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Rialtais Áitiúil agus Oidhreachta
Department of Housing,
Local Government and Heritage



NATURA IMPACT STATEMENT

Ireland's Fifth Nitrates Action Programme

This report was prepared on behalf of the Department of Housing, Local Government and Heritage



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1 INTRODUCTION

The Department of Housing, Local Government and Heritage (DHLGH) is the lead authority, working in co-operation with the Department of Agriculture, Food and the Marine (DAFM), in preparing Ireland's fifth Nitrates Action Programme (hereafter the 'NAP') in line with the requirements of Article 28 of the Good Agricultural Practice Regulations and the Nitrates Directive. This legislation requires the review of the NAP every four years and the fourth and current iteration of the NAP came into force in 2017 and will expire in 2021 and now needs to be reviewed. The NAP is designed to prevent pollution of surface waters and groundwater from agricultural sources and to protect and improve water quality.

With reference to the legislative context summarised below, a Stage 1 screening for Appropriate Assessment (AA) was undertaken with respect to the NAP in June 2021 (refer **Appendix A**). This concluded that adopting Ireland's fifth Nitrates Action Programme was not directly connected with or necessary to the management of a European Site; and the possibility of likely significant effects on some European Sites could not be excluded at the screening stage.

On that basis, the Stage 1 AA Screening Report states that, in applying the precautionary principle, and with reference to Article 6(3) of the EU Habitats Directive, a Stage 2 appraisal for Appropriate Assessment and the preparation of a Natura Impact Statement is required. This Natura Impact Statement (NIS) has been prepared based on the conclusions of the AA Screening Report. The NIS will assess, in view of best scientific knowledge and applying the precautionary principle, whether the NAP, either individually or in combination with other plans or projects, may adversely affect the integrity of any European site(s). The assessment will be carried out in accordance with the legal context outlined in **Section 1.1**.

1.1 Legislative Context

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, better known as 'The Habitats Directive', provides legal protection for habitats and species of European importance. Articles 3 to 9 of the Directive provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of a European Union (EU)-wide network of sites known as Natura 2000 (hereafter referred to as 'European sites'). European sites comprise:

- Special Areas of Conservation (SAC) designated for habitats, plants, and non-bird species, under the Habitats Directive (92/43/EEC); and
- Special Protection Areas (SPA) designated for bird species and their habitats, under the Birds Directive (79/409/ECC as codified by Directive 2009/147/EC).

Article 6 of the Habitats Directive plays a crucial role in the management of the sites that make up the Natura 2000 network¹. Articles 6(1) and 6(2) set out the need to identify conservation objectives and prevent deterioration of the habitats and species for which the sites have been designated. Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect European Sites (Annex 1.1).

Article 6(3) establishes the requirement for Appropriate Assessment (AA):

Any plan or project not directly connected with or necessary to the management of the [European] site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.

Article 6(4) states:

If, in spite of a negative assessment of the implications for the [European] site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, Member States shall take all

¹ Managing Natura 2000 sites. The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, EC 2018.

compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

The Habitats Directive has been transposed into Irish law by the Planning and Development Act 2000 (as amended) and the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended). In the context of the NAP, the governing legislation is principally the European Communities (Birds and Natural Habitats) Regulations, as amended, and specifically Article 27 which sets out the duties of public authorities (in this case DHLGH) relating to nature conservation; and Articles 42 and 42A which addresses AA. If screening for AA determines the likelihood for significant effects on a European site(s), in view of the conservation objectives of the site, then AA must be carried out for the plan, including the compilation of a Natura Impact Statement (NIS) to inform the decision making.

1.2 Purpose of the Appropriate Assessment Process

The overall purpose of the AA process is to ensure that the NAP does not result in any adverse effects on the integrity of any European sites in view of its conservation objectives. This NIS has been prepared to inform the AA process having regard to the legislative requirements of EU and national law as outlined previously.

Under the European Union (Birds and Natural Habitats) (Amendment) Regulations 2021 (S.I. No. 293 of 2021), the Ecological Assessment Unit² is required to conduct an Appropriate Assessment of the NAP. This NIS will inform the AA determination made by the Ecological Assessment Unit before the DHLGH makes any decision to adopt the NAP.

1.3 Stages of Appropriate Assessment

Stage 1: Screening / Test of Significance: This process identifies whether the proposed plan / project is directly connected to or necessary for the management of a European site(s) and identifies whether the plan / project is likely to have significant impacts upon a European site(s) either alone or in combination with other plans / projects. The output from this stage is a determination of not significant, significant, potentially significant, or uncertain effects. The latter three determinations will cause the plan / project to be brought forward to Stage 2.

Stage 2: Appropriate Assessment: This stage considers the impact of the proposed development on the integrity of a European site(s), either alone or in combination with other plans / projects, with respect to: (i) the site's conservation objectives; and (ii) the site's structure, function and its overall integrity. The output from this stage is an NIS. This document must include sufficient information for the competent authority to carry out the appropriate assessment. If the assessment is negative, i.e., adverse effects on the integrity of a site cannot be excluded despite incorporation of measures to avoid or reduce the adverse effects, then the process must consider alternatives (Stage 3).

Stage 3: Assessment of Alternatives: This process examines alternative ways of achieving the objectives of the plan / project that avoid adverse impacts on the integrity of a European site. This assessment may be carried out concurrently with Stage 2 in order to find the most appropriate solution. If no alternatives exist or all alternatives would result in negative impacts to the integrity of the European sites, then the process either moves to Stage 4 or the plan / project is abandoned.

Stage 4: Assessment where Adverse Impacts Remain: This stage is undertaken when it has been determined that a plan / project will have adverse effects on the integrity of a European Site, but that no alternatives exist. It includes the identification of compensatory measures where, in the context of Imperative Reasons of Overriding Public Interest (IROPI), it is deemed that the project or plan should proceed.

1.4 Overlap with the Strategic Environmental Assessment

A Strategic Environmental Assessment (SEA) of the NAP is being carried out concurrently with the preparation of the NIS. The purpose of the SEA is to evaluate at an early stage, the range of environmental consequences that may occur as a result of implementing the NAP and to give interested parties an opportunity to comment upon the perceived or actual environmental impacts of the NAP. There is a degree of overlap between the requirements of the SEA and AA and, in accordance with best practice, an integrated

² The Regulations define the 'Ecological Assessment Unit' as the "unit, which is known by that name, in the Department of State for which the Minister has charge".

process of data sharing has been carried out, such as sharing of baseline data and mapping of European sites, sharing of potential ecological effects of the NAP on European sites and clarification on more technical aspects of the NAP. These processes together have informed and shaped the development of the NAP.

It is also noted that there are aspects of the Habitats Directive that are not strictly related to AA, including Article 10 and 12 of the Directive. In these cases, the issues have been brought forward to the biodiversity, flora and fauna section of the SEA and have been addressed in that context as part of the wider environmental assessments informing the NAP.

1.5 Consultation

Notwithstanding the additional public consultation requirements brought into effect by Regulation 42(A) of S.I. No. 293 of 2021 where an Appropriate Assessment is required in respect of a proposed plan or project, consultation has been driven by the mandatory requirements under the SEA Directive. However, from the outset, the opportunity has been taken to consult with stakeholders in relation to both the SEA and the AA processes as these processes relate to the NAP.

In June 2021, an SEA Scoping Report was provided to the specific environmental authorities including the Development Applications Unit of the Department of Housing, Local Government and Heritage. This 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 Northern Ireland. A number of responses were received during the SEA Scoping phase including some that had direct bearing upon the AA process.

An SEA Scoping workshop was also held on the 24th June 2021. This was attended by members of the DHLGH Policy team, the SEA/AA team and representatives from the EPA SEA team. All responses received as part of the consultation as well as comments received at the SEA Scoping workshop, have been considered in the preparation of the NIS. The following is a summary of consultation responses of relevance to the AA:

Environmental Protection Agency (EPA)

- There is unequivocal evidence from reports by EPA and others that agriculture in Ireland is causing pollution and damage to ecosystems and biodiversity.
- The submission outlined the key water quality findings of concern from the Water Indicators Report 2019 including the following:
 - Nearly half (47%) of river sites have unsatisfactory nitrate concentrations. 44% of sites are showing an increasing nitrate trend for the period 2013-2019.
 - Over a fifth (22%) of estuarine and coastal water bodies have unsatisfactory dissolved inorganic nitrogen (DIN) concentrations. The highest DIN concentrations are in the south and south east of the country.
 - Loads of total nitrogen and total phosphorus to the marine environment from our rivers have increased by 24% (13,559 tonnes) and 31% (338 tonnes) respectively since 2012- 2014.
 - Over a fifth (22%) of groundwater monitoring sites have high (>25mg/l NO₃) nitrate concentrations, and three sites exceed the drinking water standard (50 mg/l NO₃).
 - Almost half (49%) of all groundwater sites had increasing nitrate concentrations for the period 2013-2019.
 - There is a strong regional pattern in all waters that have excess nitrogen concentrations and increasing trends. The areas of greatest concern are the south and south east of the country, which is also the area where the highest levels of intensive farming takes place.

Inland Fisheries Ireland

- The submission notes that the key pressure on water bodies continues to be agriculture (including nutrient run-off). There also continues to be a decline in the number of water bodies that are reaching or maintaining High ecological status, with only 20 sites reaching Q5 status in 2020 compared to 500 water bodies 30 years ago and an increase in the number of polluted water bodies; and
- While the importance of derogations to the dairy sector is recognised, the implications for water quality and ecosystem health of allowing increased Nitrogen and Phosphorus in sensitive catchments, even with a Nutrient Management Plan (NMP) in place, is a significant challenge.

Department of Agriculture, Environment and Rural Affairs Northern Ireland (DAERA)

- Note of the Northern Ireland Biodiversity Strategy to 2020;
- The Draft NI peatland policy which is currently being consulted on: <https://www.daerani.gov.uk/consultations/ni-peatland-strategy-consultation>; and
- The potential for transboundary impacts and the potential disturbance to/impact on NI/RoI migratory/mobile species such as salmon, for example within the Lough Melvin Special Area of Conservation which lies within both Northern Ireland and the Republic of Ireland.

2 BACKGROUND AND OVERVIEW OF THE NITRATES ACTION PROGRAMME

This chapter provides an overview of the Nitrates Action Programme and its programme of measures which have been subject to the AA process as documented in this NIS.

2.1 Legislation

The Nitrates Directive (91/676/EEC) has been in place since 1991 and aims to protect water quality from pollution by agricultural sources and to promote the use of good farming practice. The Nitrates Directive forms an integral part of the Water Framework Directive and is one of the key instruments in the protection of waters from agricultural pressures. The Nitrates Directive requires Member States to undertake the following:

- Monitor waters and identify waters which are polluted or are liable to pollution by nitrates from agriculture;
- Identify the area or areas to which an action programme should be applied to protect water from pollution from nitrates from agricultural sources (note Ireland has applied its Nitrates Action Programme on a country-wide basis, thus ensuring 100% territorial coverage compared to an EU average of 45% territorial coverage);
- Develop and implement an action programme to reduce and prevent such pollution. This action programme must be implemented and updated on a four-year cycle;
- Monitor the effectiveness of the action programmes, and
- Report to the EU Commission on progress.

Annex III of the Directive includes the measures to be included in action programmes and specifies that the maximum amount of livestock manure that may be applied to each farm is 170 kgN/ha/yr.

2.2 Nitrates Action Programme

In relation to the requirements for an action programme, Ireland's first Nitrates Action Programme (NAP) came into force in 2006 and has been reviewed three times since and the fourth, and current, NAP will expire in 2021. Hence, the DHLGH is currently preparing the fifth NAP for implementation.

Ireland's Nitrates Action Programme is given effect by European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2017 (S.I. No. 605 of 2017), as amended including SI 40 2020 and SI 529 2020 (for the Nitrates Derogation). Article 28 of the Regulations is the legal basis for the four-year review basis for the NAP.

There are a number of existing requirements within the fourth and current NAP that apply to farming practices and the protection of water and these are summarised below:

- Limits on farm stocking rates;
- Limiting the application of fertilisers;
- The application of 'closed periods' preventing the application of organic and chemical fertilisers during environmentally vulnerable parts of the season;
- Minimum storage requirements for livestock manures;
- Requirements regarding maintenance of green cover in tillage lands;
- Requirements for farmers to maintain adequate records;
- Knowledge transfer to farmers and farming advisors on Good Agricultural Practice (GAP);
- Nutrient Management Planning (NMP) is required from farmers to maximise the value of chemical and organic nutrient inputs;
- Phosphorus build-up is permitted on farms with stocking rates of 130 kg N/ha or above to optimise soil productivity;
- Cattle are prevented from entering watercourses on farms with a grassland stocking rate of 170 kg N/ha or above - water courses to be fenced 1.5 metres from the top of the riverbank or water's edge; and

- Low Emission Slurry Spreading (LESS) is a requirement for all derogation farmers from 2020.

In common with other EU Member States in which intensive agricultural activity is practised, Ireland availed of a derogation from the 170 kg N/ha organic nitrogen limit of the Nitrates Directive which was granted by the EU Commission in 2007 for the first time. During the first NAP, derogations were granted to just over 5,000 farm holdings amounting to circa 4% of total net land area. The number of farm holdings granted derogations under the second NAP (2010) was approximately 5,100 which has since increased to 6,016 derogation farms in 2020.

All derogation farm holdings were subject to strict controls, including a requirement on farmers to apply annually to DAFM for derogation as well as complying with additional conditions related to the application of manure and other fertilisers. An inspection programme was also established to ensure compliance with the derogation conditions. Subject to the granting of derogation by the EU Commission, this regime will continue under the fifth NAP.

DAFM initiated a voluntary review of Ireland's nitrates derogation in 2019 to examine further opportunities for derogation farmers to improve efficiencies and continue to reduce environmental footprints with regard to water, climate and air quality. The review was conducted against the background of derogation farms being a very significant intensive cohort and the increasing area being farmed under the derogation. Furthermore, recent EPA reports have highlighted deterioration in water quality and increasing greenhouse gas and ammonia emissions.

Following this review, a series of additional measures were introduced and these measures are aimed at further strengthening the protection of water and attaining optimum soil fertility that is consistent with both efficient agricultural production and effective water quality protection. These measures include the following which have been added to the NAP through the evolving legislative basis:

- Low Emission Slurry Spreading (LESS) which is mandatory since 2020 through S.I. No. 65 of 2018;
- Introduction of a Liming Programme (introduced through S.I. No. 40 of 2020);
- Reduction of Crude Protein in concentrates (introduced through S.I. No. 529 of 2020);
- Training on Grassland Management and Nutrient Use Efficiency; and
- Grassland Measurement.

The suite of measures considered for the evolving NAP is informed by the detailed research work by the Agricultural Catchments Programme (ACP). This research has highlighted that soils, weather and farming practices have a significant influence on nitrate concentrations at the local scale which has important implications for selecting the right measures. Ireland's heterogeneous landscape means that measures need to be targeted to achieve the best environmental outcomes. Ireland is adopting a collaborative approach to identifying these measures and will seek to implement them using a range of policy instruments including the NAP, the River Basin Management Plans and climate action policy.

In November 2020, the DHLGH commenced consultation on the next iteration of the NAP through publication of a consultation paper³. This fifth NAP will be developed in the context of significantly greater environmental ambition in the Programme for Government and at EU level. The DHLGH consultation document sets out a number of detailed issues to be considered and potential additional requirements and key elements of this include:

- Better policy alignment, with particular reference to the Farm 2 Fork and the EU Biodiversity Strategy for 2030 both of which have set ambitious targets for the agricultural sector;
- Climate action measures, in particular the Climate Action Plan 2019 and specifically, Action 109 on the improvement of on-farm slurry management;
- Biodiversity measures such as those in the National Biodiversity Action Plan 2017-2021; and
- Nitrates derogation and the potential to seek a new derogation for DAFM approved farms and units.

The above policy changes will be central to the revision of the NAP and the associated SEA and AA processes. In addition, the revision of the NAP needs to be cognisant of the evolving policy for the agri-food sector coupled with the observed trends in the state of the environment.

³ Link: <https://www.gov.ie/en/consultation/6c940-public-consultation-on-irelands-nitrates-action-programme/>

2.3 Enforcement

In terms of enforcement of the NAP measures, Article 27 of the Regulations requires the DAFM to carry out monitoring and evaluation programmes in relation to farm practices to determine the effectiveness of measures being taken. The results of this monitoring must be made available to the EPA and the local authority.

Farm inspections of relevance to the NAP are undertaken through three separate mechanisms as follows:

- Local Authority Inspections;
- Cross Compliance Inspections under the Common Agricultural Policy (CAP); and
- Nitrates Derogation Inspections;

The DHLGH is responsible for ensuring that the local authorities undertake inspections under the GAP Regulations. Non-compliant farms may be subject to further enforcement through reductions to the Basic Payment Scheme. Typically (pre-Covid), the local authorities undertake approximately 1,600 inspections per annum. However, the quality and consistency of the number, frequency and level of inspections and associated cross reporting between local authorities varies significantly.

Compliance with NAP measures is assessed by DAFM in conjunction with other legislative requirements on public health, animal health, plant health, animal welfare and land maintenance and this combined system is termed Cross Compliance. The requirements for these inspections are specified in Articles 91 to 95 of the Common Agricultural Policy (CAP) Regulation⁴ and farmers must meet these requirements to receive a payment under the Basic Payment Scheme.

Cross Compliance is implemented under two main areas; Statutory Management Requirements (SMRs) and Good Agricultural and Environmental Condition (GAEC) standards. There are thirteen SMRs which refer to 13 legislative requirements with SMR1 relating to the protection of water against pollution caused by nitrates. DAFM have developed a monitoring checklist in relation to SMR1 which is used by inspectors to assess compliance in the following areas:

- Section 1 Part 1 Records;
- Section 2 Minimisation of Soiled Water;
- Section 3 Part 1 Livestock Manures and other Organic Fertilisers Section 4 Landspreading of Chemical and Organic Fertiliser;
- Section 5 Application Conditions of Organic Fertilisers;
- Section 6 Ploughing and Green Cover;
- Section 7 Nitrogen from Livestock Manure;
- Section 8 Nitrogen and Phosphorus; and
- Section 9 High OM LPIS Soil Organic Matter samples.

It is noted that not all farms are inspected and the inspection regime is risk based. Approximately 20-25% of cases are selected randomly with the remainder selected using risk criteria appropriate to that SMR/GAEC. Examples of risk criteria include previous penalty cases or people with a track record of late reporting. Risk analysis results are reviewed on an annual basis and risk categories are modified as appropriate, e.g. risk categories that perform are kept but underperforming ones are either dropped or amended and new ones may also be added.

In general, the rate of on-farm inspection required for Cross Compliance is at least 1% of those farmers applying under the relevant agricultural schemes⁵. However, at least 3% of farmers must be inspected under the Animal Identification and Registration requirements for cattle and 3% for sheep/goats as prescribed

⁴ Regulation (EU) No 1306/2013 of the European Parliament and of the Council of 17 December 2013 on the financing, management and monitoring of the common agricultural policy

⁵ BPS, Greening, the Young Farmers Scheme, ANC/ASC, the Protein Aid Scheme, BDGP, the Sheep Welfare Scheme, the Hemp Production Scheme, the Green Low Carbon Agri-Environment Scheme (GLAS) and the Organic Farming Scheme (OFS) must comply with the Statutory Management Requirements (SMRs) and Good Agricultural and Environmental Condition (GAEC)

under the relevant Regulations. Generally, these inspections are carried out at a time when most requirements and standards for which the farmer was selected may be checked.

If an applicant is found to be in breach of Cross Compliance through negligence, a sanction of 3% of the Basic Payment Scheme support will generally apply but this can be increased to 5% or decreased to 1% depending on the extent, severity and permanence of the infringement.

Where the non-compliance is deemed intentional a reduction of 20% shall generally be applied. The sanction can be increased up to 100%, or reduced to 15%, depending on the seriousness of the non-compliance. In extreme cases, the sanction can extend beyond the year of the finding. In the case of an infringement of the same requirement, or standard occurring more than once, within a consecutive period of 3 calendar years, the sanction will be trebled and this is called Reoccurrence.

DAFM report that the number of farmers penalised for exceeding the nitrogen limits in 2019 was 1,829 and the sanctions for these breaches were varying levels of reduction to the Basic Payment Scheme.

The DAFM are required to undertake inspections of a minimum of 5% of holdings that have availed of the derogation. In 2020, the number of approved holdings with derogations was 6,016 and DAFM undertook 338 inspections (5.6%) of these farms. Of these 338 inspections, circa 7% were the subject of further enforcement, i.e. a deduction from the Basic Payment Scheme.

2.4 The Agri-Food Sector

The agri-food sector is Ireland's oldest and largest indigenous exporting sector. In 2020, the sector accounted for over 6% of GNI and 9% of exports in value terms. The sector accounts for 38% of total indigenous exports and over 60% of indigenous manufactured exports. The sector employed 163,600 people or 7.1% of total employment in 2020. Outside of Dublin and the mid-east region, the sector provides between 10% and 14% of employment.

Some 137,500 farms producing over €8.2 billion in output, over 770,000 hectares of forest and over 2,000 fishing vessels and aquaculture sites producing fish with a value of €700 million underpin the sector. In Ireland, agri-food is an integral part of the economy and society in particular in rural and coastal communities.

Food Vision 2030⁶ is the new stakeholder strategy for the Irish agri-food sector for the period to 2030 and sets out four high-level missions to achieve its vision:

- A Climate Smart, Environmentally Sustainable Agri-Food Sector;
- Viable and Resilient Primary Producers with Enhanced Wellbeing;
- Food that is Safe, Nutritious and Appealing, Trusted and Valued at Home and Abroad; and
- An Innovative, Competitive and Resilient Sector, driven by Technology and Talent.

There are seven goals in the environmental mission that aim to deliver a climate-neutral food system by 2050, with verifiable progress achieved by 2030, encompassing emissions reductions, carbon sequestration, improvements in air quality, restoration and enhancement of biodiversity, improvements in water quality, development of diverse forests, enhanced seafood sustainability, exploring the bioeconomy and strengthening Origin Green. Additionally some of the key high-level targets outlined in the strategy of relevance to the NAP 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; and
- Air Quality: Ammonia emissions to reduce to 5% below 2005 levels by 2030.

⁶ Link: <https://www.gov.ie/en/publication/c73a3-food-vision-2030-a-world-leader-in-sustainable-food-systems/>

These targets are supported by a series of actions and there are clear interactions between the review of the NAP and the Food Vision 2030 Strategy.

Notwithstanding the economic success of previous strategies to date, the sector faces a number of environmental, water quality and climate change commitments. The industry will be required to show an absolute commitment to the principles of sustainability, recognising that gains in productivity must not be at the expense of the environment. The success or otherwise of measures to mitigate and adapt to these challenges will inform the reforms to the Common Agricultural Policy (CAP), the cornerstone of agricultural support in Ireland and the EU.

The CAP acts as a partnership between agriculture and society and between Europe and its farmers. The CAP aims to improve farming practises and productivity to help ensure affordable food produce, as well as providing reasonable living for farmers. The CAP also focuses on climate change and sustainably managing natural resources and rural landscapes.

The EU Farm to Fork Strategy⁷ is at the heart of the European Green Deal aiming to make food systems fair, healthy and environmentally-friendly. The strategy is also central to the Commission's agenda to achieve the United Nations' Sustainable Development Goals (SDGs). The Strategy aims to reduce 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.

2.5 Water Quality Trends

In June 2021, the EPA reported⁸ on the assessment of the catchments that need reductions in nitrogen concentrations to achieve water quality objectives. The main findings of the report may be summarised as follows:

- Elevated nitrogen concentrations in waters is one of the factors that leads to poor water quality outcomes in all waters. Estuaries and coastal waters, and groundwater drinking water supplies are particularly at risk;
- There are a number of key catchments of concern with elevated nitrogen concentrations along the south, southeast and east coasts including the Maigne/Deel, Bandon, Lee, Blackwater, Suir, Nore, Barrow, Slaney, Tolka/Liffey and the Boyne river catchments;
- Nitrogen concentrations in waters have been increasing since 2013 — between 2013 and 2019, all but one of the catchments of concern showed increasing trends in the amount, or load, of nitrogen discharging to the sea via our rivers;
- The nitrogen load discharging to sea needs to be reduced in the catchments of concern to support healthy aquatic ecosystems. The scale of reduction needed ranged from zero in some years, to just over 8,000 tonnes of nitrogen in the Barrow catchment in 2018;
- The data show that in the predominantly rural catchments, more than 85% of the sources of nitrogen in the catchment are from agriculture, from chemical and organic fertilisers. In contrast, the majority of the nitrogen in Liffey/Tolka catchment, which incorporates Dublin City, is from urban wastewater; and
- Maps have been developed of the critical source areas for nitrogen. These are the highest risk areas in the landscape where nitrogen from agriculture leaches to waters. Measures to reduce leaching should be targeted in the critical source areas, in the catchments of concern, to deliver maximum environmental benefits.

In particular, nitrogen pollution in the south and south-east of the country is damaging the ecological health of many estuaries and nearshore coastal waters. In these areas, which have freely draining soils, nitrate seeps rapidly into groundwater, and losses are closely correlated with the intensiveness of farming. The higher the rate of application of nitrogen, the higher the nitrate concentrations in waters. **Figure 2-1** shows the average nitrate concentrations in rivers with a clear spatial trend showing elevated levels in the south and southeast of the country.

⁷ Link: https://ec.europa.eu/food/system/files/2020-05/f2f_action-plan_2020_strategy-info_en.pdf

⁸ Link: <https://www.catchments.ie/assessment-of-the-catchments-that-need-reductions-in-nitrogen-concentrations-to-achieve-water-quality-objectives/>

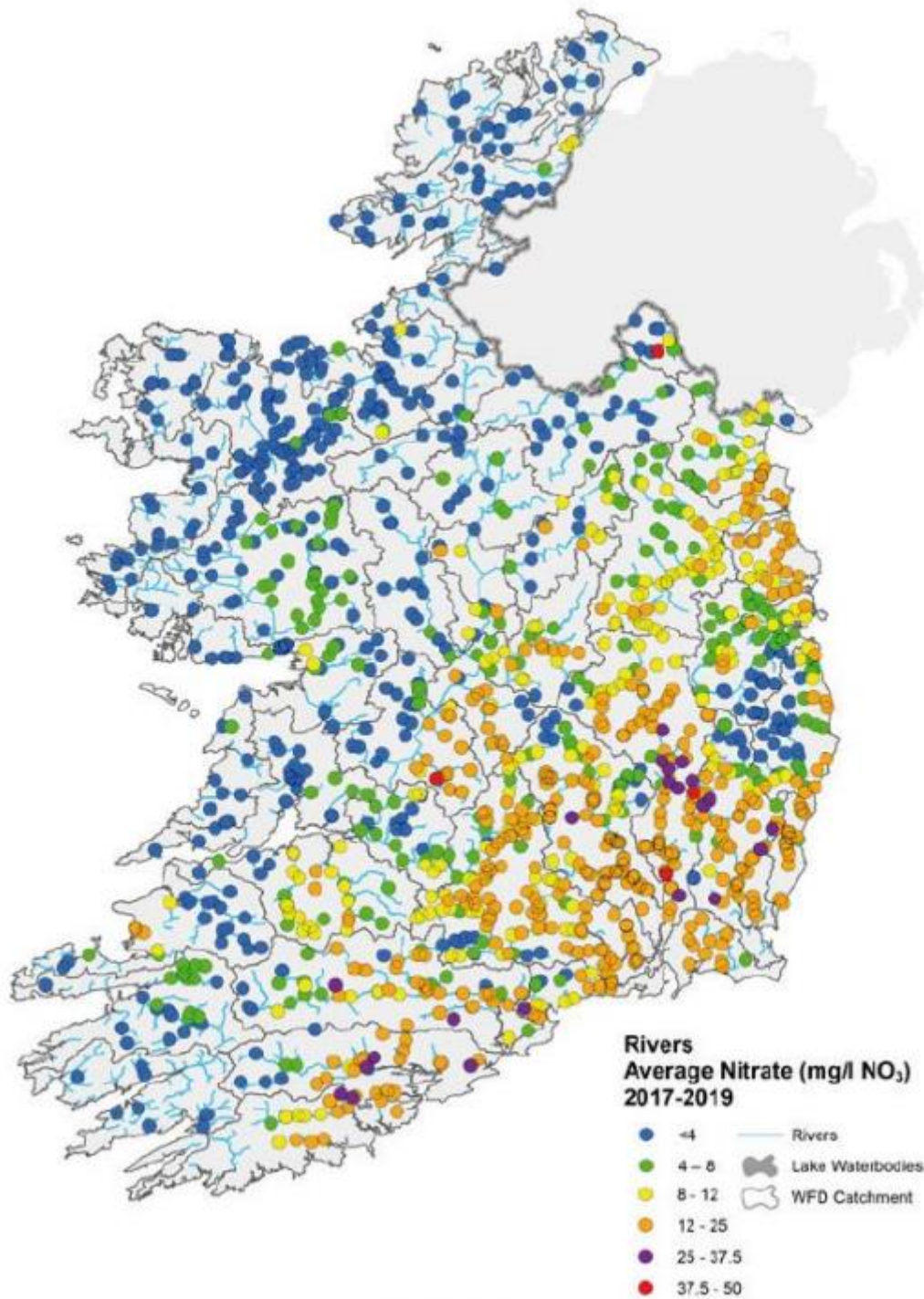


Figure 2-1: Average Nitrate concentrations in rivers for the period 2017-2019, showing elevated concentrations in the catchments in the south, southeast and east of the country (source: EPA).

The EPA also published a report in June 2021 on the ‘*Assessment of the catchments that need reductions in nitrogen concentrations to achieve water quality objectives*’⁹. The report sets out that nitrogen concentrations have been increasing in coastal waters in the south, southeast and east over the period since 2009 and it estimates that 85% of nitrogen in mainly rural catchments is from agriculture. The report provides estimates of how much of a reduction in the nitrogen load in the rivers in each catchment is needed to support healthy waters, this ranged from 0 in some catchments in a number of years to 8,000 tonnes for the Barrow in 2018. The impacts of climate and weather are acknowledged, the 2018 drought had a significant negative impact on water quality and the impacts of this were still being shown in 2019. In the Barrow and Slaney catchments circa 27% of the losses are from arable land but the majority of losses across all catchments are from grassland.

The report identifies that there are areas of land in all catchments of free draining soil which are most susceptible to losses and these are termed critical source areas and should be targeted for interventions to reduce losses. On average these make up circa 40% of the catchments or 690,000 hectares within the State. The agricultural area of Ireland excluding commonage is 4.5 million hectares and the EPA report indicates that the N reduction required will be on circa 15% of the agricultural land area which will be a significant challenge.

DAFM requested Teagasc to model the impact (environmental and economic) of a number of farm nitrogen mitigation measures in order to inform policy of the best current and potential actions to deliver the catchment-based nitrate load reduction estimated by the EPA. The report on the analysis, entitled ‘*The Impact of Nitrogen Management Strategies within Grass Based Dairy Systems*’¹⁰ was published on the 21st July 2021. The analysis has linked directly to the EPA report above and has informed environmental measures in the next NAP.

The assessment was confined to nitrate losses from freely draining soils where farming intensity is greater than 130 kg N/ha/year and the following scenarios were requested to be investigated:

- Chemical N reduction of approximately 10% and 20% i.e., chemical N application rates of 250, 225 and 200 kgN/ha;
- Delaying the first chemical N application in spring from 15 January;
- Finish final chemical N application in autumn earlier than 15 September;
- Uneven distribution of chemical N fertilizer across the farm, i.e., applying 300 and 350 kg N/ha on the grazing platform;
- Stocking rate reduction - 250 kg N/ha (2.74 cows/ha) versus 230 kg N/ha (2.52 cows/ha);
- High platform stocking rates - 340 kg N/ha (3.73 cows/ha) and 430 kg N/ha (4.72 cows/ha);
- Spreading slurry during the closed period- 12% and 25% of slurry spread during the month of December;
- Implementations of using precision farming to increase N use efficiency; and
- Options for banding organic N excretion rates for dairy cows.

The outputs to this modelling assessment have been used to inform the development of measures proposed within the draft NAP.

The ACP have also undertaken detailed monitoring to determine the influence of derogation on water quality in Ireland at a small catchment scale (circa 10 km²) by detailed high resolution water quality monitoring of surface and groundwater bodies in intensively managed and agricultural catchments with different physical settings. Eleven-years of high frequency monitoring of nitrogen (N) and phosphorus (P) concentration in the catchments outlets has shown that not only the magnitudes of concentrations but also the dynamics varied across the catchments.

A key finding from this research is that the percentage of land in derogation within a catchment or sub-catchment is not always reflected in the water quality in the associated water bodies (surface and groundwater). For example, at catchment scale with most land in derogation and with a gradual increase in annual organic N loading there was no associated increase in groundwater nitrate-N (NO₃-N) concentration.

⁹ <https://www.catchments.ie/assessment-of-the-catchments-that-need-reductions-in-nitrogen-concentrations-to-achieve-water-quality-objectives/>

¹⁰ <https://www.teagasc.ie/publications/2021/the-impact-of-nitrogen-management-strategies-within-grass-based-dairy-systems.php>

At the same time in another catchment with no derogation and only minor increases in organic N loading, there was an increase in the NO₃-N concentration in groundwater.

Such differences at catchment scale led to detailed examinations in sub-catchment scale investigations (circa 1 km²). Results from freely drained sub-catchments, show that there were higher NO₃-N and total reactive P concentrations with a higher proportion of land in derogation. In sub-catchments with poorly drained soils, the percentage of land in derogation was not reflected in the stream water.

In summary, soil type and weather, in conjunction with farm management, have a significant role in regulating nutrient losses from agricultural soils and catchments. Targeting the right mitigation measure in the right place is critical to improve water quality on all farms, irrespective of stocking rate, where water quality is impacted by agriculture.

The Agricultural Sustainability Support and Advisory Programme (ASSAP) service in association with the Local Authorities Water Programme is providing tailored advice to farmers on context suitable measures and management practices in priority areas for action to improve water quality.

2.6 Scope and Content of the NAP

The NAP is a national programme designed to prevent pollution of surface waters and groundwater from agricultural sources and to protect and improve water quality. As such the assessment will be primarily focussed on activities occurring at the national to regional scale. Recognition will also be given within the NAP to the issue of agriculture and water quality in Northern Ireland.

This is the fifth iteration of the NAP and will cover the period from 2022 up to 2025. In line with the SEA Directive, short, medium and long-term impacts (including reference to secondary, cumulative, synergistic, permanent and temporary, positive and negative effects) will be considered during the assessment. For the purpose of the SEA, the short-term will consider changes within the cycle period up to 2025, the medium-term horizon will consider 10 years beyond the end of the cycle period, and a long-term horizon of beyond 2035 will be considered.

The content of the NAP will be laid out as per the structure of the current regulations (i.e. the European Union (Good Agricultural Practice for Protection of Waters) Regulations 2017, S.I. No. 605/2017) which give effect to Ireland’s Fourth NAP. Modified or additional measures have been included as required within the general structure for the fifth NAP as per that laid out in **Table 2.1**.

Table 2.1: Structure of the NAP

Part/Schedule	Summary of Content
Part 1 Preliminary	Provides details on the purpose and scope of the Regulations and the associated definitions for implementation.
Part 2 Farmyard Management	This part addresses the necessary good practices for farm operations such as: <ul style="list-style-type: none"> • Minimisation of soiled water; • Collection and holding of certain substances; • Provision and management of storage facilities; • General obligations as to capacity of storage facilities (with additional details in Schedule 2); • Capacity of storage facilities for effluents and soiled water (with additional details in Schedule 2); • Capacity of storage facilities for pig manure; • Capacity of storage facilities for poultry manure (with additional details in Schedule 3); • Capacity of storage facilities for manure from deer, goats and sheep; • Capacity of storage facilities for manure from cattle (with additional details in Schedule 3); and • Reduced storage capacity in certain circumstances (with additional details in Schedules 2 and 4).
Part 3 Nutrient Management	This part sets out the duty of and occupier in relation to nutrient management and the general obligation to take all such reasonable steps to prevent or minimise the application to land of fertilisers in excess of crop requirement on the holding. The relevant ‘crop requirements’ are further clarified in Schedule 2.
Part 4 Prevention of Water Pollution from Fertilisers and Certain Activities	This part addresses the necessary good practices such as: <ul style="list-style-type: none"> • Distances from a water body and other issues with varying limitations dependent on the water body;

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	<ul style="list-style-type: none"> • Requirements as to manner of application of fertilisers, soiled water, etc. including weather conditions, ground conditions and application techniques; • Periods when application of fertilisers is prohibited with additional details presented in Schedule 4; • Limits on the amount of livestock manure to be applied which is set at shall not exceed an amount containing 170 kg of nitrogen per hectare and subject to Schedule 2; and • Restrictions on ploughing and the use of non-selective herbicides.
Part 5 General	<p>The part of the NAP sets out the general provisions and obligations on the occupiers as well as the relevant offence as follows:</p> <ul style="list-style-type: none"> • General duty of occupier; • Keeping of records by occupier; • False or misleading information; • Authorised person and associated powers; and • Offences and related matters.
Part 6 Functions of Public Authorities	<p>This part sets out the function of the Minister for Agriculture, Food and the Marine including monitoring and evaluation programmes, registers, inspection reports, etc. In addition, this part provides for the 4-year review of the NAP. The role of the EPA and the local authorities under the Regulations are also provided.</p>
Part 7 Implementation of Commission Decision	<p>Part 7 was introduced through S.I. No. 65 of 2018 and sets out the provisions for the occupier of the holding to seek a derogation from the Part 4 limits on the amount of livestock manure to be applied (170 kg of nitrogen per hectare) with further details provided in Schedule 5. The role of the Minister in the consent process and compliance testing is also specified. The requirement for the EPA to prepare annually a report of the results of water quality monitoring carried out by local authorities is also specified.</p>
Schedule 1 Soil Test	<p>Technical Information on the standards for soil testing.</p>
Schedule 2 Criteria as to Storage Capacity and Nutrient Management	<p>Detailed specifications for calculating storage capacities for varying farm operations, livestock type, parts of the country and crop type.</p>
Schedule 3 Storage Periods for Livestock Manure	<p>Storage period limitations based on the county within the State.</p>
Schedule 4 Periods when application of fertilisers to land is prohibited	<p>Specifications on dates for various parts of the country where chemical fertilisers, organic fertilisers and farmyard manure may be applied.</p>
Schedule 5 Conditions applying in relation to Derogation	<p>Like Part 7, Schedule 5 was introduced through S.I. No. 65 of 2018 and allows for the amount of livestock manure to be applied to increase to 250 kg of nitrogen per hectare where the occupier of the holding has approval from DAFM and subject to the requirements of the schedule.</p>
Non Good Agricultural Practice (GAP) Measures	<p>There are a number of new measures to be adopted that will not be listed within the GAP Regulations and these are listed below and assessed within this report:</p> <ul style="list-style-type: none"> • Sewage/Industrial Sludges; • Review of Technical Tables; and • Air Quality.

3 ASSESSMENT METHODOLOGY

3.1 Guidance Documents on AA

The AA requirements of Article 6 of the Habitats Directive follow the approach as outlined in the following legislation, guidance documents and Departmental Circulars, namely:

European and National Legislation

- Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (also known as the 'Habitats Directive');
- Council Directive 2009/147/EC on the conservation of wild birds, codified version, (also known as the 'Birds Directive');
- European Communities (Birds and Natural Habitats) Regulations 2011 (as amended); and
- Planning and Development Act 2000 (as amended).

European and National Guidance

- IAQM 'A guide to the assessment of air quality impacts on designated nature conservation sites' (version 1.1), Institute of Air Quality Management (2020);
- Managing Natura 2000 sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, European Commission (2018a);
- Farming for Natura 2000: Guidance on how to support Natura 2000 farming systems to achieve conservation objectives, based on Member States good practice experiences, European Commission (2018b);
- Interpretation Manual of European Union Habitats. Version EUR 28, European Commission (EC, 2013a);
- EC study on evaluating and improving permitting procedures related to Natura 2000 requirements under Article 6.3 of the Habitats Directive 92/43/EEC, European Commission (2013b);
- Guidance document on the strict protection of animal species of Community Interest under the Habitats Directive 92/43/EEC', European Commission (EC, 2007a);
- 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, European Commission (2007b);
- Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, European Commission (2001);
- Communication from the Commission on the Precautionary Principle, European Commission (2000); and
- Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. DEHLG (2009, revised 10/02/10).

Irish Government Department / NPWS Circulars

- Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular NPWS 1/10 and PSSP 2/10. (DEHLG, 2010);
- Appropriate Assessment of Land Use Plans. Circular Letter SEA 1/08 & NPWS 1/08;
- Guidance on Compliance with Regulation 23 of the Habitats Directive. Circular Letter NPWS 2/07; and
- Compliance Conditions in respect of Developments requiring (1) Environmental Impact Assessment (EIA); or (2) having potential impacts on Natura 2000 sites. Circular Letter PD 2/07 and NPWS 1/07.

3.2 Guiding Principles and Case Law

Over time, legal interpretation has been sought on the practical application of the legislation concerning AA as some terminology has been found to be unclear. European and national case law has clarified a number of issues and some aspects of the published guidance documents have been superseded by case law. Case law has been considered in the preparation of the NIS of the NAP.

3.3 Information Sources Consulted

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

- Information provided by the DHLGH on the NAP;
- Geological Survey of Ireland (GSI) – geology, soils and hydrogeology www.gsi.ie;
- Data provided by the GSI on aggregate potential and geology;
- Department of Housing, Planning and Local Government – online land use mapping <https://viewer.myplan.ie/>;
- GeoHive online mapping <http://map.geohive.ie/mapviewer.html>;
- Ordnance Survey of Ireland – online mapping and aerial photography www.osi.ie;
- National Parks and Wildlife Service – online European site information www.npws.ie;
- Northern Ireland Environment Agency – online European Site information www.daera-ni.gov.uk;
- 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)*;
- 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/>;
- Forest Cover Datasets <https://www.agriculture.gov.ie/forests-service/>;
- Format for a Prioritised Action Framework (PAF) for Natura 2000 www.npws.ie/sites/default/files/general/PAF-IE-2014.pdf;
- Ireland’s National Biodiversity Plan 2017-2021 (DCHG, 2017)¹¹; and
- Information on the Conservation Status of Birds in Ireland (Gilbert *et al.*, 2021)¹².

3.4 Impact Prediction

The methodology for the assessment of impacts is derived from the *Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites* (EC, 2001)¹³. 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.

¹¹ Available online at: <https://www.npws.ie/legislation/national-biodiversity-plan>. Accessed: February 2021.

¹² Gilbert, G., Stanbury, A. and Lewis, L. (2021) Birds of Conservation Concern in Ireland 4: 2020-2026. *Irish Birds*, 43, pp 1-22.

¹³ Assessment of plans and Projects Significantly Affecting Natura 2000 sites; Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, European Commission

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

- The **source** relates to the principles and priorities outlined in the NAP which have the potential to adversely impact European sites, e.g., emissions to water from agriculture;
- The **pathway** relates to how implementation of the NAP can potentially impact European sites, e.g., habitat loss/ fragmentation, disturbance to species, impacts to water quality; and
- The **receptor** is the Natura 2000 Network, potentially including those transboundary sites for which there is a pathway of connectivity as a result of the implementation of the NAP.

3.5 Aspects of the Nitrate Action Programme to be Assessed

Aspects of the NAP measures for implementation are considered in this assessment and **Table 3.1** sets out the parts and schedules of the NAP and identifies those to be assessed as part of this NIS and the rationale for their assessment.

Table 3.1: Elements of the draft NAP assessed in the NIS

Part/Schedule	Assessed within this NIS
Part 1 Preliminary	No. Factual information setting out the purposes and interpretation of the NAP.
Part 2 Farmyard Management	Yes. This part of the NAP specifies a number of specific measures for farmyard management that have potential for LSEs on European Sites and this part is considered further in this NIS.
Part 3 Nutrient Management	Yes. This part of the NAP specifies a number of specific measures for nutrient management that have potential for LSEs on European Sites and this part is considered further in this NIS.
Part 4 Prevention of Water Pollution from Fertilisers and Certain Activities	Yes. This part of the NAP includes for general provisions including the enforcement of the NAP and therefore there are potential for indirect LSEs on European Sites and this part is considered further in this NIS.
Part 5 General	Yes. This part of the NAP specifies a number of specific measures for farmyard management that have potential for LSEs on European Sites and this part is considered further in this NIS.
Part 6 Functions of Public Authorities	Yes. While this part of the NAP contains more administrative provisions it does include for monitoring functions and in this regard, this part is considered further in this NIS.
Part 7 Implementation of Commission Decision	Yes. This part of the NAP contains the specific requirements relating to derogations on the application of livestock manure. While it is not certain that the EU will grant Ireland such a derogation, the continued facilitation of the increased application of nitrogen against the current baseline has potential for LSEs on European Sites and this part is considered further in this NIS.
Schedule 1 Soil Test	No. Factual information.
Schedule 2 Criteria as to Storage Capacity and Nutrient Management	No. Factual information.
Schedule 3 Storage Periods for Livestock Manure	No. Factual information.
Schedule 4 Periods when application of fertilisers to land is prohibited	No. Factual information.
Schedule 5 Conditions applying in relation to Derogation	No. Factual information.
Proposed Non-GAP Regulation Measures	Yes. Potential new control measures to be included which will sit outside of the Regulation but which have potential for likely significant effect.

3.5.1 Likely Significant Effect

The threshold for a Likely Significant Effect (LSE) is treated in the screening exercise as being above a *de minimis* level¹⁴. The opinion of the Advocate General in CJEU case C-258/11 outlines:

'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.'

If low level effects on habitats or individuals of species are judged to be in the order of magnitude of *de minimis* and that judgment has been made in the absence of reasonable scientific doubt, then those effects are not considered to be LSEs.

In this report, therefore, 'relevant' European sites are those within the potential Zone of Influence (Zol) of activities where LSE pathways to European sites were identified through the source-pathway-receptor model.

3.6 Approach to AA for the NAP

The Appropriate Assessment process for the NAP has involved preparation of a Stage 1 screening appraisal for Appropriate Assessment and a Stage 2 appraisal for Appropriate Assessment resulting in the preparation of this NIS.

3.6.1 Stage 1 - Screening for Appropriate Assessment

A Stage 1 - Appropriate Assessment (AA) Screening Report was carried out in June 2021 (refer **Appendix A**) and concluded that the NAP was:

- Not directly connected with or necessary to the management of a European Site; and
- LSEs on some European Sites could not be excluded.

On that basis, the AA Screening Report states that, applying the precautionary principle, and with reference to Article 6(3) of the EU Habitats Directive a Stage 2 – Natura Impact Statement is required.

3.6.2 Stage 2 - Appropriate Assessment

The Appropriate Assessment included the following steps:

- Identification of the information required, including details of the NAP, linkages to QIs/SCIs of European sites;
- Examination of the conservation objectives of QIs/SCIs of European sites; and
- Prediction of any adverse effect of the NAP on the integrity of any European sites, including in-combination effects.

¹⁴*Sweetman v. An Bord Pleanála* (Court of Justice of the EU, case C-285/11). 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.

4 OVERVIEW OF THE RECEIVING ENVIRONMENT

Ireland has obligations under EU law to protect and conserve biodiversity. This relates to habitats and species both within and outside designated sites. Nationally, Ireland has developed a Biodiversity Action Plan (NBP)¹⁵ to address issues and halt the loss of biodiversity, in line with international commitments. The overall vision in the National Biodiversity Plan (NBP) is that *'biodiversity and ecosystems in Ireland are conserved and restored, delivering benefits essential for all sectors of society and that Ireland contributes to efforts to halt the loss of biodiversity and the degradation of ecosystems in the EU and globally.'*

The NBP includes seven headline objectives cross referenced as appropriate to both the relevant Aichi Biodiversity targets and also the UN sustainability goals. Objective 6 specifically addresses the Natura 2000 network. It states: *Expand and improve management of protected areas and species.*

The three related sub-objectives are:

- Natura 2000 network designated and under effective conservation management by 2020;
- Sufficiency, coherence, connectivity, and resilience of the protected areas network substantially enhanced by 2020; and
- No protected species in worsening status by 2020; majority species in, or moving towards, favourable status by 2020.

4.1 Identification of European Sites and Zone of Influence

In the Republic of Ireland, sites within the Natura 2000 Network are referred to as European sites and comprise SAC and SPA sites. SACs are concerned with the protection of specific Qualifying interests (QIs) and SPAs are concerned with the protection of specific Special Conservation Interests (SCIs).

In identifying the Zone of Influence (ZoI) for the NIS of the NAP, a number of considerations were considered, notably the national and strategic nature of the NAP; the relationship of listed QIs and SCIs for Ireland; and European sites understood to have connectivity.

The AA Screening Report considered that since the NAP was a national programme that all the European Sites within the Republic of Ireland and relevant sites and receptors in Northern Ireland were considered. For consistency, the ZoI for this NIS adopts the same approach.

In the Republic of Ireland, there are 439 SACs which are designated for one or more of 59 habitat types (Annex I of the Directive), 16 of which are designated as 'priority' habitats, owing to their ecological vulnerability, and 26 species (Annex II of the Directive), of which one or more are included as qualifying interests. These are mostly onshore, but a small number of reef sites lie far offshore. In addition to the marine mammals listed on Annex II of the Habitats Directive, there are further 22 cetacean species and the leatherback turtle listed on Annex IV. These species require strict protection and, like species on Annex II, require monitoring. There are 58 SACs designated in Northern Ireland.

Through the Birds Directive, SPA 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 165¹⁶ SPAs designated within the Republic of Ireland and 16 SPAs designated in Northern Ireland.

Table 4.1 provides a summary breakdown of the European sites in the Republic of Ireland and Northern 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 B** to **Appendix E**. **Figure 4-1** illustrates the distribution of the Irish SAC and SPA in relation to the NAP 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.

¹⁵ National Biodiversity Action Plan, DCHG 2017.

¹⁶ Where differences exist in the stated number of European sites (SACs and SPAs), e.g. between the 2019 NPWS Article 17 Report and the NPWS spatial dataset, the highest number of sites/features are used under the precautionary principle.

Table 4.1: European Sites in the Republic of Ireland and Northern Ireland

European Sites	Republic of Ireland	Northern Ireland
Special Areas of Conservation (SAC)	439	58
Special Protection Area (SPA)	165	16

Data Source: NPWS Datasheets for SACs (May 2021) and SPAs (June 2021).

4.2 Transboundary Considerations

There is potential for the Zol of the NAP to encompass transboundary site(s) particularly within Northern Ireland. As such, the Department of Agriculture, Environment and Rural Affairs (DAERA) of Northern Ireland have been consulted on the drafting of the draft NAP and the associated SEA Environmental Report and this NIS. No specific locations are proposed in the NAP and therefore it is not practical for this report to identify transboundary sites in any detail.

4.3 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.

