Introduction or spread of invasive species	
The Regional Development Strategy 2035 – Shaping Our Future Updates the Regional Development Strategy for Northern Ireland 2025 The strategy aims to take account of the economic ambitions and needs of the Region, and put in place spatial planning, transport and housing priorities that will support and enable the aspirations of the Region to be met.	• Habitat degradation or improvement; • Disturbance to habitats/species; • Species mortality; • Alterations to water quality and/or water movement; • Release of contaminated material (soils, runoff); and • Introduction or spread of invasive species	The RDS has been subject to AA and mitigation measures recommended. Subject to the appropriate implementation of the FAPP it is not considered that there is potential for in-combination effects to arise, however in the absence of mitigation or appropriate consideration of potential adverse effects upon European Sites, adverse in-combination effects may occur and cannot be excluded.
UK Sustainable Development Strategy, Agenda 21 The strategy aims to take account of the economic ambitions and needs of the Region, and put in place spatial planning, transport and housing priorities that will support and enable the aspirations of the Region to be met.	• Habitat degradation or improvement; • Disturbance to habitats/species; • Species mortality; • Alterations to water quality and/or water movement; • Release of contaminated material (soils, runoff); and • Introduction or spread of invasive species	There is no potential for adverse in-combination effects with the FAPP.
Water Environment (Floods Directive) Regulations (Northern Ireland) 2009, and amendment Regulations 2018 Implement EU Floods Directive 2007/60/EC on the risk and management of flood risk in Northern Ireland.	• Habitat degradation or improvement; • Alterations to water quality and/or water movement; and • Release of contaminated material (soils, runoff),	Given the nature of the regulations, which focus on flooding, there is no potential for adverse in-combination effects with the FAPP.
The Water Environment (Water Framework Directive) Regulations (Northern Ireland) 2017 Transpose the Water Framework Directive (2000/60/EC) into NI legislation. Places a responsibility on NI to try to ensure that all inland and coastal waters reach at least "good status" (or good ecological potential for artificial or heavily modified water bodies); Implementation of management planning at river basin level, to achieve this target, linking with other key policy areas such as agriculture, land use, biodiversity, tourism and flood protection through a river basin management plan (RBMP). This sets out a programme of measures to be implemented over 6-year cycles aimed at improving water body status.	• Habitat degradation or improvement; • Alterations to water quality and/or water movement; and • Release of contaminated material (soils, runoff),	River basin management plans arising from the regulations are subject to screening for appropriate assessment. Subject to the appropriate implementation of the FAPP it is not considered that there is potential for in-combination effects to arise.
Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) Regulations (NI) 2003 Establishes construction and storage standards for silage making and storage, slurry storage systems and agricultural fuel oil stores, with aim of reducing water pollution.	• Habitat degradation or improvement; • Alterations to water quality and/or water movement; and • Release of contaminated material (soils, runoff),	There is no potential for adverse in-combination effects with the FAPP, as the programme also seeks to deliver benefits to water quality, through proposed agricultural practises and standards.

FAPP In Combination with…	Key Types of Effects	Assessment of Effects
		Potential beneficial in-combination effects could be delivered subject to appropriate implementation.
Environmental Liability (Prevention and Remediation) Regulations 2009 and amendment Implement the Environmental Liability Directive (2004/35/EC) in Northern Ireland. Implement the Environmental Liability Directive (2004/35/EC) in Northern Ireland. Brings into force rules to force polluters to prevent and repair damage to water systems, land quality, species and their habitats and protected sites. The polluter does not have to be prosecuted first, so remedying the damage should be faster.	• Habitat degradation or improvement; • Disturbance to habitats/species; • Species mortality; • Alterations to water quality and/or water movement; • Release of contaminated material (soils, runoff); and • Introduction or spread of invasive species	There is no potential for adverse in-combination effects with the FAPP, as the programme also seeks to deliver benefits to water quality, through proposed agricultural practises and standards. Potential beneficial in-combination effects could be delivered subject to appropriate implementation.
Groundwater Regulations (Northern Ireland) 2009 and amendments Introduces classification systems in line with EU developments, makes it an offence to discharge listed substances without an authorisation, controls issuing and reviewing authorisations and consents. Covers enforcement, codes of practice and penalties.	• Habitat degradation or improvement; • Alterations to water quality and/or water movement; and • Release of contaminated material (soils, runoff).	There is no potential for adverse in-combination effects with the FAPP, as the programme also seeks to deliver benefits to water quality, through proposed agricultural practises and standards. Potential beneficial in-combination effects could be delivered subject to appropriate implementation.
Protection of Water Against Agricultural Nitrate Pollution (Northern Ireland) Regulations 2004 Implement the requirement of the Nitrates Directive (91/676/EEC) to formulate an “Action Programme”, for the protection of water from nitrate pollution from agricultural activities. Establishes that an Action Programme must be established and applied throughout the territory of Northern Ireland.	• Habitat degradation or improvement; • Alterations to water quality and/or water movement; and • Release of contaminated material (soils, runoff). •	There is no potential for adverse in-combination effects with the FAPP, as the programme also seeks to deliver benefits to water quality, through proposed agricultural practises and standards. Potential beneficial in-combination effects could be delivered subject to appropriate implementation.
NI Water Our Strategy 2021-2046 Strategy for the provision of a high-quality water supply. The Strategy covers a longer-term view over a quarter of a century (2021-2046).	• Habitat degradation or improvement; • Alterations to water quality and/or water movement; and • Release of contaminated material (soils, runoff).	There is no potential for adverse in-combination effects with the FAPP, as the programme also seeks to deliver benefits to water quality, through proposed agricultural practises and standards. Potential beneficial in-combination effects could be delivered subject to appropriate implementation.
Local Biodiversity Action Plans (LBAPs) Local Biodiversity Action Plans are a way of encouraging people to work together and deliver a programme of continuing action for biodiversity at a local level. They set out practical steps that aim to help protect biodiversity, enhance and improve biodiversity where possible, and promote biodiversity at a local level.	• Habitat degradation or improvement; • Disturbance to habitats/species; • Species mortality; • Alterations to water quality and/or water movement; • Release of contaminated material (soils, runoff); and • Introduction or spread of invasive species	There is no potential for adverse in-combination effects with the FAPP, as the programme also seeks to deliver benefits to biodiversity, through proposed agricultural practises and standards. Potential beneficial in-combination effects could be delivered subject to appropriate implementation.
County Development Plans and Local Development Plans Development Plans set out how an area should look in the future by deciding the type and scale of development and where building	• Habitat degradation or improvement; • Disturbance to habitats/species; • Species mortality;	County and local development plans are subject to appropriate assessment, with mitigation applied as required. Subject to appropriate implementation it is not

FAPP In Combination with…	Key Types of Effects	Assessment of Effects
should be allowed. Each Council must prepare a development plan for their area in consultation with the local community.	• Alterations to water quality and/or water movement; • Release of contaminated material (soils, runoff); and • Introduction or spread of invasive species	considered that the FAPP would have any potential to give rise to significant adverse in-combination effects.
Living With Water in Belfast 2020 Aims to deliver a new, strategic, long-term approach to drainage and wastewater management to protect from flooding, provide a cleaner and greener environment and support growth of the Greater Belfast area.	• Habitat degradation or improvement; • Alterations to water quality and/or water movement; and • Release of contaminated material (soils, runoff).	There is no potential for adverse in-combination effects with the FAPP, as the programme also seeks to deliver benefits to water quality, through proposed agricultural practises and standards. Potential beneficial in-combination effects could be delivered subject to appropriate implementation.
Plans (Republic of Ireland)		
Eight Environmental Action Programme (2021-2030) The 8th EAP aims to accelerate the transition to a climate-neutral, resource-efficient and regenerative economy. It recognises that human wellbeing and prosperity depend on the healthy ecosystems within which we operate and sets out six priority objectives (i) climate neutrality by 2050 (ii) reducing vulnerability to climate change (iii) circular economy (iv) zero-pollution ambition (v) enhancing natural capital and (vi) reducing environmental and climate pressures.	• Habitat loss or destruction; • Habitat fragmentation or degradation; • Alterations to air quality; • Alterations to water quality and/or water movement; and • Disturbance to habitats/ species.	As the EAP is aimed at environmental action protection, there are no potential in-combination effects.
The EU Sustainable Development Strategy (EU SDS) and Our Sustainable Future: A Framework for Sustainable Development in Ireland (2012) The overarching sustainable development policy document in the EU. During the 2009 review the EU noted a number of unsustainable trends that require urgent action including a decrease in high energy consumption in the transport sector in line with the 2020 Strategy. At national level, Our Sustainable Future: A Framework for Sustainable Development in Ireland (2012) has followed the model used in the EU SDS.	• Habitat loss or destruction; • Habitat fragmentation or degradation; • Species mortality; • Disturbance to habitats/species; • Alterations to water quality and/or water movement; and • Introduction or spread of invasive species.	Among the sustainable agriculture measures specified in the Our Sustainable Future national document is promoting sustainable pasture-based farming and soil management contributing to sustainable energy requirements. As such, there is no potential for in-combination effects with the FAPP.
Water Framework Directive (2000/60/EC) and Second Cycle River Basin Management Plan 2018-2021 (Third Cycle in prep, 2021-2027) The primary purpose of this Directive and the various pieces of national legislation that have enacted through the implementation of River Basin Management Plans, is to achieve good status for all water bodies, with no deterioration in water body status. The RBMP sets out the PoM to achieve the objectives of the WFD.	• Improved Water Quality; • Improved habitats; and • Increased resilience in habitats and species.	No risk of likely significant in-combination effects will result as the primary purpose of the Directive is to improve ecological status and includes achievement of objectives of the Habitats and Birds Directives. The third cycle River Basin Management Plan 2021-2027 was published together with a NIS including mitigation to offset negative effects.
Water Services Strategic Plan Irish Water has prepared a Water Services Strategic Plan (WSSP, 2015), under Section 33 of the Water Service No. 2 Act of 2013 to	• Habitat loss or destruction; • Habitat fragmentation or degradation;	The WSSP has undergone SEA and AA, which highlighted the need for additional plan/project environmental assessments to be carried out at the tier 2

FAPP In Combination with…	Key Types of Effects	Assessment of Effects
address the delivery of strategic objectives which will contribute towards improved water quality and WFD requirements. The WSSP forms the highest tier of asset management plans (Tier 1) which Irish Water prepare, and it sets the overarching framework for subsequent detailed implementation plans (Tier 2) and water services projects (Tier 3). The WSSP sets out the challenges we face as a country in relation to the provision of water services and identifies strategic national priorities. It includes Irish Water's short, medium and long term objectives and identifies strategies to achieve these objectives. As such, the plan provides the context for subsequent detailed implementation plans (Tier 2) which will document the approach to be used for key water service areas such as water resource management, wastewater compliance and sludge management. The WSSP also sets out the strategic objectives against which the Irish Water Capital Investment Programme is developed. The current version of the CIP outlines the proposals for capital expenditure in terms of upgrades and new builds within the Irish Water owned asset	• Disturbance to habitats/species; • Alterations to water quality and/or water movement; and • Introduction or spread of invasive species.	and tier 3 levels. No likely significant in-combination effects are envisaged.
Catchment Flood Risk Assessment and Management (CFRAM) Programme, under the Floods Directive The Office of Public Works (OPW) is responsible for the implementation of the Floods Directive 2007/60/EC which is being carried out through a Catchment based Flood Risk Assessment and Management (CFRAM) Programme. As part of the directive Ireland is required to undertake a Preliminary Flood Risk Assessment, to identify areas of existing or potentially significant future flood risk and to prepare flood hazard and risk maps for these areas. Following this, Flood Risk Management Plans (FRMPs) are developed for these areas setting objectives for managing the flood risk and setting out a prioritised set of measures to achieve the objectives. The CFRAM programme is currently being rolled out and Draft Flood Risk Management Plans have been prepared. These plans have been subject AA.	• Habitat loss or destruction; • Habitat fragmentation or degradation; • Alterations to water quality and/or water movement; • Disturbance; • In-combination impacts within the same scheme	CFRAM Studies and their product Flood Risk Management Plans, have undergone appropriate assessment. Any future flood plans will have to take into account the design and implementation of water management infrastructure as it has the potential to impact on hydro morphology and potentially on the ecological status and favourable conservation status of water bodies. The AA of the CFRAMs considered the potential for impacts from hard engineering solutions and how these might affect hydrological connectivity and hydro morphological supporting conditions for protected habitats and species. No likely significant in-combination effects are envisaged.
Common Agricultural Policy (CAP) and CAP Strategic Plan (CSP) The Common Agricultural Policy (CAP) protects family farm incomes, supports the rural economy, ensures the production of high-quality safe food for consumers and protects rural landscapes and the environment. The CAP consists of a Two Pillar Structure: • Pillar 1 Income Support (The main schemes include the Basic Payment Scheme and Greening); and • Pillar 2 Infrastructure, Environment and Development Support (The main schemes include GLAS, EIP-AGRI and TAMS).	• Habitat loss or destruction; • Habitat fragmentation or degradation; • Species mortality; • Disturbance to habitats/species; • Alterations to water quality and/or water movement; and • Introduction or spread of invasive species.	The evolution of the CAP has been increasingly concerned with sustainability from an environmental perspective. It has helped to reduce the pollution of waters by nitrates, through rural development measures (in particular, agri-environment measures, support for investments in storage of manure, and training) and cross-compliance (including the introduction of the Nitrates Directive, establishment of buffer strips along water courses). In this regard, no likely significant in-combination effects are envisaged.