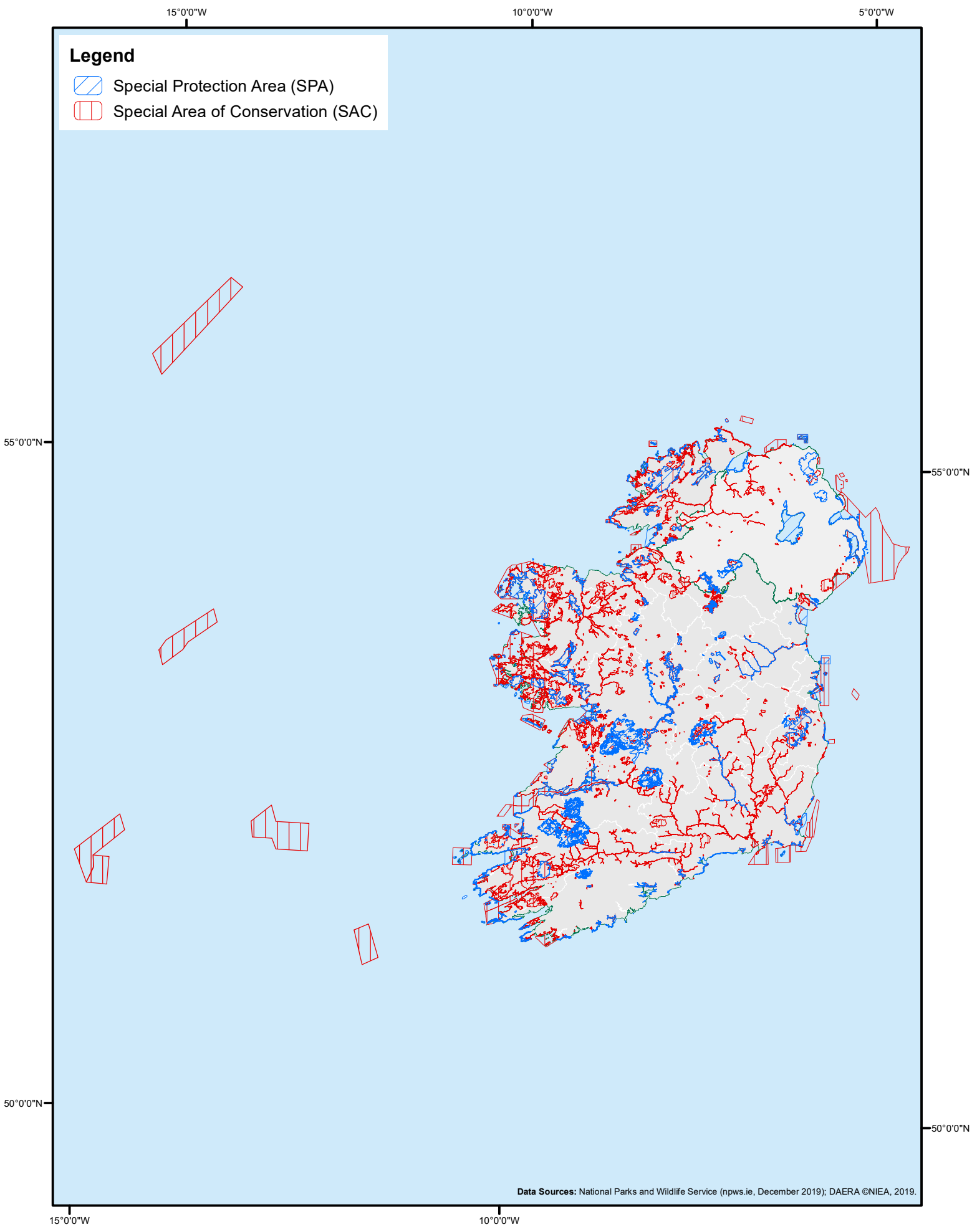
At an individual site level, SSCO specify whether the objective is to maintain or to restore favourable conservation condition of the habitat or species, and they set out attributes and targets that define the objectives. It is the aim of the DHLGH¹⁷ to produce SSCO for all European sites in due course¹⁸. QI and SCI are annexed habitats and annexed species of community interest for which an SAC or SPA has been designated. The SSCO for European Sites are set out to ensure that the QIs/ SCIs of that site are maintained or restored to a favourable conservation condition / conservation status.

A full listing of the COs and QIs/ SCIs that each European Site is designated for, as well as the attributes and targets to maintain or restore the QIs/ SCIs to a favourable conservation condition are available from the NPWS website www.npws.ie.

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.

¹⁷ Note: As of September 2020, a number of department names changes and in some cases functions have moved. The National Parks and Wildlife Service (NPWS) was previously part of the Department of Culture, Heritage and the Gaeltacht (DCHG) and is now part of the Department of Housing, Local Government and Heritage (DHLGH).

¹⁸ https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/



Data Sources: National Parks and Wildlife Service (npws.ie, December 2019); DAERA ©NIEA, 2019.

Figure 4.1:
European Sites in the Zone of Influence of the
NAP

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Drawn By: NA	Project No. MDR1713
Checked By: NO'N	File Ref: MDR1713Arc0001F01
Approved By: NO'N	Scale: 1:4,000,000 @ A4
Date: 25/07/2021	Projection: ITM (IRENET95)
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4.4 Conservation Status of EU Protected Habitats and Species

In 2007, 2013 and again in 2019 the National Parks and Wildlife Service (NPWS) published a report detailing the conservation status in Ireland of habitats and species listed in the EU Habitats Directive (92/43/EEC), often referred to as '*the Article 17 Report*'¹⁹. 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. **Appendix F** sets out a summary of the conservation status of each habitat and species from 2007 to 2019.

For the 2019 submission, Ireland's Article 17 Report recorded 15% of habitats as '*favourable*', 46% as '*inadequate*' and 39% as '*bad*'. Among the key findings were:

- Many Irish 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 marine habitats are considered to be improving, and to have better prospects, due in part to implementation of other EU environmental directives;
- The status of raised bogs in Ireland is '*bad*'; and the trend is for an ongoing decline as restoration is necessary to cause improvement, notwithstanding the cessation of cutting on SAC bogs. However, The National Raised Bog Special Areas of Conservation Management Plan 2017- 2022 sets out a commitment for protection and restoration activities within all raised bog SACs while Bord na Móna will cease the supply and use of peat by 2020. The Pearl Mussel Project is a pilot agri-environment programme to improve the quality of watercourses and has yielded positive results from peatlands;
- 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. Some improvements have been associated with the Burren Programme and Aran LIFE;
- Blanket bog is also assessed as '*bad*'; the report notes that, as one of the main impacts on this habitat is grazing, an improving trend might be expected due to the implementation of Commonage Framework Plans. However, this improvement appears to be offset and even exceeded by on-going deleterious effects such as peat cutting, erosion, drainage and burning. The newly established Wild Atlantic Nature IP project also looking at peatland conservation through Results-based Payments farming;
- 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. Improvements noted from 2013 are now recorded as stable in 2019;
- Many freshwater habitats are considered unfavourable due to nutrient loading within the catchment, however the Cycle 2 River Basin Management Plan [RBMP] (2018-2021) will aim to ensure improved targeting of mitigation measures (Note: the Cycle 3 RBMP is currently in preparation and will cover the period 2021-2027); and
- 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.

From the 2019 report, 57% of species were assessed as '*favourable*', 15% as '*inadequate*', 15% as '*bad*' and 13% as '*unknown*' or considered to be vagrant species. Among the key findings are:

- Otter, pine marten and many bat species have also been assessed as '*favourable*' with evidence of an expanding range;
- The Natterjack toad is not exhibiting adequate positive results but has gone from '*bad*' in 2013 to '*stable*' in 2019;
- Salmon (*Salmo salar*) is showing signs of improvement and the Killarney shad (*Alosa killarvensis*) is still assessed as '*favourable*', but some other fish remain at '*bad*' status; and

¹⁹ The Status of EU Protected Habitats and Species in Ireland, NPWS 2007 (Vol 1-3), 2013 (Vol 1 -3) and 2019 (Vol 1-3).

- 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. Ireland's Article 12 submission to the EU Commission on the *Status and trends of bird species (2008-2012)*²⁰ covers 196 species which includes breeding, wintering and passage species. The report details that some species have had significant increases in population over the long term, including raven (*Corvus corax*), collared dove (*Streptopelia decaocto*), buzzard (*Buteo buteo*) and blackcap (*Sylvia atricapilla*). However, other species have undergone significant declines in their long-term breeding population trend: corncrake (*Crex crex*) (85%)²¹, curlew (*Numenius arquata*) (98%)²², lapwing (*Vanellus vanellus*) (88%) and redshank (*Tringa totanus*) (88%). The hen harrier (*Circus cyaneus*)²³ shows a long-term population trend decrease of 27%. 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. It is noted that the referenced projects on the corncrake, curlew and hen harrier highlight some of the positive measures being undertaken by the agriculture sector.

The assessment and outlook are overall very poor. 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. The NPWS National Biodiversity Action Plan 2017-2021 reports that 85% of Ireland's EU protected habitats are at unfavourable status, with 46% showing ongoing declines. 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 immediate action is applied. A plan for developing a 10-year strategy for the agriculture and food sector may help address and improve some of the negative effects by which both biodiversity and ecosystems have been impacted.

4.5 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*'.

Threats and pressures considered to be most relevantly linked either directly or indirectly to the NAP were extracted from the full list of threats and pressures. The headline category considered relevant to the NAP is agriculture but the main list is presented below, with a more detailed breakdown of the threats and pressures under each headline category presented in **Appendix G**.

²⁰ http://ec.europa.eu/environment/nature/knowledge/rep_birds/index_en.htm (Accessed February 2021)

²¹ Note the Corncrake LIFE project which is joint funded by DHLGH/DAFM with DAFM designing RBPS Scorecards for farming in these areas to improve Corncrake populations.

²² National efforts being made for Curlew by CCP (NPWS) and Curlew EIP (DAFM). Breeding waders is to be considered in the new CAP SP and aims to help improve these trends in an upward trajectory.

²³ Hen Harrier EIP has targeted efforts to blend Farming and Conservation for HH with some positive results. Lessons learned from these EIPs will be used to design future policy/scheme decision in the future.

- Agriculture;
- Forestry;
- 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 QI/SCI 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.’²⁴

Threat and pressure categories identified from the most recent Article 17 Report were considered in regard to the NAP. Examples of potential threats and pressures derived from these categories are detailed in Table 4.2. Further information regarding the threat and pressure categories is available in the 2019 NPWS Article 17 reporting (Volumes 1 – 3).

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

Threat/Pressure Categories	Notes on Sub-categories	Example Threat/Pressure with regard to the draft NAP
Agriculture	Includes land conversion, grazing, abandonment, burning, enrichment, drainage and associated pollution	The NAP is designed to prevent pollution of surface waters and groundwater from agricultural sources and to protect and improve water quality. However, baseline water quality indicates that 47% of river sites in Ireland have unsatisfactory nitrate concentrations and the EPA note that up to 85% of nitrogen in rivers in some catchments in the south and southeast comes from agriculture. 44% of river sites are showing an increasing nitrate trend for the period 2013-2019 which aligns with the recent increases in the dairy herd following the removal of milk quotas. The potential threat/pressure from agriculture on water quality has shown observed increases in recent years and is a material consideration for the NAP.
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 but the impacts associated with nitrates are largely related to agriculture with minor impact from forestry. Where commercial forests are developed in peat or mineral soil areas where commercial forests are developed have the limited natural levels of soil nitrogen may require some nitrogen inputs and potential losses.
Mining, extraction of materials and energy production	Includes renewable abiotic energy use inclusive of geothermal power, solar, wind and tidal energy production.	Typically the extractive industry is a competing land use with agriculture in rural areas. Water quality issues relate mainly to sedimentation, hydromorphology and groundwater levels but with limited input in terms of

²⁴ 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 draft NAP
		nitrogen use and subsequent nitrate concentrations in the aquatic environment.
Transportation and service corridors	Includes roads, paths, shipping lanes and associated light and noise pollution	Habitat disturbance and pollution from transportation systems (e.g. shipping and transportation impacts on marine environment including those related to agricultural exports which currently account for 10% of all Irish exports).
Urbanisation, residential and commercial development	Includes urbanisation, industrialisation, recreation and associated pollution	Habitat disturbance and pollution from agricultural activities include impacts on surface waters, soil and biodiversity but these are typically associated with rural development with limited urban development.
Biological resource use other than agriculture & forestry	Includes hunting, poisoning, fishing, pollution arising from aquaculture and removal of terrestrial plants	Pollution from aquaculture impacts on estuaries, tidal mudflats and sandflats, fisheries bycatch. Limited overlap with the NAP for this threat.
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 EPA and others that agriculture in Ireland is the main pressure (but not the only pressure) 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	Habitat removal/destruction, changes and pollution. Storage and management of manures, effluents and soiled water have potential for adverse impact and are core elements of the NAP.
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 output under Food Vision 2030 may increase this threat.
Geological events, natural catastrophes	Includes storms, floods and fire	Habitat removal/destruction and pollution of geological events and natural catastrophes can have impacts on the environment.
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 regulated by the NAP (e.g. closed periods).

4.6 Relevant Biodiversity Policy

The EPA report, *Ireland’s Environment – An Integrated Assessment* (EPA, 2020), identified a number of future challenges for national biodiversity, many of which are directly relevant to the NAP including: habitat loss due to land use changes as the economy improves, climate change and associated potential change in the range of some habitats/ species and the expansion of invasive species. The report also identified the need to develop biodiversity initiatives to engage society and develop a cohesive approach between regulatory bodies so that biodiversity is a key element in economic and development decisions. The need for robust scientifically-based monitoring systems and more detailed mapping are considered vital in protecting nature and biodiversity.

An updated National Biodiversity Action Plan 2017-2021 was published in May 2017²⁵ and lists seven key objectives as follows:

1. Mainstream biodiversity into decision-making across all sectors.
2. Strengthen the knowledge base for conservation, management and sustainable use of biodiversity.

²⁵ Note that a new National Biodiversity Action Plan for post 2021 is being drafted by NPWS and will continue to consider the national threats and pressures to biodiversity even when the 2017-2021 plan terminates.

3. Increase awareness and appreciation of biodiversity and ecosystems services.
4. Conserve and restore biodiversity and ecosystem services in the wider countryside.
5. Conserve and restore biodiversity and ecosystem services in the marine environment.
6. Expand and improve management of protected areas and species.
7. Strengthen international governance for biodiversity and ecosystem services.

The NAP has a significant role to play in achieving these seven objectives, albeit that the NAP is only one of a suite of national documents needed to advance these objectives and achieve the targets which have been set at the national level.

Ireland's Prioritised Action Framework was published by the-then DAHG in March 2021 and this was based upon the *EU Biodiversity Strategy to 2030*²⁶ and the 8th Environment Action Programme 2021-2030. The EU Biodiversity Strategy identified a range of actions needed to help improve the status of Ireland's habitats and species. The key priorities of this strategy are outlined as follows:

- Establishing protected areas for at least 30% of land and 30% sea in Europe;
- Stricter protection of EU forests;
- Restoring degraded ecosystems at land and sea across the whole of Europe by;
 - Halting and reversing the decline in pollinators;
 - Increasing organic farming and biodiversity-rich landscape features on agricultural land;
 - Restoring at least 25,000 km of EU rivers to a free-flowing state;
 - Planting 3 billion trees by 2030; and
 - Reducing the use and harmfulness of pesticides by 50% by 2030.
- Unlocking €20 billion per year for biodiversity; and
- Making the EU a world leader in addressing the global biodiversity crisis.

Ireland has also developed a Biodiversity Sectoral Climate Adaptation Plan.²⁷ This plan identified upland habitats, peatlands and coastal habitats as being some of the most vulnerable habitat types to climate change. Spread of invasive species was also noted as a key pressure. The actions and priorities arising from the plan will be important for developing and ensuring resilience in the longer term.

In addition, there is a growing awareness and recognition of importance of ecosystem services supported at policy level. Target 2 of the Convention on Biological Diversity (CBD) Strategic Plan 2011-2020 required that: *'By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems'*. This is mirrored in both the new EU Biodiversity Strategy to 2030 (Target 5) and Ireland's National Actions for Biodiversity 2017 - 2021 (Target 3).

²⁶ The EU Biodiversity Strategy to 2020. European Commission, 2011

²⁷ Ireland's Biodiversity Sectoral Climate Change Adaptation Plan DCHG

5 STAGE 1: SCREENING FOR APPROPRIATE ASSESSMENT

In order to comply with the requirements of Article 6(3) of the EU Habitats Directive, the process of Screening for AA was undertaken at an early stage in the drafting of the NAP, which is presented in **Appendix A**. The AA Screening assessed the potential for the NAP to result in LSEs on any European Sites within the Natura 2000 network, either alone or in combination with other plans and projects.

The screening report prepared concluded that an Appropriate Assessment of the NAP was required for the following reasons:

- The NAP 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 Natura Impact Statement (NIS) should be prepared.

6 STAGE 2: APPROPRIATE ASSESSMENT

6.1 Introduction

The assessment considers the potential for adverse effects²⁸ that implementation of the NAP could have on the integrity of any European site, with respect to its conservation objectives, structure and function. EC guidance¹ 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 NIS, in the absence of geographic specificity of measures contained within the NAP and given the strategic nature of the NAP, 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 NAP has benefited from an integration of SEA/ AA expertise to highlight and address concerns on an ongoing basis as the NAP has evolved.

This is in line with the Habitats Directive which promotes a hierarchy beginning with avoidance before considering mitigation and compensatory measures. Through iterative discussion during the preparation of the NAP, avoidance of adverse effects as a result of implementing the NAP has been at the forefront of discussions with the EPA.

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 Prediction of Effects

As noted in **Chapter 3**, in considering the potential for impacts from implementation of the NAP, a 'source–pathway–receptor' approach has been applied. The **source** relates to the actions outlined in the NAP which have the potential to adversely impact European sites. The **pathways** relate to how implementation of the NAP can potentially impact European sites, e.g., impacts to water or air quality, disturbance to soil or species. The **receptor** is any European site(s), potentially including those transboundary sites for which there is a pathway of connectivity as a result of the implementation of the NAP.

6.3.1 Context for Impact Prediction

The impact prediction is based against the current water quality baseline and the implementation of the Fourth NAP which was adopted in 2017. Baseline data shows that elevated nitrogen concentrations in waters is one of the factors that leads to poor water quality outcomes in all waters and nitrogen concentrations in waters have been increasing since 2013. The EPA reports that in predominantly rural catchments, more than 85% of the sources of nitrogen in the catchment are from agriculture from the use of chemical and organic fertilisers.

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

However, the measures within the NAP may have potential to impact on European Sites given the nature of the measures permitted. As the NAP is focussed on a national strategic level, the potential is not for direct or location-specific impacts but rather indirect impacts arising from the potential for impacts arising as a

²⁸ Effects considered include direct, indirect, short term, long term, temporary, permanent and cumulative.

result of the various measures. **Section 6.3.2** identifies the main potential ecological impacts that could arise for European sites from the implementation of the draft NAP measures.

6.3.2 Impact Identification

The EU Commission has published a 2019 report on the links between the Birds and Habitat Directives and the Nitrates Directive²⁹. 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
<ul style="list-style-type: none"> • Natural dystrophic lakes and ponds; • Lagoons; • Blanket bog (active only); • Bog woodland; • <i>Margaritifera margaritifera</i> (freshwater pearl mussel); • Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia); • Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.; • Natural eutrophic lakes with Magnopotamion or Hydrocharition type vegetation; and • <i>Najas Flexilis</i> (Slender Naiad). 	<ul style="list-style-type: none"> • Petrifying springs with tufa formation (<i>Cratoneurion</i>); • <i>Hamatocaulis (drepanocladus) vernicosus</i> (slender green feather-moss); • Machairs; • Alkaline fens; • Calcareous fens with <i>Cladium Mariscus</i> and species of <i>Caricion davallianae</i>; • Transition mires and quaking bogs; and • Turloughs.

A summary of the main potential ecological impacts that could arise from the implementation of the NAP 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 water course). 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 sources of disturbance (e.g. noise, vibration, lighting, emissions) such as from farming practices. The NAP includes for a range of standard agricultural practices on farm and nutrient management as well as the protection of water courses and in some cases, such as livestock manure application, the activities are seasonally constrained. The activities have limited scope for impacts through noise, vibration and lighting but 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. water quality or ecological corridors

²⁹ 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

removed 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.

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 Irish 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 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. Ireland’s draft Biodiversity Sectoral Climate Change Adaption Plan³⁰ notes the impacts of this change including flooding events and coastal erosion impacting habitats, fires destroying habitats after drought events, low water levels impacting bogs and fens, etc.

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 in **Section 3**, the main ecological impacts that could potentially arise from the principles and priorities outlined in the NAP are summarised in **Table 6.1** and discussed in the following sections. In-combination impacts are assessed separately in **Section 6.5**.

It is acknowledged that the NAP is a high-level document and as such prediction of effects at individual European sites is not practical as the NAP 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 NAP 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 NAP will themselves be required to conform with the regulatory provision of Strategic Environmental Assessment (SEA), Environmental Impact Assessment (EIA), Appropriate Assessment (AA), Ecological Impact Assessment (EclA), environmental risk assessments, and planning regulations/requirements.

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

Impact Source	Impact Identification	Impact Prediction
Part 2 Farmyard Management	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> All impacts identified associated with farmyard management measures would have potential to give rise to significant continued decline in the conservation status of surface and groundwater dependent Annex I habitats which lie downstream of agricultural activities, or other sensitive Annex I habitats within proximity to sources of airborne ammonia if the proposed programme of measures is insufficient or inadequately implemented or enforced. The identified impacts would have potential to give rise to significant continued decline in the conservation status of Annex II species which are dependent upon aquatic habitats if the proposed programme of measures is insufficient or inadequately implemented or enforced. Impacts arising as a result of farmyard management measures in a particular location may be temporary and short-term or

³⁰ Link: [https://www.npws.ie/sites/default/files/files/32631_NPWS_Climate%20Change%20Report_15Feb\(1\).pdf](https://www.npws.ie/sites/default/files/files/32631_NPWS_Climate%20Change%20Report_15Feb(1).pdf)

Impact Source	Impact Identification	Impact Prediction
Part 3 Nutrient Management	<ul style="list-style-type: none"> • Habitat loss or destruction; • Habitat fragmentation or degradation; • Disturbance to habitats/species; • Species mortality; • Alterations to water quality and/or water movement; and • Introduction or spread of invasive species. 	<p>permanent and long-term, however across a catchment short term localised effects are likely to contribute to an overall diffuse decrease in water quality over the long-term.</p> <ul style="list-style-type: none"> • All impacts identified associated with nutrient management measures would have potential to give rise to significant continued decline in the conservation status of surface and groundwater dependent Annex I habitats which lie downstream of agricultural activities, or other sensitive Annex I habitats within proximity to sources of airborne ammonia if the proposed programme of measures is insufficient or inadequately implemented or enforced. • The identified impacts would have potential to give rise to significant continued decline in the conservation status of Annex II species which are dependent upon aquatic habitats if the proposed programme of measures is insufficient or inadequately implemented or enforced. • Impacts arising as a result of nutrient management measures in a particular location are likely to be temporary and short-term or permanent and long-term, however across a catchment short term localised effects are likely to contribute to an overall diffuse decrease in water quality over the long-term.
Part 4 Prevention of Water Pollution from Fertilisers and Certain Activities	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • All impacts identified associated with prevention of water pollution from fertilisers and certain activities measures would have potential to give rise to significant continued decline in the conservation status of surface and groundwater dependent Annex I habitats which lie downstream of agricultural activities, or other sensitive Annex I habitats within proximity to sources of airborne ammonia if the proposed programme of measures is insufficient or inadequately implemented or enforced. • The identified impacts would have potential to give rise to significant continued decline in the conservation status of Annex II species which are dependent upon aquatic habitats if the proposed programme of measures is insufficient or inadequately implemented or enforced. • Impacts arising as a result of prevention of water pollution from fertilisers measures in a particular location are likely to be temporary and short-term or permanent and long-term, however across a catchment short term localised effects are likely to contribute to an overall diffuse decrease in water quality over the long-term.
Part 5 General	<ul style="list-style-type: none"> • Habitat loss or destruction; • Habitat degradation; • Disturbance to habitats/species • Species mortality; and • Introduction or spread of invasive species. 	<ul style="list-style-type: none"> • All impacts identified associated with general measures would have potential to give rise to significant continued decline in the conservation status of surface and groundwater dependent Annex I habitats which lie downstream of agricultural activities, or other sensitive Annex I habitats within proximity to sources of airborne ammonia if the proposed programme of measures is insufficient or inadequately implemented or enforced. • The identified impacts would have potential to give rise to significant continued decline in the conservation status of Annex II species which are dependent upon aquatic habitats if the proposed programme of measures is insufficient or inadequately implemented or enforced. • Impacts arising as a result of general measures in a particular location are likely to be temporary and short-term or permanent and long-term, however across a catchment short term localised effects are likely to contribute to an overall diffuse decrease in water quality over the long-term.
Part 6 Functions of Public Authorities	<ul style="list-style-type: none"> • Habitat loss or destruction; • Habitat fragmentation or degradation; • Disturbance to habitats/species; 	<ul style="list-style-type: none"> • All impacts identified associated with functions for public authorities would have potential to give rise to significant continued decline in the conservation status of surface and groundwater dependent Annex I habitats which lie downstream of agricultural activities, or other sensitive Annex I habitats within proximity to sources of airborne ammonia if the

Impact Source	Impact Identification	Impact Prediction
	<ul style="list-style-type: none"> Species mortality; Alterations to water quality and/or water movement; Alterations to air quality; and Introduction or spread of invasive species. 	<p>effects of the proposed programme of measures are inadequately monitored as required by Part 6 of the GAP Regulations.</p> <ul style="list-style-type: none"> The identified impacts would have potential to give rise to significant continued decline in the conservation status of Annex II species which are dependent upon aquatic habitats if the effects of the proposed programme of measures are inadequately monitored.
Part 7 Implementation of Commission Decision	<ul style="list-style-type: none"> Habitat degradation; Disturbance to habitats/species; Species mortality; and Introduction or spread of invasive species. 	<ul style="list-style-type: none"> All impacts identified associated with implementation of commission decision measures, and particularly conditions related to derogation, would have potential to give rise to significant continued decline in the conservation status of surface and groundwater dependent Annex I habitats which lie downstream of agricultural activities, or other sensitive Annex I habitats within proximity to sources of airborne ammonia if the proposed programme of measures is insufficient or inadequately implemented or enforced. The identified impacts would have potential to give rise to significant continued decline in the conservation status of Annex II species which are dependent upon aquatic habitats if the proposed programme of measures is insufficient or inadequately implemented or enforced.

6.3.4 Key Existing Mechanisms of relevance for the NAP

There are a number of EU and national policy and legislative mechanisms already in place of relevance to the NAP 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;
- In relation to agriculture, the EC launched reforms to the EU Common Agricultural Policy (CAP) in 2018 to incorporate the sustainable ambitions of the European Green Deal, and particularly the Farm to Fork strategy into the CAP; and
- In July 2021 the government launched the Food Vision 2030 national strategy for the Irish agri-food sector over the next decade which seeks an increase in the value of agri-food exports to €21 billion by 2030, built on sustainable steady value growth.

At its core, the NAP is a mechanism for the protection of waters under the WFD but the assessment of the NAP also needs to be cognisant of the emerging agri-food policy within the State and the proposed intensification of the sector.

6.3.4.1 Water Quality Policy

The Water Framework Directive (WFD) (2000/60/EC) came into force in December 2000 and establishes 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 2018-2021 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 2011³¹. 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 aim of the Floods Directive 2007/60/EC is to assess and manage significant flood risks to reduce the risks to human health, the environment, cultural heritage and economic activity. While not explicit in its connection to the Habitats or Birds Directives, there are obvious overlaps, particularly with regard to protection of wetland areas / buffer zones etc. which are important refuges for flora and fauna which are protected under the Habitats and Birds Directives. Furthermore, the Floods Directive is tasked with helping to establish the role flooding may have in contributing to deterioration in water quality in areas where other relevant pressures are absent.

It is recognised within Ireland that improvements are required in both water and wastewater services and practices (particularly rural water services). In recent years, steps have been taken through the provision of a single utility provider, Irish Water. Irish Water has prepared a Water Services Strategic Plan (WSSP, 2015), under Section 33 of the Water Service No. 2 Act of 2013 to address the delivery of strategic objectives which will contribute towards improved water quality by protecting and enhancing the environment while also aiming to meet the requirements of the WFD. 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 strategies and plans (Tier 2) and water services projects (Tier 3) which document the approach to be used for key water service areas such as water resource management, wastewater compliance and sludge management.³²

In Northern Ireland, the Water (Amendment) (Northern Ireland) (EU Exit) Regulations 2019 ensures that the Water Framework Directive (as transposed) and the various supporting pieces of water legislation continue to operate after 1 January 2021. 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. Like the Republic of Ireland, 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.

³¹ *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*

³² https://www.water.ie/projects/strategic-plans/national-water-resources/2.-NWRP-Framework-Plan_For-Final-Adoption_2021_05_25.pdf

6.3.4.2 Agricultural Policy

In 2018, the EC launched reforms to the EU Common Agricultural Policy (CAP) to incorporate the sustainable ambitions of the European Green Deal, and particularly the Farm to Fork strategy into the CAP. The post-2020 CAP proposals are based on nine objectives setting out what the policy is intended to achieve for farmers, citizens and climate.

The proposed EU Farm to Fork Strategy is a new comprehensive European approach to food sustainability. It recognises the urgent need to deal with key issues of reliance on pesticides and antimicrobials, excess fertilisation, animal welfare, and biodiversity loss. A key objective is *'ensuring that the food chain, covering food production, transport, distribution, marketing and consumption, has a neutral or positive environmental impact, preserving and restoring the land, freshwater and sea-based resources on which the food system depends; helping to mitigate climate change and adapting to its impacts; protecting land, soil, water, air, plant and animal health and welfare; and reversing the loss of biodiversity'*.

With this in mind, the agri-food sector continues to be a growth sector within Ireland. Food Wise 2025 outlined the key actions to ensure that this sector maximises its contribution to agricultural growth and exports up to 2025 with ambitious targets in place.

A successor strategy, the government launched the Food Vision 2030 national strategy in July 2021 following the SEA and AA processes. Food Vision 2030 has four mission areas with key targets under each with those most relevant to the NAP listed below:

- Water Quality: The Strategy commits to reduce nutrient losses from agriculture to water by 50% by 2030; and
- Biodiversity: It is envisaged that by 2030, 10% of farmed area will be prioritised for biodiversity, spread across all farms throughout the country.

DAFM have been aligning agriculture policies and strategies to ensure a coherent approach to meeting agriculture's commitments to the national environmental challenges which include climate, air, water and biodiversity. The DAFM Climate Strategy *'AgClimatise'* was launched December 2020 identifying key actions to meet the State's climate challenges including a reduction of nitrogen usage to 325,000 tonnes while seeking as many co-benefits across all environmental metrics.

The common set of objectives, principles and rules through which the EU co-ordinates support for European agriculture is outlined in the Rural Development Programme (RDP) under the CAP. The 2014-2020 RDP contains a suite of measures and has been designed to enhance the competitiveness of the agri-food sector, achieve more sustainable management of natural resources to ensure a more balanced development of rural areas.

DAFM supports and protects water through a variety of schemes and programmes at national and local scale and the following policies and initiatives of relevance are noted.

Currently Pillar 1 of the CAP sets down baseline standards of protection for water through cross-compliance standards. Within the RDP is a substantial targeted agri-environment scheme, the Green Low Carbon Agri-Environment Scheme (GLAS) which includes measures for the protection of water to mitigate against climate change and to promote biodiversity. The Knowledge Transfer Programme under this RDP contains a suite of knowledge transfer measures and focuses on educating farmers on best practices for improved efficiency along with environmental outcomes. The Green, Low-Carbon, Agri-Environment Scheme (GLAS) is the largest scheme with a budget of €1.4bn with 50,000 participating farmers. It is Ireland's third such agri-environmental scheme and is a more targeted design prioritizing actions.

The Targeted Agricultural Modernisation Scheme (TAMS) provides grants for capital investment in physical assets to assist the Irish agriculture sector to respond to a range of policy challenges. For example; Low Emission Slurry Spreading (LESS) equipment is essential to contributing to meeting the challenges of reducing the nitrate and ammonia footprint. The next programming period will cover 2021-2027 and will also emphasise sustainable use of resources as part of Ireland's new CAP Strategic Plan 2023-2027, which is currently being prepared by DAFM.

Results Based Policy is to become more widespread across Europe under the new CAP regulations with member states afforded more flexibility with design and roll-out – the focus being the result. Ireland and DAFM are EU leaders in this policy area being involved in the Results Based Agri-environmental Pilot Scheme (RBAPS) and also funding several schemes and projects under the current RDP.

Most recently, DAFM has provided funding of €500,000 for the protection of drinking water to the National Federation of Group Water Schemes.

At a regional level, the ACP is an ongoing programme for monitoring the effectiveness of various measures within the NAP. It is spread across six catchments and encompasses over 300 farmers. Since 2006, DAFM has supported both science and research for the protection of the environment especially water through the ACP which is currently an annual commitment of €2.4m.

Working collaboratively has been a key theme in the development and delivery of the Agricultural Support & Advisory Programme (ASSAP) which is an innovative government/industry initiative. This arrangement provides targeted advice to farmers but also by building strong working relationships with farmers to make environmental gains at farm level. Where agriculture is identified as a significant pressure, the Local Authorities Waters Programme is working with the AASAP who are providing farmers with a free and confidential advisory service to help improve water quality. The programme is facilitating a far more targeted approach in terms of delivering the right measure in the right place with a major focus in 190 areas that have been identified for priority action in the plan.

At the local level, the Local Authority Waters Programme (LAWPRO) and ASSAP have key roles in implementing targeted action and in providing guidance. The objective of LAWRO is to coordinate efforts by Local Authorities, public bodies and other stakeholders to achieve the water quality objectives of the EU Water Framework Directive; to support local communities to get involved in caring for local waters, participating in decision making and river basin management plans and to identify and action the issues impacting on water quality.

6.4 European Sites

As set out above at **Section 6.3.2**, the NAP has potential to give rise to a range of impacts upon European Sites throughout Ireland. Such potential impacts are set out within **Section 6.3.3**.

While it is noted that a large proportion of European Sites within Ireland and Northern Ireland will be potentially affected by measures within the NAP, 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.

As set out in **Table 4.1**, the Republic of Ireland supports 439 SACs and 165 SPAs. Northern Ireland supports a further 58 SACs and 16 SPAs. **Table 6.2** details a further breakdown of the qualifying features for which these SACs and SPAs are designated.

Table 6.2: European Sites and their qualifying features in the Republic of Ireland and Northern Ireland

European Sites	Qualifying Interest	Total Number of Qualifying Features	
		Republic of Ireland	Northern Ireland
Special Areas of Conservation (SAC)	Annex I Habitat	59	55
	Annex II Species	61	18
Special Protection Area (SPA)	SCI Bird Species or Wetland SCIs	72	60

Of the qualifying features for which all SACs and SPAs in the Republic of Ireland and Northern Ireland, some are considered to be particularly sensitive to the inputs potentially arising as a result of the NAP, namely elevated nitrogen concentrations within surface and groundwater and airborne deposition of ammonia.

Previous studies have identified 23 of the Annex I Habitats and Annex II Species within Ireland which are noted as being water dependant³³. In addition to these identified water dependant QIs a further two habitats were added to consideration within this assessment, namely the Annex I Habitats: Rivers with muddy banks with *Chenopodium rubri p.p.* and *Bidention p.p.* vegetation and Water courses of plain to montane levels with the *Ranunculon fluitantis* and *Callitricho-Batrachion* vegetation. These habitats and species and the number of SACs for which they represent qualifying features are set out in **Table 6.3**.

³³ 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.

Table 6.3: Water Dependent QIs and European Sites

Water Dependent QI	Total Number of European Sites		Type of Water Dependency	Conservation objectives with specific reference to nitrates (Y/N)	Specific targets set for nitrates (Y/N)	Conservation objectives with indirect relevance to nitrates (Y/N)	Relevant Conservation Objective (NPWS)		
	Republic of Ireland	Northern Ireland					Attribute	Target	Notes
[21A0] Machairs	22	0	Largely groundwater dependant	N	N/A	N	N/A	N/A	N/A
[3180] Turloughs (Ireland)	45	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
[7140] Transition mires and quaking bogs	20	3	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 <i>Cladium mariscus</i> and species of the <i>Carex davalliana</i>	17	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 formation (<i>Cratoneurion</i>)	20	1	Groundwater dependant	Y	Y	Y	Water quality - nitrate level	No increase from baseline nitrate level and less than 10mg/l	Target based on data from McGarrigle et al. (2010). See Lyons and Kelly (2016) for further details
[7230] Alkaline fens	38	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

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Water Dependent QI	Total Number of European Sites		Type of Water Dependency	Conservation objectives with specific reference to nitrates (Y/N)	Specific targets set for nitrates (Y/N)	Conservation objectives with indirect relevance to nitrates (Y/N)	Relevant Conservation Objective (NPWS)		
	Republic of Ireland	Northern Ireland					Attribute	Target	Notes
[1393] <i>Hamatocaulis (Drepanocladus) vernicosus</i> (Slender green feather-moss)	9	0	Largely groundwater dependant	N	N/A	N	N/A	N/A	N/A
[1528] <i>Saxifraga hirculus</i> (Yellow/Marsh saxifrage)	6	1	Largely groundwater dependant	N	N/A	N	N/A	N/A	N/A
[3110] Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia</i>)	28	0	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 typical species.	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 Total Phosphorus (TP) concentration should $\leq 10\mu\text{g/l}$ TP, average annual total ammonia concentration should be $\leq 0.040\text{mg/l}$ N and annual 95 th percentile for total ammonia should be $\leq 0.090\text{mg/l}$ N. See also the European Communities Environmental Objectives (Surface Waters) Regulations 2009.
[3130] Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or	23	4	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-

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Water Dependent QI	Total Number of European Sites		Type of Water Dependency	Conservation objectives with specific reference to nitrates (Y/N)	Specific targets set for nitrates (Y/N)	Conservation objectives with indirect relevance to nitrates (Y/N)	Relevant Conservation Objective (NPWS)		
	Republic of Ireland	Northern Ireland					Attribute	Target	Notes
<i>Isoeto-Nanojuncetea</i>									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 annual 95 th percentile for total ammonia should be ≤0.090mg/l N. Where nutrient concentrations are lower there should be no upward trend.
[3140] Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara spp.</i>	18	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 annual 95 th 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 <i>Magnopotamiu m-</i> or <i>Hydrocharition-</i> type vegetation	9	2	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 typical species.	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

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Water Dependent QI	Total Number of European Sites		Type of Water Dependency	Conservation objectives with specific reference to nitrates (Y/N)	Specific targets set for nitrates (Y/N)	Conservation objectives with indirect relevance to nitrates (Y/N)	Relevant Conservation Objective (NPWS)		
	Republic of Ireland	Northern Ireland					Attribute	Target	Notes
[3160] Natural dystrophic lakes and ponds	10	5	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	lake habitat 3150, annual average TP concentrations should be $\leq 20\mu\text{g/l}$ TP, average annual total ammonia concentration should be $\leq 0.065\text{mg/l}$ N and annual 95 th percentile for total ammonia should be $\leq 0.14\text{mg/l}$ N.
[1150] Coastal lagoons	25	1	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).
[7130] Blanket bogs (active only)	50	8	Largely rainwater dependant	N	N/A	N	N/A	N/A	N/A
[91D0] Bog woodland	13	3	Surface and rainwater dependant	N	N/A	N	N/A	N/A	N/A
[91E0] Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)	27	2	Largely surface water dependant	N	N/A	N	N/A	N/A	N/A

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Water Dependent QI	Total Number of European Sites		Type of Water Dependency	Conservation objectives with specific reference to nitrates (Y/N)	Specific targets set for nitrates (Y/N)	Conservation objectives with indirect relevance to nitrates (Y/N)	Relevant Conservation Objective (NPWS)		
	Republic of Ireland	Northern Ireland					Attribute	Target	Notes
[1029] <i>Margaritifera</i> (Freshwater pearl mussel)	19	3	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).
[1106] <i>Salmo salar</i> (Atlantic salmon)	26	5	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 carried out by the Environmental Protection Agency (EPA)
[1833] <i>Najas flexilis</i> (Slender naiad)	24	0	Largely surface water dependant	N	N/A	Y	Water quality	Maintain/restore appropriate water quality to support the populations of the species.	See the <i>Najas flexilis</i> supporting document for further details.
[1099] <i>Lampetra fluviatilis</i> (River lamprey)	10	0	Surface water dependant	N	N/A	N	N/A	N/A	N/A
[1096] <i>Lampetra planeri</i> (Brook lamprey)	10	0	Surface water dependant	N	N/A	N	N/A	N/A	N/A
[1095] <i>Petromyzon marinus</i> (Sea lamprey)	12	0	Surface water dependant	N	N/A	N	N/A	N/A	N/A
[3270] Rivers with muddy banks with <i>Chenopodium rubric p.p.</i> and <i>Bidention p.p.</i> vegetation	7	0	Largely surface water dependant	Y	Y	Y	Water quality: nutrients; phytoplankton biomass	Maintain water quality necessary to support the typical species and vegetation composition of the habitat.	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 N (good). Mean molybdate reactive phosphorus must be ≤ 25 μ g/l P (high) or ≤ 35 μ g/l P (good) and the annual

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Water Dependent QI	Total Number of European Sites		Type of Water Dependency	Conservation objectives with specific reference to nitrates (Y/N)	Specific targets set for nitrates (Y/N)	Conservation objectives with indirect relevance to nitrates (Y/N)	Relevant Conservation Objective (NPWS)		
	Republic of Ireland	Northern Ireland					Attribute	Target	Notes
[3260] Watercourses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-batrachion</i> vegetation	21	5	Largely surface water dependant	Y	Y	Y	Water quality: nutrients	Maintain the concentration of nutrients in the water column necessary to support the typical species and vegetation composition of the habitat.	95th percentile must be ≤ 45 µg/l P (high) and ≤ 75 µg/l P (good). 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 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).

On the basis of the information presented in **Table 6.3**, it is considered that the following water dependant habitats are those which have the most potential to be subject to adverse effects as a result of impacts arising via the NAP:

- Turloughs;
- Transition mires and quaking bogs;
- Calcareous fens with *Cladium mariscus* and species of the *Carex davalliana*;
- Petrifying springs with tufa formation (*Cratoneurion*);
- Alkaline fens;
- Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia*);
- Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or *Isoeto-Nanojuncetea*;
- Natural dystrophic lakes and ponds;
- Coastal lagoons;
- *Margaritifera* (Freshwater pearl mussel);
- *Salmo salar* (Atlantic salmon);
- *Najas flexilis* (Slender naiad);
- Rivers with muddy banks with *Chenopodium rubric p.p.* and *Bidention p.p.* vegetation; and
- Watercourses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-batrachion* vegetation.

Each of these habitats or species has a specific target for nitrate concentration in addition to other nutrient compounds as part of its conservation objective, for each respective European site for which they form a qualifying feature and as such are extremely vulnerable to the nutrient inputs from agriculture.

Article 17 reporting information for each of these habitats and species (NPWS Article 17 Reporting 2019) is set out in **Table 6.4**, with details provided on the conservation condition of each of these qualifying interests. Further information on QI species is set out within **Appendix F**.

Table 6.4: Highly Nutrient Sensitive QIs Article 17 Reporting Information

Highly Nutrient Sensitive QI	2019 Article 17 Assessment					Identified Threats associated with NAP inputs
	Range	Area	Structure and Function/Habitat	Overall Assessment	Overall Trend	
[3180] Turloughs (Ireland)	Favourable	Favourable	Inadequate	Inadequate	Stable	Agricultural activities generating diffuse pollution to surface or ground waters
[7140] Transition mires and quaking bogs	Favourable	Inadequate	Bad	Bad	Stable	Mixed source pollution to surface and ground waters
[7210] Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Carex davalliana</i>	Favourable	Inadequate	Inadequate	Inadequate	Stable	Mixed source pollution to surface and ground waters
[7220] Petrifying springs with tufa formation (<i>Cratoneurion</i>)	Favourable	Favourable	Inadequate	Inadequate	Deteriorating	Mixed source pollution to surface and ground waters (limnic and terrestrial)
[7230] Alkaline fens	Favourable	Inadequate	Bad	Bad	Deteriorating	Agricultural activities generating diffuse pollution to surface or ground waters

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Highly Nutrient Sensitive QI	2019 Article 17 Assessment					Identified Threats associated with NAP inputs
	Range	Area	Structure and Function/Habitat	Overall Assessment	Overall Trend	
[3110] Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia</i>)	Favourable	Favourable	Bad	Bad	Stable	Agricultural activities generating diffuse pollution to surface or ground waters
[3130] Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or <i>Isoeto-Nanojuncetea</i>	Favourable	Favourable	Inadequate	Inadequate	Deteriorating	Agricultural activities generating diffuse or point source pollution to surface or ground waters
[3160] Natural dystrophic lakes and ponds	Favourable	Favourable	Inadequate	Inadequate	Stable	Agricultural activities generating diffuse pollution to surface or ground waters
[1150] Coastal lagoons	Favourable	Favourable	Bad	Bad	Deteriorating	Mixed source marine water pollution (marine and coastal)
[1029] <i>Margaritifera margaritifera</i> (Freshwater pearl mussel)	Inadequate	Bad	Bad	Bad	Deteriorating	Agricultural activities generating diffuse pollution to surface or ground waters
[1106] <i>Salmo salar</i> (Atlantic salmon)	Favourable	Inadequate	Favourable	Inadequate	Stable	Agricultural activities generating diffuse and point source pollution to surface or ground waters
[1833] <i>Najas flexilis</i> (Slender naiad)	Inadequate	Inadequate	Inadequate	Inadequate	Deteriorating	Agricultural activities generating diffuse and point source pollution to surface or ground waters
[3270] Rivers with muddy banks with <i>Chenopodium rubric p.p.</i> and <i>Bidention p.p.</i> vegetation	Favourable	Favourable	Favourable	Favourable	Stable	None
[3260] Watercourses of plain to montane levels with the <i>Ranuncullion fluitantis</i> and <i>Callitricho-batrachion</i> vegetation	Favourable	Favourable	Inadequate	Inadequate	Deteriorating	Agricultural activities generating diffuse and point source pollution to surface or ground waters

Of the habitats and species listed above the vast majority, with the exception of Rivers with muddy banks [3270], 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 this context it is considered that any potential further deterioration of the conservation status of these habitats and species arising as a result of nutrient inputs associated with agriculture would be associated with inadequate provisioning of mitigation measures in the NAP, or inadequate enforcement of these measures.

In addition to water dependant habitats and species which are particularly vulnerable to the potential effects arising as a result of the NAP, 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 sites would therefore also arise as a result of inputs associated with the NAP.

Further to the potential for surface and groundwater impacts, the majority of SACs in 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 $1\mu\text{g}/\text{m}^3$ ³⁴. Effects may arise in respect of all SACs which lie in proximity to agricultural activities related to the NAP which give rise to airborne ammonia emissions.

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 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 Ireland have been set specific conservation objectives which relate to nutrient enrichment.

It is noted however that indirect effects upon the habitats which support SCI bird species, or indeed wetland habitats which are themselves an SPA qualifying feature may still occur especially where nutrient inputs are diffuse, long-term and of a high magnitude, as in the case of nutrient enrichment associated with agriculture. This type of nutrient enrichment has the potential to give rise to adverse effects to SCI bird species, principally envisaged through decreased prey abundance of fish and invertebrate species. Similarly, impacts to non-wetland habitats of value to SCI bird species, such as upland habitats, which lie upstream of agricultural activities may also occur as a result of the deposition of atmospheric ammonia from agricultural activity in proximity to such sites.

On the basis of the above information, and on a precautionary basis, it is considered that no specific SAC or SPA in Ireland can be discounted in respect of the potential adverse effects arising via agricultural activity which would be associated with the measures set out in the NAP, or the inadequate enforcement of this Plan. However, certain SACs are known to be particularly sensitive to these potential adverse effects, already subject to deteriorating conditions associated with such effects and in unfavourable conservation condition. It is in this context that the assessment of the proposed draft NAP measures on their implications for European sites is undertaken, as set out below.

6.5 Assessment of the draft NAP Measures

The draft NAP measures assessed include for both the six relevant parts of the European Union (Good Agricultural Practice for Protection of Waters) (Amendment) Regulations 2020, those being Parts 2-7, as set out in **Table 6.1**, in addition to non-legislative measures proposed within the NAP, which include additional good agricultural practice measures and the implementation of a chemical fertiliser register, among others.

As stated previously, it is noted that the NAP, 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 Ireland. As such, it is not achievable at this level of assessment to undertake a detailed appraisal of the predicted effects of the proposed NAP at the level of individual Natura 2000 sites. This assessment will therefore focus upon the overall effects upon Natura 2000 sites which would be predicted to occur as a result of the NAP measures, in the context of historical trends in water quality, the known condition and threats to qualifying features of Natura 2000 sites across Ireland and the material changes to be implemented as a result of the latest version of the NAP, as they compare to previous versions. This assessment is undertaken in the context of the Natura 2000 site network and relevant conservation objectives, as discussed in **Section 6.4**, particularly in regard to those sites which support qualifying features known to be vulnerable to nutrient inputs from farming.

Table 6.5 assesses the measures presented within the draft NAP in the context of potential for adverse impacts on the integrity of relevant European sites in view of the conservation objectives of those sites.

³⁴ Kelleghan, D.B., Hayes, E.T., Everard, M. & Curran T.P. (2019) *Mapping ammonia risk on sensitive habitats in Ireland*. Science of the Total Environment, 649: 1580-1589.

Table 6.5: Assessment of draft NAP Measures

No.	Draft Measure	Assessment of Effects
Part 2 Farmyard Management		
5. Minimisation of soiled water	<p>5. (1) An occupier of a holding shall take all such reasonable steps as are necessary for the purposes of minimising the amount of soiled water produced on the holding.</p>	<p>In relation to the effect of soiled waters from farmyards on European Sites, the location of the farm, either wholly or partially within a European Site, directly or indirectly connected to a European Site will need to be considered. It must also be considered that post-mitigation may only minimise the potential effect from soiled water, not remove the effect.</p>
	<p>(2) Without prejudice to the generality of sub-article (1), an occupier of a holding shall ensure, as far as is practicable, that—</p> <ul style="list-style-type: none"> (a) clean water from roofs and unsoiled paved areas and that flowing from higher ground on to the farmyard is diverted away from soiled yard areas and prevented from entering storage facilities for livestock manure and other organic fertilisers, soiled water, and effluents from dungsteeds, farmyard manure pits, silage pits or silage clamps and (b) rainwater gutters and downpipes where required for the purposes of paragraph (a) are maintained in good working condition. 	<p>(a): Ensuring the diversion of clean water from roofs and unsoiled paved areas away from soiled yard areas and prevention of this clean water from entering storage facilities for livestock manure and other organic fertilisers, soiled water, and effluents from dungsteeds, farmyard manure pits, silage pits or silage clamps will have a positive effect on water quality. This will reduce the volume of soiled water produced for each farmyard thus reducing the required capacity for storage/collection. This will minimise the potential for soiled water to enter watercourses and potentially have a negative effect on any European Site that may be hydrologically connected to the farmyard.</p> <p>(b): The uncontrolled flow of soiled water has the potential to negatively effect on the Natura 2000 network, where there is a hydrological or hydrogeological connection to a European Site. Maintenance of rainwater gutters and downpipes where required for the purposes of paragraph (a) will have a positive effect by minimising the potential for clean water from roofs and unsoiled paved areas from becoming soiled.</p>
6. Collection and holding of certain substances	<p>6. (1) Livestock manure and other organic fertilisers, soiled water and effluents from dungsteeds, farmyard manure pits, silage pits or silage clamps arising or produced in a building or yard on a holding shall, prior to its application to land or other treatment, be collected and held in a manner that prevents the run-off or seepage, directly or indirectly, into groundwaters or surface waters of such substances.</p>	<p>The provision of a secure collection system for livestock manure and other organic fertilisers, soiled water and effluents from dungsteeds farmyard manure pits, silage pits or silage clamps will have a positive effect on water quality. This will require investment by the occupier to provide adequate capacity for storage in a secure manner to prevent runoff or leakage into surface and groundwaters, either directly or indirectly.</p>
	<p>(2) The occupier of a holding shall not cause or permit the entry to waters of any of the substances specified in sub-article (1).</p>	<p>Placing the onus on the occupier to prevent the entry of substances mentioned in 6(1) into surface or groundwater will have a positive effect on water quality. However, enforcement capacity remains a concern. Part (1) relates to the provision of the required storage whilst part (2) adds the requirement to not allow the substances get into a water body. This implies the prevention/removal of any potential pathway.</p>
7. Provision and management of storage facilities	<p>7. (1) Storage facilities for livestock manure and other organic fertilisers, soiled water and effluents from dungsteeds, farmyard manure pits, silage pits or silage clamps shall be maintained free of structural defect and be maintained and managed in such manner as is necessary to prevent run-off or seepage, directly or indirectly, into groundwater or surface water, of such substances.</p>	<p>The provision of a secure collection system, free of structural defects, for livestock manure and other organic fertilisers, soiled water and effluents from dungsteeds, farmyard manure pits, silage pits or silage clamps will have a positive effect on water quality. This will require investment by the occupier to ensure the maintenance of these storage structures without structural defect, in</p>

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No.	Draft Measure	Assessment of Effects
		order to prevent runoff or leakage into surface and groundwaters, either directly or indirectly. The ongoing implementation and compliance with this measure should be monitored through inspections.
	(2) Storage facilities being provided on a holding on or after 31 March 2009 shall— (a) be designed, sited, constructed, maintained and managed so as to prevent run-off or seepage, directly or indirectly, into groundwater or surface water of a substance specified in sub-article (1), and (b) comply with such construction specifications for those facilities as may be approved from time to time by the Minister for Agriculture, Food and the Marine.	(2)(a): The design, siting and construction of the secure storage mentioned in 7(1) needs to be maintained and managed to prevent runoff or seepage into surface or groundwaters. This measure will have a positive effect on water quality through prevention of contamination. Article (2)(b) is in relation to compliance with any specifications for those facilities and as such will have a positive effect, through up-to-date maintenance of best practice thereby decreasing any risk associated with the facilities.
	(3) Storage facilities other than those referred to in sub-article (2) shall be of such construction and design and shall be maintained and managed in such a manner so as to comply with the requirements of sub-article (1) and article 6(2).	See above for Article 6(2) and 7(1).
	(4) In this article ‘storage facilities’ includes out-wintering pads, earthen-lined stores, integrated constructed wetlands and any other system used for the holding or treatment of livestock manure or other organic fertilisers.	Article 7(4) expands the scope of storage facilities to encompass out-wintering pads, earthen-lined stores, integrated constructed wetlands and any other system used for the holding or treatment of livestock manure or other organic fertilisers. The widening of the scope to include additional storage facilities will have a positive effect in terms of what can be regulated and therefore controlled.
8. General obligations as to capacity of storage facilities	8. (1) The capacity of storage facilities for livestock manure and other organic fertilisers, soiled water and effluents from dungsteeds, farmyard manure pits, silage pits or silage clamps on a holding shall be adequate to provide for the storage of all such substances as are likely to require storage on the holding for such period as may be necessary as to ensure compliance with these Regulations and the avoidance of water pollution. (2) For the purposes of sub-article (1) an occupier shall have due regard to the storage capacity likely to be required during periods of adverse weather conditions when, due to extended periods of wet weather, frozen ground or otherwise, the application to land of livestock manure or soiled water is precluded. (3) For the purposes of Articles 8 to 14, the capacity of storage facilities on a holding shall be disregarded insofar as the occupier does not have exclusive use of those facilities. (4) For the purposes of Articles 10 to 14 the capacity of facilities required in accordance with these Regulations for the storage of manure from livestock of the type specified in Tables 1, 2 or 3 of Schedule 2 shall be determined by reference to the criteria set out in the relevant table and the rainfall criteria set	Article 8(1) expands the scope of storage facilities to encompass out-wintering pads, earthen-lined stores, integrated constructed wetlands and any other system used for the holding or treatment of livestock manure or other organic fertilisers. The widening of the scope to include additional storage facilities will have a positive effect in terms of what can be regulated and therefore controlled. The responsibility for ensuring sufficient storage capacity during periods of adverse weather conditions lies with the occupier. Secure storage of these substances until they can be applied to land under the correct conditions will result in a positive effect for water quality, by eliminating the potential for overflow and removing the application of these substances during suboptimal weather conditions. This measure states that if you don’t have sole rights to a storage facility then it cannot be included in the calculation of the total storage capacity. This should prevent any misunderstanding regarding capacity, thus is a positive measure as it ensures that there is always sufficient capacity in addition to shared capacity. This is a positive measure and takes into account the local and regional variations in weather conditions and physical settings across the country, in order to minimise nutrient losses during higher risk times of the year.

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No.	Draft Measure	Assessment of Effects
	<p>out in Table 4 of that schedule and shall include capacity for the storage for such period as may be necessary for compliance with these Regulations of rain-water, soiled water or other extraneous water which enters or is likely to enter the facilities.</p>	
	<p>(5) The occupier of a holding shall only be eligible to avail of a derogation from the limits on the amount of livestock manure to be applied as specified in Article 20 if the capacity of storage facilities for livestock manure, effluent and soiled water on the holding is in accordance with Articles 8 and 9.</p>	<p>This is a positive measure and ensures that adequate storage facilities are in place in advance of the grant of a derogation.</p>
	<p>(6) From 1st January 2022 all slurry generated on a holding must be applied by 8th October of that year. In relation to the commencement of the closed period for slurry application, the Minister for Housing Local Government and Heritage shall, following consultation with the Minister for Agriculture, Food and Marine, establish predefined scientific criteria for the safe application of slurry, up to 15th October each year. These criteria will be published by the Minister within six months of the commencement of the new NAP. Where these criteria are strictly met, farmers may be permitted to spread slurry.</p>	<p>In general, this is a positive measure prohibiting the spreading of slurry outside the prescribed period. This represents the time when the risk of nutrient loss to water is at its highest and there is minimal plant growth. Critically, the application of slurry will only be permitted when ground and weather conditions are suitable and as such this measure will prevent the potential high nutrient loss to waterways which would negatively affect the Natura 2000 network, where there is a hydrological or hydrogeological connection to any European Site.</p>
	<p>(7) From 1st January 2023, all slurry generated on a holding must be applied by 1st October of that year. In relation to the commencement of the closed period for slurry application, the Minister for Housing Local Government and Heritage shall, following consultation with the Minister for Agriculture, Food and Marine, establish predefined scientific criteria for the safe application of slurry, up to 15th October each year. These criteria will be published by the Minister within six months of the commencement of the new NAP. Where these criteria are strictly met, farmers may be permitted to spread slurry.</p>	<p>As above.</p>
<p>9. Capacity of storage facilities for effluents and soiled water</p>	<p>9. Without prejudice to the generality of Article 8, the capacity of facilities for the storage on a holding of— a) effluent produced by ensiled forage and other crops shall equal or exceed the capacity specified in Table 5 of Schedule 2, and b) all holdings producing soiled water must have a minimum of 4 weeks’ storage in place by 31st December 2024 except for winter/liquid milk producers where this storage needs to be in place by 31st December 2025.</p>	<p>This is a positive measure which will achieve the effective storage of other sources of nutrient input, including silage run-off and soiled water, which would otherwise be potentially released through run-off or seepage into the wider environment beyond the farm holding. Furthermore the measure will limit the potential for soiled water to give rise to overflow events within slurry storage systems and provide an appropriate temporal buffer for storage of soiled water. This will reduce the potential for adverse effects upon any hydrologically or hydrogeologically linked European sites.</p>
<p>10. Capacity of storage facilities for pig manure</p>	<p>10. (1) Without prejudice to the generality of Article 8, the capacity of facilities for the storage on a holding of livestock manure produced by pigs shall, subject to sub-article (2) and Article 14, equal or exceed the capacity required to store all such livestock manure produced on the holding during a period of 26 weeks.</p>	<p>This relates to the requirement to have sufficient storage capacity to store all pig manure produced on a holding over a 26 week period. This allows sufficient storage facilities during suboptimal weather conditions where land spreading cannot occur. This will have a positive effect on water quality through prevention of pig manure from entering a water body due to lack of holding capacity, or through land spreading during suboptimal weather conditions resulting in runoff.</p>

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No.	Draft Measure	Assessment of Effects
	<p>(2) The period specified in Schedule 3 shall, in substitution for that prescribed by sub-article (1), apply in relation to livestock manure produced by pigs on a holding where all the following conditions are met—</p> <ul style="list-style-type: none"> (a) the number of pigs on the holding does not at any time exceed one hundred pigs, and (b) the holding comprises a sufficient area of land for the application in accordance with these Regulations of all livestock manure produced on the holding. 	<p>This relates to an exception/alternative to the 26 week storage capacity for pig manure if the number of pigs on a holding never exceeds one hundred pigs. The primary issue or risk with this measure relates to compliance, specifically in reference to the threshold for the exception. Any risks associated with the inappropriate storage of pig manure from such holdings, which support less than 100 pigs, should be appropriately addressed by sub-article 2(b), in addition to the measures stipulated under other articles of the draft NAP.</p>
<p>11. Capacity of storage facilities for poultry manure</p>	<p>11. (1) Without prejudice to the generality of Article 8, the capacity of facilities for the storage on a holding of livestock manure produced by poultry shall, subject to sub-article (2) and Article 14, equal or exceed the capacity required to store all such livestock manure produced on the holding during a period of 26 weeks.</p>	<p>This relates to the requirement to have sufficient storage capacity to store all poultry manure produced on a holding over a 26 week period. This allows sufficient storage facilities during suboptimal weather conditions where land spreading cannot occur. This will have a positive effect on water quality through prevention of poultry manure from entering a water body due to lack of holding capacity, or through land spreading during suboptimal weather conditions resulting in runoff.</p>
	<p>(2) The period specified in Schedule 3 shall, in substitution for that prescribed by sub-article (1), apply in relation to livestock manure produced by poultry on a holding where all the following conditions are met—</p> <ul style="list-style-type: none"> (a) tillage or grassland farming is carried out on the holding, (b) the number of poultry places on the holding does not exceed 2,000 places, and (c) the holding comprises a sufficient area of land for the application in accordance with these Regulations of all livestock manure produced on the holding. 	<p>All relate to specific exceptions where an alternative storage capacity for poultry manure is considered to be adequate. The primary issue with this measure relates to compliance, specifically in reference to the threshold for the exceptions.</p>
<p>12. Capacity of storage facilities for manure from deer, goats and sheep</p>	<p>12. Without prejudice to the generality of Article 8, the capacity of facilities for the storage on a holding of livestock manure produced by deer, goats and sheep shall, subject to Article 14, equal or exceed the capacity required to store all such livestock manure produced on the holding during a period of six weeks.</p>	<p>This relates to the requirement to have sufficient storage capacity to store all deer, goat and sheep manure produced on a holding over a six week period. This allows sufficient storage facilities during suboptimal weather conditions where land spreading cannot occur. This will have a positive effect on water quality through prevention of deer, goat and sheep manure from entering a water body due to lack of holding capacity, or through land spreading during suboptimal weather conditions resulting in runoff.</p>
<p>13. Capacity of storage facilities for manure from cattle</p>	<p>13. Without prejudice to the generality of Article 8, the capacity of facilities for the storage on a holding of livestock manure produced by cattle shall, subject to Article 14, equal or exceed the capacity required to store all such livestock manure produced on the holding during the period specified in Schedule 3.</p>	<p>This relates to the requirement to have sufficient storage capacity to store all cattle manure produced on a holding during the period specified in Schedule 3. This allows sufficient storage facilities during suboptimal weather conditions where land spreading cannot occur. This will have a positive effect on water quality through prevention of cattle manure from entering a water body due to lack of holding capacity, or through land spreading during suboptimal weather conditions resulting in runoff.</p>

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No.	Draft Measure	Assessment of Effects
14. Reduced storage capacity in certain circumstances	<p>14. (1) The capacity of facilities for the storage of livestock manure on a holding may, to such extent as is justified in the particular circumstances of the holding, be less than the capacity specified in Article 10, 11, 12 or 13, as appropriate, in the case of a holding where—</p> <ul style="list-style-type: none"> (a) the occupier of the holding has a contract providing exclusive access to adequate alternative storage capacity located outside the holding, (b) the occupier has a contract for access to a treatment facility for live-stock manure, or (c) the occupier has a contract for the transfer of the manure to a person registered under and in accordance with the European Communities (Transmissible Spongiform Encephalopathies and Animal By-products) Regulations 2008 S.I. 252 of 2008 to undertake the transport of manure. 	<p>These relate to reducing the required storage capacities under specific circumstances, where the occupier of the holding has access to an alternative means of storage/disposal not located within the holding, confirmed by contract. Sufficient storage capacity is available and confirmed by contract, therefore this will be a positive measure.</p>
	<p>14. (2) Subject to sub-article (3), the capacity of facilities for the storage of live-stock manure may be less than the capacity specified in Article 12 or 13, as appropriate, in relation to—</p> <ul style="list-style-type: none"> (a) deer, goats or sheep which are out-wintered at a grassland stocking rate which does not exceed 130 kg nitrogen at any time during the period specified in Schedule 4 in relation to the application of organic fertiliser other than farmyard manure, or (b) livestock (other than dairy cows, deer, goats or sheep) which are out-wintered at a grassland stocking rate which does not exceed 85 kg nitrogen at any time during the period specified in Schedule 4 in relation to the application of organic fertiliser other than farmyard manure. 	<p>Relates to various situations where it may be considered acceptable to have reduced storage capacity. This includes holdings where animals are out wintered and are dependent on ensuring conditions set out at sub-article 3. Due to the nature of Irish winters where soil conditions can reach saturation there is likely to be a negative effect for soil even if lightly stocked. There is potential here for negative effect on water quality through the release of sediment. These potential adverse effects are addressed at sub-article 3.</p>
	<p>14. (3) Sub-article (2) shall apply only in relation to a holding where all the following conditions are met—</p> <ul style="list-style-type: none"> (a) all the lands used for out-wintering of the livestock are comprised in the holding, (b) the out-wintered livestock have free access at all times to the required lands, (c) the amount of manure produced on the holding does not exceed an amount containing 100kg of nitrogen per hectare per annum, (d) severe damage to the surface of the land by poaching does not occur, and (e) the reduction in storage capacity is proportionate to the extent of out-wintered livestock on the holding. 	<p>These conditions, which will apply in circumstances of overwintered grazing, as set out at sub-article 2, will ensure that any adverse effects associated with out-wintered grazing, and the associated reduced storage requirements, are at least partially mitigated through compliance with these conditions. Enforcement of these conditions remains a potential concern however, such as in the case of poaching, which may present difficulties during inspection.</p>
	<p>14. (4) In this article, a grassland stocking rate of 130 kg or 85 kg of nitrogen, as the case may be, means the stocking of grassland on a holding at any time by such numbers and types of livestock as would in the course of a year excrete waste products containing 130 kg or 85 kg of nitrogen, as the case may be, per</p>	<p>This sub-article clarifies the definition of the stocking rates for which the wider article applies. This is therefore not a measure in of itself and potential effects are discussed above in respect of the other sub-articles to which the definition applies.</p>

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No.	Draft Measure	Assessment of Effects																		
	<p>hectare of the grassland when calculated in accordance with the nutrient excretion rates for livestock specified in Table 6 of Schedule 2.</p>																			
<p>Schedule 2 Criteria as to Storage Capacity and Nutrient Management</p>	<p>Table 6 Annual nutrient excretion rates for livestock</p> <table border="1"> <thead> <tr> <th>Livestock type</th> <th>Total Nitrogen</th> <th>Total Phosphorus</th> </tr> <tr> <td></td> <th>kg/year</th> <th>kg/year</th> </tr> </thead> <tbody> <tr> <td>Dairy cow</td> <td>85</td> <td>13</td> </tr> <tr> <td>Dairy cow- Band 1 (<4,500kg)</td> <td>80</td> <td></td> </tr> <tr> <td>Dairy cow – Band 2 (4,501-6,500kg)</td> <td>92</td> <td></td> </tr> <tr> <td>Dairy cow -Band 3 (.6.500kg)</td> <td>106</td> <td></td> </tr> </tbody> </table> <p>The Minister shall consider a review of excretion rate methodologies in line with the interim review in Q3 2023 of the Nitrates Action Programme.</p>	Livestock type	Total Nitrogen	Total Phosphorus		kg/year	kg/year	Dairy cow	85	13	Dairy cow- Band 1 (<4,500kg)	80		Dairy cow – Band 2 (4,501-6,500kg)	92		Dairy cow -Band 3 (.6.500kg)	106		<p>These new rates will be introduced from the 1st January 2023. This criteria is intended to provide clarity on the livestock manure nitrogen excretion rates of dairy cows. In this context it is considered that this represents a positive change in the 2022 NAP which will lower the thresholds for more stringent storage and other requirements.</p>
Livestock type	Total Nitrogen	Total Phosphorus																		
	kg/year	kg/year																		
Dairy cow	85	13																		
Dairy cow- Band 1 (<4,500kg)	80																			
Dairy cow – Band 2 (4,501-6,500kg)	92																			
Dairy cow -Band 3 (.6.500kg)	106																			
<p>Schedule 3 Storage Periods for Livestock Manure</p>	<p>1. The storage period specified for the purposes of Articles 10(2), 11(2), 13 and 16(5)(b) is—</p> <ul style="list-style-type: none"> (a) 16 weeks in relation to holdings in counties Carlow, Cork, Dublin, Kildare, Kilkenny, Laois, Offaly, Tipperary, Waterford, Wexford and Wicklow; (b) 18 weeks in relation to holdings in counties Clare, Galway, Kerry, Limerick, Longford, Louth, Mayo, Meath, Roscommon, Sligo and Westmeath; (c) 20 weeks in relation to holdings in counties Donegal and Leitrim, and (d) 22 weeks in relation to holdings in counties Cavan and Monaghan. <p>2. Where 20% or more of a holding lies within one or more counties of higher storage requirement as specified in paragraph 1, the holding shall be deemed for the purposes of this Schedule to lie wholly within the county in relation to which the longest storage period is specified.</p>	<p>This schedule sets out the storage periods in respect of pig, poultry and cattle manure, for the respective counties in Ireland. These storage requirements represent a positive measure ensuring that suitable storage capacity is available for farms across the country.</p> <p>This represents a positive measure to ensure that any misinterpretation of the scheduled storage periods is avoided, on a precautionary basis, with farms extending over relevant county boundaries adopting the more stringent storage requirements of those relevant counties.</p>																		
<p>Schedule 4: Periods when application of fertilisers to land is prohibited</p>	<p>1. In counties Carlow, Cork, Dublin, Kildare, Kilkenny, Laois, Offaly, Tipperary, Waterford, Wexford and Wicklow, the period during which the application of fertilisers to land is prohibited in the period from—</p> <ul style="list-style-type: none"> (a) 15 September to 31 January in the case of the application of chemical fertiliser; 	<p>This part of the schedule sets out the closed period for application of fertilisers, within the counties to which it applies. This represents a positive measure which will minimise run-off associated with the application of such material during periods when the ground is saturated and when high levels of precipitation. It is noted that this period has been extended in the case of chemical fertilisers in the draft NAP, which is regarded as a positive change.</p>																		

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	<p>(b) 15 October to 12 January in the case of the application of organic fertiliser (other than farmyard manure); and</p> <p>(c) 1 November to 12 January in the case of the application of farmyard manure.</p> <p>The period when the application of chemical fertilisers to land is prohibited in Springtime will be extended by 14 days for Zones A, B and C.</p> <p>In relation to the opening period for chemical fertiliser application, the Minister for Housing Local Government and Heritage shall, following consultation with the Minister for Agriculture, Food and Marine, establish predefined scientific criteria for the safe application of chemical fertiliser in the 14 days referred to above.</p> <p>These criteria will be published by the Minister within six months of the commencement of the new NAP and shall be applicable from 1st January 2023.</p>	
	<p>2. In counties Clare, Galway, Kerry, Limerick, Longford, Louth, Mayo, Meath, Roscommon, Sligo and Westmeath, the period during which the application of fertilisers to land is prohibited is the period from—</p> <p>(a) 15 September to 3 February in the case of the application of chemical fertiliser;</p> <p>(b) 15 October to 15 January in the case of the application of organic fertiliser (other than farmyard manure); and</p> <p>(c) 1 November to 15 January in the case of the application of farmyard manure.</p>	<p>This part of the schedule sets out the closed period for application of fertilisers, within the counties to which it applies. This represents a positive measure which will minimise run-off associated with the application of such material during period when the ground is saturated and when high levels of precipitation. It is noted that this period has been extended in the case of chemical fertilisers in the draft NAP, which is regarded as a positive change. It is noted however that a more simplistic system, applying to all counties and fertilisers, may be more efficient in delivering easily enforced and understood restrictions.</p>
	<p>3. In counties Cavan, Donegal, Leitrim and Monaghan, the period during which the application of fertilisers to land is prohibited is the period from—</p> <p>(a) 15 September to 19 February in the case of the application of chemical fertiliser;</p> <p>(b) 15 October to 31 January in the case of the application of organic fertiliser (other than farmyard manure); and</p> <p>(c) 1 November to 31 January in the case of the application of farmyard manure.</p>	<p>This part of the schedule sets out the closed period for application of fertilisers, within the counties to which it applies. This represents a positive measure which will minimise run-off associated with the application of such material during period when the ground is saturated and when high levels of precipitation. It is noted that this period has been extended in the case of chemical fertilisers in the draft NAP, which is regarded as a positive change. It is noted however that a more simplistic system, applying to all counties and fertilisers, may be more efficient in delivering easily enforced and understood restrictions.</p>
	<p>4. To reduce the impact of nutrient losses in the riskiest period, the spreading of soiled water will be prohibited from the following dates:</p> <p>(a) From 1st January 2022 - between 21st December and 31st December;</p> <p>(b) From 1st January 2023 it will be prohibited between 10th December and 31st December,</p> <p>(c) From the 1st January 2024 – between 1st December and 31st December; and</p>	<p>This is a positive measure designed to minimise the risk of nitrogen run-off associated with the spread of soiled water, during the period when the ground is saturated and when high levels of precipitation. This measure applies across all counties and is therefore simply enforced.</p>

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	(d) From 1 st January 2025 onwards for winter milk farmers between 1 st December and 31 st December.	
Part 3 Nutrient Management		
15. Interpretation, commencement etc	15. (1) In this Part, 'crop requirement', in relation to the application of fertilisers to promote the growth of a crop, means the amounts and types of fertilisers which are reasonable to apply to soil for the purposes of promoting the growth of the crop having regard to the foreseeable nutrient supply available to the crop from the fertilisers, the soil and from other sources.	This is a definition of crop requirement in relation to fertiliser types/amounts. The article goes on to state that the amount of fertiliser to achieve crop requirements shall be 'reasonable to apply to soil for the purposes of promoting the growth of the crop having regard to the foreseeable nutrient supply available to the crop from the fertilisers, the soil and from other sources'. The word reasonable may give rise to subjectivity, which could result in a negative effect for water quality.
	(2) The amount of nitrogen or phosphorus specified in Table 7 or 8 of Schedule 2, as the case may be, in relation to a type of livestock manure or other substance specified in the relevant table shall for the purposes of this Part be deemed to be the amount of nitrogen or phosphorus, as the case may be, contained in that type of manure or substance except as may be otherwise specified in a certificate issued in accordance with Article 32.	Article 15(2) prescribes the amounts of nitrogen and phosphorus to be found in various organic materials. This information is positive as it standardises the quantity of total nitrogen and total phosphorus contained within slurry and organic fertilisers (other than slurry), thereby providing a consistent approach to the calculation of nutrient requirements for application across all farms.
	(3) The amount of nitrogen or phosphorus available to a crop from a fertiliser of a type which is specified in Table 9 of Schedule 2 in the year of application of that fertiliser shall, for the purposes of this Part, be deemed to be the percentage specified in that table of the amount of nitrogen or phosphorus, as the case may be, in the fertiliser.	While Article 15(2) prescribes the amount of nutrients within an organic material, with some subject to laboratory analysis and certification, Article 15.(3) prescribes the percentage bioavailability of a nutrient. This measure will have a positive effect as it seeks to ensure the correct amount of fertiliser is applied to the crop in question and therefore minimises nutrient losses to the receiving environment from overuse.
	(4) The amount of nitrogen or phosphorus available to a crop from an organic fertiliser of a type which is not specified in Table 9 of Schedule 2 shall be deemed to be the amount specified in the table in relation to cattle manure or, where supported by the necessary analysis, the amount of nitrogen estimated on the basis of the C:N ratio of the compost in accordance with Table 9A unless a different amount has been determined in relation to that fertiliser by, or with the agreement of, the relevant local authority or the Agency, as the case may be.	Article 15(4) considers the bioavailability of N and/or P in an organic material where it is not already considered in Table 9. Under this measure an organic material with an unknown N and P bioavailability ' <i>...shall be deemed to be the amount specified in the table in relation to cattle manure or, where supported by the necessary analysis.....</i> '. The use of the figures for cattle manure as a default option for the assumption of N and P bioavailability of an organic material would be considered conservative and as such support environmental sustainability. This information when linked to measures in relation to the use/application of such substances will have a positive effect on water quality by ensuring the correct amount of fertiliser is applied and therefore minimise the risk of pollution to surface and ground waters from overuse and the increased potential for runoff.
	(5) A reference in this Part to the 'nitrogen index' or the 'phosphorus index' in relation to soil is a reference to the index number assigned to the soil in accordance with Table 10 or 11 of Schedule 2, as the case may be, to indicate the level of nitrogen or phosphorus available from the soil.	Article 15(5) relates to use of N and P soil indices as an indication of soil nutrient availability. The use of a P index, and particularly the suitability of the method used to determine these indices, has been extensively commented on in submissions. It has been argued that Morgan's Extractable P is not a suitable

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		<p>methodology to determine P availability from an environmental perspective as it was developed for the purposes of giving agricultural recommendations and not for assessing the desorption of phosphorus from soils. Teagasc have illustrated from ACP findings that phosphorus sorption/desorption processes in soils are affected by a number of factors, including soil phosphorus concentration, soil type, water content, pH, organic carbon, iron and aluminium ion concentrations and redox potential. Drying/ rewetting cycles are also influencing factors (Doody et al., 2006). The adequacy of Soil Index 3 as a threshold to be used for the protection of surface and groundwaters has also been questioned by Irvine et al. (2011)³⁵, which presents findings from research to suggest that a threshold of less than 5mg/l Morgan's P is required for high and good status waters. Given that the upper boundary for Soil Index 3 is 8mg/l for grassland and 10 mg/l for other crops, this potentially represents a risk to water dependent protected habitats and species in particular, where good or high status conditions are required in order to achieve or maintain favourable conservation condition.</p> <p>Incorrectly estimating the nutrient availability of the soil increases the risk for potential negative impacts to water quality through nutrient losses to receiving waters, where crop requirements are exceeded. However, agriculture cannot be sustained without the replenishment of nutrients removed by crops, as plant growth is dependent upon a continuous supply of mineral nutrients from the soil. Getting the balance right is critical. Fertilisers are applied to grassland and crops to produce an appropriate level of soil fertility that supports adequate crop growth (and animal performance) and maintain an adequate level of soil fertility by replacing all nutrient offtakes, be they in the forms of milk, meat or crops. The N and P limits prescribed in the NAP are predicated on the need to meet crop requirements and soil P replenishment and no more³⁶.</p>
	<p>(6) From 1 January 2022, on holdings with stocking rates of 130kgs nitrogen per hectare from grazing livestock manure or above prior to export of livestock manure from the holding, a maximum crude protein content of 15% is permissible in concentrate feedstuff fed to grazing livestock on the holding between 15 April and 30 September. Records of crude protein content of concentrate feedstuff shall be kept in accordance with Article 23(1)(j).</p>	<p>This relates to concentrates fed to livestock. This measure will have a positive effect on water quality by ensuring that the protein of concentrated feeds will balance for the farm is as accurate as possible thus minimising the potential risk to the environment.</p>
	<p>(7) On holdings with stocking rates of 170kgs nitrogen per hectare from grazing livestock manure or above prior to export of livestock manure from the holding, a liming programme shall be prepared and must establish the following:</p>	<p>Sub-article 7 requires that farms with higher than threshold stocking rates must prepare a liming programme. This programme will require calculation of liming requirements to achieve the required pH and the timescales and procedures for the programme. This will be a positive measure to reduce soil acidity within farm</p>

³⁵ <http://erc.epa.ie/safer/iso19115/displayISO19115.jsp?isoID=3000>.

³⁶ Teagasc, (2016). Major and Micro Nutrient Advice for Productive Agricultural Crops, 4th Edition.

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	<p>(a) A calculation of liming requirements for each parcel to achieve optimum pH;</p> <p>(b) A lime application programme for the farm.</p>	<p>holdings, with knock on effects to hydrologically or hydrogeologically linked freshwater European sites.</p>
	<p>(8) In terms of short term grazing, only land within 30km allowed to be considered in stocking rate calculation.</p>	<p>This is a positive alteration to the calculation of stocking rates for farms which will prevent any potential loopholes associated with the inclusion of areas of distant short-term grazing land, and their inclusion in the calculation of farm stocking rates.</p>
<p>16. Duty of occupier in relation to nutrient management</p>	<p>16. (1) An occupier of a holding shall take all such reasonable steps as are necessary for the purposes of preventing or minimising the application to land of fertilisers in excess of crop requirement on the holding.</p> <p>(2) For the purposes of the determination of the grassland stocking rate in tables 12, 13A and 13B the previous calendar year's stocking rate data shall be used.</p> <p>(3)(a) For the purposes of this article, the phosphorus index for soil shall be deemed to be phosphorus index 3 unless a soil test indicates that a different phosphorus index is appropriate in relation to that soil.</p> <p>(b) The soil test to be taken into account for the purposes of paragraph (a) in relation to soil shall, subject to paragraph (c), be the soil test most recently taken in relation to that soil.</p> <p>(c) Where a period of four years or more has elapsed after the taking of a soil test, the results of that test shall be disregarded for the purposes of paragraph (a) except in a case where that soil test indicates the soil to be at phosphorus index 4.</p> <p>(d) From 2022, all soils in the indicative Teagasc/EPA layer for >20% Organic M are required to be soil tested for Organic Matter.</p> <p>(4) Without prejudice to the generality of sub-article (1) and subject to sub-article (5), the amount of available nitrogen or available phosphorus applied to promote the growth of a crop specified in Table 12, 13A, 14, 15, 16, 17, 18, 19, 20 or 21 of</p>	<p>This will have a positive effect on water quality, however the extent of what would be considered reasonable remains subjective in the absence of a precise description/threshold. There is potential for a negative effect on both water quality and soils while this measure is open to interpretation. In addition, the overuse of fertiliser should not be minimised, it should be prevented.</p> <p>The purpose of this article is to provide a base for early determination of nutrient requirements for the coming year. However, the assumption is that there will be no change in stocking rates from year to year. This is generally the case, but not always. There is potential for negative effect on water quality if the stocking rate is reduced but the allowance still corresponds to a higher rate from the previous year. Thus the holding may avail of a higher level of nutrient supplementation than would be required which has the potential for a negative effect on water quality through runoff of surplus nutrients to receiving waters.</p> <p>It is assumed in this article that Morgan's extractable P is suitable for determining environmental risk from soil P. It is also assumed in sub-article (a) that lands that are not soil tested are P index 3, in the absence of a soil test proving otherwise. No account is taken of soils that are P index 4 in this sub-article. It is noted from the Teagasc submission on the review of the NAP that soils with P index 4 have decreased by 43% between 2007 and 2015 and represent 15% of the soils in the country³⁷. However, there remains a risk for water quality here in relation to the assumption of P index 3 soils where the soils are actually P index 4. Some of the farms with P index 4 soils have utilised soil testing either to avail of derogation or voluntarily, which will lower the risk. However in scenarios where additional P fertiliser is being applied, this could have a negative effect on water quality particularly in a sensitive catchment setting. The four year validity of soil testing (unless soils are P index 4), will be beneficial, but only in cases where soil testing is actually carried out. The draft NAP includes for the addition of sub-article 3(e) which requires a soil test for all areas mapped as comprising greater than 20% organic M. This is a positive</p>

³⁷ Plunkett, M. and Wall, D.P. (2016). Soil Fertility Trends- Latest Update. Proceedings of the Fertiliser Association of Ireland, Spring Scientific Meeting 2016, 2nd February Horse and Jockey Co Tipperary. 51: 3 -12.

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	<p>Schedule 2 shall not exceed the amount specified in the table in relation to that crop having regard to the relevant nitrogen index or phosphorus index, as the case may be, for the soil on which the crops are to be grown. In the case of crops not identified in the tables listed above, fertilisers shall be applied in accordance with the national agriculture and food development authority's guidance as approved by the Minister for Agriculture, Food and the Marine.</p>	<p>measure which will provide for increased information on the nature of soils within a given holding allowing for better balancing of nutrient need of that holding and the avoidance of over-fertilisation.</p>
	<p>(5) Increased phosphorus build-up on grassland on farms with grassland stocking rates of 130kg nitrogen per hectare and above shall only be permitted in accordance with the rates contained in Table 13B provided that the following conditions are met:</p> <ul style="list-style-type: none"> (a) Soil analysis is carried out for soil phosphorus and soil organic matter contents; soil organic matter testing shall not be required where it is certified by a Farm Advisory System Advisor that the sample area is a mineral soil. (b) An occupier availing of the phosphorus build-up programme shall engage the services of a Department of Agriculture, Food and the Marine approved Farm Advisory System Advisor. (c) A detailed farm nutrient plan for the holding shall be submitted in a format specified by the Minister for Agriculture, Food and the Marine. (d) The occupier shall participate in an appropriate training programme specified by the Minister for Agriculture, Food and the Marine for the purpose of meeting the requirements of these regulations. 	<p>This article was included in 2017 in response to a reduction in soil fertility (pH, P and K) identified by Teagasc during their annual soil sampling regime. The use of additional P prescribed in this article is controlled by sub-articles 16(5)(a) to (d) and Includes the requirement for soil testing for soil phosphorus and soil organic matter, and a detailed nutrient management plan for the holding.</p> <p>However, this Article represents an increased potential negative effect on water quality on lands situated in sub-catchments where biogeophysical factors increase pollution risk through nutrient export to surface and ground waters.</p> <p>For the most part the conditions associated with this Article, and in particular the need for the development and implementation of a NMP will minimise the effect that this increased P application will have on the receiving environment. However, NMPs as they are currently undertaken do not account for any factors, other than P and N indices, that might increase 'risk' of pollution.</p> <p>Teagasc's Online NMP system, which is the most widely used system for producing NMPs in this country, will shortly have additional capability to incorporate areas of risk. This information will be largely based on work undertaken by the EPA's Catchment Management Unit and will entail a mapping layer identifying areas where agriculture represents a higher risk to water pollution. With this capability, it will be possible to overlay high risk areas with areas associated with applications associated with this Article. If an application is received where part, or all, of the lands associated with the application have been identified as high risk, then a further detailed assessment of the application can be made and appropriate mitigation introduced.</p> <p>The draft NAP introduces a lower threshold stocking rate to which the conditioned exemption applies. This is a positive step in that it requires more farms, with lower stocking rates, to undertake soil analysis and produce a NMP or alternatively lower stocking rates.</p>
	<p>(6) In the case of a holding on which grazing livestock are held, the amount of available phosphorus supplied to the holding by concentrated feedstuff shall be the amount fed to such livestock in excess of 300kg per 85kg livestock manure nitrogen in the previous calendar year and the phosphorus content of such concentrated feedstuff shall, in the absence of a known phosphorus content or phosphorus content provided by the supplier, be deemed to be 0.5 kg phosphorus in respect of each 100 kg of such concentrated feedstuff.</p>	<p>This measure will have a positive effect on water quality by ensuring that the P balance for the farm is as accurate as possible thus minimising the potential risk to the environment.</p>

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	(7) The nitrogen and phosphorus maximum limits in Tables 12, 13A and 13B are in addition to the nitrogen and phosphorus contained in grazing livestock manure produced on the holding.	This sub-article sets out that the limits to nitrogen and phosphorus imposed are in addition to livestock manures. Possible issues relating to this and the potential effect relating to water quality are discussed in the section relation to Article 16(5).
Schedule 1: Soil Test	<p>The Morgan's extractable P test as detailed below shall be used to determine the Soil P Index.</p> <p>A review of the soil test methodology for phosphorus availability will be undertaken, however guidance is required on the best approach to ensure phosphorus availability is evaluated correctly.</p> <p>From 1st January 2022, all farms above 170 kg N/ha must take soil samples. Where soil samples are not undertaken, Index 4 for Phosphorus will be assumed.</p> <p>From 1st January 2023, all farmers above 130 kg N/ha must take soil samples. Where soil samples are not undertaken, Index 4 for Phosphorus will be assumed.</p> <p>All arable land sown from 1st January 2023 must take soil samples.</p>	This measure has been amended in the draft NAP to address concerns that Morgan's extractable P test is unsuitable for assessing the supported phosphorus levels. It is proposed that a review of soil testing methods will be undertaken. Alternative methods may include assessment of soil type and geology. In addition, further soil sampling requirements will inform nutrient management planning which is positive. It is considered that this is likely to be a positive change which could lead to greater understanding of the soil conditions on farms and consequently the problem of phosphorus release into natural systems.
Part 4 Prevention of Water Pollution from Fertilisers and Certain Activities		
17. Distances from a water body and other issues	17. (1) Chemical fertiliser shall not be applied to land within 2m of any surface waters.	Whilst a mandatory setback distance of 2m from any surface water for the application of chemical fertilisers will have a positive effect on water quality through minimising the potential for nutrient loss to waters, and as a consequence to any European Site that may be hydrologically connected to the holding, it is not considered to be a sufficient distance in certain circumstances, to adequately minimise contamination of surface waters. Consideration must be given to increasing this distance in line with recommendations from scientific research. Research has shown that there is significant variation in the effectiveness of riparian buffer zones, with a removal rate range of 50-95% for N and P reported in the available literature for approximately 9m buffer zones ³⁸ . Furthermore, in the new Environmental Requirements for Afforestation (Forest Service, 2016) ³⁹ , it is recommended that the 10m buffer zone that was previously specified in the Forest and Water Quality Guidelines (Forest Service, 2000) ⁴⁰ be extended up to 25m in areas of peat soils or in high status water bodies (slope dependent). However it should be acknowledged that forestry conditions are vastly different than those encountered in agriculture. The extent of buffer zone required will vary based on a number of factors such as soil type, topography and average rainfall in addition to proximity to a watercourse or

³⁸ Irvine, K. and Ni Chuanigh, E. (2011). *Management Strategies for the Protection of High Status Water Bodies: A Literature Review*. STRIVE Report (2010-W-DS-3_). Environmental Protection Agency, Wexford.

³⁹ *Environmental Requirements for Afforestation*, Forest Service (2016). Department of Agriculture, Food and Forestry.

⁴⁰ Forest Service, (2000). *Forest and Water Quality Guidelines*. Department of the Marine and Natural Resources.

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	<p>(2) Organic fertiliser or soiled water shall not be applied to land within—</p> <p>(a) 200m of the abstraction point of any surface waters, borehole, spring or well used for the abstraction of water for human consumption in a water scheme supplying 100m³ or more of water per day or serving 500 or more persons,</p> <p>(b) 100m of the abstraction point (other than an abstraction point specified in paragraph (a)) of any surface waters, borehole, spring or well used for the abstraction of water for human consumption in a water scheme supplying 10m³ or more of water per day or serving 50 or more persons,</p> <p>(c) 25m of any borehole, spring or well used for the abstraction of water for human consumption other than a borehole, spring or well specified in paragraph (a) or (b),</p> <p>(d) 20m of a lake shoreline or a turlough likely to flood,</p> <p>(e) 15m of exposed cavernous or karstified limestone features (such as swallow-holes and collapse features),</p> <p>(f) subject to sub-article (12), 5m of any surface waters (other than a lake or surface waters specified at paragraph (a) or (b)), or</p> <p>(g) the distance specified in sub-article 2(f) shall be increased to 10m for a period of two weeks preceding and two weeks following the periods specified in Schedule 4.</p>	<p>series of land drains. Cognisance must be taken of the specific environmental characteristics in the determination of required buffer size, and a one size fits all approach is not sufficient.</p> <p>Further protection of water quality is provided here through more stringent mitigation in relation to set back distances for the application of organic material (slurries, soiled water etc.) where there is an abstraction for human consumption, a lake or turlough that has potential to flood, and karst features. Part (f) relates to the distance from surface waters not specified in (a) or (b) which covers all remaining surface waters, while part (g) provides additional protection through increasing the standard set back distance for the two weeks preceding and post the prohibited application periods specified in Schedule 4. These measures are primarily in place to provide mitigation from biohazards associated with organic materials containing faecal matter. These measures are positive for water quality through minimising the risk of nutrient or biohazard contamination. In Ireland, faecal contamination of water bodies increases after rainfall events, with ruminant faecal contamination common in the west of the country⁴¹. The additional recognition given to turloughs in Article 17(2)(d) is welcomed. Turloughs, being groundwater fed, are typically associated with high water quality; are naturally low in nutrients, have clear water and low algal growth⁴², and therefore are at higher risk when in flood.</p>
	<p>(3) Notwithstanding the requirements of sub-articles (2)(a), (2)(b) and (2)(c), the following distances shall apply—</p> <p>(a) 30m from the abstraction point in the case of any surface waters, borehole, spring or well used for the abstraction of water for human consumption in a water scheme supplying 10m³ or more of water per day or serving 50 or more persons,</p> <p>(b) 15m from the abstraction point in the case of any borehole, spring or well used for the abstraction of water for human consumption other than a borehole, spring or well specified in paragraph (a).</p>	<p>This sub-article addresses the protection set-backs required for water sources used for human consumption. While these measures have limited potential to benefit hydrologically or hydrogeologically linked European sites, they may have some beneficial effects on water quality within a catchment.</p>

⁴¹ Cormican, M., Cummins, E., Morris, D., Prendergast, M., O'Donovan, D. and O'Flaherty, V. (2012). *Enhancing Human Health through Improved Water Quality*. STRIVE Report (2005-CD-H1-M1). Environmental Protection Agency, Wexford.

⁴² Link: [https://www.npws.ie/sites/default/files/publications/pdf/Lisnageeragh%20Bog%20and%20Ballinastack%20Turlough%20SAC%20\(000296\)%20Conservation%20Objectives%20supporting%20document%20-%20Turloughs%20\[Version%201\].pdf](https://www.npws.ie/sites/default/files/publications/pdf/Lisnageeragh%20Bog%20and%20Ballinastack%20Turlough%20SAC%20(000296)%20Conservation%20Objectives%20supporting%20document%20-%20Turloughs%20[Version%201].pdf)

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	<p>(4) Sub-article (3) shall only apply in situations where a local authority or Irish Water (as the case may be) has completed a technical assessment of conditions in the vicinity of the abstraction point, including taking into account variation in soil and subsoil conditions, the landspreading pressures in the area, the type of abstraction, available water quality evidence and the likely risk to the water supply source and the local authority, in consultation with Irish Water, where relevant, has determined that the distance does not give rise to a risk to the water supply and a potential danger to human health.</p>	<p>This sub-article addresses the protection set-backs required for water sources used for human consumption. While these measures have limited potential to benefit hydrologically or hydrogeologically linked European sites, they may have some beneficial effects on water quality within a catchment.</p>
	<p>(5) A local authority may, following consultation with Irish Water, where relevant, decide to apply the landspreading restriction to the upstream catchment area and to the close proximity downstream of the abstraction point in the case of any surface waters.</p>	<p>These measures are primarily in place to provide mitigation from biohazards associated with organic materials containing faecal matter but will also minimise risk of nutrient exports to ground waters that may provide surface water base flows or discharge directly to marine environments. As such, there will be indirect benefits to water quality within hydrologically and hydrogeologically linked European Sites.</p>
	<p>(6) A local authority may, in the case of any particular abstraction point and following consultation with the Agency and, where relevant, Irish Water, specify a greater distance to that specified in sub-articles (2) or (3) where, following prior investigations by Irish Water or the local authority (as the case may be), the local authority is satisfied that such distance is appropriate for the protection of waters being abstracted at that point. The distance so specified shall be determined by the local authority using an evidence-based approach which takes into account the natural vulnerability of the waters to contamination from land spreading, the potential risk to human health arising from the landspreading activity as well as the water quality evidence, including information on water quality trends</p>	<p>These measures are primarily in place to provide mitigation from biohazards associated with organic materials containing faecal matter but will also minimise risk of nutrient exports to ground waters that may provide surface water base flows or discharge directly to marine environments. As such, there will be indirect benefits to water quality within hydrologically and hydrogeologically linked European Sites.</p>
	<p>(7) Notwithstanding the provisions of sub-articles (2), (3) and (6), a local authority shall, following prior investigations by Irish Water or the local authority (as the case may be) and following consultation with the Agency and, where relevant, Irish Water, specify an alternative distance, including a landspreading exclusion area where necessary, in the case of a water abstraction for human consumption in a scheme supplying 10m³ or more of water per day, or serving 50 or more persons, within a timeframe to be agreed with the Agency and, where relevant, Irish Water, where—</p> <p>(a) on the basis of the results of monitoring carried out for the purposes of Article 7 of the European Communities (Drinking Water) Regulations (S.I. No. 122 of 2014), the quality of water intended for human consumption does not meet the parametric values specified in Part I of the Schedule of those Regulations or the quality of water constitutes a potential danger to human health, and it appears to the local authority following consultation with the Agency and, where relevant, Irish Water, that this is due to the landspreading of organic fertilisers or soiled water in the vicinity of the abstraction point, or</p>	<p>These measures are primarily in place to provide mitigation from biohazards associated with organic materials containing faecal matter but will also minimise risk of nutrient exports to ground waters that may provide surface water base flows or discharge directly to marine environments. As such, there will be indirect benefits to water quality within hydrologically and hydrogeological linked European Sites.</p>

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	<p>(b) investigations undertaken by Irish Water as part of the management of a water supply scheme indicate that the landspreading activity presents a significant risk to the drinking water supply or a potential danger to human health having regard to catchment factors in the vicinity of the abstraction point including but not limited to slope, vulnerability, and hydrogeology, the scale and intensity of land spreading pressures, the type of water supply source and water quality evidence, including information on water quality trends.</p>	
	<p>(8) In the case of livestock holdings with grassland stocking rates of 170kgs nitrogen per hectare from livestock manure or above, bovine livestock shall not be permitted to drink directly from watercourses identified on the modern 1:5,000 scale OSi mapping or better. Where bovine livestock have direct access to watercourses on the holding, a fence shall be placed at least 1.5m from the top of the riverbank or water's edge (as the case may be). It will be permissible to move livestock across a watercourse to an isolated land parcel where necessary, provided that both sides of the watercourse are fenced.</p>	<p>This is a positive measure which is intended to restrict direct access to watercourses by cattle on holdings with stocking rates above the threshold. These measures will reduce the potential for poaching of watercourse banks. Bilotta et. al., (2007) discusses the effects to surface waters that are associated with grazing animals in intensively managed grasslands⁴³. The authors note that in the context of intensively managed grasslands there is little quantitative data in support of its effects. Soil erosion and sedimentation can cause a negative effect in terms of biodiversity and water quality. For example a direct effect can be caused by impacting fish spawning through sediment intrusion of spawning gravels; direct damage to freshwater pearl mussel habitat and populations through sedimentation and crushing respectively, and indirect effects can occur as the sediment particles can adsorb contaminants such as pesticides and transport them to a watercourse. Most commonly in an agricultural context, the sediment can transport P and lead to eutrophication. In addition to nutrient loss to waters, there is also a risk caused by pathogenic contamination caused by livestock waste. Whilst this can occur through leakage of wastes or runoff from landspreading, allowing livestock to access watercourses increases the likelihood of defecation directly into the watercourse. A study by Conroy et. al., (2016)⁴⁴ as part of the SILTFLUX project funded by the EPA, acknowledges that bovine access to watercourses can limit the potential of some sites to achieve at least good status as is required under WFD. It is anticipated therefore that this measure will achieve significant benefits for any downstream European sites. It is noted however that these requirements apply only to holdings with higher stocking rates and as such there is potential for smaller holdings to continue to give rise to adverse effects in this regard.</p>

⁴³ Bilotta, G.S., Brazier, R.E. and Haygarth, P.M. (2007). *The Impacts of Grazing Animals on the Quality of Soils, Vegetation and Surface Waters in Intensively Managed Grasslands*. Advances in Agronomy, Volume 94, p238-280.

⁴⁴ Conroy, E., Turner, J.N., Rymaszewicz, A., Bruen, M., O'Sullivan, J., Lally, H. and Kelly-Quinn, M. (2016). *Cattle access impacts on streams in agricultural catchments*. Science of the Total Environment, Volume 547, p17-29.