FAPP In Combination with…	Key Types of Effects	Assessment of Effects
DAFM is currently preparing the Strategic Plan for the Common Agricultural Policy for Ireland 2023-2027. The CAP Strategic Plan (CSP) includes the preparation of a Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis and a Needs Assessment.		
Food Vision 2030 - A World Leader in Sustainable Food Systems This ten-year strategy is the successor to the current Food Wise 2025 plan and aims to make Ireland a world leader in Sustainable Food Systems over the next decade. Some of the key high-level targets outlined in the strategy of relevance to the FAPP include the following: • Biogenic methane reduction of a minimum of 10% by 2030 (based on 2018 data); • Nitrous Oxide: Emissions associated with chemical fertiliser use to reduce by more than 50% by 2030; • Water Quality: The Strategy commits to reduce nutrient losses from agriculture to water by 50% by 2030; • Biodiversity: It is envisaged that by 2030, 10% of farmed area will be prioritised for biodiversity, spread across all farms throughout the country; • Air Quality: Ammonia emissions to reduce to 5% below 2005 levels by 2030 The Programme for Government called for an ambitious blueprint for the sector for the years ahead, adding value sustainably into the future, with a strategic focus on environmental protection. It is also a key deliverable for agriculture under the Government's Our Rural Future, Ireland's Rural Development Policy 2021-2025.	• Habitat loss or destruction; • Habitat fragmentation or degradation; • Species mortality; • Disturbance to habitats/species; • Alterations to water quality and/or water movement; and • Introduction or spread of invasive species.	This strategy aims to increase the value of Irish agri-food exports from €14.2 billion in 2020 up to €21 billion by 2030. The strategy aims to achieve this intensification through sustainable steady value growth in a climate smart, environmentally sustainable agri-food sector. The Strategy commits to reduce nutrient losses from agriculture to water by 50% in 2030 in line with the Farm to Fork Strategy. The AA concluded that the adoption of Food Vision 2030 would not have significant adverse effects on the integrity of any Natura 2000 sites. However, over the period of previous agri-food strategies (Food Harvest 2020 and Food-Wise 2025), dairy cow numbers increased by 24.5% and milk production increased by 41%. This intensification also increased the total nitrogen load discharged to Irish Waters. As such, there is a concern that the intensification of the agri-food sector may result in additional nitrogen losses over the lifetime of the Food Vision 2030 period. However, it is noted that the intensification is not projected to significantly increase herd numbers and, as such, any additional nitrogen loading to water may be modest. Potential for cumulative impacts resulting in adverse effects on European sites between the Food Vision 2030 and the FAPP cannot be ruled out.
Our Rural Future: Rural Development Policy 2021-2025 The vision of this policy is for a thriving rural Ireland which is integral to our national economic, social, cultural and environmental wellbeing and development. An Ireland which is built on the interdependence of urban and rural areas. An Ireland which recognises the centrality of people, the importance of vibrant and lived-in rural places, and the potential to create quality jobs and sustain our shared environment.	• Habitat degradation or improvement; • Disturbance to habitats/species; • Species mortality; • Alterations to water quality and/or water movement; • Release of contaminated material (soils, runoff); and • Introduction or spread of invasive species.	The AA for Our Rural Future concluded that the policy would not have LSE on a European site. Policy 126 is to Implement Ag Climatise which includes for actions to both reduce nitrogen use (see later in this table). As such likely significant in-combination effects associated with the FAPP can be excluded.
Rural Development Programme 2014-2020 Provides a new suite of rural development measures designed to enhance the competitiveness of the agri-food sector, achieve more sustainable management of natural resources and ensure a more	• Habitat loss or destruction; • Habitat fragmentation or degradation; • Disturbance to habitats/species;	The Rural Development Plan (RDP) was subject to its own AA. Mitigation in the RDP requires that Appropriate Assessment is to be carried out for all individual building, tourism or agricultural reclamation projects, stakeholder

FAPP In Combination with…	Key Types of Effects	Assessment of Effects
balanced development of rural areas. Includes provisions under GLAS; Bio-Energy; nutrient management planning; 'Carbon Navigator' software tool	• Species mortality; • Alterations to water quality and/or water movement; • Alterations to air quality; and • Introduction or spread of invasive species.	engagement and site based monitoring. With the required mitigation in the RDP, no significant in-combination impacts are predicted.
Action Plan for Rural Development (2019) Action Plan for Rural Development sets out the Government's approach for rural places in Ireland to grow and adapt through supportive measures which encourage innovation and build on the existing strengths of rural communities in Ireland.	• Habitat loss or destruction; • Habitat fragmentation or degradation; • Disturbance to habitats/species; • Species mortality; • Alterations to water quality and/or water movement; • Alterations to air quality; and • Introduction or spread of invasive species.	The Action Plan for Rural Development includes over 230 actions focussed on developing the rural economy. No significant in-combination impacts are predicted.
Climate Action Plan 2019 The plan focusses on energy, transport, waste, agriculture and buildings. The plan includes new governance structures necessary to implement changes and sets out specific targets for each sector. Specifically Action 102 of the Plan focusses on the implementation of a suite of measures to improve nitrogen use efficiency as follows: • Establish an industry group to promote new 'environmentally friendly' branding and standards on low emissions fertilisers to improve awareness; • Develop a blueprint for low N use suitable to all productivity levels and develop implementation options; • Reduce nitrogen fertiliser use through the inclusion of clover in grassland swards; • Improve adoption of Low Emissions Slurry Spreading equipment; and • Complete research in respect of potential food residues arising from certain fertiliser formulations (e.g. protected urea) which will allow industry to have confidence in the widespread use of these products which lower N_2O emissions.	• Habitat loss or destruction; • Habitat fragmentation or degradation; • Species mortality; • Disturbance to habitats/species; • Alterations to air quality; • Alterations to water quality and/or water movement; and • Introduction or spread of invasive species	Agriculture was responsible for 35.4% of greenhouse gas emissions in Ireland in 2019 mainly methane from livestock, and nitrous oxide due to the use of nitrogen fertiliser and manure management. With the Climate Action Plan Measures scenario, emissions from agriculture are projected to decrease to approximately 19 Mt CO_{2eq} by 2030 which is an 11.3% reduction over the period 2020-2030. This assumes that the Teagasc Greenhouse Gas Marginal Abatement Cost Curve[11] measures are adopted and fully implemented including the de-coupling of N_2O emissions from production via nitrogen use efficiency and the use of low emission fertilisers and spreading techniques. It is considered that there is potential for positive in combination effects as it supports long term reductions in fugitive losses of nitrogen.
Ag-Climatise This is the National 'Climate & Air Roadmap' for the Agriculture Sector. The roadmap sets an ambitious vision for a 'climate neutral	• Habitat loss or destruction; • Habitat fragmentation or degradation;	Ag-Climatise includes for actions to both reduce nitrogen use and to achieve a target of 90% of all slurry spread by low emissions slurry spreading by 2027. This LESS

[11] Link: https://www.teagasc.ie/media/website/publications/2018/An-Analysis-of-Abatement-Potential-of-Greenhouse-Gas-Emissions-in-Irish-Agriculture-2021-2030.pdf

FAPP In Combination with…	Key Types of Effects	Assessment of Effects
agriculture sector by 2050' and includes 29 actions with specific and challenging targets aimed at reducing the environmental footprint and further building on the strong credentials of Irish Agriculture. One of the key tasks listed is to reduce nutrient loss to the environment and contribute to improved water quality and biodiversity.	• Disturbance to habitats/species; • Species mortality; and • Alterations to air quality.	technology has co-benefits for reducing both nitrate losses to ground and water as well as losses of ammonia to atmosphere. It is considered that there is potential for positive in combination effects as it supports long term reductions in fugitive losses of nitrogen.
National Development Plan 2018-2027 The National Development Plan sets out the investment priorities that will underpin the implementation of the National Planning Framework (NPF). This will guide national, regional, and local planning and investment decisions in Ireland over the next two decades, to cater for an expected population increase of over 1 million people.	• Habitat loss or destruction; • Habitat fragmentation or degradation; • Disturbance to habitats/species; • Alterations to water quality and/or water movement; and • Introduction or spread of invasive species	The NDP is a high level budgetary and finance document which identifies priorities for capital investment. Given the nature of the capital investment the majority of the projects referenced and funded under the NDP have been or will be subject to EIA/AA. The NDP does not confer planning, it identifies strategic need. There is no potential for significant in-combination effects.
National Planning Framework (Ireland 2040 Our Plan) The National Planning Framework is a long-term strategy for the next 20 years and it will focus on ensuring compatibility between future growth of cities/ towns within Ireland alongside environmental sustainability. It is intended that the National Planning Framework will both provide the focus to guide and inform future planning and set the framework for integrated investment decisions. It is intended that the national policy will be detailed through the Regional Spatial and Economic Strategies in order to set out long term national, regional and local development frameworks from within which sectors will work together to ensure proper planning and sustainable development. Both the National Planning Framework and the Regional Spatial and Economic are being subject to the AA process.	• Habitat loss or destruction; • Habitat fragmentation or degradation; • Alterations to water quality and/or water movement; • Alteration to air quality; • Disturbance.	It is a policy[12] of the National Planning Framework to ensure the resilience of our natural resources and cultural assets. Linkage to wider policies such as for European Sites under the Birds and Habitats Directives and the Water Framework Directive is recognised and the need to set high level planning policies in protecting and making responsible use of our natural environment. The NPF has been subject to AA and includes clear policy on avoidance of impacts to European sites. The NPF has a focus on the sustainable development of rural areas which is aligned with agricultural practices supported in the NAP. There is no potential for significant in-combination impact.
Regional Spatial and Economic Strategies The three regional strategies seek to interpret and implement the NPF at a regional level.	• Habitat loss or destruction; • Habitat fragmentation or degradation; • Disturbance to habitats/species; • Alterations to water quality and/or water movement; and • Introduction or spread of invasive species.	The three regional strategies include clear policy and supporting actions to avoid and minimise impacts on European sites. They include similar commitments to only implement the policy base within the carrying capacity of the receiving environment as greater detail is known through the planning hierarchy. There is no potential for significant in-combination effects.
Biodiversity Climate Adaptation Plan [arising from the National Climate Adaptation Framework]	• Increased resilience in habitats and species	No risk of likely significant in-combination effects will result as the primary purpose of the plan is to protect biodiversity and improve the understanding of the link

[12] http://www.housing.gov.ie/sites/default/files/publications/files/towards_a_national_planning_framework_december_2015.pdf , Appendix II – Page 2

FAPP In Combination with…	Key Types of Effects	Assessment of Effects
The framework provides strategic focus to ensure adaptation measures are taken across different sectors and levels of government to reduce Ireland's vulnerability to the negative impacts of climate change. There is a requirement for each government department to prepare sectoral plans. The DCHG completed this in relation to Biodiversity. The Biodiversity CAP sets out the key challenges for biodiversity and the actions needed to increase resilience of our native flora and fauna to the effects of climate change.	• Introduction or spread of invasive species • Improved Water quality	between climate change and environmental impacts. The actions and priorities arising from the plan are important for resilience in the longer term. Positive in combination effects as it supports resilience to climate change and there is no potential for significant in-combination effects.
Biodiversity Action Plan 2017-2021 Ireland's third iteration of the Biodiversity Action Plan (BAP), for conserving and restoring Ireland's biodiversity covering the period 2017 to 2021. The aims are to achieve Ireland's Vision for Biodiversity through addressing issues ranging from improving the management of protected areas to increasing awareness and appreciation of biodiversity and ecosystem services.	• Improved habitat and species protection	As the BAP is aimed at environmental protection, there are no in-combination effects though it is noted that the BAP cites agricultural intensification as a current threat to biodiversity. Objective 4 is to conserve and restore biodiversity and ecosystem services in the wider countryside. Given the positive nature of the Action Plan, there is no potential for significant in-combination effects.
National Raised Bog Management Plan The current NPWS programme for the restoration of raised bogs throughout Ireland, as detailed within the National Raised Bog Management Plan, will deliver ecological benefits for both the raised bog habitats and watercourses downstream of these bogs, through blocking of drains within these sites alongside other measures. This will result in an overall decrease in the sediment loads of the watercourses within the catchments supporting raised bog SACs in addition to restoration of the condition of the raised bog habitats themselves.	• Decrease sediment loads and acidity in catchments downstream of bogs to be restored • Improved condition of raised bog habitats	No risk of likely significant in-combination effects will result as the primary purpose of the plan is to restore raised bog sites. The actions and priorities arising from the plan are important for resilience in the longer term.

7 MITIGATION MEASURES

It is noted that the FAPP is a strategic national policy which sets the framework for, and relies to a significant degree on, other policy, strategy and plan initiatives to achieve the objectives in a more coordinated approach to managing agricultural activities throughout the country. Many of these other policies will be subject to their own Appropriate Assessments which may give rise to the identification of specific measures which will be, implemented. The measures committed to in these derivative plans and initiatives will be essential to ensuring that the objectives of the FAPP are met, and that the FAPP does not in itself result in adverse effects on the integrity any European Site.

However, to further improve actions contained within the FAPP and to address potential negative effects, mitigation measures have been proposed for inclusion in the policy programme on the basis of the individual workstreams, as set out in **Table 7.1**.

It is noted that in many cases proposed mitigation comprises monitoring of the ongoing effects of the APP and in addition there is scope for integral mitigation measures for an individual policy within an alternative policy within the overall programme, for example the use of knowledge measures to counteract potential unforeseen adverse effects advising from generational renewal measures.

Table 7.1: Mitigation Measures outlined for the FAPP

FAPP Policy Proposal	Mitigation Measures
Workstream 1 – Resilience Measure	
RM1	Regulatory gaps which may exist following the implementation of RM1, namely environmental effects arising from agricultural activities within holdings of less than 10ha in size, should be addressed through a derivative policy, or within the wording of the policy itself to ensure that the proposed Farm Sustainability Standards, or similar, are also applicable to small agricultural holdings. Mitigation may also be captured within existing legislation namely the Nutrient Action Plan (NAP) Regulations.
Workstream 2 – Headage Sustainability Package	
HSP1	An absence of proposed stocking cap density may have potential to give rise to significant adverse effects upon European Sites through the associated increases to emissions to air and water. Mitigation is recommended for derivative policies and initiatives in the form of monitoring requirements to first establish whether the lack of cap is giving rise to higher than desired grazing densities and subsequently to prevent this giving rise to increases in emissions to air and water and associated adverse effects on the integrity of any European Site. Further mitigation, such as remedial policy measures, for example penalties associated with exceeding the historical reference for livestock density, may be required. Mitigation for effects associated with emissions to air and water are also likely to be at least partially if not fully covered by the requirements of the NAP Regulations.
HSP2	Proposed livestock efficiency measures may give rise to unforeseen increase in adverse effects associated with emissions to air and water. Mitigation is recommended for derivative policies and initiatives in the form of monitoring requirements to first establish whether the lack of cap is giving rise to higher than desired grazing densities and subsequently to prevent this giving rise to increases in emissions to air and water and associated adverse effects on the integrity of any European Site. Further mitigation, such as remedial policy measures, for example penalties associated with exceeding the historical reference for livestock density, may be required. Mitigation for effects associated with emissions to air and water are also likely to be at least partially if not fully covered by the requirements of the NAP Regulations.
Workstream 3 – Farming for Nature Package	

FNP1	While generally positive, this measure has potential to give rise to significant adverse effects through the creation and management of inappropriate habitats. Mitigation is recommended for derivative policies and initiatives to ensure that proposals for habitat creation are appropriate to the location and would not have potential to give rise to any significant adverse effects upon SACs or SPAs, such as the creation of woodlands within close proximity to habitats of importance for vulnerable breeding or wintering bird species. Temporal elements are also likely to be relevant, such as the avoidance of works in proximity to SPAs or SACs within periods where qualifying species populations are particularly vulnerable to airborne noise and visual disturbance, or where excess rainfall may give rise to sedimentation upon freshwater systems. Consideration of proposals should include for individual assessment of the site characteristics to establish the potential for such adverse effects to occur and appropriately adjusted or abandoned as appropriate. The method of implementation of the suggested mitigation measures should form a material component of the 'Test and Learn' pilots proposed under FNP4.
Workstream 4 – Farming for Carbon Measures	
FCM1	As discussed above in respect of FNP1, the proposed farming for carbon measures include for the potential for forestry creation. Inappropriately sited this would have potential to give rise to significant adverse effects. Mitigation is recommended for derivative policies and initiatives to ensure that such proposals are not located in sensitive location and are assessed on a case-by case basis. Management prescriptions for such forestry and other farming for carbon measures should be subject to controls to ensure that vulnerable downstream freshwater sites, particularly those designated on account of the Annex II species freshwater pearl mussel, are not subject to adverse effects associated with sedimentation or pollution events.
FCM2	Any feed additive proposed for wide scale use within catchments supporting aquatic SACs or SPAs, should be subject to a robust scientific review to establish its safety for the wider environment and particularly its propensity to affect organisms of importance for the continued ecological functioning of an Annex I habitat or qualifying species population. Robust monitoring should be required to establish any environmental effects in the absence of such an evidence base.
FCM4	Proposed for wide scale use of Urease Inhibitor chemicals within catchments supporting aquatic SACs or SPAs, should be subject to a robust scientific review to establish its safety for the wider environment and particularly its propensity to affect organisms of importance for the continued ecological functioning of an Annex I habitat or qualifying species population. Robust monitoring should be required to establish any environmental effects, in the absence of such an evidence base.
FCM9	Any proposed biomethane or hydrogen initiative should be subject to separate assessment for potential adverse effects to arise upon European Sites and, as required, a robust monitoring regime implemented.
Workstream 5 – Investment Measure	

IM1	Proposed initiatives for investment may be highly variable with an associated variable array of potential to give rise to adverse impacts upon European sites. Initiatives should be subject to separate assessment for potential adverse effects to arise upon European Sites and, as required, a robust monitoring regime implemented
Workstream 7 – Generational Renewal	
GR1	Proposed generational renewal measures should include for a system of monitoring to ensure that the measure is having the intended outcome in regard to environmental protection. Knowledge measures, under KM1, should be tailored to ensure that farmers within sensitive areas, such as within freshwater SAC or SPA catchments, are aware of their obligations under both the FAPP and the NAP regulations.
Cross-cutting Element – Controls and Assurance	
CA1	Proposed control measures, to be implemented within the Farm Sustainability Standards should be sufficiently robust as to ensure that no preventable adverse impacts arise to European Sites, through agriculture. A programme of monitoring should be implemented to ensure that no unforeseen adverse impacts arise, and, where problematic behaviours are observed, amended to take these into account.
CA2	As per CA1, there is potential for insufficient provision of prohibitive penalties to give rise to adverse effects through a lack of deterrent effect. While this is considered unlikely it is recommended that monitoring recommended for CA1 takes measures under CA2 into account. Where potential problems arise the policy should be amended accordingly.
Cross-cutting Element – Metrics, Monitoring and Evaluation	
MME1	Proposed metrics and systems of monitoring should be sufficiently robust as to capture the requirements for mitigation measures identified for all workstreams as set out above.
Horticulture	
H1	Proposed expansion of the horticulture sector should be undertaken in light of the potential for adverse effects upon European sites, such as those associated with nutrient emissions to air and water. Mitigation measures for derivative policies and initiatives should set out the requirement for horticultural enterprises to abide by the proposed Farm Sustainability Standards and any other relevant environmental protection measures, as required, relative to proximity or hydrological links to European Sites.