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	<p>(9) In relation to sub-articles (6) and (7), 'prior investigations' means, in relation to an abstraction point, an assessment of the susceptibility of waters to contamination in the vicinity of the abstraction point having regard to—</p> <ul style="list-style-type: none"> (a) the direction of flow of surface water or groundwater, as the case may be, (b) the slope of the land and its runoff potential, (c) the natural geological and hydrogeological attributes of the area including the nature and depth of any overlying soil and subsoil and its effectiveness in preventing or reducing the entry of harmful sub-stances to water, and (d) where relevant, the technical specifications set out in the document 'Groundwater Protection Schemes' published in 1999 (ISBN 1-899702-22-9) or any subsequent published amendment of that document. 	<p>The prescribed assessment is primarily in place to provide mitigation from biohazards associated with organic materials containing faecal matter but will also minimise risk of nutrient exports to ground waters that may provide surface water base flows or discharge directly to marine environments. As such, there will be indirect benefits to water quality within hydrologically and hydrogeological linked European Sites.</p>
	<p>(10) Where a local authority specifies a distance in accordance with either of sub-articles (3), (5), (6) or (7) the authority shall, as soon as may be—</p> <ul style="list-style-type: none"> (a) notify the affected landowners, Irish Water, the Agency and the Department of Agriculture, Food and the Marine of the distance so specified, (b) send to the Agency a summary of the report of any investigations undertaken and the reasons for specifying the alternative distance, (c) make an entry in the register maintained in accordance with Article 30(6), and (d) publish and maintain on the local authority website an updated schedule of setback distances specified for each drinking water supply. 	<p>These measures are primarily in place to inform decision making in respect of the application of fertiliser within proximity to water sources for human consumption. As such, there will be indirect benefits to water quality within hydrologically and hydrogeological linked European Sites.</p>
	<p>(11) The Agency may issue advice and/or direction to Irish Water or a local authority in relation to any requirements including requirements for technical assessments and prior investigations arising under sub-articles (2), (3), (4), (5), (6), (7), (8) or (9) and Irish Water or a local authority (as the case may be) shall comply with any such advice or direction given.</p>	<p>These measures are primarily in place to inform decision making in respect of the application of fertiliser within proximity to water sources for human consumption. As such, there will be indirect benefits to water quality within hydrologically and hydrogeological linked European Sites.</p>
	<p>(12) Notwithstanding sub-article (2)(f), organic fertiliser or soiled water shall not be applied to land within 10m of any surface waters where the land has an average incline greater than 10% towards the water.</p>	<p>This is a positive measure which is designed to reduce the potential for surface water run off of fertilisers into watercourses. This has a positive effect for water quality by minimising risk of pollution, however in practice compliance will be a potential issue. There is potential for incorrect slope judgement resulting in nutrient loss to watercourses.</p>
	<p>(13) Where farmyard manure is held in a field prior to landspreading it shall be held in a compact heap and shall not be placed within-</p> <ul style="list-style-type: none"> (a) 250m of the abstraction point of any surface waters or borehole, spring or well used for the abstraction of water for human consumption in a water scheme supplying 10m³ or more of water per day or serving 50 or more persons, 	<p>This relates to set back distances for the application of farmyard manure where there is an abstraction for human consumption, a lake or turlough that has potential to flood and cavernous or karstified features that would facilitate the transport of nutrients to surface or groundwaters. This is a positive measure for the protection of these waters, however there is potential for pollution as no mention is made of other high nutrient organic materials such as chicken litter etc. that are regularly stored in fields before use.</p>

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	<p>(b)50m of any other borehole, spring or well used for the abstraction of water for human consumption other than a borehole, spring or well specified at paragraph (a),</p> <p>(c)20m of a lake shoreline or a turlough likely to flood,</p> <p>(d)50m of exposed cavernous or karstified limestone features (such as swallow-holes and collapse features),</p> <p>(e)20m of any surface waters (other than a lake or surface waters specified at paragraph (a)).</p>	
	<p>(14) Organic fertiliser shall not be held in a field at any time during the periods specified in Schedule 4 as applicable to that substance.</p>	<p>This is a positive measure which will ensure that the storage of organic fertiliser within fields, where there is potential for run-off into watercourses and similar releases to natural systems to occur, will be limited to those period outside of which high levels of soil saturation and rainfall increase such risks.</p>
	<p>(15) Silage bales shall not be stored outside of farmyards within 20m of surface waters or a drinking water abstraction point in the absence of adequate facilities for the collection and storage of any effluent arising.</p>	<p>This is positive in terms of providing a buffer against effluent runoff reaching watercourses. However it is specified that this is in the absence of adequate facilities for the collection and storage of such effluent. This specification could give rise to a potentially negative effect should the silage bales give rise to leakage and overland flow to water bodies which are downslope of the bales, or via subsurface pathways to groundwaters.</p>
	<p>(16) No cultivation shall take place within 2m of a watercourse identified on the modern 1:5,000 scale OSi mapping or better, except in the case of grassland establishment or the sowing of grass crops.</p>	<p>This is a positive measure for water quality by increasing bankside biodiversity and providing a buffer zone which can be allowed to 'rewild' naturally or be planted with suitable riparian vegetation. A vegetated riparian buffer zone would provide a level of mitigation for the effect of overland runoff from adjacent farm activities.</p>
	<p>(17) Supplementary feeding points shall not be located within 20m of waters and shall not be located on bare rock.</p>	<p>This measure will have a positive effect on water quality by minimising pollution risk arising through poaching.</p>
	<p>(18) In the case of holdings with grassland stocking rates of 170kgs nitrogen per hectare from livestock manure or above, bovine livestock shall not be permitted to drink directly from waters. Where bovine livestock have direct access to water from the holding, a fence shall be placed at least 1.5m from the top of the riverbank or water's edge (as the case may be). It will be permissible to move livestock across a watercourse to an isolated land parcel where necessary, provided that both sides of the watercourse are fenced.</p>	<p>This is a positive measure which is intended to restrict direct access to watercourses by cattle on holdings with stocking rates above the threshold. These measures will reduce the potential for poaching of watercourse banks. Bilotta et. al., (2007) discusses the effects on surface waters that are associated with grazing animals in intensively managed grasslands.⁴⁵ The authors note that in the context of intensively managed grasslands there is little quantitative data in support of its effects. Soil erosion and sedimentation can cause a negative effect in terms of biodiversity and water quality. For example a direct effect can be caused by impacting fish spawning through sediment intrusion of</p>

⁴⁵ Bilotta, G.S., Brazier, R.E. and Haygarth, P.M. (2007). *The Impacts of Grazing Animals on the Quality of Soils, Vegetation and Surface Waters in Intensively Managed Grasslands*. *Advances in Agronomy*, Volume 94, p238-280.

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		<p>spawning gravels; direct damage to freshwater pearl mussel habitat and populations through sedimentation and crushing respectively, and indirect effects can occur as the sediment particles can adsorb contaminants such as pesticides and transport them to a watercourse. Most commonly in an agricultural context, the sediment can transport P and lead to eutrophication. In addition to nutrient loss to waters, there is also a risk caused by pathogenic contamination caused by livestock waste. Whilst this can occur through leakage of wastes or runoff from landspreading, allowing livestock to access watercourses increases the likelihood of defecation directly into the watercourse. A study by Conroy et. al., (2016)⁴⁶ as part of the SILTFLUX project funded by the EPA, acknowledges that bovine access to watercourses can limit the potential of some sites to achieve at least good status as is required under WFD. It is anticipated therefore that this measure will achieve significant benefits for any downstream European sites. It is noted however that these requirements apply only to holdings with higher stocking rates and as such there is potential for smaller holdings to continue to give rise to adverse effects in this regard.</p>
	<p>(19) In the case of holdings identified in sub-Article 18, supplementary drinking points may not be located within 20m of surface waters.</p>	<p>This will be positive for water quality as it will minimise risk of pollution on higher stocked farms through runoff from poaching at drinking water points in close proximity to a water body. Whilst this is a positive measure, cognisance is required of the effect that could potentially be generated on non-derogation farms that are not required to comply with this measure. There is significant potential for negative effect to watercourses in areas with, inter alia, poorly drained soils and high rainfall. In such a scenario, the location of a drinking point near a watercourse could have a significant negative effect on water quality irrespective of the stocking rate. This would be of particular concern in a sensitive catchment where there are water bodies at risk of not meeting WFD objectives.</p>
	<p>(20) There shall be no direct runoff of soiled water from farm roadways to waters. The occupier of a holding shall comply with any specification for farm roadways specified by the Minister for Agriculture, Food and the Marine pursuant to this requirement.</p>	<p>This is a positive measure for water quality as it prohibits runoff from farm roadways directly to waters. As discussed above, based on the available data this will include approximately 18,000 specialist dairy farms with an average of 1.4km of roadway per farm therefore the mitigation will apply to approximately 25,200km of farm roadway by 2021. This will be a legal requirement, with all new roads built in accordance with the Department of Agriculture, Food and the Marine specification. There will be a number of options available for existing farm roadways which will be chosen based on the characteristics of the individual site.</p>

⁴⁶ Conroy, E., Turner, J.N., Rymaszewicz, A., Bruen, M., O'Sullivan, J., Lally, H. and Kelly-Quinn, M. (2016). *Cattle access impacts on streams in agricultural catchments*. Science of the Total Environment, Volume 547, p17-29.

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	(21) There shall be no direct runoff of soiled waters to waters resulting from the poaching of land on the holding.	This is a positive measure for water quality as it prohibits runoff from poaching directly to waters. The primary issue with this measure relates to its management and enforcement.
18. Requirements as to manner of application of fertilisers, soiled water etc.	(1) (a) Livestock manure, other organic fertilisers, effluents, soiled water and chemical fertilisers shall be applied to land in as accurate and uniform a manner as is practically possible. (b) Low emission slurry spreading equipment (LESS) shall be used for the application of slurry on holdings with stocking rates of 170kgs nitrogen per hectare from grazing livestock manure or above prior to export of livestock manure from the holding.	This is a positive measure, limiting the application of these materials to the desired location and amount, and will provide protection to the aquatic environment as a result. The required use of LESS on farms with over the threshold stocking rate will further minimise nutrient losses to the atmosphere and hydrologically. LESS is known to reduce the released ammonia emissions by between 30 and 80%. The risk of pollution in this scenario is minimised by good practice. It is noted however that there is scope for betterment of this measure in future through the prescribed use of LESS by all farmers.
	(2) Organic and chemical fertilisers or soiled water shall not be applied to land in any of the following circumstances— (a) the land is waterlogged; (b) the land is flooded or likely to flood; (c) the land is snow-covered or frozen; (d) heavy rain is forecast within 48 hours, or (e) the ground slopes steeply and there is a risk of water pollution having regard to factors such as surface runoff pathways, the presence of land drains, the absence of hedgerows to mitigate surface flow, soil condition and ground cover.	The measure is positive in its design, as it mitigates for excess nutrient loss to water during adverse weather conditions. However there is a level of ambiguity in the language used in some instances, for example 'heavy rain is forecast within 48 hours'. In this instance it should be specified as to what constitutes heavy rain thereby avoiding subjectivity in its interpretation. The terminology should be more specific in this regard. Part (e) is particularly important as it takes a risk-based approach to the prevention of pollution by incorporating the physical setting of the farm e.g. slopes, land drains, soil condition etc.
	(3) A person shall, for the purposes of sub-article (2)(d), have regard to weather forecasts issued by Met Éireann.	This is a positive measure for water quality as it will prevent the application of these substances where wet weather is predicted. However, this is not always reliable therefore there will be potential for negative effect to water quality where weather is incorrectly predicted.
	(4) Organic fertilisers or soiled water shall not be applied to land— (a) by use of an umbilical system with an upward-facing splashplate, (b) by use of a tanker with an upward-facing splashplate, (c) by use of a sludge irrigator mounted on a tanker, or (d) from a road or passageway adjacent to the land irrespective of whether or not the road or passageway is within or outside the curtilage of the holding.	This is a positive measure as it is designed to avoid accidental contamination of watercourses by nutrients and organic matter. Schemes such as TAMS II promote the use of low emission slurry spreading equipment which has environmental advantages.
	(5) Subject to sub-article (6), soiled water shall not be applied to land— (a) in quantities which exceed in any period of 42 days a total quantity of 50,000 litres per hectare, or (b) by irrigation at a rate exceeding 5 mm per hour.	These are positive measures as they will prevent the over application of soiled water therefore minimising the potential for runoff. This is further strengthened by increasing the limitations for application in areas identified by GSI as 'Extreme Vulnerability Areas on Karst Limestone Aquifers' in parts 6 and 7.

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	<p>(6) In an area which is identified on maps compiled by the Geological Survey of Ireland as 'Extreme Vulnerability Areas on Karst Limestone Aquifers', soiled water shall not be applied to land—</p> <p>(a) in quantities which exceed in any period of 42 days a total quantity of 25,000 litres per hectare, or</p> <p>(b) by irrigation at a rate exceeding 3 mm per hour unless the land has a consistent minimum thickness of 1m of soil and subsoil combined.</p>	<p>As above for sub-article 18(5).</p>
	<p>(7) For the purposes of sub-article (6), it shall be assumed until the contrary is shown that areas so identified as 'Extreme Vulnerability Areas on Karst Limestone Aquifers' do not have a consistent minimum thickness of 1m of soil and subsoil combined.</p>	<p>As above for sub-article 18(5).</p>
<p>19. Periods when application of fertilisers is prohibited</p>	<p>19. (1) Subject to this article, the application of fertiliser to land is prohibited during the periods specified in Schedule 4.</p> <p>(2) Sub-article (1) shall not apply in relation to the application to land of—</p> <p>(a) soiled water, or</p> <p>(b) chemical fertilisers to meet the crop requirements of Autumn-planted cabbage or of crops grown under permanent cover, or</p> <p>(c) fertilisers whose application rate or usage rate is less than 1kg per hectare of available nitrogen or phosphorus.</p>	<p>This relates to a practice commonly known as calendar farming in which there is a closed period for the application of fertiliser for certain weeks of the year. The number of weeks where use of fertiliser is prohibited depends on the location of the holding and this is determined by Schedule 4. In the south of Ireland where they experience 12 months of grass growth, there is an argument that it restricts the application of fertilisers during dry periods when crop growth is still occurring. Some local authorities (e.g. Limerick City & County Council) feel that the closed period is inappropriately short in some areas due to wide variations in soil types and rainfall. However, the positive effects of closed periods are supported by the findings of the Teagasc Agricultural Catchments Programme⁴⁷, and is overall a positive measure to avoid higher risk of pollution to water courses during periods of higher rainfall and generally lower grass growth. The alternative is a more sophisticated system which incorporates subcatchment or local scale conditions into the determination of closed periods, which would require an extensive body of work to validate.</p> <p>For parts (b) and (c), if the article is adhered to correctly there should be no impact to water quality. For soiled water, this is defined under sub-article (2) of the Regulations, and the farmer has a duty to minimise the amount of soiled water on his holding, including diverting soiled water away from soiled yard areas and from entering storage facilities for livestock manure and other organic fertilisers etc. Similarly, rainwater gutters and downpipes must also follow this approach and be in good working condition. The results of inspections indicate that compliance rates are almost 70%, with the majority of non-compliance issues relating to management within the farmyard, including diverting clean</p>

⁴⁷ Teagasc, , Agricultural Catchments Programme, Phase 2 Report February 2017

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		water away from storage tanks ⁴⁸ . Continued focus on the implementation of good soiled water practices is essential.
20. Limits on the amount of livestock manure to be applied	20. (1) The amount of livestock manure applied in any year to land on a holding, together with that deposited to land by livestock, shall not exceed an amount containing 170 kg of nitrogen per hectare. Where imported livestock manure is to be applied to the land on the holding, calculations shall be based on the previous calendar year's stocking rate.	This measure outlines limitations for the application of livestock manure on a holding, therefore, is a positive measure. However use of the previous year's stocking rate may lead to over application in scenarios where the stocking rate of the current year may have decreased. There is also a biohazard and nutrient runoff risk associated with the use of livestock manure as a fertiliser. Recycling of nutrients ensures efficient use of scarce resources and limits over application. However, there is always a pollution risk associated with landspreading organic fertilisers. It is also noted that there is no scientific evidence to support whether 170 kg of nitrogen per hectare allows for the maintenance of high-status water quality where it is required relative to environmental objectives set under the River Basin Management Plan or is an environmental target set as part of site-specific conservation objectives for SACs e.g. for the freshwater pearl mussel, or oligotrophic or hard water lakes. Further research is required in this regard.
	(2) For the purposes of sub-article (1), the amount of nitrogen produced by livestock and the nitrogen content of livestock manure shall be calculated in accordance with Tables 6, 7 and 8 of Schedule 2 except in the case of pig manure or poultry manure where a different amount is specified in a certificate issued in accordance with Article 32 in relation to that manure.	This is a positive measure as it prescribes the amount of N and P produced by livestock and, as such, allows for consistency in calculation of quantities of livestock manure to be applied, and therefore application amounts justified for grass or crop requirements.
	(3) For the purposes of sub-article (1), the area of a holding shall be deemed to be the eligible area of the holding.	This states that the whole of the holding will be used in the determination of 170kg N threshold. This article will generally have a positive effect for water quality as it limits stocking rates. However, there is also potential for negative effect in some cases. For example farms with commonage. The whole farm approach will include the proportion of commonage associated with the farm. In most cases there will be no fertiliser applied to the commonage area therefore there will be a greater amount of fertiliser allowance to be spread on the remaining areas. There are also variations in field fertility and yield potential inter alia. Overall, whilst the article appears to be positive, there is still potential for negative effects through over application in certain land parcels where no soil testing has been undertaken.
21. Ploughing and the use of	21. (1) Where arable land is ploughed between 1 July and 30 November the necessary measures shall be taken to provide for emergence, within 14 days of ploughing, of green cover from a sown crop. A rough surface shall be maintained	This is a positive measures to mitigate for nutrient, herbicide and sediment loss after ploughing, to minimise soil erosion and ensure uptake of surplus nutrients. This includes the addition in the draft NAP of the requirement to plough harvested arable land within 14 days of harvest or alternatively to shallow

⁴⁸ http://www.housing.gov.ie/sites/default/files/public-consultation/files/draft_river_basin_management_plan_1.pdf

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non-selective herbicides	prior to a crop being sown in the case of lands ploughed between 1 December and 15 January.	cultivate the area. They ensure the minimisation of pollution risk to watercourses from these activities.
	(2) Where grassland is ploughed between 1 July and 15 October the necessary measures shall be taken to provide for emergence by 1 November of green cover from a sown crop.	This is a positive measures to mitigate for nutrient, herbicide and sediment loss after ploughing, to minimise soil erosion and ensure uptake of surplus nutrients. This will ensure the minimisation of pollution risk to watercourses from these activities.
	(3) Grassland shall not be ploughed between 16 October and 30 November.	This is a positive measures to mitigate for nutrient, herbicide and sediment loss after ploughing, to minimise soil erosion and ensure uptake of surplus nutrients. This will ensure the minimisation of pollution risk to watercourses from these activities.
	(4)(a) When a non-selective herbicide is applied to arable land or to grassland in the period between 1 July and 30 November the necessary measures shall be taken to provide for the emergence, within 6 weeks of the application, of green cover from a sown crop or from natural regeneration. (b) When a non-selective herbicide is applied to land after 15 October, the requirement in sub-article 4 (a) shall be reduced to 75% of the relevant cereal area where a contract is in place for seed crops or crops producing grain destined for human consumption which prohibits the application of a non-selective herbicide preharvest.	This is a positive measures to mitigate for nutrient, herbicide and sediment loss after ploughing, to minimise soil erosion and ensure uptake of surplus nutrients. This will ensure the minimisation of pollution risk to watercourses from these activities.
	(5) Where green cover is provided for in compliance with this Article, the cover shall not be removed by ploughing or by the use of a non-selective herbicide before 1 December unless a crop is sown within two weeks of its removal.	This is a positive measures to mitigate for nutrient, herbicide and sediment loss after ploughing, to minimise soil erosion and ensure uptake of surplus nutrients. This will ensure the minimisation of pollution risk to watercourses from these activities.
	(6) In the case of land which is ploughed in the course of a ploughing competition under the auspices of the National Ploughing Association, a temporary exemption applies in the form of an extension to the time period specified in sub-article (1) or (2) for establishment of green cover after the land is ploughed.	The provision of this exemption places a localised risk on water quality during an event, however this is not significant from a national perspective. The impact should be managed through careful consideration of the siting of the event, particularly for areas where increased footfall is expected as a result. It is noted that as a national event, this is a key opportunity to display good water quality protection practices to a large farming audience and every effort should be made to apply these regulations and GAEC during the event.
Part 5 General		
22. General duty of occupier	22. (1) An occupier of a holding shall ensure compliance with the provisions of these Regulations in relation to that holding.	This will have a positive effect for sensitive environmental receptors and European Sites, however the primary issue with this measure relates to implementation and compliance. It is noted that achieving full compliance with the regulations is challenging, and other options to improve from the almost 70% compliance rate which has been consistently observed for a number of years, are being considered. Compliance inspections and other methodologies

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		such as knowledge exchange measures, is expected to increase compliance rates.
	(2) An occupier of a holding shall comply with any advice or guidelines which may be issued from time to time for the purposes of these Regulations by the Minister, the Minister for Agriculture, Food and the Marine or the Agency.	As per sub-article 22(1), above.
23. Keeping of records by occupier	<p>23. (1) Records shall be maintained for each holding which shall indicate—</p> <ul style="list-style-type: none"> (a) total area of the holding, (b) eligible area of the holding, (c) cropping regimes and their individual areas, (d) livestock numbers and type, (e) an estimation of the annual fertiliser requirement for the holding and a copy of any Nutrient Management Plan prepared in relation to the holding, (f) quantities and types of chemical fertilisers moved on to or off the holding, including opening stock, records of purchase and closing stock, (g) livestock manure and other organic fertilisers moved on to or off the holding including quantities, type, dates and details of exporters and importers, as the case may be, in a format specified by the Minister for Agriculture, Food and the Marine, (h) the results of any soil tests carried out in relation to the holding, (i) the nature and capacity of facilities on the holding for the storage of livestock manure and other organic fertilisers, soiled water and effluents from dungsteads, farmyard manure pits, silage pits or silage clamps, including an assessment of compliance with Articles 9 to 14, (j) the quantities and types of concentrated feedstuff fed to grazing live-stock on the holding, and (k) the location of any abstraction point of water used for human consumption from any surface waters, borehole, spring or well. <p>(2) Where fertiliser is used on a holding and a certificate of the type mentioned in Article 15 or 20 was issued in relation to that fertiliser in accordance with Article 32, a copy of the certificate shall be retained and be available for inspection on the holding for a period of not less than five years from the expiry of validity of the certificate.</p> <p>(3) Records shall be prepared for each calendar year by 31 March of the following year and shall be retained for a period of not less than five years.</p>	<p>This is a positive measure, however as with Article 22 the primary issue relates to implementation and compliance. In addition guidance should be made available for the use of forms for record keeping.</p> <p>This is a positive measure, however as with Article 22 the primary issue relates to implementation and compliance. In addition guidance should be made available for the use of forms for record keeping.</p> <p>The provision of a deadline (March 31st) for the production of such records provides incentive for the occupier to remain up to date and in addition, the requirement to keep records for a minimum five year period will ensure accountability. This is a positive measure, however as with Article 22 the</p>

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		primary issue relates to implementation and compliance. In addition guidance should be made available for the use of forms for record keeping.
	(4) Notwithstanding sub-paragraphs (1), (2) and (3), an occupier shall, where requested by the Minister, the Minister for Agriculture, Food and the Marine, a local authority or the Agency, provide such information as is requested relating to the movement of organic fertilisers on or off the holding.	This is a positive measure, however as with Article 22 the primary issue relates to implementation and compliance. In addition guidance should be made available for the use of forms for record keeping.
24. False or misleading information	24. A person shall not compile information which is false or misleading to a material extent or furnish any such information in any notice or other document for the purposes of these Regulations	Ensuring that this does not occur will have a positive effect for all environmental indicators.
25. Authorised person	25. (1) In this Article, 'authorised person' means— (a) a person who is an authorised person for the purposes of section 28 of the Local Government (Water Pollution) Act, 1977 (No. 1 of 1977), or (b) a person appointed under sub-article (11) to be an authorised person for the purposes of these Regulations.	Ensuring that the functions of the Programme are being implemented properly will have a positive effect on all environmental indicators.
	(2) An authorised person may for any purpose connected with these Regulations— (a) enter and inspect any premises for the purposes of performing a function under these Regulations or of obtaining any information which he or she may require for such purposes, (b) at all reasonable times, or at any time if he or she has reasonable grounds for believing that there is or may be a risk to the environment, or that an offence under these Regulations is being or is about to be committed, arising from the carrying on of an activity at a premises, enter any premises and bring onto those premises such other persons (including a member of the Garda Síochána) or equipment as he or she may consider necessary, or (c) at any time if he or she has reasonable grounds for suspecting there may be a risk to the environment, or that an offence under these Regulations is being or is about to be committed, involving the use of any vehicle halt and board the vehicle and require the driver of the vehicle to take it to a place designated by the authorised person, and such a vehicle may be detained at that place by the authorised person for such period as he or she may consider necessary.	Ensuring that the functions of the Programme are being implemented properly will have a positive effect on all environmental indicators.
	(3) An authorised person shall not enter into a private dwelling under this article unless one of the following conditions applies— (a) the entry is effected with the consent of the occupier or (b) the entry is authorised by a warrant issued under sub-article (7).	Ensuring that the functions of the Programme are being implemented properly will have a positive effect on all environmental indicators.

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No.	Draft Measure	Assessment of Effects
	<p>(4) Whenever an authorised person enters any premises or boards any vehicle, under this article, he or she may—</p> <ul style="list-style-type: none"> (a) take photographs and carry out inspections, record information on data loggers, make tape, electrical, video or other recordings, (b) carry out tests and make copies of documents (including records kept in electronic form) found therein and take samples, (c) monitor any effluent, including trade effluent or other matter, which is contained in or discharged from a premises, (d) carry out surveys, take levels, make excavations and carry out examinations of depth and nature of subsoil, (e) require that the premises or vehicle or any part of the premises or anything in the premises or vehicle shall be left undisturbed for a specified period, (f) require information from an occupier of the premises of any occupant of the vehicle or any person employed on the premises or any other person on the premises, (g) require the production of, or inspect, records (including records held in electronic form) or documents, or take copies of or extracts from any records or documents, and (h) remove and retain documents and records (including documents held in electronic form) for such period as may be reasonable for further examination, <p>which the authorised person, having regard to all the circumstances, considers necessary for the purposes of exercising any function under these Regulations.</p>	<p>Ensuring that the functions of the Programme are being implemented properly will have a positive effect on all environmental indicators.</p>
	<p>(5)(a) An authorised person who, having entered any premises or boarded any vehicle pursuant to these Regulations, considers that a risk to the environment arises from the carrying on of an activity at the premises or involving the use of the vehicle, may direct the owner or occupier of the premises or the driver of the vehicle to take such measures as are considered by that authorised person to be necessary to remove that risk.</p> <p>(b) If the owner, occupier or driver referred to in paragraph (a) fails to comply with a direction of an authorised person under this subsection, the authorised person may do all things as are necessary to ensure that the measures required under the direction are carried out and the costs incurred by him or her in doing any such thing shall be recoverable from the owner or occupier by him or her, or the person by whom he or she was appointed.</p>	<p>Ensuring that the functions of the Programme are being implemented properly will have a positive effect on all environmental indicators.</p>

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No.	Draft Measure	Assessment of Effects
	<p>(6) A person shall not—</p> <p>(a) refuse to allow an authorised person to enter any premises or board any vehicle or to bring any person or equipment with him or her in the exercise of his or her powers,</p> <p>(b) obstruct or impede an authorised person in the exercise of any of his or her powers,</p> <p>(c) give to an authorised person information which is to his or her knowledge false or misleading in a material respect, or</p> <p>(d) fail or refuse to comply with any direction or requirement of an authorised person.</p>	<p>Ensuring that the functions of the Programme are being implemented properly will have a positive effect on all environmental indicators.</p>
	<p>(7)(a) Where an authorised person in the exercise of his or her powers under this Article is prevented from entering any premises, or if the authorised person has reason to believe that evidence related to a suspected offence under these Regulations may be present in any premises and that the evidence may be removed therefrom or destroyed, or if the authorised person has reason to believe that there is a significant immediate risk to the environment, the authorised person or the person by whom he or she was appointed may apply to the District Court for a warrant under this Article authorising the entry by the authorised person onto or into the premises.</p> <p>(b) If, on application being made to the District Court under this Article, the District Court is satisfied, on the sworn information of the authorised person that he or she has been prevented from entering a premises, the Court may issue a warrant authorising that person, accompanied, if the Court deems it appropriate by another authorised person or a member of the Garda Síochána, as may be specified in the warrant, at any time or times within one month from the date of the issue of the warrant, on production if so requested of the warrant, to enter, if need be by force, the premises concerned and exercise the powers referred to in sub-article (4) or (5).</p>	<p>Ensuring that the functions of the Programme are being implemented properly will have a positive effect on all environmental indicators.</p>
	<p>(8) An authorised person may, in the exercise of any power conferred on him or her by these Regulations involving the bringing of any vehicle to any place, or where he or she anticipates any obstruction in the exercise of any other power conferred on him or her by these Regulations, request a member of the Garda Síochána to assist him or her in the exercise of such a power and any member of the Garda Síochána to whom he or she makes such a request shall comply with this request.</p>	<p>Ensuring that the functions of the Programme are being implemented properly will have a positive effect on all environmental indicators.</p>
	<p>(9) Any certificate or other evidence given, or to be given, in respect of any test, examination or analysis of any sample shall, in relation to that sample, be evidence, without further proof, of the result of the test, examination or analysis unless the contrary is shown.</p>	<p>Ensuring that the functions of the Programme are being implemented properly will have a positive effect on all environmental indicators.</p>

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No.	Draft Measure	Assessment of Effects
	(10) When exercising any power conferred on him or her by these Regulations an authorised person shall, if requested by any person affected, produce a certificate or other evidence of his or her appointment as an authorised person.	Ensuring that the functions of the Programme are being implemented properly will have a positive effect on all environmental indicators.
	(11) A person may be appointed as an authorised person for the purposes of these Regulations by the Minister, the Minister for Agriculture, Food and the Marine or the Agency.	Ensuring that the functions of the Programme are being implemented properly will have a positive effect on all environmental indicators.
	(12) In this article 'premises' includes land whether or not there are any structures on the land.	Ensuring that the functions of the Programme are being implemented properly will have a positive effect on all environmental indicators.
26. Offences and related matters	<p>26. (1) A person who contravenes a provision of Parts 2 to 5 and Schedule 5 of these Regulations, excluding Article 17(5), (6), (7), (10) and (11), is guilty of an offence and shall be liable—</p> <p>(a) on summary conviction to a Class A fine or to imprisonment for a term not exceeding 3 months or both or,</p> <p>(b) on conviction on indictment to a fine not exceeding €500,000 or to imprisonment for a term not exceeding one year or to both such fine and such imprisonment.</p> <p>(2) Where an offence under these Regulations has been committed by a body corporate and it is proved to have been so committed with the consent or connivance of or to be attributable to any neglect on the part of any person who, when the offence was committed, was a director, manager, secretary or other officer of the body corporate, or a person purporting to act in any such capacity, that person, as well as the body corporate, is guilty of an offence and liable to be proceeded against and punished as if guilty of the first-mentioned offence.</p> <p>(3) Where the affairs of a body corporate or unincorporated body are managed by its members, sub-article (2) shall apply to the acts and defaults of a member in connection with the functions of management as if such a member were a director or manager of the body.</p> <p>(4) A prosecution for a summary offence under these Regulations may be taken by a local authority or the Agency</p> <p>(5) A prosecution for a summary offence may be taken by a local authority whether or not the offence is committed in the functional area of the authority.</p> <p>(6) Where a court imposes a fine or affirms or varies a fine imposed by another court for an offence under these Regulations, prosecuted by the Agency or a local authority, it shall, on the application of the Agency or local authority concerned (made before the time of such imposition, affirmation or variation), provide by</p>	<p>This will have a positive effect in terms of environmentally sustainable farming practices by providing an incentive for occupiers to comply with the regulations.</p> <p>This will have a positive effect in terms of environmentally sustainable farming practices by providing an incentive for occupiers to comply with the regulations.</p> <p>This will have a positive effect in terms of environmentally sustainable farming practices by providing an incentive for occupiers to comply with the regulations.</p> <p>This will have a positive effect in terms of environmentally sustainable farming practices by providing an incentive for occupiers to comply with the regulations.</p> <p>This will have a positive effect in terms of environmentally sustainable farming practices by providing an incentive for occupiers to comply with the regulations.</p> <p>This will have a positive effect in terms of environmentally sustainable farming practices by providing an incentive for occupiers to comply with the regulations.</p>

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No.	Draft Measure	Assessment of Effects
	<p>order for the payment of the amount of the fine to the Agency or local authority, as the case may be, and such payment may be enforced by the Agency or local authority, as the case may be, as if it were due to it on foot of a decree or order made by the court in civil proceedings.</p>	
	<p>(7) Where a person is convicted of an offence under these Regulations the court shall, unless it is satisfied that there are special and substantial reasons for not so doing, order that person to pay to the Agency or local authority concerned the costs and expenses, measured by the court, reasonably incurred by the Agency or local authority in relation to the investigation, detection and prosecution of the offence, including costs incurred in the taking of samples, the carrying out of tests, examinations and analyses and in respect of the remuneration and other expenses of employees, consultants and advisers.</p>	<p>This will have a positive effect in terms of environmentally sustainable farming practices by providing an incentive for occupiers to comply with the regulations.</p>
	<p>(8)(a) Where a local authority has reason to believe that an offence has been or is being committed in relation to a holding the authority may by notice require the person who appears to the authority to be the occupier to provide such information as is specified in the notice in relation to the alleged offence and it shall be the duty of that person to provide such information within the time frame specified in the notice insofar as is known to him or her.</p> <p>(b) A notice issued in accordance with paragraph (a) shall set out the provisions of Articles 22(1) and 24 and of sub-article (1).</p>	<p>This will have a positive effect in terms of environmentally sustainable farming practices by providing an incentive for occupiers to comply with the regulations.</p>
	<p>(9) Where a local authority considers that an offence under these Regulations has been or is being committed in relation to a holding the authority shall take such enforcement measures as are warranted by the circumstances and as are necessary to ensure satisfactory compliance with these Regulations and which, save in the case of a trivial or insignificant offence or specific mitigating circumstances, shall include prosecution for the alleged offence.</p>	<p>This will have a positive effect in terms of environmentally sustainable farming practices by providing an incentive for occupiers to comply with the regulations.</p>
	<p>(10)(a) Where on application by motion by the Agency or a local authority to the District Court, Circuit Court or the High Court, the court hearing the application is satisfied that a person has failed or is failing to comply with a provision of Parts 2 to 5 of these Regulations, the court may by order—</p> <p>(i) direct the person to comply with the provisions,</p> <p>(ii) make such other provision, including provision in relation to the payment of costs, as the court considers appropriate, and</p> <p>(iii) make such interim or interlocutory order as it considers appropriate.</p> <p>(b) An application for an order under this Article may be made whether or not there has been a prosecution for an offence under these Regulations in relation to the relevant failure of compliance and shall not prejudice the initiation of a prosecution for an offence under these Regulations in relation to the failure of compliance.</p>	<p>This will have a positive effect in terms of environmentally sustainable farming practices by providing an incentive for occupiers to comply with the regulations.</p>

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No.	Draft Measure	Assessment of Effects
	(11) The powers, duties and functions assigned to a local authority or the Agency by this Article are additional to, and not in substitution for, the powers, duties and functions assigned by the Local Government (Water Pollution) Acts 1977 and 1990 or any other statute.	This will have a positive effect in terms of environmentally sustainable farming practices by providing an incentive for occupiers to comply with the regulations.
	(12) A local authority shall maintain a register of inspections undertaken of farm holdings and information received for the purposes of Article 26(8) and shall keep updated a record of all enforcement measures undertaken in accordance with the requirements of Article 26(9).	This will have a positive effect in terms of environmentally sustainable farming practices by providing an incentive for occupiers to comply with the regulations.
Part 6 Functions of Public Authorities		
27. Minister for Agriculture, Food and the Marine	<p>(1) The Minister for Agriculture, Food and the Marine shall carry out, or cause to be carried out, such monitoring and evaluation programmes in relation to farm practices as may be necessary to determine the effectiveness of measures being taken in accordance with these Regulations.</p> <p>(2) The Minister for Agriculture, Food and the Marine shall, in relation to each year, make the overall results of monitoring and evaluations carried out in accordance with sub-article (1) available to the Agency, to the Minister and, on request, to a local authority.</p> <p>(3) The Minister for Agriculture, Food and the Marine shall prepare and keep updated a register of all holdings and shall, on request, make a copy of the register available to the Minister, the Agency or a local authority.</p> <p>(4) The Minister for Agriculture, Food and the Marine shall make available to the Minister, a local authority and/or the Agency a report of an inspection or inspections carried out for the purposes of these Regulations and/or upon written request other information in relation to any holding or holdings as the case may be where such transfer of data is necessary for the purposes of ensuring compliance with these Regulations.</p> <p>(5) The Minister for Agriculture, Food and the Marine shall make available, upon written request, information in relation to any holding or holdings, as the case may be, where such transfer of data is necessary for the purposes of carrying out any functions set out in these regulations, including for the purpose of promoting compliance with these Regulations. Such information may be requested by the following;</p>	<p>Monitoring and evaluation will provide a greater understanding of the effectiveness of the Programme and will identify changes that need to be made to improve the Programme. However, this must also be evaluated in the context of the current state of the environment. The 3rd National Biodiversity Action Plan 2017 – 2021, states that a 2013 assessment of the status of EU protected habitats and species in Ireland showed that 91% of the 58 habitats assessed have unfavourable conservation status (50% were 'Inadequate' and 41% were 'Bad'), while for species, 20% were assessed as being 'Inadequate' and 12% as 'Bad' including the water dependent SAC protected species – freshwater pearl mussel and sea lamprey. For Birds, the 2021 assessment of the status of 211 regularly occurring bird species placed 54 species on the Birds of Conservation concern in Ireland Red List, 79 on the Amber list and 78 on the Green list. It is noted however that the Regulations are solely concerned with the protection of water from agricultural pollution, and therefore the success of the Regulations can only be evaluated in the context of their ability to mitigate water specific impacts. In this regard, the River Basin Management Plan identifies agriculture as being a significant pressure in 729 (64%) of river and lake water bodies that are At Risk of not meeting their environmental objectives. Regional Implementation Strategies are being developed, which will prioritise areas for action during the 3rd cycle of River Basin Management Planning and will include for investigative assessments to define local issues and inform mitigation measures. It is important to note that the determination of Risk through the characterisation process included protected area requirements, and therefore the environmental supporting conditions for SAC and SPA were included in the assessment.</p> <p>The making available of data to relevant organisations may aid in the transparency of the effects of the programme and the efficacy of measures. As such this represents a positive measure.</p>

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	<p>(a) the Minister, (b) an individual local authority, (c) a representative local authority under a local authority shared service established for the purpose of carrying out functions set out in these regulations including for the purpose of promoting compliance with these Regulations, (d) Teagasc for the purpose of promoting compliance with these Regulations, (e) the Environmental Protection Agency.</p> <hr/> <p>(6) The Minister for Agriculture, Food and the Marine shall ensure compliance with the Data Sharing and Governance Act, No. 5 of 2019 in making available any information under sub-article (5) above.</p>	
<p>28. Making and review of action programme by the Minister</p>	<p>28. (1) The Minister shall, following consultation with the Minister for Agriculture, Food and the Marine and other interested parties in accordance with this Article, prepare and publish not later than 31 December 2021 and every four years thereafter, a programme of measures (hereafter in this Article referred to as ‘an action programme’) for the protection of waters against pollution from agriculture.</p> <hr/> <p>(2) An action programme required by sub-article (1) shall include all such measures as are necessary for the purposes of Article 5 of the Nitrates Directive and shall contain a review of the action programme most recently made for those purposes and of such additional measures and reinforced actions as may have been taken.</p> <hr/> <p>(3) The Minister shall ensure that all interested parties are given early and effective opportunities to participate in the preparation, review and revision of an action programme required by this Article and for this purpose shall—</p> <p>(a) inform interested parties by public notices or other appropriate means including electronic media, in relation to any proposals for the preparation, review or revision of an action programme, (b) make available to interested parties information in relation to the proposals referred to in paragraph (a) including information about the right to participate in decision-making in relation to those proposals, (c) provide an opportunity for comment by interested parties before any decision is made on the establishment, review or revision of an action programme, (d) in making any such decision, take due account of the comments made by interested parties and the results of the public participation, and (e) having examined any comments made by interested parties, make reasonable efforts to inform those parties of the decisions taken and the</p>	<p>This is positive as it allows for an interim review of the measures based on the most up to date information available. It facilitates the evolution and improvement of the Programme using an evidence based approach (e.g. ACPs, previous iterations of NAP, biodiversity status, water quality status etc.). Facilitation of the evolution of the Programme is positive.</p>

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No.	Draft Measure	Assessment of Effects
	<p>reasons and considerations on which those decisions are based, including information on the public participation process.</p> <hr/> <p>(4) The Minister shall ensure that such reasonable time is allowed as is sufficient to enable interested parties to participate effectively.</p> <hr/> <p>(5) Where the Minister publishes any information in accordance with this Article, the Minister shall—</p> <p>(a) do so in such manner as the Minister considers appropriate for the purpose of bringing that information to the attention of the public, and</p> <p>(b) make copies of that information accessible to interested parties free of charge through a website or otherwise.</p> <hr/> <p>(6) The Minister shall specify by way of public notice on a website or other-wise the detailed arrangements made to enable public participation in the preparation, review or revision of an action programme, including—</p> <p>(a) the address to which comments in relation to those proposals may be submitted, and</p> <p>(b) the date by which such comments should be received.</p> <hr/> <p>(7) In this Article ‘interested parties’ includes persons who—</p> <p>(a) are carrying on any business which relies upon the water environment or which is affected, or likely to be affected, by the action programme, or</p> <p>(b) are carrying on any activities which have or are likely to have an impact on water status, or</p> <p>(c) have an interest in the protection of the water environment whether as users of the water environment or otherwise.</p> <hr/> <p>(8) The Minister shall initiate an interim review of this action programme in 2023. The purpose of the interim review is to undertake an assessment of the effectiveness of the NAP measures and introduce any new measures that may be needed to reflect new data or significant changes to the agricultural sector.</p>	
<p>29. Agency</p>	<p>29. (1) The Agency shall prepare at four-yearly intervals a report in accordance with Article 10 of the Nitrates Directive and shall submit such report to the Minister.</p> <hr/> <p>(2) The Agency shall undertake a review of progress made in implementing these Regulations and shall submit a report to the Minister by 30 June 2021 and every four years thereafter with the results of that review and with recommendations as to such additional measures, if any, as appear to be necessary to prevent and reduce water pollution from agricultural sources.</p>	<p>This regulation should have a positive environmental impact due to the regulation of environmentally sustainable agriculture and as such, accountability for the occupier of the holding. In addition the public authorities have a duty under the Birds and Natural Habitats Regulations (as discussed above) in the protection of European Sites, taking appropriate enforcement action where necessary.</p>

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No.	Draft Measure	Assessment of Effects
	<p>(3) In preparing the reports required under sub-articles (1) and (2) the Agency shall consult with the Department of Agriculture, Food and the Marine and the co-ordinating local authority in each river basin district, and such other persons as it considers appropriate.</p> <p>(4) The Department of Agriculture, Food and the Marine, the relevant local authorities and Irish Water shall provide the Agency with such information appropriate to their functions as may be requested by the Agency for the purposes of these Regulations.</p> <p>(5) Each monitoring programme prepared by the Agency for the purposes of Article 10 of European Communities (Water Policy) Regulations, 2003 (S.I. No. 722 of 2003) shall include provision for such monitoring as is necessary for the purposes of these Regulations.</p> <p>(6) The Agency shall, from time to time as it considers appropriate, make recommendations and give directions to a local authority in relation to the monitoring and inspections to be carried out, or other measures to be taken, by the authority for the purposes of these Regulations and may revise such recommendations and directions at such times thereafter as the Agency considers appropriate.</p> <p>(7) The powers, duties and functions assigned to the Agency by these Regulations are additional to, and not in substitution for, the powers, duties and functions assigned to the Agency by section 63 of the Environmental Protection Agency Act, 1992 (No. 7 of 1992) or any other statute.</p>	
<p>30. Local authorities</p>	<p>30. (1) A local authority shall carry out, or cause to be carried out, such monitoring of surface waters and groundwaters at selected measuring points within its functional area as makes it possible to establish the extent of pollution in the waters from agricultural sources and to determine trends in the occurrence and extent of such pollution.</p> <p>(2) A local authority shall carry out or cause to be carried out such inspections of farm holdings as is necessary for the purposes of these Regulations and shall aim to co-ordinate its inspection activities with inspections carried out by other public authorities.</p> <p>(3) For the purposes of sub-article (2) a local authority shall aim to develop co-ordination arrangements with other public authorities with a view to promoting consistency of approach in inspection procedures and administrative efficiencies between public authorities and to avoid any unnecessary duplication of administrative procedures and shall have regard to any inspection protocol which may be developed by the Minister, following consultation with the Minister for Agriculture, Food and the Marine.</p>	<p>This requires the local authority to carry out monitoring of surface and groundwaters to establish the extent of pollution in the waters from agricultural sources and to determine trends in the occurrence and extent of such pollution. This is a positive measure, however resources within local authorities are limited</p> <p>Provision of resources and training within local authorities and consideration of nationalising, or possibly regionalising (as per the Local Authority 3b Tier model) these inspections will increase the efficiency of this measure and have a positive impact on biodiversity and water quality. The coordination of this process with other public authorities will improve resource efficiency.</p> <p>This is a positive measure in terms of resource requirements. Consultation with relevant persons and authorities in relation to the carrying out of these duties is also a positive measure as it allows for all available knowledge to be considered.</p>

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No.	Draft Measure	Assessment of Effects
	<p>(4) A local authority shall, in the exercise of its functions for the purposes of these Regulations—</p> <p>(a) consult to such extent as it considers appropriate with the Minister, the Minister for Agriculture, Food and the Marine, the Agency, Irish Water and such other persons as it considers appropriate, and</p> <p>(b) have regard to any recommendations made, and comply with any direction given, to the authority by the Agency in accordance with Article 29.</p>	<p>This is a positive measure in terms of resource requirements. Consultation with relevant persons and authorities in relation to the carrying out of these duties is also a positive measure as it allows for all available knowledge to be considered.</p>
	<p>(5) A local authority shall follow the protocol as established by the Minister for furnishing a report of an inspection or inspections to the Department of Agriculture, Food and the Marine and such other persons as it considers appropriate for the purposes of these Regulations where non-compliance has been detected.</p>	<p>This is a positive measure in terms of resource requirements and enforcement of non-compliance.</p>
	<p>(6) A local authority shall maintain a register of all prior investigations carried out by the local authority itself or carried out by Irish Water within its jurisdiction, and distances specified, for the purposes of Article 17.</p>	<p>This is a positive measure in terms of resource requirements and enforcement of non-compliance.</p>
<p>31. Compliance with Data Protection Acts</p>	<p>31. The provision of information by a local authority, the Agency or the Minister for Agriculture, Food and the Marine in accordance with Article 27, 29 or 30 of these Regulations shall not be a breach of the Data Protection Acts, 1988 and 2003.</p>	<p>This relates to the Data Protection Acts and the fact that provision of information under Articles 27, 29 and 30 do not constitute a breach in these Acts.</p>
<p>32. Certificate in relation to nutrient content of fertiliser</p>	<p>32. (1) A certificate of the type specified in Article 15 or 20 may be issued by a competent authority where the authority is satisfied that the nutrient content of the fertiliser in question has been assessed on the basis of appropriate methodologies based on net farm balance and is as specified in the certificate.</p> <p>(2) A certificate issued under this Article shall be valid for such period, not exceeding twelve months, as shall be specified in the certificate.</p> <p>(3) In this Article ‘competent authority’ means—</p> <p>(a) the Agency in relation to fertiliser arising in an activity in relation to which there is in force a licence under Part IV of the Act of 1992, and</p> <p>(b) the Minister for Agriculture, Food and the Marine in relation to any other fertiliser.</p> <p>(4) Notice of the methodologies used for the purposes of sub-article (1) shall be notified to the European Commission by the competent authority.</p>	<p>This will have a positive environmental impact by ensuring that the nutrient content has been appropriately assessed and certified, and that this process is regulated by a competent authority. This will minimise the impact of excess application of nutrients which could result in nutrient loss to watercourses.</p>

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No.	Draft Measure	Assessment of Effects
33. Exemption for exceptional circumstances for research	<p>33. (1) A temporary exemption from a requirement of these Regulations may be granted to a person by the Agency or the Minister for Agriculture, Food and the Marine in the case of exceptional circumstances relating to research.</p> <p>(2) A temporary exemption for the purposes of sub-article (1) shall be granted by way of certificate issued to a person by the Agency or the Minister for Agriculture, Food and the Marine and shall be subject to such conditions, if any, as are specified in the certificate.</p> <p>(3) A certificate issued for the purposes of this Article shall specify the nature, extent and duration of the exemption to which the certificate relates and a copy of the certificate shall be sent as soon as may be to the relevant local authority.</p>	<p>This allows for the potential for negative environmental impacts, however, is it considered that the benefits of the research will offset any negative impact long term.</p>
34. Transitional provisions	<p>34. Notwithstanding Articles 16 and 26 and sub-article (2), the application to land of phosphorus in excess of the quantities prescribed by Article 16 shall not be an offence for the purposes of Article 16 in a case where—</p> <p>(a) the excess arises from the application of pig manure, and</p> <p>(b) the excess amount does not exceed the amounts specified in Schedule 2, Table 22 of these Regulations from the prescribed dates.</p>	<p>This gives rise to a potentially significant negative effect on water quality due to nutrient loss to water courses, however such effects are at least partially mitigated through the prescribed timing restrictions.</p>
Part 7 implementation of Commission Decision		
Implementation of Commission Decision	<p>35. The Minister for Agriculture, Food and the Marine shall be the competent authority for the purposes of verifying compliance with a derogation granted under the Commission Decision.</p> <p>36. (1) The application to land on a holding in any year of livestock manure in excess of the amount specified in Article 20(1) shall be deemed not to be a contravention of that sub-article where all of the following conditions are met—</p> <p>(a) the occupier of the holding has made application in respect of that year to the Minister for Agriculture, Food and the Marine for authorisation of a derogation from the requirements of that sub-article;</p> <p>(b) the application under paragraph (a) is duly completed in the form and on or before the date specified for the time being by that Minister;</p> <p>(c) the application under paragraph (a) is accompanied by an undertaking in writing by the occupier to comply with all the conditions specified in Schedule 5, and</p> <p>(d) all the conditions set out in Schedule 5 are met by the occupier in relation to the holding.</p> <p>(2) Where an application is made to the Minister for Agriculture, Food and the Marine in accordance with this Article that Minister shall consider the application and, where that Minister considers that the application does not comply with the conditions therein, shall issue a notice of refusal to the occupier.</p>	<p>This is a procedural matter, with no potential to effect upon water quality and European sites.</p> <p>This sets out the requirement for farmers seeking a derogation to submit an application in a timely manner and makes a declaration to abide by the associated relevant conditions. This is a positive stipulation as it lends itself to being readily monitored and enforced.</p> <p>In making the decision as to whether a derogation is to be granted in respect of a farm the minister should have due regard to the potential for this decision to effect upon European sites which may be linked or in proximity to the farm holding.</p>

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No.	Draft Measure	Assessment of Effects
	<p>37. The Minister for Agriculture, Food and the Marine shall carry out, or arrange for the carrying out of, such monitoring, controls and reporting as are necessary for the purposes of Articles 8, 9 and 10 of the Commission Decision.</p>	<p>This is a positive measure in ensuring that any farms subject to derogation are appropriately monitored and the relevant conditions enforced.</p>
	<p>38. The Agency shall prepare annually a report of the results of water quality monitoring carried out by local authorities for the purposes of Article 8(3) of the Commission Decision and, where appropriate and as agreed from time to time between the Agency and the Minister for Agriculture, Food and the Marine, shall assist that Minister in compiling water quality data for reporting in accordance with the requirements of the Commission Decision.</p>	<p>This report increases the frequency of review and therefore is positive as it will provide a better understanding of the effects of this amendment on water quality. Again however, this is a retrospective assessment. In addition, this will only be successful if action is taken when results indicate increased pollution from agricultural sources. The latest report by the Agency clearly illustrates that in recent years, monitoring has noted a levelling out of nutrient levels (N and P) within surface and groundwaters. It is clear that if Ireland is to achieve its WFD environmental objectives and by extension water related environmental supporting condition targets for SACs and SPAs, that certain water bodies across the country will require further management of N and P sources from agriculture.</p>
	<p>39. The Agency shall make such recommendations and give such directions to a local authority in relation to the monitoring of water quality as it considers appropriate and/or necessary for the purposes of the Commission Decision.'</p>	<p>This article will minimise the risk of adverse environmental impacts by directing follow up actions in relation to monitoring of water quality.</p>
<p>Schedule 5: Conditions applying in relation to Derogation</p>	<p>The following are the conditions for the purposes of Article 36 (1) of these Regulations in relation to the application to land on a holding in any year of livestock manure in excess of the amount specified in Article 20(1):</p> <p>Application of manure, other fertilisers and lime</p> <ol style="list-style-type: none"> 1. The amount of livestock manure from grazing livestock applied to the land each year on grassland farms, including by the animals themselves, shall not exceed the amount of manure containing 250 kg nitrogen per hectare, subject to the conditions laid down in paragraphs 2 to 7. 2. The total nitrogen inputs shall neither exceed the foreseeable nutrient demand of the considered crop, nor the maximum fertilisation rate applicable to the grassland farm, established in the Nitrates Action Programme and shall take into account the supply from the soil. Total nitrogen application shall be differentiated on the basis of stocking rate and grassland productivity. 3. A fertilisation plan shall be prepared and kept for each grassland farm describing the crop rotation of the farmland and the planned application of manure and other fertilisers. The livestock manure and chemical fertiliser allowance for the holding in the fertiliser plan shall not include parcels of commonage or rough grazing, as declared by the applicant on their Basic Payment Scheme application in 2019, at rates greater than those applicable to 50 kg N/ha (to be reduced in the fifth NAP). The fertilisation plan shall be available at the grassland farm for each calendar year before 1 March of that year. The fertilisation plan shall comprise at least the following: 	<p>Schedule 5 sets out the conditions which will apply to farms which are granted a derogation.</p> <ol style="list-style-type: none"> 1. This is a positive measure to limit the quantity of animal manure which can be applied to a given area of land by farmers utilising a derogation. While the set 250kg N/ha limit may be sufficient to minimise potential nitrogen inputs into the hydrological environment, enforcement is likely to be an issue. 2. This is a positive measure which requires the tailoring of nitrogen inputs to the crop requirement to avoid excess application of fertilisers. Again enforcement may be an issue. 3. This is a positive measure which requires the production of a fertilisation plan for each derogated farm. This excludes areas of commonage or rough grazing and will require a range of considerations as listed from a-l. These are primarily intended to provide clarity and detail on the size of the farm, the number of livestock and associated manure production and record keeping of the produced grass in addition to the applied fertilisers. The fertilisation plan will provide valuable information on the potential effects arising through derogated farms and transparency for enforcement. 4. This is a positive measure which will ensure that records are submitted in a timely manner for the purposes of monitoring and enforcement. 5. This is a positive measure which will ensure that records are submitted in a timely manner for the purposes of monitoring and enforcement.

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No.	Draft Measure	Assessment of Effects
	<p>(a) The crop rotation plan, which must specify the acreage of parcels with grass and parcels with other crops, including a sketch map indicating the location of individual parcels;</p> <p>(b) the number of livestock on the grassland farm, a description of the housing and storage system, including the volume of manure storage available;</p> <p>(c) a calculation of manure nitrogen and phosphorus produced on the grassland farm;</p> <p>(d) the amount, type and characteristics of manure delivered outside the grassland farm or to the grassland farm;</p> <p>(e) the foreseeable nitrogen and phosphorus crop requirements for each parcel;</p> <p>(f) results of soil analysis related to nitrogen and phosphorus soil status if available;</p> <p>(g) the nature of the fertiliser to be used;</p> <p>(h) a calculation of nitrogen and phosphorus application from manure for each parcel;</p> <p>(i) a calculation of nitrogen and phosphorus application from chemical and other fertilisers for each parcel;</p> <p>(j) a calculation of liming requirements for each parcel to achieve optimum soil pH;</p> <p>(k) a lime application programme for the grassland farm;</p> <p>(l) a record of the grass produced annually on the holding.</p> <p>The fertilisation plan shall be revised no later than seven days following any change in agricultural practices at the grassland farm.</p> <p>4. Fertilisation accounts, including information related to management of lime, nitrogen and phosphorus inputs and management of soiled water, shall be prepared and kept for each grassland farm. They shall be submitted to the competent authority for each calendar year by 31 March of the following calendar year.</p> <p>5. Information related to manure transferred off the holding shall be submitted to the competent authority by 31 October each year.</p> <p>6. Periodic pH, nitrogen and phosphorus analysis in soil shall be done for each grassland farm.</p> <p>Sampling and analysis shall be carried out at least once every four years for each homogeneous area of the grassland farm, with regard to crop rotation and soil characteristics.</p> <p>At least one analysis per five hectares of farmland shall be carried out.</p>	<p>6. This is a positive measure which will inform nutrient requirements of the lands across the farm, to be detailed within the fertilisation plan.</p> <p>7. This is a positive measure, in line with Schedule 4, to limit the spreading of manure within parts of the year which are at higher risk of run-off.</p> <p>8. This is a positive measure to ensure that a high proportion of the slurry generated by a grassland farm is spread during low-risk periods of the year and this is undertaken using LESS.</p> <p>9. This is a positive measure to limit nutrient inputs into the farm holding beyond that stipulated at Article 22 (2).</p> <p>10. This is a positive measure to prevent soil erosion and nutrient run-off over the winter period.</p> <p>11. This is a positive measure designed to ensure that areas of ploughed grass are subsequently planted with crops which will remove significant quantities of nitrogen from the soil. It is not clear however what the definition of a high nitrogen demand crop is.</p> <p>12. This is a positive measure which will prevent the build-up of nitrogen compounds in the soil from nitrogen fixing crops.</p> <p>13. This is a positive measure to limit the seeding of clover into any re-seeded grassland, to prevent excessive nitrogen fixation into the soil by this species.</p> <p>14. This is a positive measure to ensure that the health of the hedgerows is maintained in the long-term. These hedgerows will provide some element of protection from soil erosion, and nutrient loss to natural systems whilst also providing wider benefits for wildlife.</p> <p>15. This is a positive measure requiring farmers who seek a derogation on a repeated basis to attend appropriate training in the protection of water quality and nutrient management.</p> <p>16. This is simply a list of definitions to inform the other items in the Schedule as listed above.</p> <p>17. This is a positive measure that will remove chemical fertiliser allowances for Commonage lands. In principle, it would reduce some farmers renting Commonage lands to dilute stocking rates and increase fertiliser allowances.</p> <p>18. This is a positive measure to ensure that reduced storage, through outwintering in accordance with the regulations, will only be allowed on farms with a stocking rate of less than 100kg of nitrogen per hectare. This is one measure to address the slurry storage deficit in Ireland.</p>

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No.	Draft Measure	Assessment of Effects
	<p>The results of pH, nitrogen and phosphorus analysis in soil shall be available at the grassland farm.</p> <p>7. Livestock manure shall not be spread in the autumn before grass cultivation.</p> <p>8. At least 50% of slurry produced on the holding shall be applied by 15 June each year. Low emission slurry spreading equipment shall be used for any slurry applications after 15 April 2020.</p> <p>9. Crude protein in concentrate feeds for grazing livestock shall be reduced in accordance with guidance issued under Article 22(2).</p> <p>Land management</p> <p>10. Temporary grassland shall be ploughed in Spring.</p> <p>11. Ploughed grass on all soil types shall be followed immediately by a crop with high nitrogen demand.</p> <p>12. Crop rotation shall not include leguminous or other plants fixing atmospheric nitrogen. This shall, however, not apply to clover in grassland with less than 50% clover and to other leguminous plants that are under sown with grass.</p> <p>13. Grass reseeded on grassland farms shall include a minimum clover content of 1.5kg/ha naked seed and 2.5 kg/ha pelleted seed and not exceed 50% of the sward mixture.</p> <p>14. Hedgerows on the holding shall be managed in accordance with guidance issued under Article 22(2) and management practices shall include, as a minimum, the following:</p> <ul style="list-style-type: none">(a) one mature whitethorn/ blackthorn tree shall be retained in each hedgerow;(b) hedgerows shall be maintained on a minimum 3-year cutting cycle. <p>Training</p> <p>15. From 1st January 2022, any repeat application under Article 36(1)(a) shall be accompanied by evidence of participation in an approved training programme in nutrient use efficiency and the protection of water.</p> <p>Definitions</p> <p>16. In these schedules, the following definitions shall apply:</p> <ul style="list-style-type: none">(a) 'grassland farms' means holdings where 80 % or more of the agricultural area available for manure application is grass;(b) 'grazing livestock' means cattle (with the exclusion of veal calves), sheep, deer, goats and horses;(c) 'grass' means permanent grassland or temporary grassland (temporary implying leys of less than four years);(d) 'parcel' means an individual field or a group of fields, homogeneous regarding cropping, soil type and fertilisation practices;	

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No.	Draft Measure	Assessment of Effects
	<p>(e) 'fertilisation plan' means an advance calculation about the planned use and availability of nutrients;</p> <p>(f) 'fertilisation account' means the nutrient balance based on the real use and uptake of nutrients;</p> <p>(g) 'Commonage' means a parcel which is held by two or more persons in specified shares or jointly and originally purchased from the Irish Land Commission under the Land Purchase Acts, including land over which two or more persons have grazing rights or the right to take turf;</p> <p>(h) 'Rough grazing' means parcels which are permanent grazing with low yield, and which are only suitable for extensive grazing;</p> <p>(i) 'Basic Payment Scheme' is a financial support scheme under the Common Agricultural Policy.</p> <p>17. There is no chemical fertiliser allowances to be afforded to Commonage lands.</p> <p>18. Reduced storage through outwintering will only be applicable to farmers stocked <100kgs/ha from 1st January 2025.</p>	

Proposed Non-GAP Regulation Measures

<p>Chemical Fertiliser Register</p>	<p>The Department of Agriculture, Food and Marine has already commenced the process of developing legislation that will provide for the adoption by the Minister of a register of chemical fertiliser sales across the country and this register will come into place on the 1st of January 2023. The purpose of the register is to provide for accurate tracking of fertiliser sales and provide a more realistic picture of where fertiliser is being applied to land. In addition, it will help to establish a better understanding of the value of livestock manure and the need to re-use nutrients as much as possible on farms.</p> <p>Along with the recently launched online slurry movement register, it will bring a level of regulation to the industry which is needed to ensure chemical fertilisers are used for optimum efficiency. While it is acknowledged that the majority of farmers apply chemical fertilisers in an efficient manner, and in compliance with the requirements of the GAP regulations, the inter-farm movement of fertilisers and stockpiling of fertiliser does not lend itself to an accurate calculation of the chemical fertiliser loadings at farm scale.</p> <p>Similar to the pesticides register provided for under SI 155 of 2012 and SI 159 of 2012, the proposed new chemical fertiliser register will place the responsibility on merchants to register chemical fertiliser sales against individual farmer's herd numbers. This data will be reported periodically to the DAFM, where it will feed into the Department's analysis of farming activities generally, and more specifically into assessing compliance with the requirements of the GAP regulations.</p>	<p>The implementation of a chemical fertiliser register will be a positive measure which will greatly increase the capacity for authorities to monitor the use of these materials on farms and also offer potential to provide a form of automatic enforcement on limiting of the use of such fertilisers, as records will be kept for each farm at purchasing and referenced in respect of nutrient management plans and fertilisation plans which may be produced for the holding. Better tracking of chemical fertilisers will result in a greater understanding of nutrient inputs into natural systems and allow for improved management of catchments for water quality with potential beneficial effects for European sites across Ireland.</p>
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No.	Draft Measure	Assessment of Effects
	<p>It is anticipated that the process of developing the legislation to provide for the fertiliser register will take in the region of 18-24 months, with an expected lead-in time of 6 months after publication for full compliance.</p>	
<p>Improving Compliance</p>	<p>On average, approximately 3,400 Nitrates related inspections are undertaken on farms across Ireland each year by Local Authority and DAFM personnel. The level of compliance with the requirements of the GAP regulations varies from county to county but it is generally considered to be low, relative to compliance with other national legislation. Submissions received during the first consultation stage, and discussions with local authority personnel suggests that reform of the overall enforcement of the GAP regulations is required to:</p> <ul style="list-style-type: none"> • Further improve compliance levels, • Ensure local authorities are adequately resourced, • Prioritise targeting of high-risk areas. <p>While it is not expected that there will be significant changes to the enforcement powers of authorised personnel within the GAP regulations, the Nitrates Expert Group will set out a series of recommendations for the Minister for Housing, Local Government and Heritage to provide for appropriate reform within the sector. These recommendations will include actions to develop criteria to promote consistency across jurisdictions in targeting critical source areas. The recommendations will also inform the 3rd Cycle River Basin Management Plan Programme of Measures.</p> <p>These recommendations will build on work being undertaken by the EPA, local authorities and other members of the NIECE enforcement network and will incorporate some of the recommended mitigation measures proposed in the SEA environmental report.</p>	<p>Enforcement of non-compliance with the NAP is likely to represent a significant issue in respect of potential effects upon European sites. Given that levels of compliance with the NAP, in previous years, have been recorded as being low, reform of the enforcement system is likely to represent a positive and welcome change. It is assumed that such reform would have potential to give rise to improved compliance however the detail of such reforms is not yet available and therefore it is not possible to provide a detailed assessment of the potential effects of such reforms.</p>
<p>Review of the Agricultural Sustainability Support and Advisory Programme (ASSAP)</p>	<p>The Agricultural Sustainability Support and Advisory Programme (ASSAP) was introduced during the second cycle River Basin Management Plan (RBMP) to act as a more collaborative approach to achieving positive water quality outcomes for Irish agriculture. Funding from DAFM and DHLGH has enabled Teagasc to provide 20 advisors and funding from the Dairy Processing Co-ops have provided 10 advisors as part of the Dairy Sustainability Initiative (DSI).</p> <p>In their interim report on the programme, Teagasc identified that strong collaborative relationships have been established between the ASSAP advisors, Teagasc, the dairy processing co-ops and the Local Authorities Water Programme (LAWPRO). There is a commitment in the current programme for government to expand the ASSAP programme, however in order to expand and improve the programme, some clarity is needed on the future role and scope of ASSAP. As a result, an assessment of the programme is currently being prepared by Teagasc to be carried out by a panel of external experts from outside ASSAP. The assessment will focus on the rationale, efficiency, effectiveness and sustainability of ASSAP, as well as providing recommendations for the future and</p>	<p>This programme represents a positive approach to water quality issues across Ireland, utilising a collaborative approach to managing nutrient inputs from agriculture across a range of priority areas for action. This programme has given rise to high levels of farmer engagement and as such has led to significant changes to agricultural practises within farms across the priority areas. This programme has potential to give rise to a significant increase in compliance with NAP measures, through active farmer engagement and the gradual changing of behaviours in respect of water quality protection. It is considered however that the programme would need to expand significantly if it is to have an influence upon the water quality within European sites at the national level.</p>

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No.	Draft Measure	Assessment of Effects
	<p>its role in achieving water quality objectives set out in the third cycle RBMP. The assessment is due for completion before the end of 2021 and the recommendations will be sent to the Minister for Agriculture, Food and Marine, and the Minister for Housing, Local Government & Heritage.</p>	
Air Quality	<p>From an air quality perspective, ammonia provides the most significant challenge from agriculture. The current regulations provides for the compulsory usage of Low Emission Slurry Spreading (LESS) equipment for all farmers operating above 170 kg N/ha and Derogation farmers. In order to meet our Ammonia and Agclimatise targets, the further compulsory implementation of LESS for more farmers will be required.</p> <p>In order to align with these targets, the compulsory usage of LESS will be introduced for all farmers operating above 100 kg livestock N/ha and for all Pig farmers onwards.</p> <p>From 1st January 2023, compulsory usage of LESS will be introduced for all farmers operating above 150kg livestock N/ha.</p> <ul style="list-style-type: none"> From 1st January 2024 compulsory usage of LESS will be introduced for all farmers operating above 130kg livestock N/ha From 1st January 2025 compulsory usage of LESS will be introduced for all farmers operating above 100kg livestock N/ha. This requirement to use LESS also applies to the application of slurry produced by pigs on any holding from 1st January 2023. <p>In addition, all organic manures applied to arable land must be by low emission or incorporated within 24 hours of application.</p>	<p>The introduction of a lower threshold requirement for the use of LESS by all farmers is a positive measure which has potential to give rise to significant improvements to the release of atmospheric ammonia and subsequent effects upon European sites. LESS is known to reduce the released ammonia emissions by between 30 and 80%. Where organic manures applied to arable land these are to be applied via LESS or incorporated within 24 hours of application, this is again a positive measure which will minimise the potential for airborne emissions from arable farmland.</p>
Review of Technical Tables	<p>In some instances, the information is not up to date in the technical tables and these will all be considered as part of the review. Examples include the nutrient content of livestock manures including pig slurry and poultry manure and whether existing slurry storage capacity figures are considered to accurately reflect changes in animal size over the last number of years.</p> <p>The Department of Agriculture, Food and the Marine will request Teagasc to undertake survey of soiled water and slurry production on dairy farms in 2022. This survey will be used to inform future technical specifications and guide the interim review in 2023.</p>	<p>This is positive as it allows for review of the technical tables measures based on the most up to date information available. It facilitates the evolution and improvement of the Programme using an evidence based approach. Facilitation of the evolution of the Programme is positive.</p>
Sewage/Industrial Sludges	<p>The use of sewage sludge is managed by Irish Water through its National Wastewater Sludge Management Plan. The application of sewage sludge to agricultural land is controlled by local authorities through the maintenance of sludge registers and inspection/enforcement programmes.</p> <p>The EPA regulates industries (including dairy processing and animal slaughtering) that generate industrial sludges through IED licences. The application of industrial sludges as an organic fertiliser to agricultural land is controlled under the Good Agricultural Practice regulations.</p>	<p>It is considered that the spreading of sewage sludge has significant potential to give rise to nitrogen inputs in line with those predicted as a result of the NAP, with potential to give rise to adverse in-combination effects upon European sites. The control of such operations through a sludge register and, where applicable, through IPC licenses which are subject to individual appropriate assessment, will ensure that such activities are effectively monitored and enforced. It is considered that this approach allows for a high level of assessment of such inputs and as such where nutrient inputs are likely to arise</p>

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No.	Draft Measure	Assessment of Effects
	<p>However currently there is not an integrated approach or data system available that identifies the loads and spreadlands where sludges are applied. A comprehensive understanding of the movement of sludges and the application of sludges to agricultural land is required to ensure the existing controls are fit for purpose.</p> <p>A review of the management and oversight of sludges being applied to land will be carried out by a working group established under the National Technical Implementation Group (NTIG), which is part of the River Basin Management Planning and Water Framework Directive governance structures.</p> <p>Recommendations arising will be brought back to the WFD governance structures for consideration.</p>	<p>as a result of the application of sewage sludge this may be potentially traceable to known areas in which such activities take place.</p>

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 6(3) assessment, particularly at a policy level. This step aims to consider the principles and priorities within which the NAP being developed and to identify at this early stage any possible in-combination effects of the proposed NAP with other plans and projects and these are shown in **Table 6.6**. 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 guidance¹, 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 6.6: Assessment of In-combination Effects

NAP In Combination with...	Key Types of Effects	Assessment of Effects
<p>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.</p>	<ul style="list-style-type: none"> • Increased resilience in habitats and species; • Improved habitat and species protection; and • Improved air and water quality. 	<p>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 draft NAP.</p>
<p>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.</p>	<ul style="list-style-type: none"> • 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. 	<p>As the EAP is aimed at environmental action protection, there are no in-combination effects.</p>
<p>The EU Sustainable Development Strategy (EU SDS) and Our Sustainable Future: A Framework for Sustainable Development in Ireland (2012) (national) 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.</p>	<ul style="list-style-type: none"> • 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. 	<p>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 draft NAP.</p>
<p>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.</p>	<ul style="list-style-type: none"> • Improved Water Quality; • Improved habitats; and • Increased resilience in habitats and species. 	<p>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 second cycle River Basin Management Plan 2018-2021 was published together with a NIS including mitigation to offset negative effects. The same process would be required for the RBMP 2022-2017 which is in preparation. Note that the draft River Basin Management Plan for Ireland 2022-2027 (and associated draft NIS) is open for consultation to the 31st of March 2022. The mitigation determined in the</p>

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NAP In Combination with...	Key Types of Effects	Assessment of Effects
<p>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 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</p>	<ul style="list-style-type: none"> • 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. 	<p>final NIS for the NAP will be referenced and included in the final NIS for the RBMP and will supersede all provisional measures currently included in the draft NIS document.</p> <p>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 and tier 3 levels. No likely significant in-combination effects are envisaged.</p>
<p>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.</p>	<ul style="list-style-type: none"> • Habitat loss or destruction; • Habitat fragmentation or degradation; • Alterations to water quality and/or water movement; • Disturbance; • In-combination impacts within the same scheme 	<p>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.</p>
<p>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</p>	<ul style="list-style-type: none"> • Habitat degradation or improvement; • Disturbance to habitats/species; • Species mortality; 	<p>Like the Republic of Ireland NAP, 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 two programmes are largely similar in the</p>

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NAP In Combination with...	Key Types of Effects	Assessment of Effects
<p>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.</p>	<ul style="list-style-type: none"> • Alterations to water quality and/or water movement; • Release of contaminated material (soils, runoff); and • Introduction or spread of invasive species. 	<p>measures applied (e.g. the use of LESS on larger farms) given the similarity in farming practice, geology and climate. With the required mitigation in the NAP for Northern Ireland, no significant in-combination effects are predicted.</p>
<p>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:</p> <ul style="list-style-type: none"> • 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 Agri-Environment and Climate Measure (AECM), EIP-AGRI and TAMS). <p>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.</p>	<ul style="list-style-type: none"> • 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. 	<p>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.</p>
<p>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:</p> <ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • 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. 	<p>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.</p> <p>This EU mandated target for reducing nutrient losses would aid the NAP in reducing nitrate discharges and protecting water courses from agricultural activity. In this regard, no likely significant in-combination effects are envisaged.</p>
<p>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 NAP include the following:</p>	<ul style="list-style-type: none"> • Habitat loss or destruction; • Habitat fragmentation or degradation; • Species mortality; • Disturbance to habitats/species; 	<p>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.</p>

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NAP In Combination with...	Key Types of Effects	Assessment of Effects
<ul style="list-style-type: none"> • 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 <p>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.</p>	<ul style="list-style-type: none"> • Alterations to water quality and/or water movement; and • Introduction or spread of invasive species. 	<p>The Strategy commits to reduce nutrient losses from agriculture to water by 50% in 2030 in line with the Farm to Fork Strategy.</p> <p>The AA concluded that the adoption of Food Vision 2030 would not have significant adverse effects on the integrity of any Natura 2000 sites.</p> <p>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.</p> <p>Potential for cumulative impacts resulting in adverse effects on European sites between the Food Vision 2030 and the NAP cannot be ruled out.</p>
<p>Our Rural Future: Rural Development Policy 2021-2025</p> <p>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.</p>	<ul style="list-style-type: none"> • 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. 	<p>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 the measures in this policy are positive in terms of nitrates.</p>
<p>Rural Development Programme 2014-2020</p> <p>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 balanced development of rural areas. Includes provisions under GLAS; Bio-Energy; nutrient management planning; 'Carbon Navigator' software tool</p>	<ul style="list-style-type: none"> • 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. 	<p>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 engagement and site based monitoring. With the required mitigation in the RDP, no significant in-combination impacts are predicted.</p>

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NAP In Combination with...	Key Types of Effects	Assessment of Effects
<p>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.</p>	<ul style="list-style-type: none"> • 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. 	<p>The Action Plan for Rural Development includes over 230 actions focussed on developing the rural economy. As agriculture is predominately undertaken in rural areas and promotes rural employment there are direct synergies between the Action Plan and the NAP.</p>
<p>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:</p> <ul style="list-style-type: none"> • 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 N₂O emissions. 	<ul style="list-style-type: none"> • 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 	<p>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 Curve⁴⁹ measures are adopted and fully implemented including the de-coupling of N₂O emissions from production via nitrogen use efficiency and the use of low emission fertilisers and spreading techniques.</p> <p>In this regard, the NAP measures support the N efficiency measures presented in Action 102 and there is potential for positive in combination effects as it supports long term reductions in fugitive losses of nitrogen.</p>
<p>Ag-Climatise This is the National 'Climate & Air Roadmap' for the Agriculture Sector. The roadmap sets an ambitious vision for a 'climate neutral 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</p>	<ul style="list-style-type: none"> • Habitat loss or destruction; • Habitat fragmentation or degradation; • Disturbance to habitats/species; • Species mortality; and • Alterations to air quality. 	<p>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 technology has co-benefits for reducing both nitrate losses to ground and water as well as losses of ammonia to atmosphere. The main thrust of the plan is positive and there is potential for</p>

⁴⁹ Link: <https://www.teagasc.ie/media/website/publications/2018/An-Analysis-of-Abatement-Potential-of-Greenhouse-Gas-Emissions-in-Irish-Agriculture-2021-2030.pdf>

NATURA IMPACT STATEMENT

NAP In Combination with...	Key Types of Effects	Assessment of Effects
<p>tasks listed is to reduce nutrient loss to the environment and contribute to improved water quality and biodiversity.</p>		<p>positive in combination effects as it supports long term reductions in fugitive losses of nitrogen to water.</p>
<p>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 into force in December 2016, sets 2020 and 2030 emission reduction commitments for five main air pollutants.</p>	<ul style="list-style-type: none"> • Habitat loss or destruction; • Habitat fragmentation or degradation; • Disturbance to habitats/species; • Species mortality; and • Alterations to air quality. 	<p>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 EPA predict that full Implementation at farm level of ammonia abatement measures outlined in the AgClimatise plan is projected to bring Ireland into compliance with the 2030 emission ceiling for ammonia. As above, 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 as per the NAP.</p>
<p>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.</p>	<ul style="list-style-type: none"> • 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 	<p>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.</p>
<p>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.</p>	<ul style="list-style-type: none"> • Habitat loss or destruction; • Habitat fragmentation or degradation; • Alterations to water quality and/or water movement; • Alteration to air quality; • Disturbance. 	<p>It is a policy⁵⁰ 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.</p>
<p>Regional Spatial and Economic Strategies The three regional strategies seek to interpret and implement the NPF at a regional level.</p>	<ul style="list-style-type: none"> • Habitat loss or destruction; • Habitat fragmentation or degradation; • Disturbance to habitats/species; 	<p>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</p>

⁵⁰ http://www.housing.gov.ie/sites/default/files/publications/files/towards_a_national_planning_framework_december_2015.pdf , Appendix II – Page 2

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NAP In Combination with...	Key Types of Effects	Assessment of Effects
<p>European Union Biodiversity Strategy to 2020 and revised Biodiversity Strategy to 2030</p> <p>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.</p>	<ul style="list-style-type: none"> • Alterations to water quality and/or water movement; and • Introduction or spread of invasive species. 	<p>planning hierarchy. There is no potential for significant in-combination effects.</p>
<p>Biodiversity Climate Adaptation Plan [arising from the National Climate Adaptation Framework]</p> <p>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.</p>	<ul style="list-style-type: none"> • Increased resilience in habitats and species; • Improved water quality; and • Improved air quality 	<p>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.</p>
<p>Biodiversity Action Plan 2017-2021</p> <p>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.</p>	<ul style="list-style-type: none"> • Increased resilience in habitats and species • Introduction or spread of invasive species • Improved Water quality 	<p>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 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.</p>
<p>National Raised Bog Management Plan</p> <p>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</p>	<ul style="list-style-type: none"> • Improved habitat and species protection 	<p>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.</p>
<p>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</p>	<ul style="list-style-type: none"> • Decrease sediment loads and acidity in catchments downstream of bogs to be restored • Improved condition of raised bog habitats 	<p>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.</p>

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NAP In Combination with...	Key Types of Effects	Assessment of Effects
catchments supporting raised bog SACs in addition to restoration of the condition of the raised bog habitats themselves.		

7 MITIGATION MEASURES

It is noted that the NAP 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 State. Many of these other policies have already undergone AA or are undergoing AA with development of specific measures which are, or will be, implemented. The measures committed to in these other plans will be essential to ensuring that the objectives of the NAP are met and that the NAP does not in itself result in adverse effects on the integrity any European Site.

However, to further improve actions contained within the NAP and to address potential negative effects, mitigation measures have been proposed for inclusion in the final NAP as listed in **Table 7.1**.

Table 7.1: Mitigation Measures outlined for the NAP

No.	Draft Measure	Assessment of Effects	Mitigation Measures
1	<p>All articles, schedules and non-GAP regulation measures with the exception of procedural matters.</p> <p>This was identified particularly in the case of articles 6(2), 14(3), 21 and Schedule 5. However it applies more widely to all prescriptions for farming practises within the NAP.</p>	<p>This is an overall concern regarding inspection and enforcement of all aspects of the NAP, which given the widespread nature of agricultural activities across Ireland, remains a difficult issue for both the assessment of potential impacts arising as a result of the NAP and the effectiveness of the NAP itself.</p> <p>Given that the NAP has been in place in some form since 2017, and during this period water quality in Ireland and the condition of freshwater European sites has continued to decline significantly, it is considered that compliance, which is recorded as being low, is a key issue which needs to be addressed to ensure that the draft NAP realises the required improvements to water and air quality which are required for the identified range of European sites to achieve favourable conservation status.</p>	<p>While it has been acknowledged that the existing and proposed NAP measures assessed with Table 6.5 are broadly positive or neutral in terms of protection of water quality, biodiversity and the wider environment, without effective implementation and enforcement the measures alone may offer limited environmental protection.</p> <p>The current enforcement regime is summarised in Section 2.3 and outlines the broader local authority and Cross Compliance inspection measures currently in place to implement the current NAP. The following revisions to this enforcement regime are recommended to consolidate and improve the implementation of NAP measures and to drive for greater compliance:</p> <ul style="list-style-type: none"> • It is recommended that DHLGH undertakes a review and gap analysis of the resources available to the Local Authorities to include both a review of the number of resources provided by each Local Authority (relative to an indicator such as number of holdings) as well as an assessment of the technical ability (qualifications, training, experience, etc.) of these resources to undertake the roles assigned. Where gaps or inconsistencies are identified, the DHLGH shall ensure that suitable training and/or funding is provided to the local authorities to ensure that there are sufficient and suitably trained resources available to ensure a consistent approach to farm inspections. • It is recommended that a consolidated upskilling regime is utilised to ensure that training is provided for staff undertaking Local Authority inspections, to ensure that a consistent approach is utilised in all inspections. It is also recommended that a consistent and standardised methodology is utilised during inspections across all counties. • The potential for delivery of a central database will be examined as part of the review of the implementation of the regulations. This should allow for more detailed analysis of potential compliance hotspots and proposed measures within future versions of the NAP and provide a more structured approach to enforcement. • The Local Authority enforcement regime should be risk based and include for higher numbers and more frequent inspections on holdings within EPA designated Catchments of Concern and waterbodies at risk from nutrient impacts. Critical source area mapping within these areas (EPA Pollution Impact Potential maps) should be used to further target these inspections. • DAFM currently deliver on the statutory requirements to complete 1% Cross Compliance Inspections on an annual basis. It is recommended that DAFM commit to a significant increase in this number of inspections and introduce increased risk based targeted enforcement to identify

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No.	Draft Measure	Assessment of Effects	Mitigation Measures
			<p>areas of concern and resource accordingly (as per the Local Authority Inspections above).</p> <ul style="list-style-type: none"> It is recommended that Cross Compliance Inspections should include a specific detailed analysis and quantification of existing storage capacity for livestock manure, other organic fertilisers, soiled water and effluents on farms versus the required capacities as stated in Schedule 2. <p>It is believed that this increased and targeted enforcement approach will lead to an improvement in compliance rates across all aspects of the NAP, thereby reducing the potential for adverse effects upon European sites.</p>
2	Part 7: Implementation of Commission Decision and Schedule 5.	While the 2021 NAP will include for a range of conditions for farms seeking a derogation, at Schedule 5, it is considered that poor implementation of these may give rise to potential for likely significant effects where such farms lie in close proximity to are closely hydrologically or hydrogeologically linked to European sites. This applies particularly in cases where the European sites is designated on account of a water dependant habitat or species, as identified at Table 6.4 .	<p>Like the wider suite of NAP measures outlined in Table 6.1, the application of the scheduled conditions to farm holding availing of the derogation should theoretically mitigate the potential for adverse effects upon water quality and effects associated with airborne emissions. The measures are based on sound practice but the potential for adverse environmental impact largely lies with the implementation, enforcement and compliance with these measures.</p> <p>DAFM currently undertake inspections of a minimum of 5% of holdings that have availed of the derogation. It is recommended that this is increased to a minimum of 10% of inspections of holdings that have availed of the derogation. This doubling in enforcement effort by DAFM will promote compliance and reduce the potential for likely significant effects on European Sites. In addition, these inspections should be risk based and should focus on holding s with poor compliance rates, located with EPA Catchments of Concern, etc.</p>
Proposed Non-GAP Regulation Measures	Review of the Agricultural Sustainability Support and Advisory Programme (ASSAP)	The Agricultural Support & Advisory Programme (ASSAP) is a government/industry initiative established in 2018 and provided 30 Agricultural Sustainability Advisors, 20 of whom are funded by Government and 10 by the Dairy Industry. These Advisors are promoting on-farm best practice to farmers in 190 'Areas for Action' in the current 2nd cycle of the River Basin Management Plan which were identified by the EPA, where the status of the water is at risk of deteriorating. Farmers are availing of this service within the 'Areas for Action' on a voluntary basis.	<p>It is noted that from 2022 onwards, the Dairy Industry have committed a further 8 advisors to the programme which will continue its work in delivering for the stabilisation and improvement of water quality in primarily nitrogen sensitive areas of the country.</p> <p>Like the above mitigation, this voluntary mitigation measure will aid in driving compliance with NAP measures and reduce the risk of likely significant effects on European Sites.</p>

8 PRELIMINARY CONCLUSIONS ON THE NAP

This Natura Impact Statement has considered the potential of the measures proposed within the draft NAP to give rise to adverse effects on the integrity of European 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.

The NAP 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 NIS to ensure that the measures proposed with respect to implementing the actions of the NAP are, where necessary, subject to Appropriate Assessment. As such, the NAP 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.

In light of the conclusions of the assessment contained in this NIS, the authors are of the view that the adoption of the draft NAP alone, or in combination with other plans and programmes, will not adversely affect the integrity of any European site.

Accordingly, and in light of the conclusions of the assessment contained here and the Appropriate Assessment that the Ecological Assessment Unit shall conduct on the implications for the European sites concerned, the competent authority is enabled to ascertain that the adoption of the NAP, alone or in combination with other relevant plans and programmes, will not adversely affect the integrity of any European Site.

9 NEXT STEPS

The next step in the process is wider public consultation on the draft NAP, the accompanying SEA Environmental Report and this NIS.

Under the European Union (Birds and Natural Habitats) (Amendment) Regulations 2021 (S.I. No. 293 of 2021), the Ecological Assessment Unit is required to conduct an Appropriate Assessment of the NAP and this NIS will inform this AA determination.

For the purposes of Article 6(3) of the Habitats Directive and its application through the European Communities (Birds and Natural Habitats) Regulations, as amended, the Ecological Assessment Unit must determine whether the NAP either individually or in combination with any other plan or project would adversely affect the integrity of any European Site. Only having ascertained this determination can the NAP be adopted by the DHLGH.



Appendix A
Report to Inform AA
Screening

IRELAND'S FIFTH NITRATES ACTION PROGRAMME

Information in Support of Screening for Appropriate Assessment



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1 INTRODUCTION

The Department of Housing, Local Government and Heritage (DHLGH) and the Department of Agriculture, Food and the Marine (DAFM) are currently preparing Ireland's fifth Nitrates Action Programme (hereafter the 'NAP') in line with the requirements of Article 28 of the Good Agricultural Practice Regulations and the Nitrates Directive. This legislation requires the review of the NAP every four years and the fourth iteration of the NAP came into force in 2017 and now needs to be reviewed. The NAP is designed to prevent pollution of surface waters and groundwater from agricultural sources and to protect and improve water quality.

This report comprises information in support of screening for Appropriate Assessment (AA) of the NAP in line with the requirements of Article 6(3) of the EU Habitats Directive (92/43/EEC) on the Conservation of Natural Habitats and of Wild Fauna and Flora as transposed into Irish law through the European Communities (Birds and Natural Habitats) Regulations, as amended.

Appropriate Assessment is a process for undertaking a comprehensive ecological impact assessment of a plan or project, examining its implications, on its own or in-combination with other plans and projects, on one or more European Sites in view of the sites' Conservation Objectives, as referred to in Article 6(3) of the EU Habitats Directive.

1.1 Legislative Context

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, better known as 'The Habitats Directive', provides legal protection for habitats and species of European importance. Articles 3 to 9 of the Directive provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of a European Union (EU)-wide network of sites known as Natura 2000 (hereafter referred to as 'European sites'). European sites comprise:

- Special Areas of Conservation (SAC) designated for habitats, plants, and non-bird species, under the Habitats Directive (92/43/EEC); and
- Special Protection Areas (SPA) designated for bird species and their habitats, under the Birds Directive (79/409/ECC as codified by Directive 2009/147/EC).

Article 6 of the Habitats Directive plays a crucial role in the management of the sites that make up the Natura 2000 network¹. Articles 6(1) and 6(2) set out the need to identify conservation objectives and prevent deterioration of the habitats and species for which the sites have been designated. Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect European Sites (Annex 1.1).

Article 6(3) establishes the requirement for Appropriate Assessment (AA):

Any plan or project not directly connected with or necessary to the management of the [European] site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.

Article 6(4) states:

If, in spite of a negative assessment of the implications for the [European] site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

The Habitats Directive has been transposed into Irish law by the Planning and Development Act 2000 (as amended) and the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended). In

¹ Managing Natura 2000 sites. The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC EC 2018.

the context of the NAP, the governing legislation is principally the European Communities (Birds and Natural Habitats) Regulations, as amended, and specifically Article 27 which sets out the duties of public authorities (in this case the EPA) relating to nature conservation; and Article 42 which addresses AA. If screening for AA determines the likelihood for significant effects on a European site(s), in view of the conservation objectives of the site, then AA must be carried out for the NAP, including the compilation of a Natura Impact Statement (NIS) to inform the decision making.

1.2 Purpose of the Appropriate Assessment Process

The overall purpose of the AA process is to ensure that the NAP does not result in any adverse effects on the integrity of any European sites in view of its conservation objectives. This AA has been prepared having regard to the legislative requirements of EU and national law as outlined previously. The responsibility for carrying out the AA lies with the DHLGH.

1.3 Stages of Appropriate Assessment

Stage 1: Screening / Test of Significance: This process identifies whether the proposed plan / project is directly connected to or necessary for the management of a European site(s) and identifies whether the plan / project is likely to have significant impacts upon a European site(s) either alone or in combination with other plans / projects. The output from this stage is a determination of not significant, significant, potentially significant, or uncertain effects. The latter three determinations will cause the plan / project to be brought forward to Stage 2.

Stage 2: Appropriate Assessment: This stage considers the impact of the proposed development on the integrity of a European site(s), either alone or in combination with other plans / projects, with respect to: (i) the site's conservation objectives; and (ii) the site's structure, function and its overall integrity. The output from this stage is an NIS. This document must include sufficient information for the competent authority to carry out the appropriate assessment. If the assessment is negative, i.e. adverse effects on the integrity of a site cannot be excluded despite incorporation of measures to avoid or reduce the adverse effects, then the process must consider alternatives (Stage 3).

Stage 3: Assessment of Alternatives: This process examines alternative ways of achieving the objectives of the plan / project that avoid adverse impacts on the integrity of a European site. This assessment may be carried out concurrently with Stage 2 in order to find the most appropriate solution. If no alternatives exist or all alternatives would result in negative impacts to the integrity of the European sites then the process either moves to Stage 4 or the plan / project is abandoned.

Stage 4: Assessment where Adverse Impacts Remain: This stage is undertaken when it has been determined that a plan / project will have adverse effects on the integrity of a European Site, but that no alternatives exist. It includes the identification of compensatory measures where, in the context of Imperative Reasons of Overriding Public Interest (IROPI), it is deemed that the project or plan should proceed.

2 DESCRIPTION OF THE NITRATES ACTION PROGRAMME

2.1 Background to the Nitrates Action Programme

The Nitrates Directive (91/676/EEC) has been in place since 1991 and aims to protect water quality from pollution by agricultural sources and to promote the use of good farming practice. The Nitrates Directive forms an integral part of the Water Framework Directive and is one of the key instruments in the protection of waters from agricultural pressures. The Nitrates Directive requires Member States to undertake the following:

- Monitor waters and identify waters which are polluted or are liable to pollution by nitrates from agriculture;
- Identify the area or areas to which an action programme should be applied to protect water from pollution from nitrates from agricultural sources (note Ireland has developed a national action programme with 100% territorial coverage);
- Develop and implement an action programme to reduce and prevent such pollution. This action programme must be implemented and updated on a four-year cycle;
- Monitor the effectiveness of the action programmes, and
- Report to the EU Commission on progress.

Annex III of the Directive includes the measures to be included in action programmes and specifies that the maximum amount of livestock manure that may be applied to each farm or livestock unit is 170 kgN/ha/yr under the Directive.

In relation to the requirements for an action programme, Ireland's first Nitrates Action Programme (NAP) came into force in 2006 and has been reviewed three times since and the fourth, and current, NAP will expire in 2021. Hence, the DHLGH and DAFM currently preparing the fifth NAP for implementation by December 2021.

Ireland's Nitrates Action Programme is given effect by European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2017 (S.I. No. 605 of 2017), as amended. Article 28 of the Regulations is the legal basis for the four year review basis for the NAP.

There are a number of existing requirements within the fourth and current NAP that apply to farming practices and the protection of water and a number of the key measures are summarised below:

- Cattle are prevented from entering watercourses on farms with a grassland stocking rate of 170 kg N/ha or above - water courses to be fenced 1.5 metres from the top of the river bank or water's edge;
- Phosphorus build-up is permitted on farms with stocking rates of 130 kg N/ha or above to optimise soil productivity;
- Requirements for farmers to maintain adequate records;
- Knowledge transfer to farmers and farming advisors on Good Agricultural Practice (GAP);
- Low Emission Slurry Spreading (LESS) is a requirement for all derogation farmers from 2020; and
- Nutrient Management Planning (NMP) is required from farmers to maximise the value of chemical and organic nutrient inputs.

In 2018, Ireland was granted a derogation² to allow intensive farmers a higher stocking rate of livestock manure, subject to these farmers complying with a set of rules which are overseen by DAFM. The derogation increases the application limit of 170kg/ha/yr of livestock manure to 250kg/ha/yr for farm or livestock units approved by DAFM. There has been a considerable and continuing increase in derogation applications from dairy farms - over 6,800 farmers availed of the derogation in 2019, and approximately

² Commission Implementing Decision (EU) 2018/209 of 8 February 2018 granting a derogation requested by Ireland pursuant to Council Directive 91/676/EEC concerning the protection of waters against pollution caused by nitrates from agricultural sources

7,000 farmers³ (mostly dairy) availed of the derogation in 2020. This equates to circa 5% of all farms within the State.

2.2 Review of the Nitrates Action Programme

In November 2020, the DHLGH commenced consultation on the next iteration of the NAP through publication of a consultation paper⁴. This fifth NAP will be developed in the context of significantly greater environmental ambition in the Programme for Government and at EU level. The DHLGH consultation document sets out a number of detailed issues to be considered and potential additional requirements and key elements of this include:

- Better policy alignment, with particular reference to the Farm 2 Fork and the EU Biodiversity Strategy for 2030 both of which have set ambitious targets for the agricultural sector;
- Climate action measures, in particular the Climate Action Plan 2019 and specifically, Action 109 on the improvement of on-farm slurry management;
- Biodiversity measures such as those in the National Biodiversity Action Plan 2017-2021; and
- Nitrates derogation and the potential to seek a continuation of the 2018 derogation for DAFM approved farms and units.

The above policy changes will be central to the revision of the NAP and the associated SEA and AA processes. In addition, the revision of the NAP needs to be cognisant of the evolving policy for the agriculture sector coupled with the observed trends in the state of the environment.

A key current development for the agriculture sector relevant to the NAP is the draft Agri-Food 2030 Strategy (draft for public consultation published in April 2021⁵) which is being developed by the 2030 Agri-Food Committee. This strategy is a follow-up to Food Wise 2025 which, like the previous policy publication Food Harvest 2020, promotes a focused increase in agri-production, particularly in the dairy sector and the removal of milk quotas. This relates to increased productivity, albeit in a sustainable manner. However, any increase in productivity requires an intensification of farming practices which may have implications for NAP and the receiving environment. However, it is noted that the draft Strategy sets a high level target for 2030 as follows under the environment mission:

- *Agriculture will reduce nutrient losses to water by 50% by 2030.*

This target is supported by a series of actions and there are clear interactions between the review of the NAP and the Agri-Food 2030 Strategy that will be addressed through the SEA and AA processes.

In terms of environmental baseline, the latest EPA reporting (*Ireland's Environment – An Assessment 2020*⁶) notes that the key pressures on water bodies continues to be agriculture (including nutrient run-off). There also continues to be a decline in the number of water bodies that are reaching or maintaining High ecological status, with only 20 sites reaching Q5 status in 2020 compared to 500 water bodies 30 years ago and an increase in the number of polluted water bodies.

This points to the need to reconsider actions and approaches to achieve better outcomes. One such area is derogations. While the importance of derogations to the dairy sector is recognised, the implications for water quality and ecosystem health of allowing increased N and P in sensitive catchments, even with a Nutrient Management Plan (NMP) in place, is a significant challenge.

³ Link: www.teagasc.ie/news-events/daily/dairy/changes-to-derogation-rules--timely-reminders-for-dairy-farmers.php

⁴ Link: <https://www.gov.ie/en/consultation/6c940-public-consultation-on-irelands-nitrates-action-programme/>

⁵ Link: <https://assets.gov.ie/132635/fcff0476-aa17-4e3f-962c-16baf7cbbffb.pdf>

⁶ EPA (2020) Ireland's Environment – An Assessment. Available at: <https://www.epa.ie/irelandsenvironment/stateoftheenvironmentreport/>

3 APPROPRIATE ASSESSMENT

3.1 Stages of Appropriate Assessment

The AA process progresses through four stages. If at any stage in the process it is determined that there will be no adverse effect on the integrity of a European Site in view of the sites' Conservation Objectives, the process is effectively completed. The four stages are as follows:

- Stage 1 – Screening of the proposed plan or project for AA;
- Stage 2 – An AA of the proposed plan or project;
- Stage 3 – Assessment of alternative solutions; and
- Stage 4 – Imperative Reasons of Overriding Public Interest (IROPI)/ Derogation.

Stage 1: Screening for AA

The aim of screening is to assess firstly if the plan or project is directly connected with or necessary to the management of European Site(s); or in view of best scientific knowledge, if the plan or project, individually or in combination with other plans or projects, is likely to have a significant effect on a European site. This is done by examining the proposed plan or project and the Conservation Objectives of any European Sites that might potentially be affected. If screening determines that there is a likelihood of significant effects or there is uncertainty regarding the significance of effects, then it will be recommended that the plan is brought forward to the next stage of the AA process.

Stage 2: Appropriate Assessment

The aim of Stage 2 of the AA process is to identify any adverse impacts that the plan or project might have on the integrity of relevant European Sites. As part of the assessment, a key consideration is 'in combination' effects with other plans or projects. Where adverse impacts are identified, mitigation measures can be proposed that would avoid, reduce or remedy any such negative impacts and the plan or project should then be amended accordingly, thereby avoiding the need to progress to Stage 3.

Stage 3: Alternative Solutions

If it is not possible during Stage 2 of the AA process to conclude that there will be no adverse effects on site integrity, Stage 3 of the process must be undertaken which is to objectively assess whether alternative solutions exist by which the objectives of the plan or project can be achieved. Explicitly, this means alternative solutions that do not have adverse impacts on the integrity of a European Site. It should also be noted that EU guidance on this stage of the process states that, 'other assessment criteria, such as economic criteria, cannot be seen as overruling ecological criteria' (EC, 2002). In other words, if alternative solutions exist that do not have adverse impacts on European Sites, they should be adopted regardless of economic considerations. This stage of the AA process should result in the identification of the least damaging options for the plan or project.

Stage 4: Imperative Reasons of Overriding Public Interest (IROPI)

This stage of the AA process is undertaken when it has been determined that a plan or project will have adverse effects on the integrity of a European Site, but that no alternatives exist. At this stage of the AA process, it is the characteristics of the plan or project itself that will determine whether or not the competent authority can allow it to progress. This is the determination of 'over-riding public interest'. It is important to note that in the case of European Sites that include in their qualifying features 'priority' habitats or species (Special Areas of Conservation), as defined in Annex I and II of the Habitats Directive, the demonstration of 'over-riding public interest' is not sufficient and it must be demonstrated that the plan or project is necessary for 'human health or public safety considerations'. Where plans or projects meet these criteria, they can be allowed, provided adequate compensatory measures are proposed. Stage 4 of the process defines and describes these compensation measures.

3.2 Guidance Documents on Appropriate Assessment

The AA requirements of Article 6 of the Habitats Directive follow a sequential approach as outlined in the following legislation, guidance documents and Departmental Circulars, namely:

European and National Legislation

- Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (also known as the 'Habitats Directive');
- Council Directive 2009/147/EC on the conservation of wild birds, codified version, (also known as the 'Birds Directive');
- European Communities (Birds and Natural Habitats) Regulations 2011 to 2015; and
- Planning and Development Act 2000 to 2014.

Guidance

- Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. DEHLG (2009, revised 10/02/10);
- Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. European Commission (2001);
- Communication from the Commission on the Precautionary Principle. European Commission (2000b);
- EC study on evaluating and improving permitting procedures related to Natura 2000 requirements under Article 6.3 of the Habitats Directive 92/43/EEC. European Commission (2013);
- 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. European Commission (2007);
- Managing Natura 2000 sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC⁷. European Commission (2000a); and
- Guidance document on the implementation of the birds and habitats directive in estuaries and coastal zones with particular attention to port development and dredging. European Commission (EC, 2011);
- Guidance document on the strict protection of animal species of Community interest under the Habitats Directive 92/43/EEC' (EC, 2007); and
- Interpretation Manual of European Union Habitats. Version EUR 28. European Commission (EC, 2013).

Departmental/NPWS Circulars

- Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular NPWS 1/10 and PSSP 2/10. (DEHLG, 2010);
- Appropriate Assessment of Land Use Plans. Circular Letter SEA 1/08 & NPWS 1/08;
- Water Services Investment and Rural Water Programmes – Protection of Natural Heritage and National Monuments. Circular L8/08;
- Guidance on Compliance with Regulation 23 of the Habitats Directive. Circular Letter NPWS 2/07; and
- Compliance Conditions in respect of Developments requiring (1) Environmental Impact Assessment (EIA); or (2) having potential impacts on Natura 2000 sites. Circular Letter PD 2/07 and NPWS 1/07.

3.3 Guiding Principles and Case Law

Over time legal interpretation has been sought on the practical application of the legislation concerning AA as some terminology has been found to be unclear. European and National case law has clarified a number

⁷ The Commission has notified its intent to revise this guidance and a draft revised document was published in April 2015. It would appear that this has not been finalised to date, and no revised guidance document is available on the Commissions official website as of February 2017.

of issues and some aspects of the published guidance documents have been superseded by case law. Case law has been considered in the preparation of the AA screening report for the NAP.

3.4 Information Sources Consulted

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

- Information provided by Department of Housing, Local Government and Heritage on the NAP;
- Datasets provided by the Marine Institute: Ireland's Marine Atlas – <https://atlas.marine.ie/>;
- Department of Housing, Planning, Community and Local Government Baseline Report;
- Department of Housing, Planning, Community and Local Government – online land use mapping www.myplan.ie/en/index.html;
- GeoHive online mapping <http://map.geohive.ie/mapviewer.html>;
- Ordnance Survey of Ireland – online mapping and aerial photography www.osi.ie;
- National Parks and Wildlife Service – online European Site information www.npws.ie;
- Northern Ireland Environment Agency – online European Site information www.daera-ni.gov.uk;
- Ireland's Article 17 Reports 2019, National Parks and Wildlife Service;
- Ireland's Article 12 submission to the EU Commission on the *Status and Trends of Bird Species (2008-2012)*;
- Environmental Protection Agency (EPA) – EPA maps www.epa.ie;
- 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 – <https://www.catchments.ie/>;
- Geological Survey of Ireland (GSI) – geology, soils and hydrogeology www.gsi.ie;
- Forest Cover Datasets <https://www.agriculture.gov.ie/forests-service/>;
- Format for a Prioritised Action Framework (PAF) for Natura 2000 www.npws.ie/sites/default/files/general/PAF-IE-2014.pdf; and
- Ireland's National Biodiversity Plan 2017-2021 (DCHG, 2017)⁸.