8 CONCLUSION

This Stage 2 appraisal for HRA has considered the potential of the FAPP to give rise to adverse effects on the integrity of European sites, within both Northern Ireland (UK National Sites) and the relevant areas of the Republic of Ireland (Natura 2000 Sites), with regard to their qualifying interests, associated conservation status and the overall site integrity, alone and in combination with other relevant plans and programmes.

In considering the potential for adverse effects, it has been noted that the FAPP is a strategic and high-level plan, which may inform the preparation of other strategies.

The FAPP does not determine the precise location of any development project or designate or allocate specific land uses, nor does it preclude the consideration of alternatives.

In light of this and where necessary, a precautionary approach has been adopted in the Stage 2 appraisal to ensure that the measures proposed with respect to implementing the actions of the FAPP are, where necessary, have been adequately assessed. As such, the FAPP will not adversely affect the integrity of any European Site either alone or in combination with other relevant plans or programmes and subject to securing the mitigation prescribed above, which largely relates to the nature of derivative policies and initiatives.

In light of the conclusions of the assessment contained in this Stage 2 appraisal for HRA, the authors are of the view that the adoption of the FAPP alone, or in combination with other plans and programmes, will not adversely affect the integrity of any European site, subject to the appropriate implementation of derivative policies and initiatives.

Accordingly, and in light of the conclusions of the assessment contained here, the competent authority is enabled to ascertain that the adoption of the FAPP, alone or in combination with other relevant plans and programmes, will not adversely affect the integrity of any European site.

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Appendices

Appendix I – European Sites Assessed for Significant Adverse Effects

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
UK9020301	Antrim Hills SPA	[A082] Hen Harrier (*Circus cyaneus)* [A098] Merlin (*Falco columbarius)*	To maintain each feature in favourable condition.	Version 3 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
IE001403	Arroo Mountain SAC	[4010] Northern Atlantic wet heaths with *Erica tetralix* [4030] European dry heaths [4060] Alpine and Boreal heaths [7130] Blanket bogs (* if active bog) [7220] Petrifying springs with tufa formation (*Cratoneurion*) [8120] Calcareous and calcshist screes of the montane to alpine levels (*Thlaspietea rotundifolii)* [8210] Calcareous rocky slopes with chasmophytic vegetation	To restore the favourable conservation condition of Northern Atlantic wet heaths with Erica tetralix in Arroo Mountain SAC, which is defined by 20 attributes and targets. To restore the favourable conservation condition of European dry heaths in Arroo Mountain SAC, which is defined by 19 attributes and targets. To maintain the favourable conservation condition of Alpine and Boreal heaths in Arroo Mountain SAC, which is defined by 14 attributes and targets. To restore the favourable conservation condition of Blanket bogs in Arroo Mountain SAC, which is defined by 19 attributes and targets To maintain the favourable conservation condition of Petrifying springs with tufa formation (Cratoneurion)* in Arroo Mountain SAC, which is defined by 17 attributes and targets. To restore the favourable conservation condition of Calcareous rocky slopes with chasmophytic vegetation in Arroo Mountain SAC, which is defined by 9 attributes and targets.	Version 1 31st August 2016	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
UK0030318	Aughnadarragh Lough SAC	[1065] Marsh Fritillary butterfly (*Euphydryas aurinia)*	To maintain (or restore where appropriate) the Marsh Fritillary Butterfly population to favourable condition	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
IE000115	Ballintra SAC	[4030] European dry heaths [8240] Limestone pavements	To restore the favourable conservation condition of European dry heaths in Ballintra SAC, which is defined by 19 attributes and targets. To maintain the favourable conservation condition of Limestone pavements* in Ballintra SAC, which is defined by 12 attributes and targets	Version 1 15th April 2019	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP
UK0030319	Ballykilbeg SAC	[1065] Marsh Fritillary butterfly (*Euphydryas aurinia)*	To maintain (or restore where appropriate) the Marsh Fritillary Butterfly population to favourable condition	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK0016599	Ballynahone Bog SAC	[7110] Active raised bogs	To maintain (or restore where appropriate) the active raised bog to favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK0030083	Banagher Glen SAC	[9180] Tilio-Acerion forests of slopes, screes and ravines. [91A0] Old sessile oak woods with Ilex and Blechnum in the British Isles	To maintain (or restore where appropriate) the Old sessile oak woods with Ilex and Blechnum in the British Isles and Tilio-Acerion forests of slopes, screes and ravines to favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK0030084	Bann Estuary SAC	[2110] Embryonic shifting dunes [2120] Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2130] Fixed coastal dunes with herbaceous vegetation (grey dunes) [1330] Atlantic salt meadows *(Glauco-Puccinellietalia maritimae)*	To maintain (or restore where appropriate) the • Fixed dunes with herbaceous vegetation • Atlantic salt meadows (Glauco-Puccinellietalia maritimae) • Shifting dunes along the shoreline with Ammophila arenaria • Embryonic shifting dunes to favourable condition	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK9020290	Belfast Lough Open Water SPA	[A005] Great Crested Grebe (*Podiceps cristatus)*	To maintain each feature in favourable condition	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
UK9020101	Belfast Lough SPA	[A162] Redshank (*Tringa totanus)* [A005] Great Crested Grebe (*Podiceps cristatus)*	To maintain each feature in favourable condition	Version 3 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
IE000623	Ben Bulben, Gleniff and Glenade Complex SAC	[3260] Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [4010] Northern Atlantic wet heaths with *Erica tetralix* [4030] European dry heaths [4060] Alpine and Boreal heaths [5130] *Juniperus communis* formations on heaths or calcareous grasslands [6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia)* (* important orchid sites) [6230] Species-rich Nardus grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) [6430] Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [7130] Blanket bogs (* if active bog) [7140] Transition mires and quaking bogs [7220] Petrifying springs with tufa formation (*Cratoneurion*) [7230] Alkaline fens [8110] Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*) [8120] Calcareous and calcshist screes of the montane to alpine levels (*Thlaspietea rotundifolii*) [8210] Calcareous rocky slopes with chasmophytic vegetation [1013] Geyer's Whorl Snail (*Vertigo geyeri)* [1355] Otter (*Lutra lutra)*	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected.	Generic 23rd March 2021	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP
UK0030089	Binevenagh SAC	[6230] Species-rich Nardus grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) [8120] Calcareous and calcshist screes of the montane to alpine levels (*Thlaspietea rotundifolii)*	To maintain each in favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
		[8210] Calcareous rocky slopes with chasmophytic vegetation				
UK0016609	Black Bog SAC	[7110] Active raised bogs	To maintain (or restore where appropriate) the active raised bog to favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
IE002032	Boleybrack Mountain SAC	[3160] Natural dystrophic lakes and ponds [4010] Northern Atlantic wet heaths with *Erica tetralix* [4030] European dry heaths [6410] *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae)* [7130] Blanket bogs (* if active bog)	To maintain the favourable conservation condition of Natural dystrophic lakes and ponds in Boleybrack Mountain SAC, which is defined by 18 attributes and targets. To restore the favourable conservation condition of Northern Atlantic wet heaths with Erica tetralix in Boleybrack Mountain SAC, which is defined by 20 attributes and targets. To restore the favourable conservation condition of European dry heaths in Boleybrack Mountain SAC, which is defined by 19 attributes and targets. To maintain the favourable conservation condition of Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) in Boleybrack Mountain SAC, which is defined by 13 attributes and targets. To restore the favourable conservation condition of Blanket bogs in Boleybrack Mountain SAC, which is defined by 19 attributes and targets	Version 1 17th August 2016	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP
UK0030097	Breen Wood SAC	[91A0] Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91D0] Bog woodland	To maintain (or restore where appropriate) the Old sessile oak woods with Ilex and Blechnum in the British Isles and Bog Woodland to favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
IE000625	Bunduff Lough and Machair/Trawalua/Mullaghmore SAC	[1140] Mudflats and sandflats not covered by seawater at low tide [1160] Large shallow inlets and bays [1170] Reefs [2120] Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2130] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2190] Humid dune slacks [21A0] Machairs (* in Ireland) [5130] *Juniperus communis* formations on heaths or calcareous grasslands [6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia)* (* important orchid sites) [7230] Alkaline fens [1065] Marsh Fritillary (*Euphydryas aurinia)* [1395] Petalwort (*Petalophyllum ralfsii)*	To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in Bunduff Lough and Machair/Trawalua/Mullaghmore SAC, which is defined by 2 attributes and targets. To maintain the favourable conservation condition of Large shallow inlets and bays in Bunduff Lough and Machair/Trawalua/Mullaghmore SAC, which is defined by 2 attributes and targets. To maintain the favourable conservation condition of Reefs in Bunduff Lough and Machair/Trawalua/Mullaghmore SAC, which is defined by 3 attributes and targets. To maintain the favourable conservation condition of Shifting dunes along the shoreline with Ammophila arenaria ('white dunes') in Bunduff Lough and Machair/Trawalua/Mullaghmore SAC, which is defined by 7 attributes and targets. To restore the favourable conservation condition of Fixed coastal dunes with herbaceous vegetation ('grey dunes') in Bunduff Lough and Machair/Trawalua/Mullaghmore SAC, which is defined by 9 attributes and targets. To maintain the favourable conservation condition of Machairs in Bunduff Lough and Machair/Trawalua/Mullaghmore SAC, which is defined by 11 attributes and targets.	Version 1 3rd March 2015	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
			To restore the favourable conservation condition of Juniperus communis formations on heaths or calcareous grasslands in Bunduff Lough and Machair/Trawalua/Mullaghmore SAC, which is defined by 8 attributes and targets To maintain the favourable conservation condition of Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco Brometalia) in Bunduff Lough and Machair/Trawalua/Mullaghmore SAC, which is defined by 11 attributes and targets. To maintain the favourable conservation condition of Alkaline fens in Bunduff Lough and Machair/Trawalua/Mullaghmore SAC, which is defined by 9 attributes and targets. To maintain the favourable conservation condition of Petalwort in Bunduff Lough and Machair/Trawalua/Mullaghmore SAC, which is defined by 5 attributes and targets			
UK9020161	Carlingford Lough SPA	[A191] Sandwich Tern (*Sterna sandvicensis)* [A193] Common Tern (*Sterna hirundo)* [A046] Light-bellied goose (*Branta bernicla hrota)*	To maintain each feature in favourable condition	Version 3 1st August 2015	NI	In proximity to agricultural lands within NI subject to FAPP
IE004078	Carlingford Lough SPA (RoI)	[A046] Light-bellied goose (*Branta bernicla hrota)* [A999] Wetland and waterbirds	To maintain each feature in favourable condition	Version 1 22nd August 2013	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP and is hydrologically connected to NI via the Newry River and other contributing watercourses

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
IE000453	Carlingford Mountain SAC	[4010] Northern Atlantic wet heaths with *Erica tetralix* [4030] European dry heaths [4060] Alpine and Boreal heaths [6230] Species-rich *Nardus* grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) [7130] Blanket bogs (* if active bog) [7140] Transition mires and quaking bogs [7230] Alkaline fens [8110] Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*) [8210] Calcareous rocky slopes with chasmophytic vegetation [8220] Siliceous rocky slopes with chasmophytic vegetation	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected.	Generic 23rd March 2021	RoI	Lies within 15km of the NI border and as such in proximity to agricultural lands within NI subject to FAPP
IE002306	Carlingford Shore SAC	[1210] Annual vegetation of drift lines [1220] Perennial vegetation of stony banks	To maintain the favourable conservation condition of Annual vegetation of drift lines in Carlingford Shore SAC, which is defined by 6 attributes and targets. To maintain the favourable conservation condition of Perennial vegetation of stony banks in Carlingford Shore SAC, which is defined by 6 attributes and targets.	Version 1 15th July 2013	RoI	Lies within 15km of the NI border and as such in proximity to agricultural lands within NI subject to FAPP and is hydrologically connected to NI via the Newry River and other contributing watercourses
UK0030110	Carn Glenshane Pass SAC	[7130] Blanket bogs (* if active bog)	To maintain (or restore where appropriate) the Blanket Bog to favourable condition.	Version 2.1 10th October 2017	NI	In proximity to agricultural lands within NI subject to FAPP
UK0030116	Cladagh (Swanlinbar) River SAC	[1029] Freshwater Pearl Mussel (*Margaritifera margaritifera)* [3260] Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation	To maintain (or restore where appropriate) the Freshwater Pearl Mussel *Margaritifera margaritifera*, Water courses of plain to montane levels with the Ranunculus fluitans and Callitricho-Batrachion vegetation to favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
UK9020291	Copeland islands SPA	[A194] Artic Tern (*Sterna paradisaea)* [A013] Manx Shearwater (*Puffinus puffinus)*	To maintain each feature in favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
IE000979	Corratirrim SAC	[8240] Limestone pavements*	To maintain the favourable conservation condition of Limestone pavements* in Corratirrim SAC, which is defined by 12 attributes and targets.	Version 1 17th April 2019	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP
UK0030321	Cranny Bogs SAC	[7110] Active raised bogs	To maintain (or restore where appropriate) the active raised bog to favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
IE000129	Croaghonagh Bog SAC	[7130] Blanket bogs (* if active bog)	To restore the favourable conservation condition of Blanket bogs (* if active bog) in Croaghonagh Bog SAC, which is defined by 19 attributes and targets.	Version 1 15th May 2017	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP
IE000584	Cuilcagh – Anierin Uplands SAC	[3110] Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) [3160] Natural dystrophic lakes and ponds [4010] Northern Atlantic wet heaths with *Erica tetralix* [4030] European dry heaths [4060] Alpine and Boreal heaths [6230] Species-rich Nardus grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) [7130] Blanket bogs (* if active bog) [7140] Transition mires and quaking bogs [7220] Petrifying springs with tufa formation (*Cratoneurion)* [8110] Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*) [8220] Siliceous rocky slopes with chasmophytic vegetation [6216] Slender Green Feather-moss (*Hamatocaulis vernicosus)*	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected.	Version 1 5th September 2016	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
UK0016603	Cuilcagh Mountain SAC	[3160] Natural dystrophic lakes and ponds [4010] Northern Atlantic wet heaths with *Erica tetralix* [4030] European dry heaths [4060] Alpine and Boreal heaths [7130] Blanket bogs (* if active bog) [8110] Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*) [8220] Siliceous rocky slopes with chasmophytic vegetation	To maintain each feature in favourable condition.	Version 2.1 11th October 2017	NI	In proximity to agricultural lands within NI subject to FAPP
UK0030322	Curran Bog SAC	[7110] Active raised bogs [7120] Degraded raised bogs still capable of natural regeneration	To maintain (or restore where appropriate) the active raised bog to favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK0030323	Dead Island Bog SAC	[7110] Active raised bogs	To maintain (or restore where appropriate) the active raised bog to favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK0030324	Deroran Bog SAC	[7110] Active raised bogs	To maintain (or restore where appropriate) the active raised bog to favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK0016620	Derryleckagh SAC	[91A0] Old sessile oak woods with Ilex and Blechnum in the British Isles [7140] Transition mires and quaking bogs	To maintain (or restore where appropriate) the Transition mires and quaking bogs and Old sessile oak woods with Ilex and Blechnum in the British Isles to favourable condition	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
IE000133	Donegal Bay (Murvagh) SAC	[1140] Mudflats and sandflats not covered by seawater at low tide [2130] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2170] Dunes with *Salix repens* ssp. argentea (*Salicion arenariae)* [2190] Humid dune slacks [1365] Harbour Seal (*Phoca vitulina)*	To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in Donegal Bay (Murvagh) SAC, which is defined by 2 attributes and targets. To maintain the favourable conservation condition of Harbour Seal in Donegal Bay (Murvagh) SAC, which is defined by 5 attributes and targets.	Version 1 9th July 2012	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
			To restore the favourable conservation condition of Fixed coastal dunes with herbaceous vegetation (grey dunes) in Donegal Bay (Murvagh) SAC, which is defined by 9 attributes and targets. To restore the favourable conservation condition of Humid dune slacks in Donegal Bay (Murvagh) SAC, which is defined by 11 attributes and targets			
IE004151	Donegal Bay SPA	[A003] Great Northern Diver G*avia immer* [A046] Light-bellied Brent Goose (*Branta bernicla hrota)* [A065] Common Scoter (*Melanitta nigra*) [A144] Sanderling *Calidris alba* [A999] Wetland and Waterbirds	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.	Version 1 17th May 2017	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP and is hydrologically connected to NI via the contributing watercourses
IE000455	Dundalk Bay SAC	[1130] Estuaries [1140] Mudflats and sandflats not covered by seawater at low tide [1220] Perennial vegetation of stony banks [1310] Salicornia and other annuals colonising mud and sand [1330] Atlantic salt meadows *(Glauco-Puccinellietalia maritimae)* [1410] Mediterranean salt meadows (*Juncetalia 111lpine111e)*	To maintain the favourable conservation condition of Estuaries in Dundalk Bay SAC, which is defined by 2 attributes and targets. To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide at Dundalk Bay SAC, which is defined by 2 attributes and targets To maintain the favourable conservation condition of Perennial vegetation of stony banks in Dundalk Bay SAC, which is defined by 6 attributes and targets. To restore the favourable conservation condition of Salicornia and other annuals colonizing mud	Version 1 19th July 2011	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP and is hydrologically connected to NI via the contributing watercourses