3.5 Approach to Screening for the NAP

In line with best practice guidance the AA Screening involves the following:

1. Description of the plan;
2. Identification of relevant European Sites;
3. Assessment of likely significant effects;
4. Screening statement/ determination with conclusions.

An overview of the NAP, including background and context are provided in **Chapter 2** of this document. The identification of relevant European Sites and assessment of likely significant effects is covered in **Chapter 4**. The screening recommendation is included in **Chapter 5**.

⁸ Available online at: <https://www.npws.ie/sites/default/files/publications/pdf/National%20Biodiversity%20Action%20Plan%20English.pdf>. Accessed June 2021.

4 SCREENING PROCESS

4.1 Introduction

European Sites comprise (a) Special Areas of Conservation (SACs) that are designated under the Habitats Directive as requiring the conservation of important, rare or threatened habitats and species (other than birds) and (b) Special Protection Areas (SPAs), which are designated under the Birds Directive to conserve certain migratory or rare birds and their habitats. Collectively these sites form the Natura 2000 Network. In accordance with DEHLG Guidance (2009), the AA also takes into account of transboundary impacts where it is identified that the implementation of the plan has the potential to impact on European Sites outside the Member State territory.

4.2 Management of European Sites

AA Screening is not required where the plan or proposed development is connected with, or necessary to the management of any European site. In this case, the proposed plan is not directly connected with or necessary to the management of any European site(s).

4.3 Identification of European and Zone of Influence

In the Republic of Ireland, sites within the Natura 2000 Network are referred to as European sites and comprise SAC and SPA. SACs are concerned with the protection of specific Qualifying interests (QI) and SPAs are concerned with the protection of specific Special Conservation Interests (SCI).

In identifying the Zone of Influence for the AA Screening of the NAP, a number of considerations were taken into account, notably the national and strategic nature of the NAP, the relationship of listed QI and SCI for Ireland and European sites understood to have connectivity. This assessment considers that, since the NAP is a national programme, that all European Sites within the Republic of Ireland and relevant sites and receptors in Northern Ireland are considered.

In the Republic of Ireland, there are 439 SACs which are designated for one or more of 59 habitat types (Annex I of the Directive), 16 of which are designated as 'priority' habitats, owing to their ecological vulnerability, and 26 species (Annex II of the Directive), of which one or more are included as qualifying interests. These are mostly inshore but a small number of reef sites lie far offshore. In addition to the marine mammals listed on Annex II of the Habitats Directive, there are further 22 cetacean species and the leatherback turtle listed on Annex IV. These species require strict protection and, like species on Annex II, require monitoring. There are 58 SAC designated in Northern Ireland.

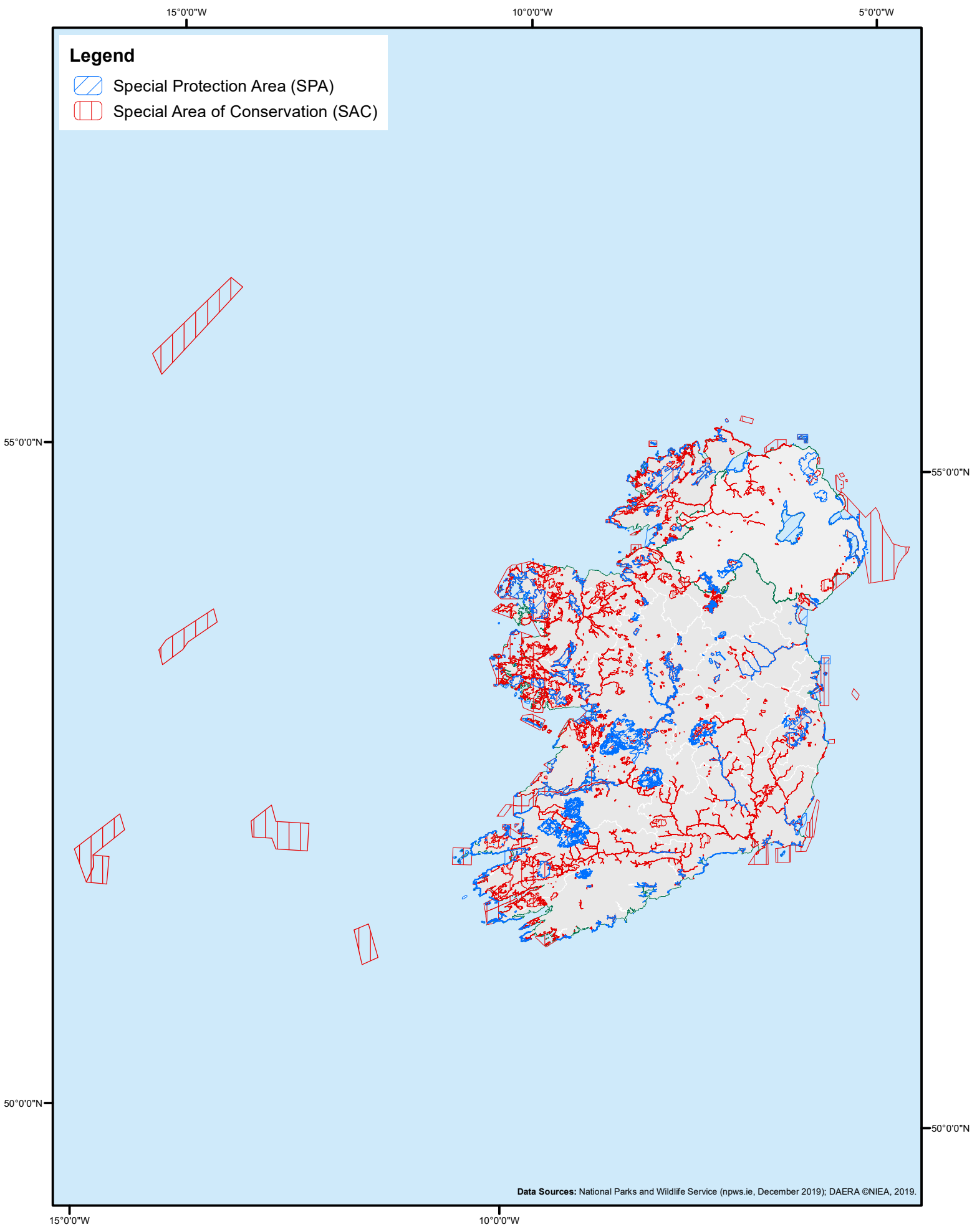
Through the Birds Directive, SPA designated for the protection of endangered species of wild birds including listed rare and vulnerable species, regularly occurring migratory species as well as wetland habitats that support such species. Currently there are 165 SPA designated within the Republic of Ireland and 16 SPA designated in Northern Ireland.

Table 4-1 provides a summary breakdown of the number of European sites in the Republic of Ireland and Northern Ireland and **Figure 4.1** illustrates the distribution of the Irish SAC and SPA in relation to the NAP 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 in the Republic of Ireland and Northern Ireland

European Sites	Republic of Ireland	Northern Ireland
Special Areas of Conservation (SAC)	439	58
Special Protection Area (SPA)	165	16

Data Source: NPWS Datasheets for SACs (May 2020) and SPAs (June 2021).



Data Sources: National Parks and Wildlife Service (npws.ie, December 2019); DAERA ©NIEA, 2019.

Figure 4.1:
European Sites in the Zone of Influence of the NAP

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4.4 Transboundary Considerations

There is potential for the zone of influence of the NAP to encompass transboundary site(s) within the EU Natura 2000 Network outside Irish waters. No specific locations are proposed therefore it is not practical for this report to identify transboundary sites in any detail. AA on lower tier plans and indeed sectoral plans will be in a position to consider transboundary issues in more detail where geographic context can be added.

4.5 Assessment of Likely significant Effects

The main objective of the NAP is to prevent pollution of waters from agricultural sources and to protect and improve water quality. The NAP is prepared under the Nitrates Directive which forms an integral part of the Water Framework Directive (WFD). 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. 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'.

'In order to make Article 4.1(c) on protected areas operational 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 is on those habitats and species dependent on water and on the water related requirements.

'The objectives of the directives are closely related and special attention and coordination is needed where these directives are implemented in the same areas. The measures serving the BHD and the WFD objectives need to be included in the river basin management plans required under Article 13 and should also be included in the management plans of the Natura 2000 sites.'

The WFD does not change what Member States must achieve for the BHD, but it provides a joint framework for the implementation of measures needed by the WFD and BHD in water-dependent Natura 2000 sites. Both the WFD and BHD require the achievement of a high level target or goal.

For the WFD the aim for surface waters is to prevent deterioration in status, to achieve or maintain good ecological status (GES) and good chemical status (good ecological potential and good chemical status in artificial and heavily modified water bodies) by 2015, and to reduce pollution from priority substances and to cease or phase out emissions, discharges and losses of priority hazardous substances. For groundwaters, the objectives are to achieve good quantitative status and good chemical status in all groundwater bodies. This includes also for the protection of directly dependent surface water and terrestrial ecosystems.

The aim of the Habitats Directive is to maintain or restore at Favourable Conservation Status (FCS) the specified habitats and species protected under the Directive. Unlike GES for the WFD there is no time specified by which FCS is to be achieved. The defined habitats and species of 'Community interest' are further sub-divided by protection measures that apply to them under Annexes of the HD. These are:

- Annex I: Specified habitats for which Special Areas of Conservation are to be identified;
- Annex II: Specified species for which Special Areas of Conservation are to be identified;
- Annex IV: Species in need of strict protection; and
- Annex V: Species for which exploitation may be subject to management measures.

Of key significance is the 'integrity' of a site which involves its ecological functions: the coherence of the site's ecological structure and function, across its whole area or habitats, complex of habitats and/or populations of species for which the site is or will be classified (UK DoE, 1994). The decision as to whether a site is adversely affected should focus on and be limited to the site's conservation objectives (EC, 2000). Conservation objectives have been prepared for many SACs and SPAs in Ireland and further are in preparation.

In 2013, National Parks and Wildlife Service produced a report on the Status of EU protected habitats and species in Ireland⁹ which identified that 358 SACs (83%) contain at least one water dependant feature. These SACs intersect with 1770 river water bodies or 55.4%; 153 (76.5%) of transitional water bodies, and 88 (71%) of coastal water bodies.

Fifty-eight habitats and 61 species are covered by the 2013 NPWS Status report of which 44 are water dependent habitats, and 22 are water dependent species. Five water dependent habitats (11%) were deemed to be at favourable conservation status. Eleven water dependent species (50%) are at favourable conservation status.

4.5.1 Conservation Objectives

The overall aim of the Habitats Directive is to *maintain or restore the favourable conservation status* of habitats and species of community interest (the qualifying interest habitats and species for which a site has been designated).

Site specific conservation objectives aim to define favourable conservation condition for these habitats or species at the site level. Maintenance of favourable conservation condition of habitats and species at a site level in turn contributes to maintaining or restoring favourable conservation status of habitats and species at a national level and ultimately at the Natura 2000 Network level.

Given the number of European Sites that could potentially be impacted by the implementation of NAP, it is not practical to list the Conservation Objectives of each site in the screening report, but rather these have been collated for the purposes of the assessment. Rather the generic Conservation Objectives which have been developed by NPWS, and encompass the spirit of site specific Conservation Objectives in the context of *maintain and restore* are presented:

- *To maintain or restore the favourable conservation condition of the qualifying interests i.e. Annex I habitat(s) and/or Annex II species for which the SAC has been selected; and*
- *To maintain the bird species of special conservation interest for which the SPA has been listed at favourable conservation status.*

In undertaking this screening of the NAP, consideration has been given to the potential to impact on the achievement of Conservation Objectives at this more general level in the first instance.

NPWS has published site specific conservation objectives for 109 SACs and 36 SPAs. For each relevant species listed in a Conservation Objectives report for an SAC, details are presented on the following:

- The 'attributes', such as 'population size';
- The 'measures', such as 'occurrence' or 'EPA Q-value'; and
- The 'target', such as 'no reduction from baseline' or 'Q 3-4 value'.

Many of the SAC site specific conservation objectives do not specify numeric Environmental Supporting Conditions, such as a Q-value or nutrient concentration requirement. SPA related site specific conservation objectives do not have detailed water related targets, other than comments on barriers to connectivity, i.e. non-numerical type comments.

4.5.2 Assessment

The potential threats from the NAP on European Sites cannot at this stage be confirmed based on the level of detail available, however they may be inferred particularly in relation to impacts to sensitive habitats, e.g. those sensitive to water emissions. **Table 4.2** outlines the potential likely significant effects associated with each measure proposed under the NAP.

The methodology for the assessment of impacts is derived from the Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites (EC, 2002). When describing changes/activities and impacts on ecosystem structure and function, the types of impacts that are commonly presented include:

⁹ Link: https://www.npws.ie/sites/default/files/publications/pdf/NPWS_2019_Vol1_Summary_Article17.pdf

- Direct and indirect effects;
- Short- and long-term effects;
- Construction, operational and decommissioning effects; and
- Isolated, interactive and cumulative effects.

Impacts that could potentially occur through the implementation of the NAP can be categorised under a number of impact categories as outlined in the EC 2002 document as follows:

- Loss/Reduction of habitat area;
- Disturbance to key species;
- Habitat or species fragmentation;
- Reduction in species density;
- Species mortality; and
- Changes in key indicators of conservation value such as decrease in water quality and quantity.

The analysis presented in **Table 4.2** illustrates that potential likely significant effects cannot currently be ruled out as a result of implementation of the NAP.

Table 4-2: Potential Significant Effects from the NAP

Part/Schedule	Aspects of the NAP with potential for significant effects
General	Just over half of Ireland's monitored surface water bodies have satisfactory water quality and agriculture is the most widespread and significant pressure impacting on the water environment. The EPA report that nearly half of all river sites and one quarter of all groundwater sites have elevated nitrate concentrations. Given the known and observed significant impact that the previous Nitrate Action Programmes have had on water quality and water dependent ecosystems, the fifth NAP is considered to have potential for significant direct, indirect or cumulative effects to European Sites.
Part 1 Preliminary	No. Factual information setting out the purposes and interpretation of the NAP.
Part 2 Farmyard Management	Yes. This part of the NAP specifies a number of specific measures for farmyard management that have potential for likely significant effects on European Sites.
Part 3 Nutrient Management	Yes. This part of the NAP specifies a number of specific measures for nutrient management that have potential for likely significant effects on European Sites.
Part 4 Prevention of Water Pollution from Fertilisers and Certain Activities	Yes. This part of the NAP includes for general provisions including the enforcement of the NAP and therefore there are potential for indirect likely significant effects on European Sites.
Part 5 General	Yes. This part of the NAP specifies a number of specific measures for farmyard management that have potential for likely significant effects on European Sites.
Part 6 Functions of Public Authorities	Yes. While this part of the NAP contains more administrative provisions it does include for monitoring functions and in this regard, has potential for likely significant effects on European Sites.
Part 7 Implementation of Commission Decision	Yes. This part of the NAP contains the specific requirements relating to derogations on the application of livestock manure. While it is not certain that the EU will grant Ireland such a derogation, the continued facilitation of the increased application of nitrogen against the current baseline has potential for likely significant effects on European Sites.
Schedule 1 Soil Test	No. Factual information.

Schedule 2 Criteria as to Storage Capacity and Nutrient Management	No. Factual information.
Schedule 3 Storage Periods for Livestock Manure	No. Factual information.
Schedule 4 Periods when application of fertilisers to land is prohibited	No. Factual information.
Schedule 5 Conditions applying in relation to Derogation	No. Factual information.

4.5.3 In-combination Effects

It is a requirement of Article 6(3) of the Habitats Directive that the in-combination effects with other plans or projects are considered. Consideration has been given, at this draft stage of the NAP, to other relevant plans on a similarly strategic level that have clear potential to have a cumulative impact upon European Sites.

Given the level of detail currently available for the NAP and that potential likely significant effects cannot currently be ruled out as a result of implementation of the programme, it is considered that the NAP has the potential to result in in-combination effects with other plans. Some of the plans considered are listed in **Table 4.3** along with a brief description of the plan.

Table 4-3: In-combination Effects

NAP In Combination with...	Description
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 NAP sets out the PoM to achieve the objectives of the WFD.
Water Services Strategic Plan (2015)	Irish Water has prepared a Water Services Strategic Plan (WSSP, 2015), under Section 33 of the Water Service No. 2 Act of 2013 to 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.
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.
EU Common Agricultural Policy	The EU CAP acts as a partnership between agriculture and society and between Europe and its farmers. The CAP aims to improve farming practises and productivity to help ensure affordable food produce, as well as providing reasonable living for farmers. The EU CAP also focuses on climate change and sustainably managing natural resources and rural landscapes.

SCREENING FOR APPROPRIATE ASSESSMENT OF THE NITRATES ACTION PROGRAMME

Agri-Food Strategy 2030	<p>The 2030 Agri-Food Strategy 2030 builds on its predecessor programmes; Food Harvest 2020 and most recently Food Wise 2025. It aims to establish a vision of how the sector is to develop over the period to 2030 for the benefit of its stakeholders and the wider Irish economy, society and environment. Some of the key high-level targets within the Strategy for having a 'a climate-neutral food system by 2050, with verifiable progress achieved by 2030' include:</p> <ul style="list-style-type: none"> • Reduction of ammonia emissions to below 107,500 tonnes by 2030; and • Reduction of nutrient losses to water by 50% by 2030.
Rural Development Programme 2014-2020	<p>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 balanced development of rural areas. Includes provisions under GLAS; Bio-Energy; nutrient management planning; 'Carbon Navigator' software tool</p>
Action Plan for Rural Development (2019)	<p>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.</p>
National Development Plan 2018-2027	<p>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.</p>
National Planning Framework (Ireland 2040 Our Plan)	<p>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.</p>
Regional Spatial and Economic Strategies	<p>The three regional strategies seek to interpret and implement the NPF at a regional level.</p>
European Union Biodiversity Strategy to 2020 and revised Biodiversity Strategy to 2030	<p>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.</p>
Biodiversity Climate Adaptation Plan [arising from the National Climate Adaptation Framework]	<p>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.</p>
National Biodiversity Action Plan 2017-2021	<p>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.</p>
National Wastewater Sludge Management Plan	<p>Sets out a nationwide standardised approach to ensure that treated wastewater sludge across the country is effectively managed, stored, transported and re-used or disposed of in a sustainable way.</p>
Sewage Sludge Directive Waste (86/278/EEC)	<p>Seeks to encourage the use of sewage sludge in agriculture and to regulate its use in such a way as to prevent harmful effects on soil, vegetation, animals and man. The Directive also specifies rules for the sampling and analysis of sludges and soils.</p>

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. It has a timetable of actions, including producing the EU Circular Economy Action Plan, Chemicals Strategy for Sustainability, which were published in 2020.
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. Under Chapter 12: Waste and the Circular Economy, the plan sets out the recycling targets for waste, one of which is separate collection obligations which are to be extended to include hazardous household waste (by end 2022), bio-waste (by end 2023), and textiles (by end 2025).
The EU Policy Framework for Climate and Energy in the period from 2020 to 2030	Sets targets for the period 2020 to 2030: Target of 27% renewable energy in the EU; Increase energy efficiency by 27% by 2020; and Reaching electricity interconnection target of 15% between EU countries by 2030.
Energy Roadmap 2050	This roadmap does not set specific energy targets at this point but does aim to achieve an 80% to 95% reduction in greenhouse gases compared to 1990 levels by 2050.
Eight Environmental Action Programme (2021-2030)	The 8 th 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.

5 SCREENING CONCLUSION

On completion of the AA Screening, it was determined that the potential for likely significant effects on European sites could not be ruled out and the NAP should undergo AA. Furthermore, it was noted at that time that given the high level nature of the NAP, mitigation in the form of protection policies would likely be required to prevent adverse impacts on site integrity. With this in mind, the AA process then proceeded to the preparation of a NIS to inform the AA to be undertaken by DHLGH.

Appendix B
List of SACs in the
Republic of Ireland

Site Code	Site Name	Habitat/ Species Name
IE0000006	Killyconny Bog (Cloghbally) SAC	Active raised bogs
IE0000006	Killyconny Bog (Cloghbally) SAC	Degraded raised bogs still capable of natural regeneration
IE0000007	Lough Oughter and Associated Loughs SAC	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation
IE0000007	Lough Oughter and Associated Loughs SAC	Bog woodland
IE0000007	Lough Oughter and Associated Loughs SAC	Lutra lutra
IE0000014	Ballyallia Lake SAC	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation
IE0000016	Ballycullinan Lake SAC	Calcareous fens with Cladium mariscus and species of the Caricion davallianae
IE0000019	Ballyogan Lough SAC	Calcareous fens with Cladium mariscus and species of the Caricion davallianae
IE0000020	Black Head-Poulsallagh Complex SAC	Reefs
IE0000020	Black Head-Poulsallagh Complex SAC	Perennial vegetation of stony banks
IE0000020	Black Head-Poulsallagh Complex SAC	Fixed coastal dunes with herbaceous vegetation (""grey dunes"")
IE0000020	Black Head-Poulsallagh Complex SAC	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation
IE0000020	Black Head-Poulsallagh Complex SAC	Alpine and Boreal heaths
IE0000020	Black Head-Poulsallagh Complex SAC	Juniperus communis formations on heaths or calcareous grasslands
IE0000020	Black Head-Poulsallagh Complex SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)
IE0000020	Black Head-Poulsallagh Complex SAC	Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)
IE0000020	Black Head-Poulsallagh Complex SAC	Petrifying springs with tufa formation (Cratoneurion)
IE0000020	Black Head-Poulsallagh Complex SAC	Limestone pavements
IE0000020	Black Head-Poulsallagh Complex SAC	Submerged or partially submerged sea caves
IE0000020	Black Head-Poulsallagh Complex SAC	Petalophyllum ralfsii
IE0000030	Danes Hole, Poulnalecka SAC	Caves not open to the public
IE0000030	Danes Hole, Poulnalecka SAC	Old sessile oak woods with Ilex and Blechnum in the British Isles
IE0000030	Danes Hole, Poulnalecka SAC	Rhinolophus hipposideros
IE0000032	Dromore Woods and Loughs SAC	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation
IE0000032	Dromore Woods and Loughs SAC	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels
IE0000032	Dromore Woods and Loughs SAC	Limestone pavements
IE0000032	Dromore Woods and Loughs SAC	Rhinolophus hipposideros
IE0000032	Dromore Woods and Loughs SAC	Lutra lutra
IE0000036	Inagh River Estuary SAC	Salicornia and other annuals colonizing mud and sand

Site Code	Site Name	Habitat/ Species Name
IE0000036	Inagh River Estuary SAC	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)
IE0000036	Inagh River Estuary SAC	Mediterranean salt meadows (<i>Juncetalia maritimi</i>)
IE0000036	Inagh River Estuary SAC	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")
IE0000036	Inagh River Estuary SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0000037	Pouladatig Cave SAC	Caves not open to the public
IE0000037	Pouladatig Cave SAC	<i>Rhinolophus hipposideros</i>
IE0000051	Lough Gash Turlough SAC	Turloughs
IE0000051	Lough Gash Turlough SAC	Rivers with muddy banks with <i>Chenopodium rubri</i> p.p. and <i>Bidention</i> p.p. vegetation
IE0000054	Moneen Mountain SAC	Turloughs
IE0000054	Moneen Mountain SAC	Alpine and Boreal heaths
IE0000054	Moneen Mountain SAC	<i>Juniperus communis</i> formations on heaths or calcareous grasslands
IE0000054	Moneen Mountain SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites)
IE0000054	Moneen Mountain SAC	Petrifying springs with tufa formation (<i>Cratoneurion</i>)
IE0000054	Moneen Mountain SAC	Limestone pavements
IE0000054	Moneen Mountain SAC	<i>Euphydryas aurinia</i>
IE0000054	Moneen Mountain SAC	<i>Rhinolophus hipposideros</i>
IE0000057	Moyree River System SAC	Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation
IE0000057	Moyree River System SAC	Alkaline fens
IE0000057	Moyree River System SAC	Limestone pavements
IE0000057	Moyree River System SAC	Caves not open to the public
IE0000057	Moyree River System SAC	<i>Rhinolophus hipposideros</i>
IE0000057	Moyree River System SAC	<i>Lutra lutra</i>
IE0000064	Poulnagordon Cave (Quin) SAC	Caves not open to the public
IE0000064	Poulnagordon Cave (Quin) SAC	<i>Rhinolophus hipposideros</i>
IE0000077	Ballymacoda (Clonpriest and Pillmore) SAC	Estuaries
IE0000077	Ballymacoda (Clonpriest and Pillmore) SAC	Mudflats and sandflats not covered by seawater at low tide
IE0000077	Ballymacoda (Clonpriest and Pillmore) SAC	<i>Salicornia</i> and other annuals colonizing mud and sand
IE0000077	Ballymacoda (Clonpriest and Pillmore) SAC	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)
IE0000077	Ballymacoda (Clonpriest and Pillmore) SAC	Mediterranean salt meadows (<i>Juncetalia maritimi</i>)
IE0000090	Glengarriff Harbour and Woodland SAC	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles
IE0000090	Glengarriff Harbour and Woodland SAC	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)

Site Code	Site Name	Habitat/ Species Name
IE0000090	Glengarriff Harbour and Woodland SAC	Geomalacus maculosus
IE0000090	Glengarriff Harbour and Woodland SAC	Rhinolophus hipposideros
IE0000090	Glengarriff Harbour and Woodland SAC	Lutra lutra
IE0000090	Glengarriff Harbour and Woodland SAC	Phoca vitulina
IE0000091	Clonakilty Bay SAC	Mudflats and sandflats not covered by seawater at low tide
IE0000091	Clonakilty Bay SAC	Annual vegetation of drift lines
IE0000091	Clonakilty Bay SAC	Embryonic shifting dunes
IE0000091	Clonakilty Bay SAC	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")
IE0000091	Clonakilty Bay SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0000091	Clonakilty Bay SAC	Atlantic decalcified fixed dunes (Calluno-Ulicetea)
IE0000093	Caha Mountains SAC	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)
IE0000093	Caha Mountains SAC	Natural dystrophic lakes and ponds
IE0000093	Caha Mountains SAC	Northern Atlantic wet heaths with Erica tetralix
IE0000093	Caha Mountains SAC	European dry heaths
IE0000093	Caha Mountains SAC	Alpine and Boreal heaths
IE0000093	Caha Mountains SAC	Species-rich Nardus grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)
IE0000093	Caha Mountains SAC	Blanket bogs (* if active bog)
IE0000093	Caha Mountains SAC	Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)
IE0000093	Caha Mountains SAC	Calcareous rocky slopes with chasmophytic vegetation
IE0000093	Caha Mountains SAC	Siliceous rocky slopes with chasmophytic vegetation
IE0000093	Caha Mountains SAC	Geomalacus maculosus
IE0000093	Caha Mountains SAC	Trichomanes speciosum
IE0000097	Lough Hyne Nature Reserve and Environs SAC	Large shallow inlets and bays
IE0000097	Lough Hyne Nature Reserve and Environs SAC	Reefs
IE0000097	Lough Hyne Nature Reserve and Environs SAC	Submerged or partially submerged sea caves
IE0000101	Roaringwater Bay and Islands SAC	Large shallow inlets and bays
IE0000101	Roaringwater Bay and Islands SAC	Reefs
IE0000101	Roaringwater Bay and Islands SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0000101	Roaringwater Bay and Islands SAC	European dry heaths
IE0000101	Roaringwater Bay and Islands SAC	Submerged or partially submerged sea caves
IE0000101	Roaringwater Bay and Islands SAC	Phocoena phocoena

Site Code	Site Name	Habitat/ Species Name
IE0000101	Roaringwater Bay and Islands SAC	Lutra lutra
IE0000101	Roaringwater Bay and Islands SAC	Halichoerus grypus
IE0000102	Sheep's Head SAC	Northern Atlantic wet heaths with Erica tetralix
IE0000102	Sheep's Head SAC	European dry heaths
IE0000102	Sheep's Head SAC	Geomalacus maculosus
IE0000106	St. Gobnet's Wood SAC	Old sessile oak woods with Ilex and Blechnum in the British Isles
IE0000108	The Gearagh SAC	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation
IE0000108	The Gearagh SAC	Rivers with muddy banks with Chenopodium rubri p.p. and Bidention p.p. vegetation
IE0000108	The Gearagh SAC	Old sessile oak woods with Ilex and Blechnum in the British Isles
IE0000108	The Gearagh SAC	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)
IE0000108	The Gearagh SAC	Lutra lutra
IE0000109	Three Castle Head to Mizen Head SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0000109	Three Castle Head to Mizen Head SAC	European dry heaths
IE0000111	Aran Island (Donegal) Cliffs SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0000111	Aran Island (Donegal) Cliffs SAC	European dry heaths
IE0000111	Aran Island (Donegal) Cliffs SAC	Alpine and Boreal heaths
IE0000111	Aran Island (Donegal) Cliffs SAC	Calcareous rocky slopes with chasmophytic vegetation
IE0000111	Aran Island (Donegal) Cliffs SAC	Siliceous rocky slopes with chasmophytic vegetation
IE0000111	Aran Island (Donegal) Cliffs SAC	Submerged or partially submerged sea caves
IE0000115	Ballintra SAC	European dry heaths
IE0000115	Ballintra SAC	Limestone pavements
IE0000116	Ballyarr Wood SAC	Old sessile oak woods with Ilex and Blechnum in the British Isles
IE0000129	Croaghonagh Bog SAC	Blanket bogs (* if active bog)
IE0000133	Donegal Bay (Murvagh) SAC	Mudflats and sandflats not covered by seawater at low tide
IE0000133	Donegal Bay (Murvagh) SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0000133	Donegal Bay (Murvagh) SAC	Dunes with Salix repens ssp. argentea (Salicion arenariae)
IE0000133	Donegal Bay (Murvagh) SAC	Humid dune slacks
IE0000133	Donegal Bay (Murvagh) SAC	Phoca vitulina
IE0000138	Durnesh Lough SAC	Coastal lagoons
IE0000138	Durnesh Lough SAC	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)
IE0000140	Fawnboy Bog/Lough Nacung SAC	Northern Atlantic wet heaths with Erica tetralix

Site Code	Site Name	Habitat/ Species Name
IE0000140	Fawnboy Bog/Lough Nacung SAC	Blanket bogs (* if active bog)
IE0000140	Fawnboy Bog/Lough Nacung SAC	Depressions on peat substrates of the Rhynchosporion
IE0000140	Fawnboy Bog/Lough Nacung SAC	Margaritifera margaritifera
IE0000142	Gannivegil Bog SAC	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)
IE0000142	Gannivegil Bog SAC	Northern Atlantic wet heaths with Erica tetralix
IE0000142	Gannivegil Bog SAC	Blanket bogs (* if active bog)
IE0000147	Horn Head and Rinclevan SAC	Embryonic shifting dunes
IE0000147	Horn Head and Rinclevan SAC	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")
IE0000147	Horn Head and Rinclevan SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0000147	Horn Head and Rinclevan SAC	Dunes with Salix repens ssp. argentea (Salicion arenariae)
IE0000147	Horn Head and Rinclevan SAC	Humid dune slacks
IE0000147	Horn Head and Rinclevan SAC	Machairs (* in Ireland)
IE0000147	Horn Head and Rinclevan SAC	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoetes-Nanojuncetea
IE0000147	Horn Head and Rinclevan SAC	Vertigo geyeri
IE0000147	Horn Head and Rinclevan SAC	Halichoerus grypus
IE0000147	Horn Head and Rinclevan SAC	Petalophyllum ralfsii
IE0000147	Horn Head and Rinclevan SAC	Najas flexilis
IE0000154	Inishtrahull SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0000163	Lough Eske and Ardnamona Wood SAC	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)
IE0000163	Lough Eske and Ardnamona Wood SAC	Petrifying springs with tufa formation (Cratoneurion)
IE0000163	Lough Eske and Ardnamona Wood SAC	Old sessile oak woods with Ilex and Blechnum in the British Isles
IE0000163	Lough Eske and Ardnamona Wood SAC	Margaritifera margaritifera
IE0000163	Lough Eske and Ardnamona Wood SAC	Salmo salar
IE0000163	Lough Eske and Ardnamona Wood SAC	Trichomanes speciosum
IE0000164	Lough Nagreany Dunes SAC	Embryonic shifting dunes
IE0000164	Lough Nagreany Dunes SAC	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")
IE0000164	Lough Nagreany Dunes SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0000164	Lough Nagreany Dunes SAC	Decalcified fixed dunes with Empetrum nigrum
IE0000164	Lough Nagreany Dunes SAC	Atlantic decalcified fixed dunes (Calluno-Ulicetea)
IE0000164	Lough Nagreany Dunes SAC	Dunes with Salix repens ssp. argentea (Salicion arenariae)
IE0000164	Lough Nagreany Dunes SAC	Humid dune slacks

Site Code	Site Name	Habitat/ Species Name
IE0000164	Lough Nagreany Dunes SAC	Machairs (* in Ireland)
IE0000164	Lough Nagreany Dunes SAC	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoetes to Nannojuncetea
IE0000164	Lough Nagreany Dunes SAC	Najas flexilis
IE0000165	Lough Nillan Bog (Carrickatlieve) SAC	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)
IE0000165	Lough Nillan Bog (Carrickatlieve) SAC	Blanket bogs (* if active bog)
IE0000168	Magheradrumman Bog SAC	Northern Atlantic wet heaths with Erica tetralix
IE0000168	Magheradrumman Bog SAC	Blanket bogs (* if active bog)
IE0000172	Meenaguse/Ardbane Bog SAC	Blanket bogs (* if active bog)
IE0000173	Meentygrannagh Bog SAC	Blanket bogs (* if active bog)
IE0000173	Meentygrannagh Bog SAC	Transition mires and quaking bogs
IE0000173	Meentygrannagh Bog SAC	Alkaline fens
IE0000173	Meentygrannagh Bog SAC	Hamatocaulis vernicosus
IE0000174	Curraghchase Woods SAC	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)
IE0000174	Curraghchase Woods SAC	Taxus baccata woods of the British Isles
IE0000174	Curraghchase Woods SAC	Vertigo moulinsiana
IE0000174	Curraghchase Woods SAC	Rhinolophus hipposideros
IE0000181	Rathlin O'Birne Island SAC	Reefs
IE0000185	Sessiagh Lough SAC	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoetes to Nannojuncetea
IE0000185	Sessiagh Lough SAC	Najas flexilis
IE0000189	Slieve League SAC	Reefs
IE0000189	Slieve League SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0000189	Slieve League SAC	Northern Atlantic wet heaths with Erica tetralix
IE0000189	Slieve League SAC	European dry heaths
IE0000189	Slieve League SAC	Alpine and Boreal heaths
IE0000189	Slieve League SAC	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels
IE0000189	Slieve League SAC	Blanket bogs (* if active bog)
IE0000189	Slieve League SAC	Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)
IE0000189	Slieve League SAC	Calcareous rocky slopes with chasmophytic vegetation
IE0000189	Slieve League SAC	Siliceous rocky slopes with chasmophytic vegetation
IE0000190	Slieve Tooley/Tormore Island/Loughros Beg Bay SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts

Site Code	Site Name	Habitat/ Species Name
IE0000190	Slieve Tooley/Tormore Island/Loughros Beg Bay SAC	Embryonic shifting dunes
IE0000190	Slieve Tooley/Tormore Island/Loughros Beg Bay SAC	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")
IE0000190	Slieve Tooley/Tormore Island/Loughros Beg Bay SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0000190	Slieve Tooley/Tormore Island/Loughros Beg Bay SAC	Decalcified fixed dunes with <i>Empetrum nigrum</i>
IE0000190	Slieve Tooley/Tormore Island/Loughros Beg Bay SAC	Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>)
IE0000190	Slieve Tooley/Tormore Island/Loughros Beg Bay SAC	Alpine and Boreal heaths
IE0000190	Slieve Tooley/Tormore Island/Loughros Beg Bay SAC	Blanket bogs (* if active bog)
IE0000190	Slieve Tooley/Tormore Island/Loughros Beg Bay SAC	<i>Vertigo angustior</i>
IE0000190	Slieve Tooley/Tormore Island/Loughros Beg Bay SAC	<i>Lutra lutra</i>
IE0000190	Slieve Tooley/Tormore Island/Loughros Beg Bay SAC	<i>Halichoerus grypus</i>
IE0000191	St. John's Point SAC	Large shallow inlets and bays
IE0000191	St. John's Point SAC	Reefs
IE0000191	St. John's Point SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0000191	St. John's Point SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites)
IE0000191	St. John's Point SAC	<i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>)
IE0000191	St. John's Point SAC	Alkaline fens
IE0000191	St. John's Point SAC	Limestone pavements
IE0000191	St. John's Point SAC	Submerged or partially submerged sea caves
IE0000191	St. John's Point SAC	<i>Euphydryas aurinia</i>
IE0000194	Tranarossan and Melmore Lough SAC	Mudflats and sandflats not covered by seawater at low tide
IE0000194	Tranarossan and Melmore Lough SAC	Annual vegetation of drift lines
IE0000194	Tranarossan and Melmore Lough SAC	Perennial vegetation of stony banks
IE0000194	Tranarossan and Melmore Lough SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0000194	Tranarossan and Melmore Lough SAC	Embryonic shifting dunes
IE0000194	Tranarossan and Melmore Lough SAC	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")
IE0000194	Tranarossan and Melmore Lough SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0000194	Tranarossan and Melmore Lough SAC	Decalcified fixed dunes with <i>Empetrum nigrum</i>
IE0000194	Tranarossan and Melmore Lough SAC	Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>)
IE0000194	Tranarossan and Melmore Lough SAC	Machairs (* in Ireland)
IE0000194	Tranarossan and Melmore Lough SAC	Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.
IE0000194	Tranarossan and Melmore Lough SAC	European dry heaths

Site Code	Site Name	Habitat/ Species Name
IE0000194	Tranarossan and Melmore Lough SAC	Alpine and Boreal heaths
IE0000194	Tranarossan and Melmore Lough SAC	Petalophyllum ralfsii
IE0000197	West of Ardara/Maas Road SAC	Estuaries
IE0000197	West of Ardara/Maas Road SAC	Mudflats and sandflats not covered by seawater at low tide
IE0000197	West of Ardara/Maas Road SAC	Large shallow inlets and bays
IE0000197	West of Ardara/Maas Road SAC	Annual vegetation of drift lines
IE0000197	West of Ardara/Maas Road SAC	Atlantic salt meadows (Glauco-Puccinellietalia maritima)
IE0000197	West of Ardara/Maas Road SAC	Mediterranean salt meadows (Juncetalia maritimi)
IE0000197	West of Ardara/Maas Road SAC	Embryonic shifting dunes
IE0000197	West of Ardara/Maas Road SAC	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")
IE0000197	West of Ardara/Maas Road SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0000197	West of Ardara/Maas Road SAC	Decalcified fixed dunes with Empetrum nigrum
IE0000197	West of Ardara/Maas Road SAC	Atlantic decalcified fixed dunes (Calluno-Ulicetea)
IE0000197	West of Ardara/Maas Road SAC	Dunes with Salix repens ssp. argentea (Salicion arenaria)
IE0000197	West of Ardara/Maas Road SAC	Humid dune slacks
IE0000197	West of Ardara/Maas Road SAC	Machairs (* in Ireland)
IE0000197	West of Ardara/Maas Road SAC	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)
IE0000197	West of Ardara/Maas Road SAC	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoetes-Nanojuncetea
IE0000197	West of Ardara/Maas Road SAC	Northern Atlantic wet heaths with Erica tetralix
IE0000197	West of Ardara/Maas Road SAC	European dry heaths
IE0000197	West of Ardara/Maas Road SAC	Alpine and Boreal heaths
IE0000197	West of Ardara/Maas Road SAC	Juniperus communis formations on heaths or calcareous grasslands
IE0000197	West of Ardara/Maas Road SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)
IE0000197	West of Ardara/Maas Road SAC	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)
IE0000197	West of Ardara/Maas Road SAC	Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)
IE0000197	West of Ardara/Maas Road SAC	Blanket bogs (* if active bog)
IE0000197	West of Ardara/Maas Road SAC	Depressions on peat substrates of the Rhynchosporion
IE0000197	West of Ardara/Maas Road SAC	Alkaline fens
IE0000197	West of Ardara/Maas Road SAC	Vertigo geyeri
IE0000197	West of Ardara/Maas Road SAC	Margaritifera margaritifera

Site Code	Site Name	Habitat/ Species Name
IE0000197	West of Ardara/Maas Road SAC	Euphydryas aurinia
IE0000197	West of Ardara/Maas Road SAC	Salmo salar
IE0000197	West of Ardara/Maas Road SAC	Lutra lutra
IE0000197	West of Ardara/Maas Road SAC	Phoca vitulina
IE0000197	West of Ardara/Maas Road SAC	Petalophyllum ralfsii
IE0000197	West of Ardara/Maas Road SAC	Najas flexilis
IE0000199	Baldoyle Bay SAC	Mudflats and sandflats not covered by seawater at low tide
IE0000199	Baldoyle Bay SAC	Salicornia and other annuals colonizing mud and sand
IE0000199	Baldoyle Bay SAC	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)
IE0000199	Baldoyle Bay SAC	Mediterranean salt meadows (Juncetalia maritimi)
IE0000202	Howth Head SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0000202	Howth Head SAC	European dry heaths
IE0000204	Lambay Island SAC	Reefs
IE0000204	Lambay Island SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0000204	Lambay Island SAC	Halichoerus grypus
IE0000204	Lambay Island SAC	Phoca vitulina
IE0000205	Malahide Estuary SAC	Mudflats and sandflats not covered by seawater at low tide
IE0000205	Malahide Estuary SAC	Salicornia and other annuals colonizing mud and sand
IE0000205	Malahide Estuary SAC	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)
IE0000205	Malahide Estuary SAC	Mediterranean salt meadows (Juncetalia maritimi)
IE0000205	Malahide Estuary SAC	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")
IE0000205	Malahide Estuary SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0000206	North Dublin Bay SAC	Mudflats and sandflats not covered by seawater at low tide
IE0000206	North Dublin Bay SAC	Annual vegetation of drift lines
IE0000206	North Dublin Bay SAC	Salicornia and other annuals colonizing mud and sand
IE0000206	North Dublin Bay SAC	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)
IE0000206	North Dublin Bay SAC	Mediterranean salt meadows (Juncetalia maritimi)
IE0000206	North Dublin Bay SAC	Embryonic shifting dunes
IE0000206	North Dublin Bay SAC	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")
IE0000206	North Dublin Bay SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0000206	North Dublin Bay SAC	Humid dune slacks

Site Code	Site Name	Habitat/ Species Name
IE0000206	North Dublin Bay SAC	Petalophyllum ralfsii
IE0000208	Rogerstown Estuary SAC	Estuaries
IE0000208	Rogerstown Estuary SAC	Mudflats and sandflats not covered by seawater at low tide
IE0000208	Rogerstown Estuary SAC	Salicornia and other annuals colonizing mud and sand
IE0000208	Rogerstown Estuary SAC	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)
IE0000208	Rogerstown Estuary SAC	Mediterranean salt meadows (Juncetalia maritimi)
IE0000208	Rogerstown Estuary SAC	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")
IE0000208	Rogerstown Estuary SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0000210	South Dublin Bay SAC	Mudflats and sandflats not covered by seawater at low tide
IE0000210	South Dublin Bay SAC	Annual vegetation of drift lines
IE0000210	South Dublin Bay SAC	Salicornia and other annuals colonizing mud and sand
IE0000210	South Dublin Bay SAC	Embryonic shifting dunes
IE0000212	Inishmaan Island SAC	Reefs
IE0000212	Inishmaan Island SAC	Perennial vegetation of stony banks
IE0000212	Inishmaan Island SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0000212	Inishmaan Island SAC	Embryonic shifting dunes
IE0000212	Inishmaan Island SAC	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")
IE0000212	Inishmaan Island SAC	Machairs (* in Ireland)
IE0000212	Inishmaan Island SAC	European dry heaths
IE0000212	Inishmaan Island SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)
IE0000212	Inishmaan Island SAC	Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)
IE0000212	Inishmaan Island SAC	Limestone pavements
IE0000213	Inishmore Island SAC	Coastal lagoons
IE0000213	Inishmore Island SAC	Reefs
IE0000213	Inishmore Island SAC	Perennial vegetation of stony banks
IE0000213	Inishmore Island SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0000213	Inishmore Island SAC	Embryonic shifting dunes
IE0000213	Inishmore Island SAC	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")
IE0000213	Inishmore Island SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0000213	Inishmore Island SAC	Dunes with Salix repens ssp. argentea (Salicion arenariae)
IE0000213	Inishmore Island SAC	Humid dune slacks

Site Code	Site Name	Habitat/ Species Name
IE0000213	Inishmore Island SAC	Machairs (* in Ireland)
IE0000213	Inishmore Island SAC	European dry heaths
IE0000213	Inishmore Island SAC	Alpine and Boreal heaths
IE0000213	Inishmore Island SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)
IE0000213	Inishmore Island SAC	Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)
IE0000213	Inishmore Island SAC	Limestone pavements
IE0000213	Inishmore Island SAC	Submerged or partially submerged sea caves
IE0000213	Inishmore Island SAC	Vertigo angustior
IE0000216	River Shannon Callows SAC	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)
IE0000216	River Shannon Callows SAC	Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)
IE0000216	River Shannon Callows SAC	Limestone pavements
IE0000216	River Shannon Callows SAC	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)
IE0000216	River Shannon Callows SAC	Lutra lutra
IE0000218	Coolcam Turlough SAC	Turloughs
IE0000231	Barroughter Bog SAC	Active raised bogs
IE0000231	Barroughter Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0000231	Barroughter Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0000238	Caherglassaun Turlough SAC	Turloughs
IE0000238	Caherglassaun Turlough SAC	Rivers with muddy banks with Chenopodium rubri p.p. and Bidens p.p. vegetation
IE0000238	Caherglassaun Turlough SAC	Rhinolophus hipposideros
IE0000242	Castletaylor Complex SAC	Turloughs
IE0000242	Castletaylor Complex SAC	Alpine and Boreal heaths
IE0000242	Castletaylor Complex SAC	Juniperus communis formations on heaths or calcareous grasslands
IE0000242	Castletaylor Complex SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)
IE0000242	Castletaylor Complex SAC	Limestone pavements
IE0000248	Cloonmoylan Bog SAC	Active raised bogs
IE0000248	Cloonmoylan Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0000248	Cloonmoylan Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0000248	Cloonmoylan Bog SAC	Bog woodland
IE0000252	Coole-Garryland Complex SAC	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation

Site Code	Site Name	Habitat/ Species Name
IE0000252	Coole-Garryland Complex SAC	Turloughs
IE0000252	Coole-Garryland Complex SAC	Rivers with muddy banks with <i>Chenopodium rubri</i> p.p. and <i>Bidention</i> p.p. vegetation
IE0000252	Coole-Garryland Complex SAC	<i>Juniperus communis</i> formations on heaths or calcareous grasslands
IE0000252	Coole-Garryland Complex SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites)
IE0000252	Coole-Garryland Complex SAC	Limestone pavements
IE0000252	Coole-Garryland Complex SAC	<i>Taxus baccata</i> woods of the British Isles
IE0000255	Croaghill Turlough SAC	Turloughs
IE0000261	Derrycrag Wood Nature Reserve SAC	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles
IE0000268	Galway Bay Complex SAC	Mudflats and sandflats not covered by seawater at low tide
IE0000268	Galway Bay Complex SAC	Coastal lagoons
IE0000268	Galway Bay Complex SAC	Large shallow inlets and bays
IE0000268	Galway Bay Complex SAC	Reefs
IE0000268	Galway Bay Complex SAC	Perennial vegetation of stony banks
IE0000268	Galway Bay Complex SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0000268	Galway Bay Complex SAC	<i>Salicornia</i> and other annuals colonizing mud and sand
IE0000268	Galway Bay Complex SAC	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)
IE0000268	Galway Bay Complex SAC	Mediterranean salt meadows (<i>Juncetalia maritimi</i>)
IE0000268	Galway Bay Complex SAC	Turloughs
IE0000268	Galway Bay Complex SAC	<i>Juniperus communis</i> formations on heaths or calcareous grasslands
IE0000268	Galway Bay Complex SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites)
IE0000268	Galway Bay Complex SAC	Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>
IE0000268	Galway Bay Complex SAC	Alkaline fens
IE0000268	Galway Bay Complex SAC	Limestone pavements
IE0000268	Galway Bay Complex SAC	<i>Lutra lutra</i>
IE0000268	Galway Bay Complex SAC	<i>Phoca vitulina</i>
IE0000278	Inishbofin and Inishshark SAC	Coastal lagoons
IE0000278	Inishbofin and Inishshark SAC	Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>)
IE0000278	Inishbofin and Inishshark SAC	Northern Atlantic wet heaths with <i>Erica tetralix</i>
IE0000278	Inishbofin and Inishshark SAC	European dry heaths
IE0000278	Inishbofin and Inishshark SAC	<i>Halichoerus grypus</i>

Site Code	Site Name	Habitat/ Species Name
IE0000285	Kilsallagh Bog SAC	Active raised bogs
IE0000285	Kilsallagh Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0000285	Kilsallagh Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0000286	Kiltartan Cave (Coole) SAC	Caves not open to the public
IE0000286	Kiltartan Cave (Coole) SAC	Rhinolophus hipposideros
IE0000295	Levally Lough SAC	Turloughs
IE0000296	Lisnageeragh Bog and Ballinastack Turlough SAC	Turloughs
IE0000296	Lisnageeragh Bog and Ballinastack Turlough SAC	Active raised bogs
IE0000296	Lisnageeragh Bog and Ballinastack Turlough SAC	Degraded raised bogs still capable of natural regeneration
IE0000296	Lisnageeragh Bog and Ballinastack Turlough SAC	Depressions on peat substrates of the Rhynchosporion
IE0000297	Lough Corrib SAC	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)
IE0000297	Lough Corrib SAC	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoetes-Nanojuncetea
IE0000297	Lough Corrib SAC	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.
IE0000297	Lough Corrib SAC	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation
IE0000297	Lough Corrib SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)
IE0000297	Lough Corrib SAC	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)
IE0000297	Lough Corrib SAC	Active raised bogs
IE0000297	Lough Corrib SAC	Degraded raised bogs still capable of natural regeneration
IE0000297	Lough Corrib SAC	Depressions on peat substrates of the Rhynchosporion
IE0000297	Lough Corrib SAC	Calcareous fens with Cladium mariscus and species of the Caricion davallianae
IE0000297	Lough Corrib SAC	Petrifying springs with tufa formation (Cratoneurion)
IE0000297	Lough Corrib SAC	Alkaline fens
IE0000297	Lough Corrib SAC	Limestone pavements
IE0000297	Lough Corrib SAC	Old sessile oak woods with Ilex and Blechnum in the British Isles
IE0000297	Lough Corrib SAC	Bog woodland
IE0000297	Lough Corrib SAC	Margaritifera margaritifera
IE0000297	Lough Corrib SAC	Austropotamobius pallipes
IE0000297	Lough Corrib SAC	Petromyzon marinus
IE0000297	Lough Corrib SAC	Lampetra planeri
IE0000297	Lough Corrib SAC	Salmo salar

Site Code	Site Name	Habitat/ Species Name
IE0000297	Lough Corrib SAC	Rhinolophus hipposideros
IE0000297	Lough Corrib SAC	Lutra lutra
IE0000297	Lough Corrib SAC	Najas flexilis
IE0000297	Lough Corrib SAC	Hamatocaulis vernicosus
IE0000299	Lough Cutra SAC	Rhinolophus hipposideros
IE0000301	Lough Lurteen Bog/Glenamaddy Turlough SAC	Turloughs
IE0000301	Lough Lurteen Bog/Glenamaddy Turlough SAC	Rivers with muddy banks with Chenopodium rubri p.p. and Bidention p.p. vegetation
IE0000301	Lough Lurteen Bog/Glenamaddy Turlough SAC	Active raised bogs
IE0000301	Lough Lurteen Bog/Glenamaddy Turlough SAC	Degraded raised bogs still capable of natural regeneration
IE0000301	Lough Lurteen Bog/Glenamaddy Turlough SAC	Depressions on peat substrates of the Rhynchosporion
IE0000304	Lough Rea SAC	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.
IE0000308	Loughatorick South Bog SAC	Blanket bogs (* if active bog)
IE0000318	Peterswell Turlough SAC	Turloughs
IE0000318	Peterswell Turlough SAC	Rivers with muddy banks with Chenopodium rubri p.p. and Bidention p.p. vegetation
IE0000319	Pollnacknockaun Wood Nature Reserve SAC	Old sessile oak woods with Ilex and Blechnum in the British Isles
IE0000322	Rahasane Turlough SAC	Turloughs
IE0000324	Rosroe Bog SAC	Blanket bogs (* if active bog)
IE0000324	Rosroe Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0000326	Shankill West Bog SAC	Active raised bogs
IE0000326	Shankill West Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0000326	Shankill West Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0000328	Slyne Head Islands SAC	Reefs
IE0000328	Slyne Head Islands SAC	Tursiops truncatus
IE0000328	Slyne Head Islands SAC	Halichoerus grypus
IE0000330	Tully Mountain SAC	European dry heaths
IE0000330	Tully Mountain SAC	Alpine and Boreal heaths
IE0000332	Akeragh, Banna and Barrow Harbour SAC	Annual vegetation of drift lines
IE0000332	Akeragh, Banna and Barrow Harbour SAC	Salicornia and other annuals colonizing mud and sand
IE0000332	Akeragh, Banna and Barrow Harbour SAC	Atlantic salt meadows (Glauco-Puccinellietalia maritima)
IE0000332	Akeragh, Banna and Barrow Harbour SAC	Mediterranean salt meadows (Juncetalia maritimi)
IE0000332	Akeragh, Banna and Barrow Harbour SAC	Embryonic shifting dunes

Site Code	Site Name	Habitat/ Species Name
IE0000332	Akeragh, Banna and Barrow Harbour SAC	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")
IE0000332	Akeragh, Banna and Barrow Harbour SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0000332	Akeragh, Banna and Barrow Harbour SAC	Humid dune slacks
IE0000332	Akeragh, Banna and Barrow Harbour SAC	European dry heaths
IE0000335	Ballinskelligs Bay and Inny Estuary SAC	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)
IE0000335	Ballinskelligs Bay and Inny Estuary SAC	Mediterranean salt meadows (<i>Juncetalia maritimi</i>)
IE0000335	Ballinskelligs Bay and Inny Estuary SAC	<i>Petalophyllum ralfsii</i>
IE0000343	Castlemaine Harbour SAC	Estuaries
IE0000343	Castlemaine Harbour SAC	Mudflats and sandflats not covered by seawater at low tide
IE0000343	Castlemaine Harbour SAC	Annual vegetation of drift lines
IE0000343	Castlemaine Harbour SAC	Perennial vegetation of stony banks
IE0000343	Castlemaine Harbour SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0000343	Castlemaine Harbour SAC	<i>Salicornia</i> and other annuals colonizing mud and sand
IE0000343	Castlemaine Harbour SAC	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)
IE0000343	Castlemaine Harbour SAC	Mediterranean salt meadows (<i>Juncetalia maritimi</i>)
IE0000343	Castlemaine Harbour SAC	Embryonic shifting dunes
IE0000343	Castlemaine Harbour SAC	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")
IE0000343	Castlemaine Harbour SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0000343	Castlemaine Harbour SAC	Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>)
IE0000343	Castlemaine Harbour SAC	Humid dune slacks
IE0000343	Castlemaine Harbour SAC	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)
IE0000343	Castlemaine Harbour SAC	<i>Petromyzon marinus</i>
IE0000343	Castlemaine Harbour SAC	<i>Lampetra fluviatilis</i>
IE0000343	Castlemaine Harbour SAC	<i>Salmo salar</i>
IE0000343	Castlemaine Harbour SAC	<i>Lutra lutra</i>
IE0000343	Castlemaine Harbour SAC	<i>Petalophyllum ralfsii</i>
IE0000353	Old Domestic Building, Dromore Wood SAC	<i>Rhinolophus hipposideros</i>
IE0000364	Kilgarvan Ice House SAC	<i>Rhinolophus hipposideros</i>
IE0000365	Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC	Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>)
IE0000365	Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC	Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoëto-Nanojuncetea</i>

Site Code	Site Name	Habitat/ Species Name
IE0000365	Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment SAC	Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation
IE0000365	Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment SAC	Northern Atlantic wet heaths with <i>Erica tetralix</i>
IE0000365	Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment SAC	European dry heaths
IE0000365	Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment SAC	Alpine and Boreal heaths
IE0000365	Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment SAC	<i>Juniperus communis</i> formations on heaths or calcareous grasslands
IE0000365	Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment SAC	Calaminarian grasslands of the <i>Violetalia calaminariae</i>
IE0000365	Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment SAC	<i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>)
IE0000365	Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment SAC	Blanket bogs (* if active bog)
IE0000365	Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment SAC	Depressions on peat substrates of the <i>Rhynchosporion</i>
IE0000365	Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment SAC	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles
IE0000365	Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment SAC	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)
IE0000365	Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment SAC	<i>Taxus baccata</i> woods of the British Isles
IE0000365	Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment SAC	<i>Geomalacus maculosus</i>
IE0000365	Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment SAC	<i>Margaritifera margaritifera</i>
IE0000365	Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment SAC	<i>Euphydrias aurinia</i>
IE0000365	Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment SAC	<i>Petromyzon marinus</i>
IE0000365	Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment SAC	<i>Lampetra planeri</i>
IE0000365	Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment SAC	<i>Lampetra fluviatilis</i>
IE0000365	Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment SAC	<i>Salmo salar</i>

Site Code	Site Name	Habitat/ Species Name
IE0000365	Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC	Rhinolophus hipposideros
IE0000365	Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC	Lutra lutra
IE0000365	Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC	Trichomanes speciosum
IE0000365	Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC	Najas flexilis
IE0000365	Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC	Alosa killarnensis
IE0000370	Lough Yganavan and Lough Nambrackdarrig SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0000370	Lough Yganavan and Lough Nambrackdarrig SAC	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)
IE0000370	Lough Yganavan and Lough Nambrackdarrig SAC	Geomalacus maculosus
IE0000375	Mount Brandon SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0000375	Mount Brandon SAC	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)
IE0000375	Mount Brandon SAC	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoetes-Nanojuncetea
IE0000375	Mount Brandon SAC	Northern Atlantic wet heaths with Erica tetralix
IE0000375	Mount Brandon SAC	European dry heaths
IE0000375	Mount Brandon SAC	Alpine and Boreal heaths
IE0000375	Mount Brandon SAC	Species-rich Nardus grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)
IE0000375	Mount Brandon SAC	Blanket bogs (* if active bog)
IE0000375	Mount Brandon SAC	Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)
IE0000375	Mount Brandon SAC	Calcareous rocky slopes with chasmophytic vegetation
IE0000375	Mount Brandon SAC	Siliceous rocky slopes with chasmophytic vegetation
IE0000375	Mount Brandon SAC	Margaritifera margaritifera
IE0000375	Mount Brandon SAC	Trichomanes speciosum
IE0000382	Sheheree (Ardagh) Bog SAC	Active raised bogs
IE0000382	Sheheree (Ardagh) Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0000391	Ballynafagh Bog SAC	Active raised bogs
IE0000391	Ballynafagh Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0000391	Ballynafagh Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0000396	Pollardstown Fen SAC	Calcareous fens with Cladium mariscus and species of the Caricion davallianae

Site Code	Site Name	Habitat/ Species Name
IE0000396	Pollardstown Fen SAC	Petrifying springs with tufa formation (Cratoneurion)
IE0000396	Pollardstown Fen SAC	Alkaline fens
IE0000396	Pollardstown Fen SAC	Vertigo geyeri
IE0000396	Pollardstown Fen SAC	Vertigo angustior
IE0000396	Pollardstown Fen SAC	Vertigo moulinsiana
IE0000397	Red Bog, Kildare SAC	Transition mires and quaking bogs
IE0000404	Hugginstown Fen SAC	Alkaline fens
IE0000407	The Loughans SAC	Turloughs
IE0000412	Slieve Bloom Mountains SAC	Northern Atlantic wet heaths with Erica tetralix
IE0000412	Slieve Bloom Mountains SAC	Blanket bogs (* if active bog)
IE0000412	Slieve Bloom Mountains SAC	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)
IE0000428	Lough Melvin SAC	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoetes-Nanojuncetea
IE0000428	Lough Melvin SAC	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)
IE0000428	Lough Melvin SAC	Salmo salar
IE0000428	Lough Melvin SAC	Lutra lutra
IE0000432	Barrigone SAC	Juniperus communis formations on heaths or calcareous grasslands
IE0000432	Barrigone SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)
IE0000432	Barrigone SAC	Limestone pavements
IE0000432	Barrigone SAC	Euphydryas aurinia
IE0000439	Tory Hill SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)
IE0000439	Tory Hill SAC	Calcareous fens with Cladium mariscus and species of the Caricion davallianae
IE0000439	Tory Hill SAC	Alkaline fens
IE0000440	Lough Ree SAC	Natural eutrophic lakes with Magnopotamion or Hydrocharitum - type vegetation
IE0000440	Lough Ree SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)
IE0000440	Lough Ree SAC	Active raised bogs
IE0000440	Lough Ree SAC	Degraded raised bogs still capable of natural regeneration
IE0000440	Lough Ree SAC	Alkaline fens
IE0000440	Lough Ree SAC	Limestone pavements
IE0000440	Lough Ree SAC	Bog woodland

Site Code	Site Name	Habitat/ Species Name
IE0000440	Lough Ree SAC	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, <i>Alnion incanae</i> , <i>Salicion albae</i>)
IE0000440	Lough Ree SAC	<i>Lutra lutra</i>
IE0000448	Fortwilliam Turlough SAC	Turloughs
IE0000453	Carlingford Mountain SAC	Northern Atlantic wet heaths with <i>Erica tetralix</i>
IE0000453	Carlingford Mountain SAC	European dry heaths
IE0000453	Carlingford Mountain SAC	Alpine and Boreal heaths
IE0000453	Carlingford Mountain SAC	Species-rich <i>Nardus</i> grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)
IE0000453	Carlingford Mountain SAC	Transition mires and quaking bogs
IE0000453	Carlingford Mountain SAC	Alkaline fens
IE0000453	Carlingford Mountain SAC	Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>)
IE0000453	Carlingford Mountain SAC	Calcareous rocky slopes with chasmophytic vegetation
IE0000453	Carlingford Mountain SAC	Siliceous rocky slopes with chasmophytic vegetation
IE0000455	Dundalk Bay SAC	Estuaries
IE0000455	Dundalk Bay SAC	Mudflats and sandflats not covered by seawater at low tide
IE0000455	Dundalk Bay SAC	Perennial vegetation of stony banks
IE0000455	Dundalk Bay SAC	<i>Salicornia</i> and other annuals colonizing mud and sand
IE0000455	Dundalk Bay SAC	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>)
IE0000455	Dundalk Bay SAC	Mediterranean salt meadows (<i>Juncetalia maritimi</i>)
IE0000458	Killala Bay/Moy Estuary SAC	Estuaries
IE0000458	Killala Bay/Moy Estuary SAC	Mudflats and sandflats not covered by seawater at low tide
IE0000458	Killala Bay/Moy Estuary SAC	Annual vegetation of drift lines
IE0000458	Killala Bay/Moy Estuary SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0000458	Killala Bay/Moy Estuary SAC	<i>Salicornia</i> and other annuals colonizing mud and sand
IE0000458	Killala Bay/Moy Estuary SAC	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>)
IE0000458	Killala Bay/Moy Estuary SAC	Embryonic shifting dunes
IE0000458	Killala Bay/Moy Estuary SAC	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")
IE0000458	Killala Bay/Moy Estuary SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0000458	Killala Bay/Moy Estuary SAC	Humid dune slacks
IE0000458	Killala Bay/Moy Estuary SAC	<i>Vertigo angustior</i>
IE0000458	Killala Bay/Moy Estuary SAC	<i>Petromyzon marinus</i>
IE0000458	Killala Bay/Moy Estuary SAC	<i>Phoca vitulina</i>

Site Code	Site Name	Habitat/ Species Name
IE0000461	Ardkill Turlough SAC	Turloughs
IE0000463	Balla Turlough SAC	Turloughs
IE0000466	Bellacorick Iron Flush SAC	Saxifraga hirculus
IE0000470	Mullet/Blacksod Bay Complex SAC	Mudflats and sandflats not covered by seawater at low tide
IE0000470	Mullet/Blacksod Bay Complex SAC	Large shallow inlets and bays
IE0000470	Mullet/Blacksod Bay Complex SAC	Reefs
IE0000470	Mullet/Blacksod Bay Complex SAC	Salicornia and other annuals colonizing mud and sand
IE0000470	Mullet/Blacksod Bay Complex SAC	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")
IE0000470	Mullet/Blacksod Bay Complex SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0000470	Mullet/Blacksod Bay Complex SAC	Atlantic decalcified fixed dunes (Calluno-Ulicetea)
IE0000470	Mullet/Blacksod Bay Complex SAC	Machairs (* in Ireland)
IE0000470	Mullet/Blacksod Bay Complex SAC	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation
IE0000470	Mullet/Blacksod Bay Complex SAC	Alkaline fens
IE0000470	Mullet/Blacksod Bay Complex SAC	Lutra lutra
IE0000470	Mullet/Blacksod Bay Complex SAC	Petalophyllum ralfsii
IE0000471	Brackloon Woods SAC	Old sessile oak woods with Ilex and Blechnum in the British Isles
IE0000472	Broadhaven Bay SAC	Mudflats and sandflats not covered by seawater at low tide
IE0000472	Broadhaven Bay SAC	Large shallow inlets and bays
IE0000472	Broadhaven Bay SAC	Reefs
IE0000472	Broadhaven Bay SAC	Atlantic salt meadows (Glauco-Puccinellietalia maritima)
IE0000472	Broadhaven Bay SAC	Submerged or partially submerged sea caves
IE0000474	Ballymaglancy Cave, Cong SAC	Caves not open to the public
IE0000474	Ballymaglancy Cave, Cong SAC	Rhinolophus hipposideros
IE0000475	Carrowkeel Turlough SAC	Turloughs
IE0000476	Carrowmore Lake Complex SAC	Blanket bogs (* if active bog)
IE0000476	Carrowmore Lake Complex SAC	Depressions on peat substrates of the Rhynchosporion
IE0000476	Carrowmore Lake Complex SAC	Saxifraga hirculus
IE0000476	Carrowmore Lake Complex SAC	Hamatocaulis vernicosus
IE0000479	Cloughmoyne SAC	Limestone pavements
IE0000480	Clyard Kettle-holes SAC	Turloughs
IE0000480	Clyard Kettle-holes SAC	Calcareous fens with Cladium mariscus and species of the Caricion davallianae

Site Code	Site Name	Habitat/ Species Name
IE0000484	Cross Lough (Killadoon) SAC	Perennial vegetation of stony banks
IE0000485	Corraun Plateau SAC	Northern Atlantic wet heaths with <i>Erica tetralix</i>
IE0000485	Corraun Plateau SAC	European dry heaths
IE0000485	Corraun Plateau SAC	Alpine and Boreal heaths
IE0000485	Corraun Plateau SAC	<i>Juniperus communis</i> formations on heaths or calcareous grasslands
IE0000485	Corraun Plateau SAC	Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>)
IE0000485	Corraun Plateau SAC	Siliceous rocky slopes with chasmophytic vegetation
IE0000492	Doocastle Turlough SAC	Turloughs
IE0000495	Duvillaun Islands SAC	<i>Tursiops truncatus</i>
IE0000495	Duvillaun Islands SAC	<i>Halichoerus grypus</i>
IE0000497	Flughany Bog SAC	Active raised bogs
IE0000497	Flughany Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0000497	Flughany Bog SAC	Depressions on peat substrates of the <i>Rhynchosporion</i>
IE0000500	Glenamoy Bog Complex SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0000500	Glenamoy Bog Complex SAC	Machairs (* in Ireland)
IE0000500	Glenamoy Bog Complex SAC	Natural dystrophic lakes and ponds
IE0000500	Glenamoy Bog Complex SAC	Northern Atlantic wet heaths with <i>Erica tetralix</i>
IE0000500	Glenamoy Bog Complex SAC	<i>Juniperus communis</i> formations on heaths or calcareous grasslands
IE0000500	Glenamoy Bog Complex SAC	Blanket bogs (* if active bog)
IE0000500	Glenamoy Bog Complex SAC	Transition mires and quaking bogs
IE0000500	Glenamoy Bog Complex SAC	Depressions on peat substrates of the <i>Rhynchosporion</i>
IE0000500	Glenamoy Bog Complex SAC	<i>Salmo salar</i>
IE0000500	Glenamoy Bog Complex SAC	<i>Petalophyllum ralfsii</i>
IE0000500	Glenamoy Bog Complex SAC	<i>Saxifraga hirculus</i>
IE0000500	Glenamoy Bog Complex SAC	<i>Hamatocaulis vernicosus</i>
IE0000503	Greaghans Turlough SAC	Turloughs
IE0000504	Kilglassan/Caheravoostia Turlough Complex SAC	Turloughs
IE0000507	Inishkea Islands SAC	Machairs (* in Ireland)
IE0000507	Inishkea Islands SAC	<i>Halichoerus grypus</i>
IE0000507	Inishkea Islands SAC	<i>Petalophyllum ralfsii</i>
IE0000516	Lackan Saltmarsh and Kilcummin Head SAC	<i>Salicornia</i> and other annuals colonizing mud and sand

Site Code	Site Name	Habitat/ Species Name
IE0000516	Lackan Saltmarsh and Kilcummin Head SAC	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>)
IE0000516	Lackan Saltmarsh and Kilcummin Head SAC	Mediterranean salt meadows (<i>Juncetalia maritimi</i>)
IE0000516	Lackan Saltmarsh and Kilcummin Head SAC	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")
IE0000516	Lackan Saltmarsh and Kilcummin Head SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0000522	Lough Gall Bog SAC	Blanket bogs (* if active bog)
IE0000522	Lough Gall Bog SAC	Depressions on peat substrates of the <i>Rhynchosporion</i>
IE0000525	Shrule Turlough SAC	Turloughs
IE0000527	Moore Hall (Lough Carra) SAC	<i>Rhinolophus hipposideros</i>
IE0000532	Oldhead Wood SAC	European dry heaths
IE0000532	Oldhead Wood SAC	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles
IE0000534	Owenduff/Nephin Complex SAC	Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>)
IE0000534	Owenduff/Nephin Complex SAC	Natural dystrophic lakes and ponds
IE0000534	Owenduff/Nephin Complex SAC	Water courses of plain to montane levels with the <i>Ranunculus fluitans</i> and <i>Callitriche-Batrachion</i> vegetation
IE0000534	Owenduff/Nephin Complex SAC	Northern Atlantic wet heaths with <i>Erica tetralix</i>
IE0000534	Owenduff/Nephin Complex SAC	Alpine and Boreal heaths
IE0000534	Owenduff/Nephin Complex SAC	<i>Juniperus communis</i> formations on heaths or calcareous grasslands
IE0000534	Owenduff/Nephin Complex SAC	Blanket bogs (* if active bog)
IE0000534	Owenduff/Nephin Complex SAC	Transition mires and quaking bogs
IE0000534	Owenduff/Nephin Complex SAC	<i>Salmo salar</i>
IE0000534	Owenduff/Nephin Complex SAC	<i>Lutra lutra</i>
IE0000534	Owenduff/Nephin Complex SAC	<i>Saxifraga hirculus</i>
IE0000534	Owenduff/Nephin Complex SAC	<i>Hamatocaulis vernicosus</i>
IE0000541	Skealaghan Turlough SAC	Turloughs
IE0000542	Slieve Fyagh Bog SAC	Blanket bogs (* if active bog)
IE0000566	All Saints Bog and Esker SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites)
IE0000566	All Saints Bog and Esker SAC	Active raised bogs
IE0000566	All Saints Bog and Esker SAC	Degraded raised bogs still capable of natural regeneration
IE0000566	All Saints Bog and Esker SAC	Depressions on peat substrates of the <i>Rhynchosporion</i>
IE0000566	All Saints Bog and Esker SAC	Bog woodland
IE0000571	Charleville Wood SAC	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)
IE0000571	Charleville Wood SAC	<i>Vertigo moulinsiana</i>

Site Code	Site Name	Habitat/ Species Name
IE0000572	Clara Bog SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)
IE0000572	Clara Bog SAC	Active raised bogs
IE0000572	Clara Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0000572	Clara Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0000572	Clara Bog SAC	Bog woodland
IE0000575	Ferbane Bog SAC	Active raised bogs
IE0000575	Ferbane Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0000575	Ferbane Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0000576	Fin Lough (Offaly) SAC	Alkaline fens
IE0000576	Fin Lough (Offaly) SAC	Vertigo geyeri
IE0000580	Mongan Bog SAC	Active raised bogs
IE0000580	Mongan Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0000580	Mongan Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0000581	Moyclare Bog SAC	Active raised bogs
IE0000581	Moyclare Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0000581	Moyclare Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0000582	Raheenmore Bog SAC	Active raised bogs
IE0000582	Raheenmore Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0000582	Raheenmore Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0000584	Cuilcagh - Anierin Uplands SAC	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)
IE0000584	Cuilcagh - Anierin Uplands SAC	Natural dystrophic lakes and ponds
IE0000584	Cuilcagh - Anierin Uplands SAC	Northern Atlantic wet heaths with Erica tetralix
IE0000584	Cuilcagh - Anierin Uplands SAC	European dry heaths
IE0000584	Cuilcagh - Anierin Uplands SAC	Alpine and Boreal heaths
IE0000584	Cuilcagh - Anierin Uplands SAC	Species-rich Nardus grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)
IE0000584	Cuilcagh - Anierin Uplands SAC	Blanket bogs (* if active bog)
IE0000584	Cuilcagh - Anierin Uplands SAC	Transition mires and quaking bogs
IE0000584	Cuilcagh - Anierin Uplands SAC	Petrifying springs with tufa formation (Cratoneurion)
IE0000584	Cuilcagh - Anierin Uplands SAC	Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)
IE0000584	Cuilcagh - Anierin Uplands SAC	Siliceous rocky slopes with chasmophytic vegetation

Site Code	Site Name	Habitat/ Species Name
IE0000584	Cuilcagh - Anierin Uplands SAC	Hamatocaulis vernicosus
IE0000585	Sharavogue Bog SAC	Active raised bogs
IE0000585	Sharavogue Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0000585	Sharavogue Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0000588	Ballinturly Turlough SAC	Turloughs
IE0000592	Bellanagare Bog SAC	Active raised bogs
IE0000592	Bellanagare Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0000592	Bellanagare Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0000595	Callow Bog SAC	Active raised bogs
IE0000595	Callow Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0000595	Callow Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0000597	Carrowbehy/Caheer Bog SAC	Active raised bogs
IE0000597	Carrowbehy/Caheer Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0000597	Carrowbehy/Caheer Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0000600	Cloonchambers Bog SAC	Active raised bogs
IE0000600	Cloonchambers Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0000600	Cloonchambers Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0000604	Derrinea Bog SAC	Active raised bogs
IE0000604	Derrinea Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0000604	Derrinea Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0000606	Lough Fingall Complex SAC	Turloughs
IE0000606	Lough Fingall Complex SAC	Alpine and Boreal heaths
IE0000606	Lough Fingall Complex SAC	Juniperus communis formations on heaths or calcareous grasslands
IE0000606	Lough Fingall Complex SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)
IE0000606	Lough Fingall Complex SAC	Calcareous fens with Cladium mariscus and species of the Caricion davallianae
IE0000606	Lough Fingall Complex SAC	Limestone pavements
IE0000606	Lough Fingall Complex SAC	Rhinolophus hipposideros
IE0000607	Errit Lough SAC	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.
IE0000609	Lisduff Turlough SAC	Turloughs
IE0000610	Lough Croan Turlough SAC	Turloughs
IE0000611	Lough Funshinagh SAC	Turloughs

Site Code	Site Name	Habitat/ Species Name
IE0000611	Lough Funshinagh SAC	Rivers with muddy banks with <i>Chenopodium rubri</i> p.p. and <i>Bidention</i> p.p. vegetation
IE0000612	Mullygollan Turlough SAC	Turloughs
IE0000614	Cloonshanville Bog SAC	Active raised bogs
IE0000614	Cloonshanville Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0000614	Cloonshanville Bog SAC	Depressions on peat substrates of the <i>Rhynchosporion</i>
IE0000614	Cloonshanville Bog SAC	Bog woodland
IE0000622	Ballysadare Bay SAC	Estuaries
IE0000622	Ballysadare Bay SAC	Mudflats and sandflats not covered by seawater at low tide
IE0000622	Ballysadare Bay SAC	Embryonic shifting dunes
IE0000622	Ballysadare Bay SAC	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")
IE0000622	Ballysadare Bay SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0000622	Ballysadare Bay SAC	Humid dune slacks
IE0000622	Ballysadare Bay SAC	<i>Vertigo angustior</i>
IE0000622	Ballysadare Bay SAC	<i>Phoca vitulina</i>
IE0000623	Ben Bulben, Gleniff and Glenade Complex SAC	Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation
IE0000623	Ben Bulben, Gleniff and Glenade Complex SAC	Northern Atlantic wet heaths with <i>Erica tetralix</i>
IE0000623	Ben Bulben, Gleniff and Glenade Complex SAC	European dry heaths
IE0000623	Ben Bulben, Gleniff and Glenade Complex SAC	Alpine and Boreal heaths
IE0000623	Ben Bulben, Gleniff and Glenade Complex SAC	<i>Juniperus communis</i> formations on heaths or calcareous grasslands
IE0000623	Ben Bulben, Gleniff and Glenade Complex SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites)
IE0000623	Ben Bulben, Gleniff and Glenade Complex SAC	Species-rich <i>Nardus</i> grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)
IE0000623	Ben Bulben, Gleniff and Glenade Complex SAC	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels
IE0000623	Ben Bulben, Gleniff and Glenade Complex SAC	Transition mires and quaking bogs
IE0000623	Ben Bulben, Gleniff and Glenade Complex SAC	Petrifying springs with tufa formation (<i>Cratoneurion</i>)
IE0000623	Ben Bulben, Gleniff and Glenade Complex SAC	Alkaline fens
IE0000623	Ben Bulben, Gleniff and Glenade Complex SAC	Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>)
IE0000623	Ben Bulben, Gleniff and Glenade Complex SAC	Calcareous and calcshist screes of the montane to alpine levels (<i>Thlaspietea rotundifolii</i>)
IE0000623	Ben Bulben, Gleniff and Glenade Complex SAC	Calcareous rocky slopes with chasmophytic vegetation
IE0000623	Ben Bulben, Gleniff and Glenade Complex SAC	<i>Vertigo geyeri</i>
IE0000623	Ben Bulben, Gleniff and Glenade Complex SAC	<i>Lutra lutra</i>

Site Code	Site Name	Habitat/ Species Name
IE0000625	Bunduff Lough and Machair/Trawalua/Mullaghmore SAC	Mudflats and sandflats not covered by seawater at low tide
IE0000625	Bunduff Lough and Machair/Trawalua/Mullaghmore SAC	Large shallow inlets and bays
IE0000625	Bunduff Lough and Machair/Trawalua/Mullaghmore SAC	Reefs
IE0000625	Bunduff Lough and Machair/Trawalua/Mullaghmore SAC	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")
IE0000625	Bunduff Lough and Machair/Trawalua/Mullaghmore SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0000625	Bunduff Lough and Machair/Trawalua/Mullaghmore SAC	Humid dune slacks
IE0000625	Bunduff Lough and Machair/Trawalua/Mullaghmore SAC	Machairs (* in Ireland)
IE0000625	Bunduff Lough and Machair/Trawalua/Mullaghmore SAC	<i>Juniperus communis</i> formations on heaths or calcareous grasslands
IE0000625	Bunduff Lough and Machair/Trawalua/Mullaghmore SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites)
IE0000625	Bunduff Lough and Machair/Trawalua/Mullaghmore SAC	Alkaline fens
IE0000625	Bunduff Lough and Machair/Trawalua/Mullaghmore SAC	<i>Euphydryas aurinia</i>
IE0000625	Bunduff Lough and Machair/Trawalua/Mullaghmore SAC	<i>Petalophyllum ralfsii</i>
IE0000627	Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Estuaries
IE0000627	Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Mudflats and sandflats not covered by seawater at low tide
IE0000627	Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Embryonic shifting dunes
IE0000627	Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")
IE0000627	Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0000627	Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	<i>Juniperus communis</i> formations on heaths or calcareous grasslands
IE0000627	Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites)
IE0000627	Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Petrifying springs with tufa formation (<i>Cratoneurion</i>)
IE0000627	Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	<i>Vertigo angustior</i>
IE0000627	Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	<i>Petromyzon marinus</i>
IE0000627	Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	<i>Lampetra fluviatilis</i>
IE0000627	Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	<i>Phoca vitulina</i>
IE0000633	Lough Hoe Bog SAC	Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>)
IE0000633	Lough Hoe Bog SAC	Blanket bogs (* if active bog)
IE0000633	Lough Hoe Bog SAC	<i>Vertigo geyeri</i>
IE0000633	Lough Hoe Bog SAC	<i>Austropotamobius pallipes</i>
IE0000634	Lough Nabrickkeagh Bog SAC	Blanket bogs (* if active bog)
IE0000636	Templehouse and Cloonacleigha Loughs SAC	Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.

Site Code	Site Name	Habitat/ Species Name
IE0000636	Templehouse and Cloonacleigha Loughs SAC	Water courses of plain to montane levels with the Ranunculus fluitans and Callitriche-Batrachion vegetation
IE0000637	Turloughmore (Sligo) SAC	Turloughs
IE0000638	Union Wood SAC	Old sessile oak woods with Ilex and Blechnum in the British Isles
IE0000641	Ballyduff/Clonfinane Bog SAC	Active raised bogs
IE0000641	Ballyduff/Clonfinane Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0000641	Ballyduff/Clonfinane Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0000641	Ballyduff/Clonfinane Bog SAC	Bog woodland
IE0000646	Galtee Mountains SAC	Northern Atlantic wet heaths with Erica tetralix
IE0000646	Galtee Mountains SAC	European dry heaths
IE0000646	Galtee Mountains SAC	Alpine and Boreal heaths
IE0000646	Galtee Mountains SAC	Species-rich Nardus grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)
IE0000646	Galtee Mountains SAC	Blanket bogs (* if active bog)
IE0000646	Galtee Mountains SAC	Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)
IE0000646	Galtee Mountains SAC	Calcareous rocky slopes with chasmophytic vegetation
IE0000646	Galtee Mountains SAC	Siliceous rocky slopes with chasmophytic vegetation
IE0000647	Kilcarren-Firville Bog SAC	Active raised bogs
IE0000647	Kilcarren-Firville Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0000647	Kilcarren-Firville Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0000665	Helvick Head SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0000665	Helvick Head SAC	European dry heaths
IE0000668	Nier Valley Woodlands SAC	Old sessile oak woods with Ilex and Blechnum in the British Isles
IE0000671	Tramore Dunes and Backstrand SAC	Mudflats and sandflats not covered by seawater at low tide
IE0000671	Tramore Dunes and Backstrand SAC	Annual vegetation of drift lines
IE0000671	Tramore Dunes and Backstrand SAC	Perennial vegetation of stony banks
IE0000671	Tramore Dunes and Backstrand SAC	Salicornia and other annuals colonizing mud and sand
IE0000671	Tramore Dunes and Backstrand SAC	Atlantic salt meadows (Glaucopuccinellietalia maritima)
IE0000671	Tramore Dunes and Backstrand SAC	Mediterranean salt meadows (Juncetalia maritimi)
IE0000671	Tramore Dunes and Backstrand SAC	Embryonic shifting dunes
IE0000671	Tramore Dunes and Backstrand SAC	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")
IE0000671	Tramore Dunes and Backstrand SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0000679	Garriskil Bog SAC	Active raised bogs

Site Code	Site Name	Habitat/ Species Name
IE0000679	Garriskil Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0000679	Garriskil Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0000685	Lough Ennell SAC	Alkaline fens
IE0000688	Lough Owel SAC	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.
IE0000688	Lough Owel SAC	Transition mires and quaking bogs
IE0000688	Lough Owel SAC	Alkaline fens
IE0000688	Lough Owel SAC	Austropotamobius pallipes
IE0000692	Scragh Bog SAC	Transition mires and quaking bogs
IE0000692	Scragh Bog SAC	Alkaline fens
IE0000692	Scragh Bog SAC	Hamatocaulis vernicosus
IE0000696	Ballyteige Burrow SAC	Estuaries
IE0000696	Ballyteige Burrow SAC	Mudflats and sandflats not covered by seawater at low tide
IE0000696	Ballyteige Burrow SAC	Coastal lagoons
IE0000696	Ballyteige Burrow SAC	Annual vegetation of drift lines
IE0000696	Ballyteige Burrow SAC	Perennial vegetation of stony banks
IE0000696	Ballyteige Burrow SAC	Salicornia and other annuals colonizing mud and sand
IE0000696	Ballyteige Burrow SAC	Atlantic salt meadows (Glauco-Puccinellietalia maritima)
IE0000696	Ballyteige Burrow SAC	Mediterranean salt meadows (Juncetalia maritimi)
IE0000696	Ballyteige Burrow SAC	Mediterranean and thermo-Atlantic halophilous scrubs (Sarcocornetea fruticosi)
IE0000696	Ballyteige Burrow SAC	Embryonic shifting dunes
IE0000696	Ballyteige Burrow SAC	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")
IE0000696	Ballyteige Burrow SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0000696	Ballyteige Burrow SAC	Atlantic decalcified fixed dunes (Calluno-Ulicetea)
IE0000697	Bannow Bay SAC	Estuaries
IE0000697	Bannow Bay SAC	Mudflats and sandflats not covered by seawater at low tide
IE0000697	Bannow Bay SAC	Annual vegetation of drift lines
IE0000697	Bannow Bay SAC	Perennial vegetation of stony banks
IE0000697	Bannow Bay SAC	Salicornia and other annuals colonizing mud and sand
IE0000697	Bannow Bay SAC	Atlantic salt meadows (Glauco-Puccinellietalia maritima)
IE0000697	Bannow Bay SAC	Mediterranean salt meadows (Juncetalia maritimi)
IE0000697	Bannow Bay SAC	Mediterranean and thermo-Atlantic halophilous scrubs (Sarcocornetea fruticosi)

Site Code	Site Name	Habitat/ Species Name
IE0000697	Bannow Bay SAC	Embryonic shifting dunes
IE0000697	Bannow Bay SAC	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")
IE0000697	Bannow Bay SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0000700	Cahore Polders and Dunes SAC	Annual vegetation of drift lines
IE0000700	Cahore Polders and Dunes SAC	Embryonic shifting dunes
IE0000700	Cahore Polders and Dunes SAC	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")
IE0000700	Cahore Polders and Dunes SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0000700	Cahore Polders and Dunes SAC	Humid dune slacks
IE0000704	Lady's Island Lake SAC	Coastal lagoons
IE0000704	Lady's Island Lake SAC	Reefs
IE0000704	Lady's Island Lake SAC	Perennial vegetation of stony banks
IE0000707	Saltee Islands SAC	Mudflats and sandflats not covered by seawater at low tide
IE0000707	Saltee Islands SAC	Large shallow inlets and bays
IE0000707	Saltee Islands SAC	Reefs
IE0000707	Saltee Islands SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0000707	Saltee Islands SAC	Submerged or partially submerged sea caves
IE0000707	Saltee Islands SAC	<i>Halichoerus grypus</i>
IE0000708	Screen Hills SAC	Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>)
IE0000708	Screen Hills SAC	European dry heaths
IE0000709	Tacumshin Lake SAC	Coastal lagoons
IE0000709	Tacumshin Lake SAC	Annual vegetation of drift lines
IE0000709	Tacumshin Lake SAC	Perennial vegetation of stony banks
IE0000709	Tacumshin Lake SAC	Embryonic shifting dunes
IE0000709	Tacumshin Lake SAC	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")
IE0000710	Raven Point Nature Reserve SAC	Mudflats and sandflats not covered by seawater at low tide
IE0000710	Raven Point Nature Reserve SAC	Annual vegetation of drift lines
IE0000710	Raven Point Nature Reserve SAC	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>)
IE0000710	Raven Point Nature Reserve SAC	Embryonic shifting dunes
IE0000710	Raven Point Nature Reserve SAC	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")
IE0000710	Raven Point Nature Reserve SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0000710	Raven Point Nature Reserve SAC	Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>)

Site Code	Site Name	Habitat/ Species Name
IE0000710	Raven Point Nature Reserve SAC	Humid dune slacks
IE0000713	Ballyman Glen SAC	Petrifying springs with tufa formation (Cratoneurion)
IE0000713	Ballyman Glen SAC	Alkaline fens
IE0000714	Bray Head SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0000714	Bray Head SAC	European dry heaths
IE0000716	Carriggower Bog SAC	Transition mires and quaking bogs
IE0000717	Deputy's Pass Nature Reserve SAC	Old sessile oak woods with Ilex and Blechnum in the British Isles
IE0000719	Glen of the Downs SAC	Old sessile oak woods with Ilex and Blechnum in the British Isles
IE0000725	Knocksink Wood SAC	Petrifying springs with tufa formation (Cratoneurion)
IE0000725	Knocksink Wood SAC	Old sessile oak woods with Ilex and Blechnum in the British Isles
IE0000725	Knocksink Wood SAC	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae)
IE0000729	Buckroney-Brittis Dunes and Fen SAC	Annual vegetation of drift lines
IE0000729	Buckroney-Brittis Dunes and Fen SAC	Perennial vegetation of stony banks
IE0000729	Buckroney-Brittis Dunes and Fen SAC	Mediterranean salt meadows (<i>Juncetalia maritimi</i>)
IE0000729	Buckroney-Brittis Dunes and Fen SAC	Embryonic shifting dunes
IE0000729	Buckroney-Brittis Dunes and Fen SAC	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")
IE0000729	Buckroney-Brittis Dunes and Fen SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0000729	Buckroney-Brittis Dunes and Fen SAC	Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>)
IE0000729	Buckroney-Brittis Dunes and Fen SAC	Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>)
IE0000729	Buckroney-Brittis Dunes and Fen SAC	Humid dune slacks
IE0000729	Buckroney-Brittis Dunes and Fen SAC	Alkaline fens
IE0000733	Vale of Clara (Rathdrum Wood) SAC	Old sessile oak woods with Ilex and Blechnum in the British Isles
IE0000764	Hook Head SAC	Large shallow inlets and bays
IE0000764	Hook Head SAC	Reefs
IE0000764	Hook Head SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0000770	Blackstairs Mountains SAC	Northern Atlantic wet heaths with <i>Erica tetralix</i>
IE0000770	Blackstairs Mountains SAC	European dry heaths
IE0000781	Slaney River Valley SAC	Estuaries
IE0000781	Slaney River Valley SAC	Mudflats and sandflats not covered by seawater at low tide
IE0000781	Slaney River Valley SAC	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)
IE0000781	Slaney River Valley SAC	Mediterranean salt meadows (<i>Juncetalia maritimi</i>)

Site Code	Site Name	Habitat/ Species Name
IE0000781	Slaney River Valley SAC	Water courses of plain to montane levels with the <i>Ranunculus fluitans</i> and <i>Callitriche-Batrachion</i> vegetation
IE0000781	Slaney River Valley SAC	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles
IE0000781	Slaney River Valley SAC	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)
IE0000781	Slaney River Valley SAC	<i>Margaritifera margaritifera</i>
IE0000781	Slaney River Valley SAC	<i>Petromyzon marinus</i>
IE0000781	Slaney River Valley SAC	<i>Lampetra planeri</i>
IE0000781	Slaney River Valley SAC	<i>Lampetra fluviatilis</i>
IE0000781	Slaney River Valley SAC	<i>Alosa fallax</i>
IE0000781	Slaney River Valley SAC	<i>Salmo salar</i>
IE0000781	Slaney River Valley SAC	<i>Lutra lutra</i>
IE0000781	Slaney River Valley SAC	<i>Phoca vitulina</i>
IE0000831	Cullahill Mountain SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites)
IE0000849	Spahill and Clomantagh Hill SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites)
IE0000859	Clonaslee Eskers and Derry Bog SAC	Alkaline fens
IE0000859	Clonaslee Eskers and Derry Bog SAC	<i>Vertigo geyeri</i>
IE0000869	Lisbigney Bog SAC	Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>
IE0000869	Lisbigney Bog SAC	<i>Vertigo moulinsiana</i>
IE0000919	Ridge Road, SW of Rapemills SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites)
IE0000925	The Long Derries, Edenderry SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites)
IE0000930	Clare Glen SAC	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles
IE0000930	Clare Glen SAC	<i>Trichomanes speciosum</i>
IE0000934	Kilduff, Devilsbit Mountain SAC	European dry heaths
IE0000934	Kilduff, Devilsbit Mountain SAC	Species-rich <i>Nardus</i> grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)
IE0000939	Silvermine Mountains SAC	Northern Atlantic wet heaths with <i>Erica tetralix</i>
IE0000939	Silvermine Mountains SAC	Species-rich <i>Nardus</i> grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)
IE0000979	Corratirrim SAC	Limestone pavements
IE0000994	Ballyteige (Clare) SAC	<i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>)

Site Code	Site Name	Habitat/ Species Name
IE0000996	Ballyvaughan Turlough SAC	Turloughs
IE0001013	Glenomra Wood SAC	Old sessile oak woods with Ilex and Blechnum in the British Isles
IE0001021	Carrowmore Point to Spanish Point and Islands SAC	Coastal lagoons
IE0001021	Carrowmore Point to Spanish Point and Islands SAC	Reefs
IE0001021	Carrowmore Point to Spanish Point and Islands SAC	Perennial vegetation of stony banks
IE0001021	Carrowmore Point to Spanish Point and Islands SAC	Petrifying springs with tufa formation (Cratoneurion)
IE0001040	Barley Cove to Ballyrisode Point SAC	Mudflats and sandflats not covered by seawater at low tide
IE0001040	Barley Cove to Ballyrisode Point SAC	Perennial vegetation of stony banks
IE0001040	Barley Cove to Ballyrisode Point SAC	Salicornia and other annuals colonizing mud and sand
IE0001040	Barley Cove to Ballyrisode Point SAC	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)
IE0001040	Barley Cove to Ballyrisode Point SAC	Mediterranean salt meadows (Juncetalia maritimi)
IE0001040	Barley Cove to Ballyrisode Point SAC	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")
IE0001040	Barley Cove to Ballyrisode Point SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0001040	Barley Cove to Ballyrisode Point SAC	European dry heaths
IE0001040	Barley Cove to Ballyrisode Point SAC	Petalophyllum ralfsii
IE0001043	Cleanderry Wood SAC	Old sessile oak woods with Ilex and Blechnum in the British Isles
IE0001043	Cleanderry Wood SAC	Trichomanes speciosum
IE0001058	Great Island Channel SAC	Mudflats and sandflats not covered by seawater at low tide
IE0001058	Great Island Channel SAC	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)
IE0001061	Kilkeran Lake and Castlereke Dunes SAC	Coastal lagoons
IE0001061	Kilkeran Lake and Castlereke Dunes SAC	Embryonic shifting dunes
IE0001061	Kilkeran Lake and Castlereke Dunes SAC	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")
IE0001061	Kilkeran Lake and Castlereke Dunes SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0001070	Myross Wood SAC	Trichomanes speciosum
IE0001090	Ballyness Bay SAC	Estuaries
IE0001090	Ballyness Bay SAC	Mudflats and sandflats not covered by seawater at low tide
IE0001090	Ballyness Bay SAC	Embryonic shifting dunes
IE0001090	Ballyness Bay SAC	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")
IE0001090	Ballyness Bay SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0001090	Ballyness Bay SAC	Humid dune slacks
IE0001090	Ballyness Bay SAC	Vertigo geyeri

Site Code	Site Name	Habitat/ Species Name
IE0001107	Coolvoy Bog SAC	Blanket bogs (* if active bog)
IE0001125	Dunragh Loughs/Pettigo Plateau SAC	Northern Atlantic wet heaths with <i>Erica tetralix</i>
IE0001125	Dunragh Loughs/Pettigo Plateau SAC	Blanket bogs (* if active bog)
IE0001141	Gweedore Bay and Islands SAC	Coastal lagoons
IE0001141	Gweedore Bay and Islands SAC	Reefs
IE0001141	Gweedore Bay and Islands SAC	Perennial vegetation of stony banks
IE0001141	Gweedore Bay and Islands SAC	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>)
IE0001141	Gweedore Bay and Islands SAC	Mediterranean salt meadows (<i>Juncetalia maritimi</i>)
IE0001141	Gweedore Bay and Islands SAC	Embryonic shifting dunes
IE0001141	Gweedore Bay and Islands SAC	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")
IE0001141	Gweedore Bay and Islands SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0001141	Gweedore Bay and Islands SAC	Decalcified fixed dunes with <i>Empetrum nigrum</i>
IE0001141	Gweedore Bay and Islands SAC	Atlantic decalcified fixed dunes (<i>Calluno-Ulicetalia</i>)
IE0001141	Gweedore Bay and Islands SAC	Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>)
IE0001141	Gweedore Bay and Islands SAC	Humid dune slacks
IE0001141	Gweedore Bay and Islands SAC	Machairs (* in Ireland)
IE0001141	Gweedore Bay and Islands SAC	Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoetes</i> - <i>Nanojuncetalia</i>
IE0001141	Gweedore Bay and Islands SAC	European dry heaths
IE0001141	Gweedore Bay and Islands SAC	Alpine and Boreal heaths
IE0001141	Gweedore Bay and Islands SAC	<i>Juniperus communis</i> formations on heaths or calcareous grasslands
IE0001141	Gweedore Bay and Islands SAC	<i>Euphydryas aurinia</i>
IE0001141	Gweedore Bay and Islands SAC	<i>Lutra lutra</i>
IE0001141	Gweedore Bay and Islands SAC	<i>Petalophyllum ralfsii</i>
IE0001141	Gweedore Bay and Islands SAC	<i>Najas flexilis</i>
IE0001151	Kindrum Lough SAC	Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoetes</i> - <i>Nanojuncetalia</i>
IE0001151	Kindrum Lough SAC	<i>Najas flexilis</i>
IE0001179	Muckish Mountain SAC	Alpine and Boreal heaths
IE0001179	Muckish Mountain SAC	Siliceous rocky slopes with chasmophytic vegetation
IE0001190	Sheephaven SAC	Mudflats and sandflats not covered by seawater at low tide
IE0001190	Sheephaven SAC	<i>Salicornia</i> and other annuals colonizing mud and sand

Site Code	Site Name	Habitat/ Species Name
IE0001190	Sheephaven SAC	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)
IE0001190	Sheephaven SAC	Mediterranean salt meadows (<i>Juncetalia maritimi</i>)
IE0001190	Sheephaven SAC	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")
IE0001190	Sheephaven SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0001190	Sheephaven SAC	Humid dune slacks
IE0001190	Sheephaven SAC	Machairs (* in Ireland)
IE0001190	Sheephaven SAC	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles
IE0001190	Sheephaven SAC	<i>Euphydryas aurinia</i>
IE0001190	Sheephaven SAC	<i>Petalophyllum ralfsii</i>
IE0001195	Termon Strand SAC	Coastal lagoons
IE0001197	Keeper Hill SAC	Northern Atlantic wet heaths with <i>Erica tetralix</i>
IE0001197	Keeper Hill SAC	Blanket bogs (* if active bog)
IE0001209	Glenasmole Valley SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites)
IE0001209	Glenasmole Valley SAC	<i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>)
IE0001209	Glenasmole Valley SAC	Petrifying springs with tufa formation (<i>Cratoneurion</i>)
IE0001228	Aughrusbeg Machair and Lake SAC	Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoetes-Nanojuncetea</i>
IE0001228	Aughrusbeg Machair and Lake SAC	Northern Atlantic wet heaths with <i>Erica tetralix</i>
IE0001230	Courtmacsherry Estuary SAC	Estuaries
IE0001230	Courtmacsherry Estuary SAC	Mudflats and sandflats not covered by seawater at low tide
IE0001230	Courtmacsherry Estuary SAC	Annual vegetation of drift lines
IE0001230	Courtmacsherry Estuary SAC	Perennial vegetation of stony banks
IE0001230	Courtmacsherry Estuary SAC	<i>Salicornia</i> and other annuals colonizing mud and sand
IE0001230	Courtmacsherry Estuary SAC	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)
IE0001230	Courtmacsherry Estuary SAC	Mediterranean salt meadows (<i>Juncetalia maritimi</i>)
IE0001230	Courtmacsherry Estuary SAC	Embryonic shifting dunes
IE0001230	Courtmacsherry Estuary SAC	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")
IE0001230	Courtmacsherry Estuary SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0001242	Carrownagappul Bog SAC	Active raised bogs
IE0001242	Carrownagappul Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0001242	Carrownagappul Bog SAC	Depressions on peat substrates of the <i>Rhynchosporion</i>

Site Code	Site Name	Habitat/ Species Name
IE0001251	Cregduff Lough SAC	Transition mires and quaking bogs
IE0001251	Cregduff Lough SAC	<i>Najas flexilis</i>
IE0001257	Dog's Bay SAC	Annual vegetation of drift lines
IE0001257	Dog's Bay SAC	Embryonic shifting dunes
IE0001257	Dog's Bay SAC	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")
IE0001257	Dog's Bay SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0001257	Dog's Bay SAC	European dry heaths
IE0001271	Gortnandarragh Limestone Pavement SAC	Limestone pavements
IE0001275	Inisheer Island SAC	Coastal lagoons
IE0001275	Inisheer Island SAC	Reefs
IE0001275	Inisheer Island SAC	European dry heaths
IE0001275	Inisheer Island SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites)
IE0001275	Inisheer Island SAC	Lowland hay meadows (<i>Alopecurus pratensis</i> , <i>Sanguisorba officinalis</i>)
IE0001275	Inisheer Island SAC	Limestone pavements
IE0001285	Kiltiernan Turlough SAC	Turloughs
IE0001309	Omey Island Machair SAC	Machairs (* in Ireland)
IE0001309	Omey Island Machair SAC	Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.
IE0001309	Omey Island Machair SAC	<i>Petalophyllum ralfsii</i>
IE0001311	Rusheenduff Lough SAC	Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoetes</i> - <i>Nanojuncetea</i>
IE0001311	Rusheenduff Lough SAC	<i>Najas flexilis</i>
IE0001312	Ross Lake and Woods SAC	Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.
IE0001312	Ross Lake and Woods SAC	<i>Rhinolophus hipposideros</i>
IE0001313	Rosturra Wood SAC	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles
IE0001321	Termon Lough SAC	Turloughs
IE0001342	Cloonee and Inchiquin Loughs, Uragh Wood SAC	Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletea uniflorae</i>)
IE0001342	Cloonee and Inchiquin Loughs, Uragh Wood SAC	Northern Atlantic wet heaths with <i>Erica tetralix</i>
IE0001342	Cloonee and Inchiquin Loughs, Uragh Wood SAC	European dry heaths
IE0001342	Cloonee and Inchiquin Loughs, Uragh Wood SAC	Siliceous rocky slopes with chasmophytic vegetation
IE0001342	Cloonee and Inchiquin Loughs, Uragh Wood SAC	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles
IE0001342	Cloonee and Inchiquin Loughs, Uragh Wood SAC	<i>Geomalacus maculosus</i>