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
			and sand in Dundalk Bay SAC, which is defined by 10 attributes and targets. To maintain the favourable conservation condition of Atlantic salt meadows in Dundalk Bay SAC, which is defined by 10 attributes and targets. To maintain the favourable conservation condition of Mediterranean salt meadows in Dundalk Bay SAC, which is defined by 10 attributes and targets.			
IE004026	Dundalk Bay SPA	[A005] Great Crested Grebe (*Podiceps cristatus)* [A043] Greylag Goose (*Anser anser*) [A046] Light-bellied Brent Goose (*Branta bernicla hrota)* [A048] Shelduck (*Tadorna tadorna)* [A052] Teal (*Anas crecca*) [A053] Mallard (*Anas platyrhynchos)* [A054] Pintail (*Anas acuta*) [A065] Common Scoter (*Melanitta nigra*) [A069] Red-breasted Merganser (*Mergus serrator)* [A130] Oystercatcher (*Haematopus ostralegus)* [A137] Ringed Plover (*Charadrius hiaticula*) [A140] Golden Plover (*Pluvialis apricaria)* [A141] Grey Plover (*Pluvialis squatarola*) [A142] Lapwing (*Vanellus vanellus*) [A143] Knot (*Calidris canutus)* [A149] Dunlin (*Calidris 112lpine)* [A156] Black-tailed Godwit (*Limosa limosa*) [A157] Bar-tailed Godwit (*Limosa lapponica)* [A160] Curlew (*Numenius arquata)* [A162] Redshank (*Tringa totanus)* [A179] Black-headed Gull (*Chroicocephalus ridibundus)* [A182] Common Gull (*Larus canus)* [A184] Herring Gull *(Larus argentatus)* [A999] Wetland and Waterbirds	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.	Version 1 19th July 2011	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP and is hydrologically connected to NI via the contributing watercourses

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
IE002303	Dunmuckrun Turloughs SAC	[3180] Turloughs	To maintain the favourable conservation condition of Dunmuckrun Turloughs SAC, which is defined by 15 attributes and targets.	Version 1 22nd January 2021	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP
IE001125	Dunragh Lough/Pettigo Plateau SAC	[4010] Northern Atlantic wet heaths with *Erica tetralix* [7130] Blanket bogs (* if active bog)	To restore the favourable conservation condition of Northern Atlantic wet heaths with *Erica tetralix* in Dunragh Lough/Pettigo Plateau SAC, which is defined by 20 attributes and targets. To restore the favourable conservation condition of European dry heaths in Dunragh Lough/Pettigo Plateau SAC, which is defined by 19 attributes and targets.	Version 1 16th May 2017	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP
IE000138	Durnesh Lough SAC	[1150] Coastal lagoons [6410] Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae)*	To restore the favourable conservation condition of Coastal lagoons in Durnesh Lough SAC, which is defined by 12 attributes and targets. To restore the favourable conservation condition of Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) in Durnesh Lough SAC, which is defined by 10 attributes and targets.	Version 1 5th Oct 2016	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP
IE004145	Durnesh Lough SPA	[A038] Whooper Swan (*Cygnus cygnus*) [A395] Greenland White-fronted Goose *(Anser albifrons flavirostris)*	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.	Generic 23rd March 2021	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP
UK 9020320	East Coast (NI) Marine pSPA	[A005] Great Crested Grebe (*Podiceps cristatus)* [A001] Red-throated diver (*Gavia 113lpine113e*) [A191] Sandwich Tern (*Sterna sandvicensis)* [A192] Roseate Tern (*Sterna dougallii)* [A193] Common Tern (*Sterna hirundo)* [A194] Arctic Tern (*Sterna paradisaea)* [A013] Manx Shearwater (*Puffinus puffinus)*	To maintain or enhance the population of the qualifying species. To maintain or enhance the range of habitats utilised by the qualifying species. To ensure that the integrity of the site is maintained;	Version 1 April 2015	NI	In proximity to agricultural lands within NI subject to FAPP

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
		A063] Eider (*Somateria mollissima*)	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.			
UK0016615	Eastern Mournes SAC	[4010] Northern Atlantic wet heaths with *Erica tetralix* [4030] European dry heaths [4060] Alpine and Boreal heaths [6150] Siliceous alpine and boreal grasslands [7130] Blanket bogs (* if active bog) [8110] Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*) [8220] Siliceous rocky slopes with chasmophytic vegetation	To maintain (or restore where appropriate) the European dry heaths, Northern Atlantic wet heaths with Erica tetralix, Active blanket bogs, Alpine and boreal heaths, Siliceous alpine and boreal grasslands, Siliceous rocky slopes with chasmophytic vegetation, Siliceous scree of the montane to snow levels to favourable condition.	Version 2 11th October 2017	NI	In proximity to agricultural lands within NI subject to FAPP
UK0016611	Fairy Water Bogs SAC	[7110] Active raised bogs	To maintain (or restore where appropriate) the active raised bog to favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK0030068	Fardrum and Roosky Turloughs SAC	[3180] Turloughs	To maintain (or restore where appropriate) the Turloughs to favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK0016606	Garron Plateau SAC	[7130] Blanket bogs (* if active bog) [7230] Alkaline fens [1528] Marsh saxifrage (*Saxifraga hirculus)* [3160] Natural dystrophic lakes and ponds [4010] Northern Atlantic wet heaths with *Erica tetralix*	To maintain (or restore where appropriate) the • Active Blanket Bog • Alkaline fen (upland)	Version 2 12th October 2017	NI	In proximity to agricultural lands within NI subject to FAPP

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
		[3130] Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea* [7140] Transition mires and quaking bogs	• Marsh saxifrage Saxifraga hirculus L • Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea* • Northern Atlantic wet heath • Natural dystrophic lakes and pools • Transition mires and quaking bogs to favourable condition.			
UK0016610	Garry Bog SAC	[7110] Active raised bogs	To maintain (or restore where appropriate) the active raised bog to favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK0030169	Hollymount SAC	[91A0] Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91E0] Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)*	To maintain (or restore where appropriate) the Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion alvae), Old sessile oak woods with Ilex and Blechnum in the British Isles to favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK9020221	Killough Bay SPA	[A046] Light-bellied Brent Goose (*Branta bernicla hrota)*	To maintain each feature in favourable condition.	Version 3 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
IE001786	Kilroosky Lough Cluster SAC	[3140] Hard oligo-mesotrophic waters with benthic vegetation of *Chara spp*. [7210] Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*. [7230] Alkaline fens [1092] White-clawed Crayfish (*Austropotamobius pallipes)*	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected.	Version 1 23rd March 2021	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP
UK0030045	Largalinny SAC	[91A0] Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles	To maintain (or restore where appropriate) the Old sessile oak woods with Ilex and Blechnum in the British Isles to favourable condition	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK9020042	Larne Lough SPA	[A191] Sandwich Tern (*Sterna sandvicensis)* [A192] Roseate Tern (*Sterna dougallii)* [A193] Common Tern (*Sterna hirundo)* [A046] Light-bellied Brent goose (*Branta bernicla)*	To maintain each feature in favourable condition.	Version 4 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
UK0030180	Lecale Fens SAC	[7230] Alkaline fens	To maintain (or restore where appropriate) the Alkaline Fens to favourable condition	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
IE004057	Lough Derg (Donegal) SPA	[A183] Lesser Black-backed Gull (*Larus fuscus*) [A184] Herring Gull (*Larus argentatus*)	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.	Version 1 23rd March 2021	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP
IE000163	Lough Eske and Ardnamona Wood SAC	[3110] Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) [7220] Petrifying springs with tufa formation (*Cratoneurion)* [91A0] Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [1029] Freshwater Pearl Mussel (*Margaritifera margaritifera)* [1106] Salmon (*Salmo salar)* [6985] Killarney Fern (*Trichomanes speciosum)*	To restore the favourable conservation condition of Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) in Lough Eske and Ardnamona Wood SAC, which is defined by 18 attributes and targets. To maintain the favourable conservation condition of Petrifying springs with tufa formation (Cratoneurion)* in Lough Eske and Ardnamona Wood SAC, which is defined by 9 attributes and targets. To maintain the favourable conservation condition of Petrifying springs with tufa formation (Cratoneurion)* in Lough Eske and Ardnamona Wood SAC, which is defined by 9 attributes and targets. To maintain the favourable conservation condition of Old sessile oak woods with Ilex and Blechnum in the British Isles in Lough Eske and Ardnamona Wood SAC, which is defined by 13 attributes and targets. To restore the favourable conservation condition of Freshwater Pearl Mussel (*Margaritifera margaritifera)* in Lough Eske	Version 1 11th September 2019	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
			and Ardnamona Wood SAC, which is defined by 13 attributes and targets. To restore the favourable conservation condition of Atlantic Salmon (*Salmo salar*) in Lough Eske and Ardnamona Wood SAC, which is defined by 6 attributes and targets To maintain the favourable conservation condition of Killarney Fern (*Vandenboschia speciosa)* in Lough Eske and Ardnamona Wood SAC, which is defined by 16 attributes and targets.			
UK9020031	Lough Foyle SPA	[A005] Great Crested Grebe (*Podiceps cristatus*) [A037] Bewick's Swan (*Cygnus columbianus bewickii*) [A038] Whooper Swan (*Cygnus cygnus*) [A043] Greylag Goose (*Anser anser*) [A046] Light-bellied Brent Goose (*Branta bernicla hrota)* [A048] Shelduck (*Tadorna tadorna)* [A050] Wigeon (*Anas 117lpine117e*) [A052] Teal *(Anas crecca)* [A053] Mallard (*Anas platyrhynchos)* [A063] Eider (*Somateria mollissima*) [A069] Red-breasted Merganser (*Mergus serrator)* [A130] Oystercatcher (*Haematopus ostralegus)* [A140] Golden Plover (*Pluvialis apricaria*) [A142] Lapwing (*Vanellus vanellus)* [A143] Knot (*Calidris canutus*) [A149] Dunlin (*Calidris 117lpine*) [A157] Bar-tailed Godwit (*Limosa lapponica*) [A160] Curlew (*Numenius arquata*) [A162] Redshank *(Tringa totanus*) [A999] Wetland and Waterbirds	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.	Version 4 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
IE004087	Lough Foyle SPA (RoI)	[A001] Red-throated Diver (*Gavia 117lpine117e*) [A005] Great Crested Grebe (*Podiceps cristatus*)	To maintain or restore the favourable conservation condition of the bird species	Version 1 23 September 2014	RoI	Lies within 15km of the NI border and as such In proximity to agricultural

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
		[A037] Bewick's Swan (*Cygnus columbianus bewickii*) [A038] Whooper Swan (*Cygnus cygnus*) [A043] Greylag Goose *(Anser anser*) [A046] Light-bellied Brent Goose (*Branta bernicla hrota)* [A048] Shelduck (*Tadorna tadorna)* [A050] Wigeon (*Anas 118lpine118e)* [A052] Teal (*Anas crecca)* [A053] Mallard (*Anas platyrhynchos)* [A063] Eider (*Somateria mollissima)* [A069] Red-breasted Merganser (*Mergus serrator)* [A130] Oystercatcher (*Haematopus ostralegus)* [A140] Golden Plover (*Pluvialis apricaria)* [A142] Lapwing (*Vanellus vanellus)* [A143] Knot (*Calidris canutus)* [A149] Dunlin (*Calidris 118lpine)* [A157] Bar-tailed Godwit (*Limosa lapponica)* [A160] Curlew (*Numenius arquata)* [A162] Redshank (*Tringa totanus*) [A179] Black-headed Gull (*Chroicocephalus ridibundus)* [A182] Common Gull (*Larus canus*) [A184] Herring Gull (*Larus argentatus)* [A999] Wetland and Waterbirds	listed as Special Conservation Interests for this SPA.			lands within NI subject to FAPP and is hydrologically connected to NI via the River Foyle and contributing watercourses
IE001976	Lough Gill SAC	[3150] Natural eutrophic lakes with Magnopotamion or Hydrocharition – type vegetation [6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia)* (* important orchid sites) [91A0] Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91E0] Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)* [1092] White-clawed Crayfish (*Austropotamobius pallipes)* [1095] Sea Lamprey (*Petromyzon marinus)* [1096](Brook Lamprey (*Lampetra planeri)*	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected.	23rd March 2021	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
		[1099] River Lamprey (*Lampetra fluviatilis)* [1106] Salmon (*Salmo salar)* [1355] Otter (*Lutra lutra)*				
IE002164	Lough Golagh and Breesy Hill SAC	[7130] Blanket bogs (* if active bog)	To restore the favourable conservation condition of Blanket bogs (* if active bog) in Lough Golagh and Breesy Hill SAC, which is defined by the following list of attributes and targets.	29th May 2017	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP
UK0030047	Lough Melvin SAC	[3130] Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea* [6410] *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae)* [91A0] Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [1106] Salmon (*Salmo salar)*	To maintain (or restore where appropriate) the [3130] Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea*, Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinia caeruleae), Old sessile oak woods with Ilex and Blechnum in the British Isles, Salmon Salmo salar to favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
IE000428	Lough Melvin SAC (RoI)	[3130] Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea* [6410] *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae)* [1106] Salmon (*Salmo salar)* [1355] Otter (*Lutra lutra)*	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected.	Generic 23rd March 2021	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP and is hydrologically connected to NI via various contributing watercourses including the lough itself.
IE002135	Lough Nageage SAC	[1092] White-clawed Crayfish (*Austropotamobius pallipes)*	To maintain the favourable conservation condition of White-clawed Crayfish in Lough Nageage SAC, which is defined by 7 attributes and targets.	Version 1 5th March 2021	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP and is hydrologically connected to NI via minor contributing watercourses
UK9020091	Lough Neagh and Lough Beg SPA	[A193] Common Tern (*Sterna hirundo)* [A005] Great Crested Grebe (*Podiceps cristatus)* [A038] Whooper Swan (*Cygnus cygnus*) [A037] Bewick's Swan (*Cygnus columbianus bewickii)* [A140] Golden Plover (*Pluvialis apricaria*) [A059] Pochard (*Aythya ferina)*	To maintain each feature in favourable condition.	Version 4 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
		[A061] Tufted Duck (*Aythya fuligula)* [A062] Scaup (*Aythya marila)* [A067] Goldeneye *Bucephala clangula* [A004] Little Grebe (*Tachybaptus ruficolis*) [A017] Cormorant (*Phalacrocorax carbo*) [A043] Greylag Goose (*Anser anser*) [A048] Shelduck (*Tadorna tadorna)* [A050] Wigeon (*Anas 120lpine120e)* [A051] Gadwall *(Anas strepera*) [A052] Teal *(Anas crecca*) [A053] Mallard (*Anas platyrhynchos)* [A056] Shoveler *(Anas clypeata*) [A125] Coot *(Fulica atra*) [A142] Lapwing (*Vanellus vanellus)* Waterfowl assemblage				
IE004049	Lough Oughter Complex SPA	[A005] Great Crested Grebe (*Podiceps cristatus*) [A038] Whooper Swan (*Cygnus cygnus)* [A050] Wigeon (*Anas 120lpine120e*) [A999] Wetland and Waterbirds	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.	Version 1 23rd March 2021	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP
IE000007	Lough Oughter and Associated Loughs SAC	[3150] Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition* – type vegetation [91D0] Bog woodland [1355] Otter (*Lutra lutra)*	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected.	Version 1 23rd March 2021	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP
IE002287	Lough Swilly SAC	[1130] Estuaries [1150] Coastal lagoons [1330] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae)* [6410] *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae)* [1355] Otter (*Lutra lutra)* [91A0] Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected.	Version 1 19th July 2011	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP and is hydrologically connected to NI via minor contributing watercourses
IE004075	Lough Swilly SPA	[A005] Great Crested Grebe (*Podiceps cristatus)* [A028] Grey Heron (*Ardea cinerea*) [A038] Whooper Swan (*Cygnus cygnus*) [A043] Greylag Goose (*Anser anser*) [A048] Shelduck (*Tadorna tadorna*) [A050] Wigeon (*Anas 120lpine120e)*	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.	Version 1 19th July 2011	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP and is hydrologically

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
		[A052] Teal (*Anas crecca)* [A053] Mallard (*Anas platyrhynchos)* [A056] Shoveler (*Anas clypeata)* [A062] Scaup (Aythya marila) [A067] Goldeneye (*Bucephala clangula)* [A069] Red-breasted Merganser (*Mergus serrator)* [A125] Coot (*Fulica atra*) [A130] Oystercatcher (*Haematopus ostralegus)* [A143] Knot (*Calidris canutus)* [A149] Dunlin (*Calidris alpina)* [A160] Curlew (*Numenius arquata)* [A162] Redshank (*Tringa totanus)* [A164] Greenshank (*Tringa nebularia)* [A179] Black-headed Gull *(Chroicocephalus ridibundus)* [A182] Common Gull (*Larus canus)* [A191] Sandwich Tern (*Sterna sandvicensis)* [A193] Common Tern (*Sterna hirundo)* [A395] Greenland White-fronted Goose *(Anser albifrons flavirostris)* [A999] Wetland and Waterbirds				connected to NI via minor contributing watercourses
IE000168	Magheradrumman Bog SAC	[4010] Northern Atlantic wet heaths with *Erica tetralix* [7130] Blanket bogs (* if active bog)	To restore the favourable conservation condition of Northern Atlantic wet heaths with Erica tetralix in Magheradrumman Bog SAC, which is defined by 20 attributes and targets. To restore the favourable conservation condition of Blanket bogs (* if active bog) in Magheradrumman Bog SAC, which is defined by 19 attributes and targets.	Version 1 15th May 2017	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP
UK0016621	Magheraveely Marl Loughs SAC	[7210] Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae.* [1092] White-clawed Crayfish (*Austropotamobius pallipes)* [3140] Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp. [7230] Alkaline fens	To maintain (or restore where appropriate) the Hard oligo-mesotrophic waters with benthic vegetation of Chara formations, White-clawed Crayfish Austropotamobius pallipes, Alkaline fens, Calcareous fens with Cladium mariscus and species of the Caricion davallianae to favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
UK0016613	Magilligan SAC	[2130] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2170] Dunes with *Salix repens* ssp. *Argentea* (*Salicion arenariae)* [2190] Humid dune slacks [2110] Embryonic shifting dunes [1065] Marsh Fritillary (*Euphydryas aurinia)* [1395] Petalwort (*Petalophyllum ralfsii)* [2120] Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes)	To maintain (or restore where appropriate) the Dunes with Salix repens ssp. Argentea (Salicion arenariae), Embryonic shifting dunes, Fixed dunes with herbaceous vegetation (grey dunes), Humid dune slacks, Shifting dunes along the shoreline with Ammophila arenaria (white dunes), Marsh Fritillary Euphydryas aurinia, Petalwort Petalophyllum ralfsii to favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK0030199	Main Valley Bogs SAC	[7110] Active raised bogs	To maintain (or restore where appropriate) the active raised bog to favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK0016619	Monawilkin SAC	[6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) [91A0] Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles	To maintain (or restore where appropriate) the Semi-natural dry grasslands and scrubland facies: on calcareous substrates (Festuco-Brometalia) and the Old sessile oak woods with Ilex and Blechnum in the British Isles to favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK0030211	Moneygal Bog SAC	[7110] Active raised bogs	To maintain (or restore where appropriate) the active raised bog to favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK0030214	Montiaghs Moss SAC	[1065] Marsh Fritillary (*Euphydryas aurinia)*	To maintain (or restore where appropriate) the Marsh-Fritillary Butterfly Euphydryas aurinia to favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK0016612	Murlough SAC	[2150] Atlantic decalcified fixed dunes (*Calluno-Ulicetea)* [2130] Fixed coastal dunes with herbaceous vegetation (grey dunes) [1330] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae)* [2170] Dunes with *Salix repens ssp. argentea (Salicion arenariae)* [2110] Embryonic shifting dunes [1065] Marsh Fritillary (*Euphydryas aurinia)* [1140] Mudflats and sandflats not covered by seawater at low tide [1365] Harbour Seal (*Phoca vitulina)*	To maintain (or restore where appropriate) the - Atlantic decalcified fixed dunes (Calluno-Ulicetea) - Atlantic salt meadows (Glauco-Puccinellietalia maritimae) - Dunes with Salix repens ssp. Argentea (Salicion arenariae) - Embryonic shifting dunes - Fixed dunes with herbaceous vegetation (grey dunes) - Mudflats and sandflats not covered by seawater at low tide	Version 4 24th March 2017	NI	In proximity to agricultural lands within NI subject to FAPP

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
		[1110] Sandbanks which are slightly covered by sea water all the time [2120] Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes)	- Sandbanks which are slightly covered by sea water all the time - Shifting dunes along the shoreline with Ammophila arenaria (white dunes) - Marsh Fritillary Euphydryas aurinia - Harbour (Common) Seal Phoca vitulina to favourable condition.			
UK0030224	North Antrim Coast SAC	[2130] Fixed coastal dunes with herbaceous vegetation (grey dunes) [6230] Species-rich Nardus grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) [1210] Annual vegetation of drift lines [1330] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae)* [2120] Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [1230] Vegetated sea cliffs of the Atlantic and Baltic coasts [1014] Narrow-mouthed Whorl Snail (*Vertigo angustior)*	To maintain each feature in favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK0030399	North Channel SAC	[1365] Harbour Porpoise (*Phocoena phocoena)*	To maintain each feature in favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
IE002012	North Inishowen Coast SAC	[1140] Mudflats and sandflats not covered by seawater at low tide [1220] Perennial vegetation of stony banks [1230] Vegetated sea cliffs of the Atlantic and Baltic coasts [2130] Fixed coastal dunes with herbaceous vegetation (grey dunes) [21A0] Machairs (* in Ireland) [4030] European dry heaths [1014] Narrow-mouthed Whorl Snail (*Vertigo angustior)* [1355] Otter (*Lutra lutra)*	To maintain the favourable conservation condition of Mudflats and sandflats not covered by Seawater at low tide in North Inishowen Coast SAC, which is defined by the following list of attributes and targets. To maintain the favourable conservation condition of Perennial vegetation of stony banks in North Inishowen Coast SAC, which is defined by 6 attributes and targets. To maintain the favourable conservation condition of Vegetated sea cliffs of the Atlantic and Baltic coasts in North Inishowen	Version 1 24th November 2014	RoI	Lies within 15km of the NI border and as such In proximity to agricultural lands within NI subject to FAPP

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
			Coast SAC, which is defined by the following list of 8 attributes and targets. To restore the favourable conservation condition of Fixed coastal dunes with herbaceous vegetation ('grey dunes') in North Inishowen Coast SAC, which is defined by 9 attributes and targets. To maintain the favourable conservation condition of Machairs in North Inishowen Coast SAC, which is defined by 11 attributes and targets. To restore the favourable conservation condition of Otter in North Inishowen Coast SAC, which is defined by 7 attributes and targets.			
UK9020271	Outer Ards SPA	[A194] Arctic Tern (*Sterna paradisaea*) [A140] Golden Plover (*Pluvialis apricaria*) [A046] Light-bellied Brent Goose (*Branta bernicla hrota)* [A137] Ringed Plover (*Charadrius hiaticula*) [A169] Turnstone (*Arenaria interpres)*	To maintain each feature in favourable condition.	Version 4 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK0030233	Owenkillew River SAC	[91D0] Bog woodland [1355] Otter (*Lutra lutra)* [1029] Freshwater Pearl Mussel (*Margaritifera margaritifera)* [91A0] Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [3260] Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [1106] Salmon (*Salmo salar)*	To maintain each feature in favourable condition.	Version 3 27th July 2017	NI	In proximity to agricultural lands within NI subject to FAPP
UK0030236	Peatlands Park SAC	[7110] Active raised bogs [7120] Degraded raised bogs still capable of natural regeneration [91A0] Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles	To maintain each feature in favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
		[91D0] Bog woodland				
UK0016607	Pettigo Plateau SAC	[7130] Blanket bogs (* if active bog) [3160] Natural dystrophic lakes and ponds [4010] Northern Atlantic wet heaths with *Erica tetralix* [4030] European dry heaths [3130] Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea*	To maintain each feature in favourable condition.	Version 2 13th October 2017	NI	In proximity to agricultural lands within NI subject to FAPP
UK9020051	Pettigo Plateau SPA	[A140] Golden Plover (*Pluvialis apricaria)*	To maintain each feature in favourable condition.	Version 3 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK0030055	Rathlin Island SAC	[8330] Submerged or partially submerged sea caves [1210] Annual vegetation of drift lines [1170] Reefs [1110] Sandbanks which are slightly covered by sea water all the time [1230] Vegetated sea cliffs of the Atlantic and Baltic coasts	To maintain each feature in favourable condition.	Version 3 13th October 2017	NI	In proximity to agricultural lands within NI subject to FAPP
UK9020011	Rathlin Island SPA	[A103] Peregrine (*Falco peregrinus)* [A199] Guillemot *(Uria aalge*) [A200] Razorbill (*Alca torda)* [A188] Kittiwake *(Rissa tridacyla*) [A009] Fulmar (*Fulmarus glacialis)* [A182] Common Gull (*Larus canus)* A183] Lesser Black-backed Gull (*Larus fuscus*) [A184] Herring Gull *(Larus argentatus)* [A204] Puffin (*Fratercula arctica)* Seabird Assemblage	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.	Version 3 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK0030244	Rea's Wood and Farr's Bay SAC	[91E0] Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)*	To maintain each feature in favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK0030365	Red Bay SAC	[1110] Sandbanks which are slightly covered by sea water all the time	To maintain (or restore where appropriate) the sandbanks which are slightly covered by sea water all the time to favourable condition.	Version 2 20th March 2017	NI	In proximity to agricultural lands within NI subject to FAPP

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
UK0030361	River Faughan and Tributaries SAC	[1106] Salmon (*Salmo salar)* [1355] Otter (*Lutra lutra)* [91A0] Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles	To maintain each feature in favourable condition.	Version 3 27th July 2017	NI	In proximity to agricultural lands within NI subject to FAPP
IE002301	River Finn SAC	[3110] Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae)* [4010] Northern Atlantic wet heaths with *Erica tetralix* [7130] Blanket bogs (* if active bog) [7140] Transition mires and quaking bogs [1355] Otter (*Lutra lutra)* [1106] Salmon (*Salmo salar)*	To restore the favourable conservation condition of Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) in River Finn SAC, which is defined by 18 attributes and targets. To restore the favourable conservation condition of Northern Atlantic wet heaths with Erica tetralix in River Finn SAC, which is defined by 20 attributes and targets. To restore the favourable conservation condition of Blanket bogs in River Finn SAC, which is defined by 19 attributes and targets. To restore the favourable conservation condition of Transition mires and quaking bogs in River Finn SAC, which is defined by 13 of attributes and targets. To restore the favourable conservation condition of Atlantic Salmon (*Salmo salar*) in River Finn SAC, which is defined by 6 attributes and targets To restore the favourable conservation condition of Otter in River Finn SAC, which is defined by 7 attributes and targets.	Version 1 31st May 2017	RoI	Lies within 15km of the NI border and as such in proximity to agricultural lands within NI subject to FAPP and is hydrologically connected to NI via minor contributing watercourses
UK0030320	River Foyle and Tributaries SAC	[1355] Otter (*Lutra lutra)* [1106] Salmon (*Salmo salar)* [3260] Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation	To maintain each feature in favourable condition.	Version 3 27th October 2017	NI	In proximity to agricultural lands within NI subject to FAPP

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
UK0030360	River Roe and Tributaries SAC	[1355] Otter (*Lutra lutra)* [1106] Salmon (*Salmo salar)* [3260] Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [91A0] Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles	To maintain each feature in favourable condition.	Version 3 27th October 2017	NI	In proximity to agricultural lands within NI subject to FAPP
UK0030268	Rostrevor Wood SAC	[91A0] Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles	To maintain each feature in favourable condition	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK9020021	Sheep Island SPA	[A017] Cormorant (*Phalacrocorax carbo)*	To maintain each feature in favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK0030383	Skerries and Causeway SAC	[1170] Reefs [1110] Sandbanks which are slightly covered by sea water all the time [8330] Submerged or partially submerged sea caves [1365] Harbour Porpoise (*Phocoena phocoena)*	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) to favourable condition.	Version 2 20th March 2017	NI	In proximity to agricultural lands within NI subject to FAPP
UK9020302	Slieve Beagh - Mullaghfad – Lisnaskea SPA	[A082] Hen Harrier (*Circus cyaneus)*	To maintain the Hen Harrier in favourable condition.	Version 3 1st April 2014	NI	In proximity to agricultural lands within NI subject to FAPP
UK0016622	Slieve Beagh SAC	[7130] Blanket bogs (* if active bog) [4030] European dry heaths [3160] Natural dystrophic lakes and ponds	To maintain each feature in favourable condition.	Version 2 11th October 2017	NI	In proximity to agricultural lands within NI subject to FAPP
IE004167	Slieve Beagh SPA (RoI)	[A082] Hen Harrier (*Circus cyaneus)*	To maintain the Hen Harrier in favourable condition.	Version 8 23rd March 2021	RoI	Lies within 15km of the NI border and as such in proximity to agricultural lands within NI subject to FAPP

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
UK0030277	Slieve Gullion SAC	[4030] European dry heaths	To maintain European dry heaths in favourable condition.	Version 2 11th October 2017	NI	In proximity to agricultural lands within NI subject to FAPP
IE004187	Sligo/Leitrim Uplands SPA	[A103] Peregrine (*Falco peregrinus)* [A346] Chough (*Pyrrhocorax pyrrhocorax)*	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.	Version 1 23RD March 2021	RoI	Lies within 15km of the NI border and as such in proximity to agricultural lands within NI subject to FAPP
UK0016618	Strangford Lough SAC	[1150] Coastal lagoons [1160] Large shallow inlets and bays [1210] Annual vegetation of drift lines [1330] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1140] Mudflats and sandflats not covered by seawater at low tide [1220] Perennial vegetation of stony banks [1365] Harbour Seal (*Phoca vitulina)* [1170] Reefs [1310] Salicornia and other annuals colonising mud and sand	To maintain or restore where appropriate the features to favourable condition.	Version 4 20th March 2017	NI	In proximity to agricultural lands within NI subject to FAPP
UK9020111	Strangford Lough SPA	[A191] Sandwich Tern (*Sterna sandvicensis)* [A193] Common Tern (*Sterna hirundo)* [A194] Arctic Tern (*Sterna paradisaea)* [A140] Golden Plover (*Pluvialis apricaria)* [A157] Bar-tailed Godwit (*Limosa lapponica)* [A046] Light-bellied Brent Goose (*Branta bernicla hrota)* [A048] Shelduck (*Tadorna tadorna)* [A143] Knot (*Calidris canutus)* [A162] Redshank (*Tringa totanus)* [A005] Great Crested Grebe (*Podiceps cristatus)* [A017] Cormorant (*Phalacrocorax carbo)* [A043] Greylag Goose (*Anser anser*) [A050] Wigeon *(Anas penelope)* [A051] Gadwall *(Anas strepera*)	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.	Version 4 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
		[A052] Teal (*Anas crecca)* [A053] Mallard (*Anas platyrhynchos)* [A054] Pintail *Anas acuta* [A056] Shoveler *Anas clypeata* [A067] Goldeneye *Bucephala clangula* [A069] Red-breasted Merganser (*Mergus serrator)* [A125] Coot *(Fulica atra*) [A130] Oystercatcher (*Haematopus ostralegus)* [A137] Ringed Plover (*Charadrius hiaticula*) [A141] Grey Plover (*Pluvialis squatarola*) [A142] Lapwing (*Vanellus vanellus)* [A149] Dunlin (*Calidris alpina)* A160] Curlew (*Numenius arquata)* [A169] Turnstone (*Arenaria interpres)* Waterfowl Assemblage				
IE001992	Tamur Bog SAC	[4010] Northern Atlantic wet heaths with *Erica tetralix* [7130] Blanket bogs (* if active bog) [7150] Depressions on peat substrates of the *Rhynchosporion*	To restore the favourable conservation condition of Northern Atlantic wet heaths with Erica tetralix in Tamur Bog SAC, which is defined by 20 attributes and targets. To restore the favourable conservation condition of Blanket bogs (*if active bog) in Tamur Bog SAC, which is defined by 19 attributes and targets. To restore the favourable conservation condition of Depressions on peat substrates of the Rhynchosporion in Tamur Bog SAC, which is defined by 16 attributes and Targets.	Version 1 29th May 2017	RoI	Lies within 15km of the NI border and as such in proximity to agricultural lands within NI subject to FAPP
UK0016608	Teal Lough SAC	[7130] Blanket bogs (* if active bog)	To maintain each feature in favourable condition.	Version 2 13th October 2017	NI	In proximity to agricultural lands within NI subject to FAPP
UK0030384	The Maidens SAC	[1170] Reefs [1110] Sandbanks which are slightly covered by sea water all the time	To maintain each feature in favourable condition.	Version 2 20th March 2017	NI	In proximity to agricultural lands within NI subject to FAPP

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
		[1364] *Halichoerus grypus* (Grey Seal)				
UK0030325	Tonnagh Beg Bog SAC	[7110] Active raised bogs	To maintain (or restore where appropriate) the active raised bog to favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK0030326	Tully Bog SAC	[7110] Active raised bogs	To maintain (or restore where appropriate) the active raised bog to favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK0030291	Turmennan SAC	[7140] Transition mires and quaking bogs	To maintain (or restore where appropriate) the Transition mires and quaking bogs to favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK0030296	Upper Ballinderry River SAC	[1355] Otter (*Lutra lutra)* [1029] Freshwater Pearl Mussel (*Margaritifera margaritifera)* [3260] Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation	To maintain each feature in favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK0016614	Upper Lough Erne SAC	[91E0] Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)* [1355] Otter *Lutra lutra* [3150] Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation [91A0] Old sessile oak woods with *Ilex* and Blechnum in the British Isles	To maintain each feature in favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK9020071	Upper Lough Erne SPA	[A038] Whooper Swan (*Cygnus cygnus)*	To maintain each feature in favourable condition.	Version 3 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP
UK0030300	West Fermanagh Scarplands SAC	[7130] Blanket bogs (* if active bog) [8240] Limestone pavements [7220] Petrifying springs with tufa formation (Cratoneurion) [9180] Tilio-Acerion forests of slopes, screes and ravines. [7230] Alkaline fens	To maintain each feature in favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP

Site Code	Site Name	Qualifying Features	Conservation objectives	Version	NI/RoI	Identified Impact Pathway
		[6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia)* (* important orchid sites) [6410] Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae)* [3150] Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation [4010] Northern Atlantic wet heaths with *Erica tetralix*				
UK0030303	Wolf Island Bog SAC	[7110] Active raised bogs	To maintain (or restore where appropriate) the active raised bog to favourable condition.	Version 2 1st April 2015	NI	In proximity to agricultural lands within NI subject to FAPP

Appendix II – Qualifying Interests or Special Conservation Interests of Screened European Sites, their Conservation Status and their Sensitivity to FAPP Effects

Appendix II, Table 1: Qualifying Features of Screened in SACS in Northern Ireland (including SACS in the Republic of Ireland found within 15km of the border/hydrologically linked to NI watercourses) their Conservation Status and Trend and their sensitivity to FAPP Effects

Qualifying Feature	SAC Name	Northern Ireland Conservation Status and Trend (Based on 2019 Article 17 Reporting)	RoI Conservation Status and Trend (Based on 2019 Article 17 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry	Sensitive to FAPP effects associated with disturbance
Active raised bogs [7110]	Ballynahone Bog Black Bog Cranny Bogs Curran Bog Dead Island Bog Deroran Bog Fairy Water Bogs Garry Bog Main Valley Bogs Moneygal Bog Moninea Bog Peatlands Park Tonnagh Beg Bog Tully Bog Wolf Island Bog	Unfavourable/Bad - Stable	Bad - Deteriorating	Yes	Yes	Yes	No

Qualifying Feature	SAC Name	Northern Ireland Conservation Status and Trend (Based on 2019 Article 17 Reporting)	RoI Conservation Status and Trend (Based on 2019 Article 17 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry	Sensitive to FAPP effects associated with disturbance
Alkaline Fens [7230]	Ben Bulben, Gleniff and Glenade complex Bunduff Lough and Machair/Trawalua/Mullaghmore Carlingford Mountain Garron Plateau Kilroosky Lough Cluster Lecale Fens Magheraveely Marl Loughs West Fermanagh Scarplands	Unfavourable Bad - Stable	Bad - Deteriorating	Yes	Yes	Yes	No
Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion alvae) [91E0]	Hollymount Lough Gill Rea's Wood and Farr's Bay Upper Lough Erne	Unfavourable Bad - Stable	Bad - Deteriorating	Yes	Yes	Yes	No
Alpine and Boreal heaths [4060]	Arroo Mountain Ben Bulben, Gleniff and Glenade complex Carlingford Mountain Cuilcagh Mountain	Unfavourable Bad - Stable	Bad - Improving	Yes	Yes	Yes	No

Qualifying Feature	SAC Name	Northern Ireland Conservation Status and Trend (Based on 2019 Article 17 Reporting)	RoI Conservation Status and Trend (Based on 2019 Article 17 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry	Sensitive to FAPP effects associated with disturbance
	Cuilcagh - Anierin Uplands Eastern Mournes						
Annual vegetation of drift lines [1210]	Carlingford Shore North Antrim Coast Rathlin island Strangford Lough	Unknown - Unknown	Inadequate - Deteriorating	Yes	Yes	No	No
Atlantic decalcified fixed dunes (Calluno-Ulicetea) [2150]	Murlough	Unfavourable Bad - Stable	Inadequate - Stable	Yes	Yes	No	No
Atlantic salmon *Salmo salar* [1106]	Lough Eske and Ardnamona Wood Lough Gill Lough Melvin Lough Melvin (RoI) Lough Swilly Owenkillew River River Faughan and Tributaries River Finn	Inadequate - Stable	Inadequate - Stable	Yes	Yes	Yes	No

Qualifying Feature	SAC Name	Northern Ireland Conservation Status and Trend (Based on 2019 Article 17 Reporting)	RoI Conservation Status and Trend (Based on 2019 Article 17 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry	Sensitive to FAPP effects associated with disturbance
	River Foyle and Tributaries River Roe and Tributaries						
Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330]	Bann Estuary Dundalk Bay Lough Swilly Murlough North Antrim Coast Strangford Lough	Unfavourable Bad - Stable	Inadequate - Deteriorating	Yes	Yes	No	No
Blanket Bogs [7130]	Arroo Mountain Ben Bulben, Gleniff and Glenade complex Boleybrack Mountain Carlingford Mountain Carn Glenshane Pass Croaghonagh Bog Cuilcagh Mountain Cuilcagh - Anierin Uplands Dunragh Loughs/Pettigo Plateau Eastern Mournes	Unfavourable Bad - Stable	Bad - Deteriorating	Yes	Yes	Yes	No

Qualifying Feature	SAC Name	Northern Ireland Conservation Status and Trend (Based on 2019 Article 17 Reporting)	RoI Conservation Status and Trend (Based on 2019 Article 17 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry	Sensitive to FAPP effects associated with disturbance
	Garron Plateau Lough Golagh and Breesy Hill Magheradrumman Bog Pettigoe Plateau River Finn Slieve Beagh Tamur Bog Teal Lough West Fermanagh Scarplands						
Bog woodland [91D0]	Breen wood Lough Oughter and Associated Loughs Owenkillew River Peatlands Park	Unfavourable Bad - Deteriorating	Favourable – Stable	Yes	Yes	Yes	No
Brook Lamprey *Lampetra planeri* [1096]	Lough Gill	Unknown - Unknown	Favourable - Stable	Yes	Yes	No	No

Qualifying Feature	SAC Name	Northern Ireland Conservation Status and Trend (Based on 2019 Article 17 Reporting)	RoI Conservation Status and Trend (Based on 2019 Article 17 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry	Sensitive to FAPP effects associated with disturbance
Calcareous and calcshist screes of the montane to alpine levels (*Thlaspietea rotundifolii)* [8120]	Arroo Mountain Ben Bulben, Gleniff and Glenade complex Binevenagh	Unknown – Stable	Inadequate - Stable	Y+es	Yes	Yes	No
Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* [7210]	Kilroosky Lough Cluster Magheraveely Marl Loughs	Unfavourable Bad - Stable	Inadequate - Stable	Yes	Yes	Yes	No
Calcareous rocky slopes with chasmophytic vegetation [8210]	Arroo Mountain Ben Bulben, Gleniff and Glenade complex Binevenagh Carlingford Mountain	Unknown – Stable	Inadequate - Stable	Yes	Yes	No	No
Coastal lagoons [1150]	Durnesh Lough Lough Swilly Strangford Lough	Unfavourable Inadequate - Unknown	Bad - Deteriorating	Yes	Yes	No	No

Qualifying Feature	SAC Name	Northern Ireland Conservation Status and Trend (Based on 2019 Article 17 Reporting)	RoI Conservation Status and Trend (Based on 2019 Article 17 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry	Sensitive to FAPP effects associated with disturbance
Degraded raised bogs still capable of natural regeneration [7120]	Curran Bog Peatlands Park	Unfavourable Bad - Stable	Bad - Deteriorating	Yes	Yes	Yes	No
Depressions on the peat substrates of the Rynchosporion [7150]	Tamur Bog	Unfavourable Bad - Stable	Bad - Deteriorating	Yes	Yes	Yes	No
Dunes with Salix repens ssp. argentea (Salicion arenariae) [2170]	Donegal Bay (Murvagh) Magilligan Murlough	Unfavourable Inadequate - Stable	Inadequate - Stable	Yes	Yes	No	No
Embryonic shifting dunes [2110]	Bann Estuary Magilligan Murlough	Unfavourable Inadequate - Stable	Inadequate - Stable	Yes	Yes	No	No
Estuaries [1130]	Dundalk Bay Lough Swilly	Unfavourable Bad - Unknown	Inadequate - Deteriorating	Yes	Yes	No	No

Qualifying Feature	SAC Name	Northern Ireland Conservation Status and Trend (Based on 2019 Article 17 Reporting)	RoI Conservation Status and Trend (Based on 2019 Article 17 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry	Sensitive to FAPP effects associated with disturbance
European dry heaths [4030]	Arroo Mountain Ballintra Ben Bulben, Gleniff and Glenade complex Boleybrack Mountain Carlingford Mountain Cuilcagh Mountain Cuilcagh - Anierin Uplands Eastern Mournes North Inishowen Coast Pettigoe Plateau Slieve Beagh Slieve Gullion	Unfavourable Bad - Stable	Bad - Stable	Yes	Yes	Yes	No
Fixed coastal dunes with herbaceous vegetation (“grey dunes”) [2130]	Bann Estuary Bunduff Lough and Machair/Trawalua/Mullaghmore Donegal Bay (Murvagh) Magilligan Murlough North Antrim Coast North Inishowen Coast	Unfavourable Inadequate - Improving	Bad - Deteriorating	Yes	Yes	No	No

Qualifying Feature	SAC Name	Northern Ireland Conservation Status and Trend (Based on 2019 Article 17 Reporting)	RoI Conservation Status and Trend (Based on 2019 Article 17 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry	Sensitive to FAPP effects associated with disturbance
Freshwater pearl mussel *Margaritifera margaritifera* [1029]	Cladagh (Swanlinbar) River Owenkillew River Lough Eske and Ardnamona Wood Upper Ballinderry River	Bad - Deteriorating	Bad - Deteriorating	Yes	Yes	Yes	Yes
Geyer's Whorl Snail *Vertigo geyeri* [1013]	Ben Bulben, Gleniff and Glenade Complex	Unknown – Unknown	Bad - Deteriorating	Yes	Yes	No	No
Grey seal (*Halichoerus grypus)* [1364]	Skerries and Causeway The Maidens	Favourable - Stable	Favourable - Improving	Yes	Yes	No	No
Harbour porpoise (*Phocoena phocoena*) [1351]	North Channel Skerries and Causeway The Maidens	Unknown – Unknown	Favourable - Stable	Yes	Yes	No	No

Qualifying Feature	SAC Name	Northern Ireland Conservation Status and Trend (Based on 2019 Article 17 Reporting)	RoI Conservation Status and Trend (Based on 2019 Article 17 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry	Sensitive to FAPP effects associated with disturbance
Harbour Seal *Phoca vitulina* [1365]	Donegal Bay (Murvagh) Murlough Strangford Lough The Maidens	Inadequate - Improving	Favourable - Stable	Yes	Yes	No	No
Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. [3140]	Kilroosky Lough Cluster Magheraveely Marl Loughs	Unfavourable Bad - Stable	Bad - Deteriorating	Yes	Yes	Yes	No
Humid dune slacks [2190]	Bunduff Lough and Machair/Trawalua/Mullaghmore Donegal Bay (Murvagh) Magilligan	Unfavourable Bad - Stable	Inadequate - Deteriorating	No	Yes	No	No
Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430]	Ben Bulben, Gleniff and Glenade Complex	Unknown - Unknown	Bad - Deteriorating	Yes	Yes	Yes	No

Qualifying Feature	SAC Name	Northern Ireland Conservation Status and Trend (Based on 2019 Article 17 Reporting)	RoI Conservation Status and Trend (Based on 2019 Article 17 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry	Sensitive to FAPP effects associated with disturbance
Juniperus communis formations on heaths or calcareous grasslands [5130]	Ben Bulben, Gleniff and Glenade Complex Bunduff Lough and Machair/Trawalua/Mullaghmore	N/A	Favourable - Stable	Yes	Yes	No	No
Killarney Fern *Trichomanes speciosum* [6985]	Lough Eske and Ardnamona Wood Lough Swilly	N/A	Favourable - Stable	Yes	Yes	No	No
Large shallow inlets and bays [1160]	Bunduff Lough and Machair/Trawalua/Mullaghmore Strangford Lough	Unfavourable Inadequate - Stable	Bad -Deteriorating	Yes	Yes	No	No
Limestone pavements [8240]	Ballintra Corratirrim West Fermanagh Scarplands	Unfavourable Inadequate – Deteriorating	Inadequate - Stable	Yes	Yes	Yes	No

Qualifying Feature	SAC Name	Northern Ireland Conservation Status and Trend (Based on 2019 Article 17 Reporting)	RoI Conservation Status and Trend (Based on 2019 Article 17 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry	Sensitive to FAPP effects associated with disturbance
Machairs (* in Ireland) [21A0]	Bunduff Lough and Machair/Trawalua/Mullaghmore North Inishowen Coast	N/A	Inadequate - Stable	Yes	Yes	Yes	No
Marsh fritillary *Euphydryas aurinia* [1065]	Aughnadarragh Lough Ballykilbeg Bunduff Lough and Machair/Trawalua/Mullaghmore Magilligan Montiaghs Moss Murlough	Favourable - Stable	Inadequate - Improving	Yes	Yes	Yes	Yes
Marsh saxifrage *Saxifraga hirculus* [1528]	Garron Plateau	Inadequate - Unknown	Favourable - Stable	Yes	Yes	Yes	No
Mediterranean salt meadows *(Juncetalia maritimi)* [1410]	Dundalk Bay	N/A	Inadequate - Deteriorating	Yes	Yes	No	No

Qualifying Feature	SAC Name	Northern Ireland Conservation Status and Trend (Based on 2019 Article 17 Reporting)	RoI Conservation Status and Trend (Based on 2019 Article 17 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry	Sensitive to FAPP effects associated with disturbance
Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) [6410]	Boleybrack Mountain Durnesh Lough Lough Melvin Lough Melvin (RoI) Lough Swilly West Fermanagh Scarplands	Unfavourable Bad - Stable	Bad - Deteriorating	Yes	Yes	Yes	
Mudflats and sandflats not covered by seawater at low tide [1140]	Bunduff Lough and Machair/Trawalua/Mullaghmore Donegal Bay (Murvagh) Dundalk Bay Murlough North Inishowen Coast Strangford Lough	Unfavourable Inadequate - Unknown	Inadequate - Deteriorating	Yes	Yes	No	No
Narrow-mouthed Whorl-snail *Vertigo angustior* [1014]	North Antrim Coast North Inishowen Coast	Unknown - Unknown	Inadequate - Deteriorating	Yes	Yes	No	No

Qualifying Feature	SAC Name	Northern Ireland Conservation Status and Trend (Based on 2019 Article 17 Reporting)	RoI Conservation Status and Trend (Based on 2019 Article 17 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry	Sensitive to FAPP effects associated with disturbance
Natural dystrophic lakes and ponds [3160]	Boleybrack Mountain Cuilcagh Mountain Cuilcagh - Anierin Uplands Garron Plateau Lough Oughter and Associated Loughs Pettigoe Plateau Slieve Beagh Slieve Gullion	Unfavourable Bad - Stable	Inadequate - Stable	Yes	Yes	Yes	No
Natural eutrophic lakes with Magnopotamion or Hydrocharition-type vegetation [3150]	Lough Gill Lough Oughter and Associated Loughs Upper Lough Erne West Fermanagh Scarplands	Unfavourable Bad - Deteriorating	Inadequate - Stable	Yes	Yes	Yes	No
Northern Atlantic wet heaths with *Erica tetralix* [4010]	Arroo Mountain Ben Bulben, Gleniff and Glenade complex Boleybrack Mountain Carlingford Mountain Cuilcagh Mountain	Unfavourable Bad - Deteriorating	Bad - Deteriorating	Yes	Yes	Yes	No

Qualifying Feature	SAC Name	Northern Ireland Conservation Status and Trend (Based on 2019 Article 17 Reporting)	RoI Conservation Status and Trend (Based on 2019 Article 17 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry	Sensitive to FAPP effects associated with disturbance
	Cuilcagh - Anierin Uplands Dunragh Loughs/Pettigo Plateau Eastern Mournes Garron Plateau Magheradrumman Bog Pettigoe Plateau River Finn Tamur Bog West Fermanagh Scarplands						
Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0]	Banagher Glen Breen wood Derryleckagh Hollymount Largalinny Lough Eske and Ardnamona Wood Lough Gill Lough Melvin Lough Swilly Monawilkin	Unfavourable Bad - Deteriorating	Bad - Deteriorating	Yes	Yes	Yes	No

Qualifying Feature	SAC Name	Northern Ireland Conservation Status and Trend (Based on 2019 Article 17 Reporting)	RoI Conservation Status and Trend (Based on 2019 Article 17 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry	Sensitive to FAPP effects associated with disturbance
	Owenkillew River Peatlands Park River Faughan and Tributaries River Roe and Tributaries Rostrevor Wood Upper Lough Erne						
Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea [3130]	Garron Plateau Lough Melvin Lough Melvin (RoI) Pettigoe Plateau	Unfavourable Bad - Stable	Inadequate - Deteriorating	Yes	Yes	Yes	No
Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae)* [3110]	Cuilcagh - Anierin Uplands Lough Eske and Ardnamona Wood River Finn	N/A	Bad - Stable	Yes	Yes	Yes	No

Qualifying Feature	SAC Name	Northern Ireland Conservation Status and Trend (Based on 2019 Article 17 Reporting)	RoI Conservation Status and Trend (Based on 2019 Article 17 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry	Sensitive to FAPP effects associated with disturbance
Otter *Lutra lutra* [1355]	Ben Bulben, Gleniff and Glenade Complex Lough Gill Lough Melvin (RoI) Lough Oughter and Associated Loughs Lough Swilly North Inishowen Coast Owenkillew River River Faughan and Tributaries River Finn River Foyle and Tributaries River Roe and Tributaries Upper Ballinderry River Upper Lough Erne	Favourable - Stable	Favourable - Improving	Yes	Yes	Yes	Yes
Perennial vegetation of stony banks [1220]	Carlingford Shore Dundalk Bay North Inishowen Coast Strangford Lough	Unfavourable Bad - Stable	Inadequate - Stable	Yes	Yes	No	No

Qualifying Feature	SAC Name	Northern Ireland Conservation Status and Trend (Based on 2019 Article 17 Reporting)	RoI Conservation Status and Trend (Based on 2019 Article 17 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry	Sensitive to FAPP effects associated with disturbance
Petalwort *Petalophyllum ralfsii* [1395]	Bunduff Lough and Machair/Trawalua/Mullaghmore Magilligan	Bad - Deteriorating	Favourable - Stable	Yes	Yes	No	No
Petrifying springs with tufa formation (*Cratoneurion*) [7220]	Arroo Mountain Ben Bulben, Gleniff and Glenade complex Cuilcagh - Anierin Uplands Lough Eske and Ardnamona Wood West Fermanagh Scarplands	Unknown - Unknown	Inadequate - Deteriorating	Yes	Yes	Yes	No
Reefs [1170]	Bunduff Lough and Machair/Trawalua/Mullaghmore Rathlin Island Skerries and Causeway Strangford Lough The Maidens	Unknown - Unknown	Inadequate - Stable	Yes	Yes	No	No

Qualifying Feature	SAC Name	Northern Ireland Conservation Status and Trend (Based on 2019 Article 17 Reporting)	RoI Conservation Status and Trend (Based on 2019 Article 17 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry	Sensitive to FAPP effects associated with disturbance
River Lamprey *Lampetra fluviatilis* [1099]	Lough Gill	Unknown - Unknown	Unknown	Yes	Yes	No	No
Salicornia and other annuals colonising mud and sand [1310]	Dundalk Bay Strangford Lough	Unfavourable Bad - Stable	Favourable - Stable	Yes	Yes	No	No
Sandbanks which are slightly covered by sea water all the time [1110]	Murlough Rathlin Island Red Bay Skerries and Causeway The Maidens	Unfavourable Bad - Unknown	Favourable - Stable	Yes	Yes	No	No
Sea Lamprey *Petromyzon marinus* [1095]	Lough Gill	Unknown - Unknown	Bad - Stable	Yes	Yes	No	No

Qualifying Feature	SAC Name	Northern Ireland Conservation Status and Trend (Based on 2019 Article 17 Reporting)	RoI Conservation Status and Trend (Based on 2019 Article 17 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry	Sensitive to FAPP effects associated with disturbance
Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco Brometalia*) [6210]	Ben Bulben, Gleniff and Glenade complex Bunduff Lough and Machair/Trawalua/Mullaghmore Lough Gill Monawilkin West Fermanagh Scarplands	Unfavourable Inadequate - Improving	Bad - Deteriorating	Yes	Yes	Yes	No
Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes") [2120]	Bann Estuary Bunduff Lough and Machair/Trawalua/Mullaghmore Magilligan Murlough North Antrim Coast	Unfavourable Bad - Stable	Inadequate - Stable	Yes	Yes	No	No
Siliceous alpine and boreal grasslands [6150]	Eastern Mournes	Unfavourable Bad - Deteriorating	N/A	Yes	Yes	Yes	No

Qualifying Feature	SAC Name	Northern Ireland Conservation Status and Trend (Based on 2019 Article 17 Reporting)	RoI Conservation Status and Trend (Based on 2019 Article 17 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry	Sensitive to FAPP effects associated with disturbance
Siliceous rocky slopes with chasmophytic vegetation [8220]	Carlingford Mountain Cuilcagh Mountain Cuilcagh - Anierin Uplands Eastern Mournes	Unknown - Stable	Inadequate - Stable	Yes	Yes	Yes	No
Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*) [8110]	Ben Bulben, Gleniff and Glenade complex Carlingford Mountain Cuilcagh Mountain Cuilcagh - Anierin Uplands Eastern Mournes	Unknown - Stable	Inadequate - Stable	Yes	Yes	Yes	No
Slender Green Feather-moss *Hamatocaulis vernicosus* [6216]	Cuilcagh - Anierin Uplands SAC	Unknown - Unknown	Favourable - Stable	Yes	Yes	No	No
Species-rich *Nardus* grassland, on siliceous substrates in mountain areas (and submountain areas in continental Europe)	Ben Bulben, Gleniff and Glenade complex Binevenagh Carlingford Mountain Cuilcagh - Anierin Uplands North Antrim Coast	Favourable - Improving	Bad - Stable	Yes	Yes	Yes	No

Qualifying Feature	SAC Name	Northern Ireland Conservation Status and Trend (Based on 2019 Article 17 Reporting)	RoI Conservation Status and Trend (Based on 2019 Article 17 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry	Sensitive to FAPP effects associated with disturbance
[6230]							
Submerged or partially submerged sea caves [8330]	Rathlin Island Skerries and Causeway	Unknown – Unknown	Favourable - Stable	Yes	Yes	No	No
Tilio-Acerion forests of slopes, screes and ravines [9180]	Banagher Glen West Fermanagh Scarplands	Unfavourable Bad - Stable	N/A	Yes	Yes	Yes	No
Transition mires and quaking bogs [7140]	Ben Bulben, Gleniff and Glenade complex Carlingford Mountain Cuilcagh - Anierin Uplands Derryleckagh Garron Plateau River Finn Turmennan	Unfavourable Bad - Stable	Bad - Stable	Yes	Yes	Yes	No

Qualifying Feature	SAC Name	Northern Ireland Conservation Status and Trend (Based on 2019 Article 17 Reporting)	RoI Conservation Status and Trend (Based on 2019 Article 17 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry	Sensitive to FAPP effects associated with disturbance
Turloughs [3180]	Dunmuckrun Turloughs Fardrum and Roosky Turloughs	Unfavourable Bad - Stable	Inadequate - Stable	Yes	Yes	Yes	No
Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]	North Antrim Coast North Inishowen Coast Rathlin Island	Unfavourable Inadequate - Stable	Inadequate – Stable	Yes	Yes	No	No
Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260]	Ben Bulben, Gleniff and Glenade complex Cladagh (Swanlinbar) River Owenkillew River River Foyle and Tributaries River Roe and Tributaries Upper Ballinderry River	Unfavourable Inadequate - Improving	Inadequate - Deteriorating	Yes	Yes	Yes	No

Qualifying Feature	SAC Name	Northern Ireland Conservation Status and Trend (Based on 2019 Article 17 Reporting)	RoI Conservation Status and Trend (Based on 2019 Article 17 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry	Sensitive to FAPP effects associated with disturbance
White-clawed crayfish *Austropotamobius pallipes* [1092]	Kilroosky Lough Cluster Lough Gill Lough Nageage Magheraveely Marl Loughs	Unknown - Unknown	Bad - Deteriorating	Yes	Yes	Yes	No

Appendix II, Table 2: Qualifying Features of SPAs found in Northern Ireland (including SPAs in the Republic of Ireland found within 15km of the border/hydrologically linked to NI watercourses), their Conservation Status and Sensitivity to FAPP Effects

Qualifying Feature	SPA Name	UK Conservation Status and Trend (Based on 2019 Article 12 Reporting)	RoI Conservation Status and Trend (Based on 2012 Article 12 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry
Arctic tern (*Sterna paradisaea)* [A194]	Belfast Lough Copeland islands East Coast (NI) Marine pSPA Outer Ards Strangford Lough	Short and Long Term Increase	Short - and Long-Term Increase	Yes	Yes	No
Bar-tailed Godwit (*Limosa lapponica)* [A157]	Belfast Lough Dundalk Bay Lough Foyle Lough Foyle (RoI) Strangford Lough	Short and Long Term Stable	Short-Term Increase, Long-Term Decrease	Yes	Yes	No
Bewick's Swan *(Cygnus columbianus)* [A037]	Lough Foyle Lough Foyle (RoI) Lough Neagh and Lough Beg	Short Term Decrease, Long Term Decrease	Short-Term Decrease, Long-Term Decrease	Yes	Yes	No
Black-headed Gull *(Chroicocephalus ridibundus* [A179]	Dundalk Bay Lough Foyle (RoI) Lough Swilly	Short Term Stable, Long Term Increase	Short-Term Increase, Long-Term Increase	Yes	Yes	No

Qualifying Feature	SPA Name	UK Conservation Status and Trend (Based on 2019 Article 12 Reporting)	RoI Conservation Status and Trend (Based on 2012 Article 12 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry
Black-tailed godwit (*Limosa limosa)* [A156]	Belfast Lough Dundalk Bay	Short and Long Term Increase	Short-Term Increase, Long-Term Increase	Yes	Yes	No
Chough (*Pyrrhocorax pyrrhocorax)* [A346]	Sligo/Leitrim Uplands	Short and Long Term Increase	Short-Term Stable, Long-Term Increase	Yes	Yes	No
Common Gull *(Larus canus)* [A182]	Dundalk Bay Lough Foyle (RoI) Lough Swilly Rathlin Island	Short-Term Decrease, Long-Term Increase	Short-Term Increase, Long-Term Decrease	Yes	Yes	No
Common Scoter (*Melanitta nigra)* [A065]	Donegal Bay Dundalk Bay	Short-Term Decrease, Long-Term Increase	Short-Term Decrease, Long-Term Decrease	Yes	Yes	No
Common Tern (*Sterna hirundo)* [A193]	Belfast Lough Carlingford Lough East Coast (NI) Marine Larne Lough Lough Neagh and Lough Beg Lough Swilly Strangford Lough	Short-Term Decrease, Long-Term Decrease	Short-Term Increase, Long-Term Increase	Yes	Yes	No
Coot (*Fulica atra)* [A125]	Lough Neagh and Lough Beg Lough Swilly Strangford Lough	Short-Term Decrease, Long-Term Stable	Short-Term Stable, Long-Term Unknown	Yes	Yes	No
Cormorant *(Phalacrocorax carbo)* [A017]	Lough Foyle Lough Neagh and Lough Beg Sheep Island Strangford Lough	Short-Term Unknown, Long-Term Increase	Short-Term Fluctuating, Long-Term Increase	Yes	Yes	No

Qualifying Feature	SPA Name	UK Conservation Status and Trend (Based on 2019 Article 12 Reporting)	RoI Conservation Status and Trend (Based on 2012 Article 12 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry
Curlew *(Numenius arquata)* [A160]	Dundalk Bay Lough Foyle Lough Foyle (RoI) Lough Swilly Strangford Lough	Short-Term Decrease, Long-Term Decrease	Short-Term Decrease, Long-Term Decrease	Yes	Yes	No
Dunlin *(Calidris alpina schinzii)* [A149]	Dundalk Bay Lough Foyle Lough Foyle (RoI) Lough Swilly Strangford Lough	Short-Term Stable, Long-Term Decrease	Short-Term Decrease, Long-Term Decrease	Yes	Yes	No
Eider *(Somateria mollissima)* [A063]	East Coast (NI) Marine Lough Foyle Lough Foyle (RoI)	Short-Term Decrease, Long-Term Decrease	Short-Term Increase, Long-Term Unknown	Yes	Yes	No
Fulmar *(Fulmarus glacialis)* [A009]	Rathlin Island	Short-Term Decrease, Long-Term Decrease	Short-Term Stable, Long-Term Increase	Yes	Yes	No
Gadwall *(Mareca strepera)* [A051]	Lough Neagh and Lough Beg Strangford Lough	Short-Term Increase, Long-Term Increase	Short-Term Increase, Long-Term Increase	Yes	Yes	No
Golden Plover *(Pluvialis apricaria)* [A140]	Dundalk Bay Lough Foyle Lough Foyle (RoI) Lough Neagh and Lough Beg Outer Ards Pettigoe Plateau Strangford Lough	Short-Term Decrease, Long-Term Increase	Short-Term Decrease, Long-Term Decrease	Yes	Yes	Yes

Qualifying Feature	SPA Name	UK Conservation Status and Trend (Based on 2019 Article 12 Reporting)	RoI Conservation Status and Trend (Based on 2012 Article 12 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry
Goldeneye (*Bucephala clangula)* [A067]	Lough Neagh and Lough Beg Lough Swilly Strangford Lough	Short-Term Decrease, Long-Term Stable	Short-Term Decrease, Long-Term Decrease	Yes	Yes	No
Great Crested Grebe (*Podiceps cristatus*) [A005]	Belfast Lough Belfast Lough Open Water Dundalk Bay East Coast (NI) Marine Lough Foyle Lough Foyle (RoI) Lough Neagh and Lough Beg Lough Oughter Complex Lough Swilly Strangford Lough	Short-Term Decrease, Long-Term Increase	Short-Term Stable/Fluctuating Long-Term Unknown	Yes	Yes	No
Great Northern Diver *(Gavia immer)* [A003]	Donegal Bay	Short-Term Stable, Long-Term Increase	Short-Term Decrease, Long-Term Unknown	Yes	Yes	No
Greenland White-fronted Goose *(Anser albifrons flavirostris)* [A395]	Durnesh Lough Lough Swilly Pettigo Plateau Nature Reserve	Short-Term Decrease, Long-Term Increase	Short-Term Decrease, Long-Term Increase	Yes	Yes	Yes
Greenshank (*Tringa nebularia)* [A164]	Lough Swilly	Short-Term Stable, Long-Term Increase	Short-Term Stable, Long-Term Increase	Yes	Yes	No
Grey Heron (*Ardea cinerea)* [A028]	Lough Swilly	Short-Term Decrease, Long-Term Stable	Short-Term Stable, Long-Term Stable	Yes	Yes	No
Grey plover (*Pluvialis squatarola)* [A141]	Dundalk Bay Strangford Lough	Short-Term Stable, Long-Term Increase	Short-Term Decrease, Long-Term Unknown	Yes	Yes	No

Qualifying Feature	SPA Name	UK Conservation Status and Trend (Based on 2019 Article 12 Reporting)	RoI Conservation Status and Trend (Based on 2012 Article 12 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry
Greylag goose (*Anser anser)* [A043]	Dundalk Bay Lough Foyle Lough Foyle (RoI) Lough Neagh and Lough Beg Lough Swilly Strangford Lough	Short-Term Stable, Long-Term Stable	Short-Term Decrease, Long-Term Unknown	Yes	Yes	No
Guillemot (*Uria aalge)* [A199]	Rathlin Island	Short-Term Increase, Long-Term Increase	Short-Term Stable, Long-Term Increase	Yes	Yes	No
Hen Harrier (*Circus cyaneus)* [A082]	Antrim Hills Slieve Beagh - Mullaghfad – Lisnaskea Slieve Beagh	Short-Term Stable, Long-Term Stable	Short-Term Decrease, Long-Term Decrease	Yes	Yes	Yes
Herring Gull (*Larus argentatus)* [A184]	Dundalk Bay Lough Derg (Donegal) Lough Foyle (RoI) Rathlin Island	Short-Term Decrease, Long-Term Unknown	Short-Term Decrease, Long-Term Decrease	Yes	Yes	No
Kittiwake *(Rissa tridactyla)* [A188]	Rathlin Island	Short-Term Decrease, Long-Term Decrease	Short-Term Decrease, Long-Term Increase	Yes	Yes	No
Knot *(Calidris canutus)* [A143]	Dundalk Bay Lough Foyle Lough Foyle (RoI) Lough Swilly Strangford Lough	Short-Term Stable, Long-Term Increase	Short-Term Increase, Long-Term Unknown	Yes	Yes	No

Qualifying Feature	SPA Name	UK Conservation Status and Trend (Based on 2019 Article 12 Reporting)	RoI Conservation Status and Trend (Based on 2012 Article 12 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry
Lapwing *(Vanellus vanellus)* [A142]	Dundalk Bay Lough Foyle Lough Foyle (RoI) Lough Neagh and Lough Beg Strangford Lough	Short-Term Decrease, Long-Term Increase	Short-Term Decrease, Long-Term Decrease	Yes	Yes	No
Lesser black-backed gull (*Larus fuscus)* [A183]	Lough Derg (Donegal) Rathlin Island	Short-Term Unknown, Long-Term Decrease	Short-Term Increase, Long-Term Increase	Yes	Yes	No
Light-bellied Brent Goose (*Branta bernicla hrota)* [A046]	Carlingford Lough Carlingford Lough (RoI) Donegal Bay Dundalk Bay Killough Bay Larne Lough Lough Foyle Lough Foyle (RoI) Outer Ards Strangford Lough	Short-Term Increase, Long-Term Increase	Short-Term Increase, Long-Term Increase	Yes	Yes	No
Little grebe *(Tachybaptus ruficollis)* [A004]	Lough Neagh and Lough Beg	Short-Term Stable, Long-Term Increase	Short-Term Increase, Long-Term Unknown	Yes	Yes	No
Mallard (*Anas platyrhynchos)* [A053]	Dundalk Bay Lough Foyle Lough Foyle (RoI) Lough Neagh and Lough Beg Lough Swilly	Short-Term Decrease, Long-Term Decrease	Short-Term Fluctuating, Long-Term Unknown	Yes	Yes	No

Qualifying Feature	SPA Name	UK Conservation Status and Trend (Based on 2019 Article 12 Reporting)	RoI Conservation Status and Trend (Based on 2012 Article 12 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry
	Strangford Lough					
Manx Shearwater *(Puffinus puffinus)* [A013]	Copeland islands East Coast (NI) Marine	Short-Term Unknown, Long-Term Unknown	Short-Term Stable, Long-Term Decrease	Yes	Yes	No
Merlin (*Falco columbarius)* [A098]	Antrim Hills	Short-Term Decrease, Long-Term Increase	Short-Term Unknown, Long-Term Unknown	Yes	Yes	Yes
Oystercatcher (*Haematopus ostralegus)* [A130]	Dundalk Bay Lough Foyle Lough Foyle (RoI) Lough Swilly Strangford Lough	Short-Term Stable, Long-Term Stable	Short-Term Stable, Long-Term Unknown	Yes	Yes	No
Peregrine Falcon (*Falco peregrinus)* [A103]	Rathlin Island Sligo/Leitrim Uplands	Short-Term Stable, Long-Term Increase	Short-Term Increase, Long-Term Increase	Yes	Yes	No
Pintail *(Anas acuta)* [A054]	Dundalk Bay Strangford Lough	Short-Term Decrease, Long-Term Decrease	Short-Term Fluctuating, Long-Term Unknown	Yes	Yes	No
Pochard (*Aythya ferina*) [A059]	Lough Neagh and Lough Beg	Short-Term Decrease, Long-Term Decrease	Short-Term Decrease, Long-Term Unknown	Yes	Yes	No
Puffin *(Fratercula arctica)* [A204]	Rathlin Island Tory Island	Unknown - Unknown	Short-Term Increase, Long-Term Increase	Yes	Yes	No
Razorbill (*Alca torda)* [A200]	Rathlin Island	Short-Term Increase, Long-Term Increase	Short-Term Decrease, Long-Term Increase	Yes	Yes	No

Qualifying Feature	SPA Name	UK Conservation Status and Trend (Based on 2019 Article 12 Reporting)	RoI Conservation Status and Trend (Based on 2012 Article 12 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry
Red-breasted Merganser (*Mergus serrator)* [A069]	Dundalk Bay Lough Foyle Lough Foyle (RoI) Lough Swilly Strangford Lough	Short-Term Decrease, Long-Term Increase	Short-Term Fluctuating, Long-Term Decrease	Yes	Yes	No
Redshank *(Tringa totanus)* [A162]	Belfast Lough Dundalk Bay Lough Foyle Lough Foyle (RoI) Lough Swilly Strangford Lough	Short-Term Decrease, Long-Term Stable	Short-Term Stable, Long-Term Increase	Yes	Yes	No
Red-throated Diver *(Gavia stellata)* [A001]	East Coast (NI) Marine Lough Foyle (RoI)	Short-Term Decrease, Long-Term Stable	Short-Term Increase, Long-Term Stable	Yes	Yes	No
Ringed plover *(Charadrius hiaticula)* [A137]	Dundalk Bay Outer Ards Strangford Lough	Short-Term Decrease, Long-Term Decrease	Short-Term Stable, Long-Term Unknown	Yes	Yes	No
Roseate Tern (*Sterna dougallii)* [A192]	Larne Lough	Short-Term Decrease, Long-Term Decrease	Short-Term Increase, Long-Term Increase	Yes	Yes	No
Sanderling (*Calidris alba)* [A144]	Donegal Bay	Short-Term Increase, Long-Term Increase	Short-Term Increase, Long-Term Increase	Yes	Yes	No

Qualifying Feature	SPA Name	UK Conservation Status and Trend (Based on 2019 Article 12 Reporting)	RoI Conservation Status and Trend (Based on 2012 Article 12 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry
Sandwich Tern (*Stema sandvicensis)* [A191]	Carlingford Lough East Coast (NI) Marine Larne Lough Strangford Lough Lough Swilly	Short-Term Increase, Long-Term Increase	Short-Term Increase, Long-Term Increase	Yes	Yes	No
Scaup (*Aythya marila)* [A062]	Lough Neagh and Lough Beg Lough Swilly	Short-Term Decrease, Long-Term Increase	Short-Term Decrease, Long-Term Unknown	Yes	Yes	No
Seabird Assemblage	Rathlin Island	N/A	N/A	Yes	Yes	No
Shelduck (*Tadorna tadorna)* [A048]	Dundalk Bay Lough Foyle Lough Foyle (RoI) Lough Neagh and Lough Beg Lough Swilly Strangford Lough	Short-Term Decrease, Long-Term Stable	Short-Term Fluctuating, Long-Term Unknown	Yes	Yes	No
Shoveler (*Anas clypeata)* [A056]	Lough Neagh and Lough Beg Lough Swilly Strangford Lough	Short-Term Increase, Long-Term Increase	Short-Term Fluctuating, Long-Term Unknown	Yes	Yes	No
Teal (*Anas crecca)* [A052]	Dundalk Bay Lough Foyle Lough Foyle (RoI) Lough Neagh and Lough Beg Lough Swilly Strangford Lough	Short-Term Stable, Long-Term Increase	Short-Term Stable, Long-Term Unknown	Yes	Yes	No

Qualifying Feature	SPA Name	UK Conservation Status and Trend (Based on 2019 Article 12 Reporting)	RoI Conservation Status and Trend (Based on 2012 Article 12 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry
Tufted duck *(Aythya fuligula)* [A061]	Lough Neagh and Lough Beg	Short-Term Stable, Long-Term Increase	Short-Term Increase, Long-Term Unknown	Yes	Yes	No
Turnstone (*Arenaria interpres*) [A169]	Outer Ards Strangford Lough	Short-Term Decrease, Long-Term Stable	Short-Term Fluctuating, Long-Term Unknown	Yes	Yes	No
Waterfowl assemblage	Lough Foyle Lough Neagh and Lough Beg Strangford Lough	N/A	N/A	Yes	Yes	No
Wetland and Waterbirds [A999]	Carlingford Lough (RoI) Donegal Bay Dundalk Bay Lough Foyle (RoI) Lough Oughter Complex Lough Swilly Trawbreaga Bay	N/A	N/A	Yes	Yes	No
Whooper swan (*Cygnus cygnus)* [A038]	Durnesh Lough Lough Foyle Lough Foyle (RoI) Lough Neagh and Lough Beg Lough Oughter Complex Lough Swilly Upper Lough Erne	Short-Term Increase, Long-Term Increase	Short-Term Increasing, Long-Term Increase	Yes	Yes	No

Qualifying Feature	SPA Name	UK Conservation Status and Trend (Based on 2019 Article 12 Reporting)	RoI Conservation Status and Trend (Based on 2012 Article 12 Reporting)	Sensitive to FAPP inputs from agricultural run-off	Sensitive to FAPP inputs from airborne nutrient deposition	Sensitive to FAPP effects associated with afforestation and agroforestry
Wigeon (*Anas penelope)* [A050]	Lough Foyle Lough Foyle (RoI) Lough Neagh and Lough Beg Lough Oughter Complex Lough Swilly Strangford Lough	Short-Term Stable, Long-Term Increase	Short-Term Decrease, Long-Term Decrease	Yes	Yes	No