Site Code	Site Name	Habitat/ Species Name
IE0001342	Cloonee and Inchiquin Loughs, Uragh Wood SAC	Rhinolophus hipposideros
IE0001342	Cloonee and Inchiquin Loughs, Uragh Wood SAC	Trichomanes speciosum
IE0001342	Cloonee and Inchiquin Loughs, Uragh Wood SAC	Najas flexilis
IE0001371	Mucksna Wood SAC	Old sessile oak woods with Ilex and Blechnum in the British Isles
IE0001387	Ballynafagh Lake SAC	Alkaline fens
IE0001387	Ballynafagh Lake SAC	Vertigo moulinsiana
IE0001387	Ballynafagh Lake SAC	Euphydryas aurinia
IE0001398	Rye Water Valley/Carnton SAC	Petrifying springs with tufa formation (Cratoneurion)
IE0001398	Rye Water Valley/Carnton SAC	Vertigo angustior
IE0001398	Rye Water Valley/Carnton SAC	Vertigo moulinsiana
IE0001403	Arroo Mountain SAC	Northern Atlantic wet heaths with Erica tetralix
IE0001403	Arroo Mountain SAC	European dry heaths
IE0001403	Arroo Mountain SAC	Alpine and Boreal heaths
IE0001403	Arroo Mountain SAC	Blanket bogs (* if active bog)
IE0001403	Arroo Mountain SAC	Petrifying springs with tufa formation (Cratoneurion)
IE0001403	Arroo Mountain SAC	Calcareous and calcshist screes of the montane to alpine levels (Thlaspietea rotundifolii)
IE0001403	Arroo Mountain SAC	Calcareous rocky slopes with chasmophytic vegetation
IE0001430	Glen Bog SAC	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)
IE0001432	Glenstal Wood SAC	Trichomanes speciosum
IE0001459	Clogher Head SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0001459	Clogher Head SAC	European dry heaths
IE0001482	Clew Bay Complex SAC	Mudflats and sandflats not covered by seawater at low tide
IE0001482	Clew Bay Complex SAC	Coastal lagoons
IE0001482	Clew Bay Complex SAC	Large shallow inlets and bays
IE0001482	Clew Bay Complex SAC	Annual vegetation of drift lines
IE0001482	Clew Bay Complex SAC	Perennial vegetation of stony banks
IE0001482	Clew Bay Complex SAC	Atlantic salt meadows (Glauco-Puccinellietalia maritima)
IE0001482	Clew Bay Complex SAC	Embryonic shifting dunes
IE0001482	Clew Bay Complex SAC	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")
IE0001482	Clew Bay Complex SAC	Machairs (* in Ireland)
IE0001482	Clew Bay Complex SAC	Old sessile oak woods with Ilex and Blechnum in the British Isles

Site Code	Site Name	Habitat/ Species Name
IE0001482	Clew Bay Complex SAC	Vertigo geyeri
IE0001482	Clew Bay Complex SAC	Lutra lutra
IE0001482	Clew Bay Complex SAC	Phoca vitulina
IE0001497	Doogort Machair/Lough Doo SAC	Machairs (* in Ireland)
IE0001497	Doogort Machair/Lough Doo SAC	Petalophyllum ralfsii
IE0001501	Erris Head SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0001501	Erris Head SAC	Alpine and Boreal heaths
IE0001513	Keel Machair/Menaun Cliffs SAC	Perennial vegetation of stony banks
IE0001513	Keel Machair/Menaun Cliffs SAC	Machairs (* in Ireland)
IE0001513	Keel Machair/Menaun Cliffs SAC	Alpine and Boreal heaths
IE0001513	Keel Machair/Menaun Cliffs SAC	Petalophyllum ralfsii
IE0001529	Lough Cahasy, Lough Baun and Roonah Lough SAC	Coastal lagoons
IE0001529	Lough Cahasy, Lough Baun and Roonah Lough SAC	Perennial vegetation of stony banks
IE0001529	Lough Cahasy, Lough Baun and Roonah Lough SAC	Embryonic shifting dunes
IE0001529	Lough Cahasy, Lough Baun and Roonah Lough SAC	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")
IE0001529	Lough Cahasy, Lough Baun and Roonah Lough SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0001529	Lough Cahasy, Lough Baun and Roonah Lough SAC	Machairs (* in Ireland)
IE0001536	Mocorha Lough SAC	Calcareous fens with Cladium mariscus and species of the Caricion davallianae
IE0001547	Castletownshend SAC	Trichomanes speciosum
IE0001571	Urlaur Lakes SAC	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.
IE0001625	Castlesampson Esker SAC	Turloughs
IE0001625	Castlesampson Esker SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)
IE0001626	Annaghmore Lough (Roscommon) SAC	Alkaline fens
IE0001626	Annaghmore Lough (Roscommon) SAC	Vertigo geyeri
IE0001637	Four Roads Turlough SAC	Turloughs
IE0001656	Bricklieve Mountains & Keishcorran SAC	Turloughs
IE0001656	Bricklieve Mountains & Keishcorran SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)
IE0001656	Bricklieve Mountains & Keishcorran SAC	Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)
IE0001656	Bricklieve Mountains & Keishcorran SAC	Calcareous and calcshist screes of the montane to alpine levels (Thlaspietea rotundifolii)
IE0001656	Bricklieve Mountains & Keishcorran SAC	Euphydryas aurinia

Site Code	Site Name	Habitat/ Species Name
IE0001656	Bricklieve Mountains & Keishcorran SAC	Austropotamobius pallipes
IE0001669	Knockalongy and Knockachree Cliffs SAC	Trichomanes speciosum
IE0001673	Lough Arrow SAC	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.
IE0001680	Streedagh Point Dunes SAC	Mudflats and sandflats not covered by seawater at low tide
IE0001680	Streedagh Point Dunes SAC	Perennial vegetation of stony banks
IE0001680	Streedagh Point Dunes SAC	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)
IE0001680	Streedagh Point Dunes SAC	Mediterranean salt meadows (Juncetalia maritimi)
IE0001680	Streedagh Point Dunes SAC	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")
IE0001680	Streedagh Point Dunes SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0001680	Streedagh Point Dunes SAC	Vertigo angustior
IE0001683	Liskeenan Fen SAC	Calcareous fens with Cladium mariscus and species of the Caricion davallianae
IE0001741	Kilmuckridge-Tinnaberna Sandhills SAC	Embryonic shifting dunes
IE0001741	Kilmuckridge-Tinnaberna Sandhills SAC	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")
IE0001741	Kilmuckridge-Tinnaberna Sandhills SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0001742	Kilpatrick Sandhills SAC	Annual vegetation of drift lines
IE0001742	Kilpatrick Sandhills SAC	Embryonic shifting dunes
IE0001742	Kilpatrick Sandhills SAC	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")
IE0001742	Kilpatrick Sandhills SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0001742	Kilpatrick Sandhills SAC	Atlantic decalcified fixed dunes (Calluno-Uliceteta)
IE0001757	Holdenstown Bog SAC	Transition mires and quaking bogs
IE0001766	Magherabeg Dunes SAC	Annual vegetation of drift lines
IE0001766	Magherabeg Dunes SAC	Embryonic shifting dunes
IE0001766	Magherabeg Dunes SAC	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")
IE0001766	Magherabeg Dunes SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0001766	Magherabeg Dunes SAC	Atlantic decalcified fixed dunes (Calluno-Uliceteta)
IE0001766	Magherabeg Dunes SAC	Petrifying springs with tufa formation (Cratoneurion)
IE0001774	Lough Carra/Mask Complex SAC	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)
IE0001774	Lough Carra/Mask Complex SAC	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoetes-Nanojunceteta
IE0001774	Lough Carra/Mask Complex SAC	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.
IE0001774	Lough Carra/Mask Complex SAC	European dry heaths

Site Code	Site Name	Habitat/ Species Name
IE0001774	Lough Carra/Mask Complex SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)
IE0001774	Lough Carra/Mask Complex SAC	Calcareous fens with Cladium mariscus and species of the Caricion davallianae
IE0001774	Lough Carra/Mask Complex SAC	Alkaline fens
IE0001774	Lough Carra/Mask Complex SAC	Limestone pavements
IE0001774	Lough Carra/Mask Complex SAC	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)
IE0001774	Lough Carra/Mask Complex SAC	Rhinolophus hipposideros
IE0001774	Lough Carra/Mask Complex SAC	Lutra lutra
IE0001774	Lough Carra/Mask Complex SAC	Hamatocaulis vernicosus
IE0001776	Pilgrim's Road Esker SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)
IE0001786	Kilroosky Lough Cluster SAC	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.
IE0001786	Kilroosky Lough Cluster SAC	Calcareous fens with Cladium mariscus and species of the Caricion davallianae
IE0001786	Kilroosky Lough Cluster SAC	Alkaline fens
IE0001786	Kilroosky Lough Cluster SAC	Austropotamobius pallipes
IE0001810	White Lough, Ben Loughs and Lough Doo SAC	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.
IE0001810	White Lough, Ben Loughs and Lough Doo SAC	Austropotamobius pallipes
IE0001818	Lough Forbes Complex SAC	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation
IE0001818	Lough Forbes Complex SAC	Active raised bogs
IE0001818	Lough Forbes Complex SAC	Degraded raised bogs still capable of natural regeneration
IE0001818	Lough Forbes Complex SAC	Depressions on peat substrates of the Rhynchosporion
IE0001818	Lough Forbes Complex SAC	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)
IE0001831	Split Hills and Long Hill Esker SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)
IE0001847	Philipston Marsh SAC	Transition mires and quaking bogs
IE0001858	Galmoy Fen SAC	Alkaline fens
IE0001873	Derryclogher (Knockboy) Bog SAC	Blanket bogs (* if active bog)
IE0001879	Glanmore Bog SAC	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)
IE0001879	Glanmore Bog SAC	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation
IE0001879	Glanmore Bog SAC	Northern Atlantic wet heaths with Erica tetralix
IE0001879	Glanmore Bog SAC	Species-rich Nardus grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)
IE0001879	Glanmore Bog SAC	Blanket bogs (* if active bog)

Site Code	Site Name	Habitat/ Species Name
IE0001879	Glanmore Bog SAC	Margaritifera margaritifera
IE0001879	Glanmore Bog SAC	Trichomanes speciosum
IE0001880	Meenaguse Scragh SAC	Northern Atlantic wet heaths with Erica tetralix
IE0001881	Maulagowna Bog SAC	Blanket bogs (* if active bog)
IE0001890	Mullaghanish Bog SAC	Blanket bogs (* if active bog)
IE0001898	Unshin River SAC	Water courses of plain to montane levels with the Ranunculon fluitantis and Callitricho-Batrachion vegetation
IE0001898	Unshin River SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)
IE0001898	Unshin River SAC	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)
IE0001898	Unshin River SAC	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)
IE0001898	Unshin River SAC	Salmo salar
IE0001898	Unshin River SAC	Lutra lutra
IE0001899	Cloonakillina Lough SAC	Transition mires and quaking bogs
IE0001912	Glendree Bog SAC	Blanket bogs (* if active bog)
IE0001913	Sonnagh Bog SAC	Blanket bogs (* if active bog)
IE0001919	Glenade Lough SAC	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation
IE0001919	Glenade Lough SAC	Austropotamobius pallipes
IE0001919	Glenade Lough SAC	Najas flexilis
IE0001922	Bellacorick Bog Complex SAC	Natural dystrophic lakes and ponds
IE0001922	Bellacorick Bog Complex SAC	Northern Atlantic wet heaths with Erica tetralix
IE0001922	Bellacorick Bog Complex SAC	Blanket bogs (* if active bog)
IE0001922	Bellacorick Bog Complex SAC	Depressions on peat substrates of the Rhynchosporion
IE0001922	Bellacorick Bog Complex SAC	Alkaline fens
IE0001922	Bellacorick Bog Complex SAC	Vertigo geyeri
IE0001922	Bellacorick Bog Complex SAC	Saxifraga hirculus
IE0001926	East Burren Complex SAC	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.
IE0001926	East Burren Complex SAC	Turloughs
IE0001926	East Burren Complex SAC	Water courses of plain to montane levels with the Ranunculon fluitantis and Callitricho-Batrachion vegetation
IE0001926	East Burren Complex SAC	Alpine and Boreal heaths
IE0001926	East Burren Complex SAC	Juniperus communis formations on heaths or calcareous grasslands
IE0001926	East Burren Complex SAC	Calaminarian grasslands of the Violetalia calaminariae

Site Code	Site Name	Habitat/ Species Name
IE0001926	East Burren Complex SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites)
IE0001926	East Burren Complex SAC	Lowland hay meadows (<i>Alopecurus pratensis</i> , <i>Sanguisorba officinalis</i>)
IE0001926	East Burren Complex SAC	Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>
IE0001926	East Burren Complex SAC	Petrifying springs with tufa formation (<i>Cratoneurion</i>)
IE0001926	East Burren Complex SAC	Alkaline fens
IE0001926	East Burren Complex SAC	Limestone pavements
IE0001926	East Burren Complex SAC	Caves not open to the public
IE0001926	East Burren Complex SAC	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)
IE0001926	East Burren Complex SAC	<i>Euphydryas aurinia</i>
IE0001926	East Burren Complex SAC	<i>Rhinolophus hipposideros</i>
IE0001926	East Burren Complex SAC	<i>Lutra lutra</i>
IE0001932	Mweelrea/Sheeffry/Erriff Complex SAC	Coastal lagoons
IE0001932	Mweelrea/Sheeffry/Erriff Complex SAC	Annual vegetation of drift lines
IE0001932	Mweelrea/Sheeffry/Erriff Complex SAC	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)
IE0001932	Mweelrea/Sheeffry/Erriff Complex SAC	Mediterranean salt meadows (<i>Juncetalia maritimi</i>)
IE0001932	Mweelrea/Sheeffry/Erriff Complex SAC	Embryonic shifting dunes
IE0001932	Mweelrea/Sheeffry/Erriff Complex SAC	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")
IE0001932	Mweelrea/Sheeffry/Erriff Complex SAC	Atlantic decalcified fixed dunes (<i>Calluno-Ulicetalia</i>)
IE0001932	Mweelrea/Sheeffry/Erriff Complex SAC	Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>)
IE0001932	Mweelrea/Sheeffry/Erriff Complex SAC	Machairs (* in Ireland)
IE0001932	Mweelrea/Sheeffry/Erriff Complex SAC	Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>)
IE0001932	Mweelrea/Sheeffry/Erriff Complex SAC	Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoetes-Nanojuncetalia</i>
IE0001932	Mweelrea/Sheeffry/Erriff Complex SAC	Natural dystrophic lakes and ponds
IE0001932	Mweelrea/Sheeffry/Erriff Complex SAC	Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation
IE0001932	Mweelrea/Sheeffry/Erriff Complex SAC	Northern Atlantic wet heaths with <i>Erica tetralix</i>
IE0001932	Mweelrea/Sheeffry/Erriff Complex SAC	European dry heaths
IE0001932	Mweelrea/Sheeffry/Erriff Complex SAC	Alpine and Boreal heaths
IE0001932	Mweelrea/Sheeffry/Erriff Complex SAC	<i>Juniperus communis</i> formations on heaths or calcareous grasslands
IE0001932	Mweelrea/Sheeffry/Erriff Complex SAC	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels
IE0001932	Mweelrea/Sheeffry/Erriff Complex SAC	Blanket bogs (* if active bog)

Site Code	Site Name	Habitat/ Species Name
IE0001932	Mweelrea/Sheefry/Erriff Complex SAC	Transition mires and quaking bogs
IE0001932	Mweelrea/Sheefry/Erriff Complex SAC	Depressions on peat substrates of the Rhynchosporion
IE0001932	Mweelrea/Sheefry/Erriff Complex SAC	Petrifying springs with tufa formation (Cratoneurion)
IE0001932	Mweelrea/Sheefry/Erriff Complex SAC	Alkaline fens
IE0001932	Mweelrea/Sheefry/Erriff Complex SAC	Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)
IE0001932	Mweelrea/Sheefry/Erriff Complex SAC	Calcareous rocky slopes with chasmophytic vegetation
IE0001932	Mweelrea/Sheefry/Erriff Complex SAC	Siliceous rocky slopes with chasmophytic vegetation
IE0001932	Mweelrea/Sheefry/Erriff Complex SAC	Vertigo geyeri
IE0001932	Mweelrea/Sheefry/Erriff Complex SAC	Vertigo angustior
IE0001932	Mweelrea/Sheefry/Erriff Complex SAC	Margaritifera margaritifera
IE0001932	Mweelrea/Sheefry/Erriff Complex SAC	Salmo salar
IE0001932	Mweelrea/Sheefry/Erriff Complex SAC	Lutra lutra
IE0001932	Mweelrea/Sheefry/Erriff Complex SAC	Petalophyllum ralfsii
IE0001932	Mweelrea/Sheefry/Erriff Complex SAC	Najas flexilis
IE0001952	Comeragh Mountains SAC	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)
IE0001952	Comeragh Mountains SAC	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation
IE0001952	Comeragh Mountains SAC	Northern Atlantic wet heaths with Erica tetralix
IE0001952	Comeragh Mountains SAC	European dry heaths
IE0001952	Comeragh Mountains SAC	Alpine and Boreal heaths
IE0001952	Comeragh Mountains SAC	Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)
IE0001952	Comeragh Mountains SAC	Calcareous rocky slopes with chasmophytic vegetation
IE0001952	Comeragh Mountains SAC	Siliceous rocky slopes with chasmophytic vegetation
IE0001952	Comeragh Mountains SAC	Hamatocaulis vernicosus
IE0001955	Croaghaun/Slievemore SAC	Northern Atlantic wet heaths with Erica tetralix
IE0001955	Croaghaun/Slievemore SAC	European dry heaths
IE0001955	Croaghaun/Slievemore SAC	Alpine and Boreal heaths
IE0001955	Croaghaun/Slievemore SAC	Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)
IE0001955	Croaghaun/Slievemore SAC	Siliceous rocky slopes with chasmophytic vegetation
IE0001957	Boyne Coast and Estuary SAC	Estuaries
IE0001957	Boyne Coast and Estuary SAC	Mudflats and sandflats not covered by seawater at low tide
IE0001957	Boyne Coast and Estuary SAC	Annual vegetation of drift lines

Site Code	Site Name	Habitat/ Species Name
IE0001957	Boyne Coast and Estuary SAC	Salicornia and other annuals colonizing mud and sand
IE0001957	Boyne Coast and Estuary SAC	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>)
IE0001957	Boyne Coast and Estuary SAC	Embryonic shifting dunes
IE0001957	Boyne Coast and Estuary SAC	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")
IE0001957	Boyne Coast and Estuary SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0001975	Ballyhoorisky Point to Fanad Head SAC	Perennial vegetation of stony banks
IE0001975	Ballyhoorisky Point to Fanad Head SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0001975	Ballyhoorisky Point to Fanad Head SAC	Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoetes</i> - <i>Nanojuncetea</i>
IE0001975	Ballyhoorisky Point to Fanad Head SAC	Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.
IE0001975	Ballyhoorisky Point to Fanad Head SAC	<i>Vertigo angustior</i>
IE0001975	Ballyhoorisky Point to Fanad Head SAC	<i>Najas flexilis</i>
IE0001976	Lough Gill SAC	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation
IE0001976	Lough Gill SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites)
IE0001976	Lough Gill SAC	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles
IE0001976	Lough Gill SAC	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)
IE0001976	Lough Gill SAC	<i>Austropotamobius pallipes</i>
IE0001976	Lough Gill SAC	<i>Petromyzon marinus</i>
IE0001976	Lough Gill SAC	<i>Lampetra planeri</i>
IE0001976	Lough Gill SAC	<i>Lampetra fluviatilis</i>
IE0001976	Lough Gill SAC	<i>Salmo salar</i>
IE0001976	Lough Gill SAC	<i>Lutra lutra</i>
IE0001992	Tamur Bog SAC	Northern Atlantic wet heaths with <i>Erica tetralix</i>
IE0001992	Tamur Bog SAC	Blanket bogs (* if active bog)
IE0001992	Tamur Bog SAC	Depressions on peat substrates of the <i>Rhynchosporion</i>
IE0002005	Bellacragher Saltmarsh SAC	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>)
IE0002005	Bellacragher Saltmarsh SAC	Mediterranean salt meadows (<i>Juncetalia maritimi</i>)
IE0002006	Ox Mountains Bogs SAC	Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletea uniflorae</i>)
IE0002006	Ox Mountains Bogs SAC	Natural dystrophic lakes and ponds
IE0002006	Ox Mountains Bogs SAC	Northern Atlantic wet heaths with <i>Erica tetralix</i>
IE0002006	Ox Mountains Bogs SAC	European dry heaths

Site Code	Site Name	Habitat/ Species Name
IE0002006	Ox Mountains Bogs SAC	Blanket bogs (* if active bog)
IE0002006	Ox Mountains Bogs SAC	Transition mires and quaking bogs
IE0002006	Ox Mountains Bogs SAC	Depressions on peat substrates of the Rhynchosporion
IE0002006	Ox Mountains Bogs SAC	Vertigo geyeri
IE0002006	Ox Mountains Bogs SAC	Saxifraga hirculus
IE0002008	Maumturk Mountains SAC	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)
IE0002008	Maumturk Mountains SAC	Northern Atlantic wet heaths with Erica tetralix
IE0002008	Maumturk Mountains SAC	Alpine and Boreal heaths
IE0002008	Maumturk Mountains SAC	Blanket bogs (* if active bog)
IE0002008	Maumturk Mountains SAC	Depressions on peat substrates of the Rhynchosporion
IE0002008	Maumturk Mountains SAC	Siliceous rocky slopes with chasmophytic vegetation
IE0002008	Maumturk Mountains SAC	Salmo salar
IE0002008	Maumturk Mountains SAC	Najas flexilis
IE0002010	Old Domestic Building (Keevagh) SAC	Rhinolophus hipposideros
IE0002012	North Inishowen Coast SAC	Mudflats and sandflats not covered by seawater at low tide
IE0002012	North Inishowen Coast SAC	Perennial vegetation of stony banks
IE0002012	North Inishowen Coast SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0002012	North Inishowen Coast SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0002012	North Inishowen Coast SAC	Machairs (* in Ireland)
IE0002012	North Inishowen Coast SAC	European dry heaths
IE0002012	North Inishowen Coast SAC	Vertigo angustior
IE0002012	North Inishowen Coast SAC	Lutra lutra
IE0002031	The Twelve Bens/Garraun Complex SAC	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)
IE0002031	The Twelve Bens/Garraun Complex SAC	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoetes-Nanojuncetea
IE0002031	The Twelve Bens/Garraun Complex SAC	Alpine and Boreal heaths
IE0002031	The Twelve Bens/Garraun Complex SAC	Blanket bogs (* if active bog)
IE0002031	The Twelve Bens/Garraun Complex SAC	Depressions on peat substrates of the Rhynchosporion
IE0002031	The Twelve Bens/Garraun Complex SAC	Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)
IE0002031	The Twelve Bens/Garraun Complex SAC	Calcareous rocky slopes with chasmophytic vegetation
IE0002031	The Twelve Bens/Garraun Complex SAC	Siliceous rocky slopes with chasmophytic vegetation
IE0002031	The Twelve Bens/Garraun Complex SAC	Old sessile oak woods with Ilex and Blechnum in the British Isles

Site Code	Site Name	Habitat/ Species Name
IE0002031	The Twelve Bens/Garraun Complex SAC	Margaritifera margaritifera
IE0002031	The Twelve Bens/Garraun Complex SAC	Salmo salar
IE0002031	The Twelve Bens/Garraun Complex SAC	Lutra lutra
IE0002031	The Twelve Bens/Garraun Complex SAC	Najas flexilis
IE0002032	Boleybrack Mountain SAC	Natural dystrophic lakes and ponds
IE0002032	Boleybrack Mountain SAC	Northern Atlantic wet heaths with Erica tetralix
IE0002032	Boleybrack Mountain SAC	European dry heaths
IE0002032	Boleybrack Mountain SAC	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)
IE0002032	Boleybrack Mountain SAC	Blanket bogs (* if active bog)
IE0002034	Connemara Bog Complex SAC	Coastal lagoons
IE0002034	Connemara Bog Complex SAC	Reefs
IE0002034	Connemara Bog Complex SAC	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)
IE0002034	Connemara Bog Complex SAC	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoetes-Nanojuncetea
IE0002034	Connemara Bog Complex SAC	Natural dystrophic lakes and ponds
IE0002034	Connemara Bog Complex SAC	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation
IE0002034	Connemara Bog Complex SAC	Northern Atlantic wet heaths with Erica tetralix
IE0002034	Connemara Bog Complex SAC	European dry heaths
IE0002034	Connemara Bog Complex SAC	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)
IE0002034	Connemara Bog Complex SAC	Blanket bogs (* if active bog)
IE0002034	Connemara Bog Complex SAC	Transition mires and quaking bogs
IE0002034	Connemara Bog Complex SAC	Depressions on peat substrates of the Rhynchosporion
IE0002034	Connemara Bog Complex SAC	Alkaline fens
IE0002034	Connemara Bog Complex SAC	Old sessile oak woods with Ilex and Blechnum in the British Isles
IE0002034	Connemara Bog Complex SAC	Euphydryas aurinia
IE0002034	Connemara Bog Complex SAC	Salmo salar
IE0002034	Connemara Bog Complex SAC	Lutra lutra
IE0002034	Connemara Bog Complex SAC	Najas flexilis
IE0002036	Ballyhoura Mountains SAC	Northern Atlantic wet heaths with Erica tetralix
IE0002036	Ballyhoura Mountains SAC	European dry heaths
IE0002036	Ballyhoura Mountains SAC	Blanket bogs (* if active bog)
IE0002037	Carrigeenamronety Hill SAC	European dry heaths

Site Code	Site Name	Habitat/ Species Name
IE0002037	Carrigeenamronety Hill SAC	Trichomanes speciosum
IE0002041	Old Domestic Building, Curraglass Wood SAC	Rhinolophus hipposideros
IE0002047	Cloghernagore Bog and Glenveagh National Park SAC	Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>)
IE0002047	Cloghernagore Bog and Glenveagh National Park SAC	Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation
IE0002047	Cloghernagore Bog and Glenveagh National Park SAC	Northern Atlantic wet heaths with <i>Erica tetralix</i>
IE0002047	Cloghernagore Bog and Glenveagh National Park SAC	European dry heaths
IE0002047	Cloghernagore Bog and Glenveagh National Park SAC	Alpine and Boreal heaths
IE0002047	Cloghernagore Bog and Glenveagh National Park SAC	<i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>)
IE0002047	Cloghernagore Bog and Glenveagh National Park SAC	Blanket bogs (* if active bog)
IE0002047	Cloghernagore Bog and Glenveagh National Park SAC	Depressions on peat substrates of the <i>Rhynchosporion</i>
IE0002047	Cloghernagore Bog and Glenveagh National Park SAC	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles
IE0002047	Cloghernagore Bog and Glenveagh National Park SAC	<i>Margaritifera margaritifera</i>
IE0002047	Cloghernagore Bog and Glenveagh National Park SAC	<i>Salmo salar</i>
IE0002047	Cloghernagore Bog and Glenveagh National Park SAC	<i>Lutra lutra</i>
IE0002047	Cloghernagore Bog and Glenveagh National Park SAC	<i>Trichomanes speciosum</i>
IE0002070	Tralee Bay and Magharees Peninsula, West to Cloghane SAC	Estuaries
IE0002070	Tralee Bay and Magharees Peninsula, West to Cloghane SAC	Mudflats and sandflats not covered by seawater at low tide
IE0002070	Tralee Bay and Magharees Peninsula, West to Cloghane SAC	Coastal lagoons
IE0002070	Tralee Bay and Magharees Peninsula, West to Cloghane SAC	Large shallow inlets and bays
IE0002070	Tralee Bay and Magharees Peninsula, West to Cloghane SAC	Reefs
IE0002070	Tralee Bay and Magharees Peninsula, West to Cloghane SAC	Annual vegetation of drift lines
IE0002070	Tralee Bay and Magharees Peninsula, West to Cloghane SAC	Perennial vegetation of stony banks
IE0002070	Tralee Bay and Magharees Peninsula, West to Cloghane SAC	<i>Salicornia</i> and other annuals colonizing mud and sand
IE0002070	Tralee Bay and Magharees Peninsula, West to Cloghane SAC	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>)
IE0002070	Tralee Bay and Magharees Peninsula, West to Cloghane SAC	Mediterranean salt meadows (<i>Juncetalia maritimi</i>)
IE0002070	Tralee Bay and Magharees Peninsula, West to Cloghane SAC	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")
IE0002070	Tralee Bay and Magharees Peninsula, West to Cloghane SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0002070	Tralee Bay and Magharees Peninsula, West to Cloghane SAC	Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>)
IE0002070	Tralee Bay and Magharees Peninsula, West to Cloghane SAC	Humid dune slacks
IE0002070	Tralee Bay and Magharees Peninsula, West to Cloghane SAC	<i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>)
IE0002070	Tralee Bay and Magharees Peninsula, West to Cloghane SAC	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, <i>Salicion albae</i>)

Site Code	Site Name	Habitat/ Species Name
IE0002070	Tralee Bay and Magharees Peninsula, West to Cloghane SAC	Lutra lutra
IE0002070	Tralee Bay and Magharees Peninsula, West to Cloghane SAC	Petalophyllum ralfsii
IE0002074	Slyne Head Peninsula SAC	Coastal lagoons
IE0002074	Slyne Head Peninsula SAC	Large shallow inlets and bays
IE0002074	Slyne Head Peninsula SAC	Reefs
IE0002074	Slyne Head Peninsula SAC	Annual vegetation of drift lines
IE0002074	Slyne Head Peninsula SAC	Perennial vegetation of stony banks
IE0002074	Slyne Head Peninsula SAC	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)
IE0002074	Slyne Head Peninsula SAC	Mediterranean salt meadows (Juncetalia maritimi)
IE0002074	Slyne Head Peninsula SAC	Embryonic shifting dunes
IE0002074	Slyne Head Peninsula SAC	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")
IE0002074	Slyne Head Peninsula SAC	Machairs (* in Ireland)
IE0002074	Slyne Head Peninsula SAC	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)
IE0002074	Slyne Head Peninsula SAC	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoetes-Nanojuncetea
IE0002074	Slyne Head Peninsula SAC	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.
IE0002074	Slyne Head Peninsula SAC	European dry heaths
IE0002074	Slyne Head Peninsula SAC	Juniperus communis formations on heaths or calcareous grasslands
IE0002074	Slyne Head Peninsula SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)
IE0002074	Slyne Head Peninsula SAC	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)
IE0002074	Slyne Head Peninsula SAC	Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)
IE0002074	Slyne Head Peninsula SAC	Alkaline fens
IE0002074	Slyne Head Peninsula SAC	Tursiops truncatus
IE0002074	Slyne Head Peninsula SAC	Petalophyllum ralfsii
IE0002074	Slyne Head Peninsula SAC	Najas flexilis
IE0002081	Ballinafad SAC	Rhinolophus hipposideros
IE0002091	Newhall and Edenvale Complex SAC	Caves not open to the public
IE0002091	Newhall and Edenvale Complex SAC	Rhinolophus hipposideros
IE0002098	Old Domestic Building, Askive Wood SAC	Rhinolophus hipposideros
IE0002110	Corliskea/Trien/Cloonfolliv Bog SAC	Active raised bogs
IE0002110	Corliskea/Trien/Cloonfolliv Bog SAC	Degraded raised bogs still capable of natural regeneration

Site Code	Site Name	Habitat/ Species Name
IE0002110	Corliskea/Trien/Cloonfelliv Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0002110	Corliskea/Trien/Cloonfelliv Bog SAC	Bog woodland
IE0002111	Kilkieran Bay and Islands SAC	Mudflats and sandflats not covered by seawater at low tide
IE0002111	Kilkieran Bay and Islands SAC	Coastal lagoons
IE0002111	Kilkieran Bay and Islands SAC	Large shallow inlets and bays
IE0002111	Kilkieran Bay and Islands SAC	Reefs
IE0002111	Kilkieran Bay and Islands SAC	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>)
IE0002111	Kilkieran Bay and Islands SAC	Mediterranean salt meadows (<i>Juncetalia maritimi</i>)
IE0002111	Kilkieran Bay and Islands SAC	Machairs (* in Ireland)
IE0002111	Kilkieran Bay and Islands SAC	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea
IE0002111	Kilkieran Bay and Islands SAC	Lowland hay meadows (<i>Alopecurus pratensis</i> , <i>Sanguisorba officinalis</i>)
IE0002111	Kilkieran Bay and Islands SAC	<i>Lutra lutra</i>
IE0002111	Kilkieran Bay and Islands SAC	<i>Phoca vitulina</i>
IE0002111	Kilkieran Bay and Islands SAC	<i>Najas flexilis</i>
IE0002112	Ballyseedy Wood SAC	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, <i>Alnion incanae</i> , <i>Salicion albae</i>)
IE0002117	Lough Coy SAC	Turloughs
IE0002118	Barnahallia Lough SAC	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea
IE0002118	Barnahallia Lough SAC	<i>Najas flexilis</i>
IE0002119	Lough Nageeron SAC	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea
IE0002119	Lough Nageeron SAC	<i>Najas flexilis</i>
IE0002120	Lough Bane and Lough Glass SAC	Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.
IE0002120	Lough Bane and Lough Glass SAC	<i>Austropotamobius pallipes</i>
IE0002121	Lough Lene SAC	Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.
IE0002121	Lough Lene SAC	<i>Austropotamobius pallipes</i>
IE0002122	Wicklow Mountains SAC	Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>)
IE0002122	Wicklow Mountains SAC	Natural dystrophic lakes and ponds
IE0002122	Wicklow Mountains SAC	Northern Atlantic wet heaths with <i>Erica tetralix</i>
IE0002122	Wicklow Mountains SAC	European dry heaths
IE0002122	Wicklow Mountains SAC	Alpine and Boreal heaths

Site Code	Site Name	Habitat/ Species Name
IE0002122	Wicklow Mountains SAC	Calaminarian grasslands of the <i>Violetalia calaminariae</i>
IE0002122	Wicklow Mountains SAC	Species-rich <i>Nardus</i> grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)
IE0002122	Wicklow Mountains SAC	Blanket bogs (* if active bog)
IE0002122	Wicklow Mountains SAC	Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>)
IE0002122	Wicklow Mountains SAC	Calcareous rocky slopes with chasmophytic vegetation
IE0002122	Wicklow Mountains SAC	Siliceous rocky slopes with chasmophytic vegetation
IE0002122	Wicklow Mountains SAC	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles
IE0002122	Wicklow Mountains SAC	<i>Lutra lutra</i>
IE0002123	Ardmore Head SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0002123	Ardmore Head SAC	European dry heaths
IE0002124	Bolingbrook Hill SAC	Northern Atlantic wet heaths with <i>Erica tetralix</i>
IE0002124	Bolingbrook Hill SAC	European dry heaths
IE0002124	Bolingbrook Hill SAC	Species-rich <i>Nardus</i> grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)
IE0002125	Anglesey Road SAC	Species-rich <i>Nardus</i> grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)
IE0002126	Pollagoona Bog SAC	Blanket bogs (* if active bog)
IE0002129	Murvey Machair SAC	Machairs (* in Ireland)
IE0002129	Murvey Machair SAC	<i>Petalophyllum ralfsii</i>
IE0002130	Tully Lough SAC	Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoetes</i> - <i>Nanojuncetea</i>
IE0002130	Tully Lough SAC	<i>Najas flexilis</i>
IE0002135	Lough Nageage SAC	<i>Austropotamobius pallipes</i>
IE0002137	Lower River Suir SAC	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)
IE0002137	Lower River Suir SAC	Mediterranean salt meadows (<i>Juncetalia maritimi</i>)
IE0002137	Lower River Suir SAC	Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation
IE0002137	Lower River Suir SAC	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels
IE0002137	Lower River Suir SAC	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles
IE0002137	Lower River Suir SAC	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)
IE0002137	Lower River Suir SAC	<i>Taxus baccata</i> woods of the British Isles
IE0002137	Lower River Suir SAC	<i>Margaritifera margaritifera</i>
IE0002137	Lower River Suir SAC	<i>Austropotamobius pallipes</i>

Site Code	Site Name	Habitat/ Species Name
IE0002137	Lower River Suir SAC	Petromyzon marinus
IE0002137	Lower River Suir SAC	Lampetra planeri
IE0002137	Lower River Suir SAC	Lampetra fluviatilis
IE0002137	Lower River Suir SAC	Alosa fallax
IE0002137	Lower River Suir SAC	Salmo salar
IE0002137	Lower River Suir SAC	Lutra lutra
IE0002141	Mountmellick SAC	Vertigo moulinsiana
IE0002144	Newport River SAC	Margaritifera margaritifera
IE0002144	Newport River SAC	Salmo salar
IE0002147	Lisduff Fen SAC	Petrifying springs with tufa formation (Cratoneurion)
IE0002147	Lisduff Fen SAC	Alkaline fens
IE0002147	Lisduff Fen SAC	Vertigo geyeri
IE0002157	Newgrove House SAC	Rhinolophus hipposideros
IE0002158	Kenmare River SAC	Large shallow inlets and bays
IE0002158	Kenmare River SAC	Reefs
IE0002158	Kenmare River SAC	Perennial vegetation of stony banks
IE0002158	Kenmare River SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0002158	Kenmare River SAC	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)
IE0002158	Kenmare River SAC	Mediterranean salt meadows (Juncetalia maritimi)
IE0002158	Kenmare River SAC	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")
IE0002158	Kenmare River SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0002158	Kenmare River SAC	European dry heaths
IE0002158	Kenmare River SAC	Juniperus communis formations on heaths or calcareous grasslands
IE0002158	Kenmare River SAC	Calaminarian grasslands of the Violetalia calaminariae
IE0002158	Kenmare River SAC	Submerged or partially submerged sea caves
IE0002158	Kenmare River SAC	Vertigo angustior
IE0002158	Kenmare River SAC	Rhinolophus hipposideros
IE0002158	Kenmare River SAC	Lutra lutra
IE0002158	Kenmare River SAC	Phoca vitulina
IE0002159	Mulroy Bay SAC	Large shallow inlets and bays
IE0002159	Mulroy Bay SAC	Reefs

Site Code	Site Name	Habitat/ Species Name
IE0002159	Mulroy Bay SAC	Lutra lutra
IE0002161	Long Bank SAC	Sandbanks which are slightly covered by sea water all the time
IE0002162	River Barrow and River Nore SAC	Estuaries
IE0002162	River Barrow and River Nore SAC	Mudflats and sandflats not covered by seawater at low tide
IE0002162	River Barrow and River Nore SAC	Reefs
IE0002162	River Barrow and River Nore SAC	Salicornia and other annuals colonizing mud and sand
IE0002162	River Barrow and River Nore SAC	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>)
IE0002162	River Barrow and River Nore SAC	Mediterranean salt meadows (<i>Juncetalia maritimi</i>)
IE0002162	River Barrow and River Nore SAC	Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation
IE0002162	River Barrow and River Nore SAC	European dry heaths
IE0002162	River Barrow and River Nore SAC	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels
IE0002162	River Barrow and River Nore SAC	Petrifying springs with tufa formation (<i>Cratoneurion</i>)
IE0002162	River Barrow and River Nore SAC	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles
IE0002162	River Barrow and River Nore SAC	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)
IE0002162	River Barrow and River Nore SAC	<i>Vertigo moulinsiana</i>
IE0002162	River Barrow and River Nore SAC	<i>Margaritifera margaritifera</i>
IE0002162	River Barrow and River Nore SAC	<i>Austropotamobius pallipes</i>
IE0002162	River Barrow and River Nore SAC	<i>Petromyzon marinus</i>
IE0002162	River Barrow and River Nore SAC	<i>Lampetra planeri</i>
IE0002162	River Barrow and River Nore SAC	<i>Lampetra fluviatilis</i>
IE0002162	River Barrow and River Nore SAC	<i>Alosa fallax</i>
IE0002162	River Barrow and River Nore SAC	<i>Salmo salar</i>
IE0002162	River Barrow and River Nore SAC	<i>Lutra lutra</i>
IE0002162	River Barrow and River Nore SAC	<i>Trichomanes speciosum</i>
IE0002162	River Barrow and River Nore SAC	<i>Margaritifera durrovensis</i>
IE0002164	Lough Golagh and Breesy Hill SAC	Blanket bogs (* if active bog)
IE0002165	Lower River Shannon SAC	Sandbanks which are slightly covered by sea water all the time
IE0002165	Lower River Shannon SAC	Estuaries
IE0002165	Lower River Shannon SAC	Mudflats and sandflats not covered by seawater at low tide
IE0002165	Lower River Shannon SAC	Coastal lagoons
IE0002165	Lower River Shannon SAC	Large shallow inlets and bays

Site Code	Site Name	Habitat/ Species Name
IE0002165	Lower River Shannon SAC	Reefs
IE0002165	Lower River Shannon SAC	Perennial vegetation of stony banks
IE0002165	Lower River Shannon SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0002165	Lower River Shannon SAC	Salicornia and other annuals colonizing mud and sand
IE0002165	Lower River Shannon SAC	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)
IE0002165	Lower River Shannon SAC	Mediterranean salt meadows (<i>Juncetalia maritimi</i>)
IE0002165	Lower River Shannon SAC	Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation
IE0002165	Lower River Shannon SAC	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>)
IE0002165	Lower River Shannon SAC	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)
IE0002165	Lower River Shannon SAC	<i>Margaritifera margaritifera</i>
IE0002165	Lower River Shannon SAC	<i>Petromyzon marinus</i>
IE0002165	Lower River Shannon SAC	<i>Lampetra planeri</i>
IE0002165	Lower River Shannon SAC	<i>Lampetra fluviatilis</i>
IE0002165	Lower River Shannon SAC	<i>Salmo salar</i>
IE0002165	Lower River Shannon SAC	<i>Tursiops truncatus</i>
IE0002165	Lower River Shannon SAC	<i>Lutra lutra</i>
IE0002170	Blackwater River (Cork/Waterford) SAC	Estuaries
IE0002170	Blackwater River (Cork/Waterford) SAC	Mudflats and sandflats not covered by seawater at low tide
IE0002170	Blackwater River (Cork/Waterford) SAC	Perennial vegetation of stony banks
IE0002170	Blackwater River (Cork/Waterford) SAC	Salicornia and other annuals colonizing mud and sand
IE0002170	Blackwater River (Cork/Waterford) SAC	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)
IE0002170	Blackwater River (Cork/Waterford) SAC	Mediterranean salt meadows (<i>Juncetalia maritimi</i>)
IE0002170	Blackwater River (Cork/Waterford) SAC	Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation
IE0002170	Blackwater River (Cork/Waterford) SAC	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles
IE0002170	Blackwater River (Cork/Waterford) SAC	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)
IE0002170	Blackwater River (Cork/Waterford) SAC	<i>Margaritifera margaritifera</i>
IE0002170	Blackwater River (Cork/Waterford) SAC	<i>Austropotamobius pallipes</i>
IE0002170	Blackwater River (Cork/Waterford) SAC	<i>Petromyzon marinus</i>
IE0002170	Blackwater River (Cork/Waterford) SAC	<i>Lampetra planeri</i>
IE0002170	Blackwater River (Cork/Waterford) SAC	<i>Lampetra fluviatilis</i>
IE0002170	Blackwater River (Cork/Waterford) SAC	<i>Alosa fallax</i>

Site Code	Site Name	Habitat/ Species Name
IE0002170	Blackwater River (Cork/Waterford) SAC	Salmo salar
IE0002170	Blackwater River (Cork/Waterford) SAC	Lutra lutra
IE0002170	Blackwater River (Cork/Waterford) SAC	Trichomanes speciosum
IE0002171	Bandon River SAC	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation
IE0002171	Bandon River SAC	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)
IE0002171	Bandon River SAC	Margaritifera margaritifera
IE0002171	Bandon River SAC	Lampetra planeri
IE0002172	Blasket Islands SAC	Reefs
IE0002172	Blasket Islands SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0002172	Blasket Islands SAC	European dry heaths
IE0002172	Blasket Islands SAC	Submerged or partially submerged sea caves
IE0002172	Blasket Islands SAC	Phocoena phocoena
IE0002172	Blasket Islands SAC	Halichoerus grypus
IE0002173	Blackwater River (Kerry) SAC	European dry heaths
IE0002173	Blackwater River (Kerry) SAC	Geomalacus maculosus
IE0002173	Blackwater River (Kerry) SAC	Margaritifera margaritifera
IE0002173	Blackwater River (Kerry) SAC	Salmo salar
IE0002173	Blackwater River (Kerry) SAC	Rhinolophus hipposideros
IE0002173	Blackwater River (Kerry) SAC	Lutra lutra
IE0002176	Leannan River SAC	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)
IE0002176	Leannan River SAC	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoetes-Nanojuncetea
IE0002176	Leannan River SAC	Margaritifera margaritifera
IE0002176	Leannan River SAC	Salmo salar
IE0002176	Leannan River SAC	Lutra lutra
IE0002176	Leannan River SAC	Najas flexilis
IE0002177	Lough Dahybaun SAC	Najas flexilis
IE0002179	Towerhill House SAC	Rhinolophus hipposideros
IE0002180	Gortacarnaun Wood SAC	Old sessile oak woods with Ilex and Blechnum in the British Isles
IE0002181	Drummin Wood SAC	Old sessile oak woods with Ilex and Blechnum in the British Isles
IE0002185	Slieve Mish Mountains SAC	Northern Atlantic wet heaths with Erica tetralix
IE0002185	Slieve Mish Mountains SAC	European dry heaths

Site Code	Site Name	Habitat/ Species Name
IE0002185	Slieve Mish Mountains SAC	Alpine and Boreal heaths
IE0002185	Slieve Mish Mountains SAC	Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)
IE0002185	Slieve Mish Mountains SAC	Calcareous rocky slopes with chasmophytic vegetation
IE0002185	Slieve Mish Mountains SAC	Siliceous rocky slopes with chasmophytic vegetation
IE0002185	Slieve Mish Mountains SAC	Trichomanes speciosum
IE0002187	Drongawn Lough SAC	Coastal lagoons
IE0002189	Farranamanagh Lough SAC	Coastal lagoons
IE0002189	Farranamanagh Lough SAC	Perennial vegetation of stony banks
IE0002193	Ireland's Eye SAC	Perennial vegetation of stony banks
IE0002193	Ireland's Eye SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0002197	Derrinlough (Cloonkeenleananode) Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0002199	Ballygar (Aghrane) Bog SAC	Active raised bogs
IE0002199	Ballygar (Aghrane) Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0002200	Aughrim (Aghrane) Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0002201	Derragh Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0002201	Derragh Bog SAC	Bog woodland
IE0002202	Mount Jessop Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0002202	Mount Jessop Bog SAC	Bog woodland
IE0002203	Girley (Drewstown) Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0002205	Wooddown Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0002206	Scohaboy (Sopwell) Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0002207	Arragh More (Derrybreen) Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0002213	Glenloughaun Esker SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)
IE0002214	Killeglan Grassland SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)
IE0002236	Island Fen SAC	Juniperus communis formations on heaths or calcareous grasslands
IE0002236	Island Fen SAC	Alkaline fens
IE0002241	Lough Derg, North-East Shore SAC	Juniperus communis formations on heaths or calcareous grasslands
IE0002241	Lough Derg, North-East Shore SAC	Calcareous fens with Cladium mariscus and species of the Caricion davallianae
IE0002241	Lough Derg, North-East Shore SAC	Alkaline fens
IE0002241	Lough Derg, North-East Shore SAC	Limestone pavements

Site Code	Site Name	Habitat/ Species Name
IE0002241	Lough Derg, North-East Shore SAC	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae)
IE0002241	Lough Derg, North-East Shore SAC	<i>Taxus baccata</i> woods of the British Isles
IE0002243	Clare Island Cliffs SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0002243	Clare Island Cliffs SAC	Calcareous rocky slopes with chasmophytic vegetation
IE0002243	Clare Island Cliffs SAC	Siliceous rocky slopes with chasmophytic vegetation
IE0002244	Ardrahan Grassland SAC	Alpine and Boreal heaths
IE0002244	Ardrahan Grassland SAC	<i>Juniperus communis</i> formations on heaths or calcareous grasslands
IE0002244	Ardrahan Grassland SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)
IE0002244	Ardrahan Grassland SAC	Limestone pavements
IE0002245	Old Farm Buildings, Ballymacrogan SAC	<i>Rhinolophus hipposideros</i>
IE0002246	Ballycullinan, Old Domestic Building SAC	<i>Rhinolophus hipposideros</i>
IE0002247	Toonagh Estate SAC	<i>Rhinolophus hipposideros</i>
IE0002249	The Murrough Wetlands SAC	Annual vegetation of drift lines
IE0002249	The Murrough Wetlands SAC	Perennial vegetation of stony banks
IE0002249	The Murrough Wetlands SAC	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>)
IE0002249	The Murrough Wetlands SAC	Mediterranean salt meadows (<i>Juncetalia maritimi</i>)
IE0002249	The Murrough Wetlands SAC	Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>
IE0002249	The Murrough Wetlands SAC	Alkaline fens
IE0002250	Carrowmore Dunes SAC	Reefs
IE0002250	Carrowmore Dunes SAC	Embryonic shifting dunes
IE0002250	Carrowmore Dunes SAC	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")
IE0002250	Carrowmore Dunes SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
IE0002250	Carrowmore Dunes SAC	<i>Vertigo angustior</i>
IE0002252	Thomastown Quarry SAC	Petrifying springs with tufa formation (<i>Cratoneurion</i>)
IE0002256	Ballyprior Grassland SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)
IE0002257	Moanour Mountain SAC	Northern Atlantic wet heaths with <i>Erica tetralix</i>
IE0002257	Moanour Mountain SAC	European dry heaths
IE0002258	Silvermines Mountains West SAC	Northern Atlantic wet heaths with <i>Erica tetralix</i>
IE0002258	Silvermines Mountains West SAC	European dry heaths
IE0002258	Silvermines Mountains West SAC	Calaminarian grasslands of the <i>Violetalia calaminariae</i>

Site Code	Site Name	Habitat/ Species Name
IE0002259	Tory Island Coast SAC	Coastal lagoons
IE0002259	Tory Island Coast SAC	Reefs
IE0002259	Tory Island Coast SAC	Perennial vegetation of stony banks
IE0002259	Tory Island Coast SAC	Vegetated sea cliffs of the Atlantic and Baltic Coasts
IE0002259	Tory Island Coast SAC	Submerged or partially submerged sea caves
IE0002261	Magharee Islands SAC	Reefs
IE0002262	Valencia Harbour/Portmagee Channel SAC	Mudflats and sandflats not covered by seawater at low tide
IE0002262	Valencia Harbour/Portmagee Channel SAC	Large shallow inlets and bays
IE0002262	Valencia Harbour/Portmagee Channel SAC	Reefs
IE0002263	Kerry Head Shoal SAC	Reefs
IE0002264	Kilkee Reefs SAC	Large shallow inlets and bays
IE0002264	Kilkee Reefs SAC	Reefs
IE0002264	Kilkee Reefs SAC	Submerged or partially submerged sea caves
IE0002265	Kingstown Bay SAC	Large shallow inlets and bays
IE0002268	Achill Head SAC	Mudflats and sandflats not covered by seawater at low tide
IE0002268	Achill Head SAC	Large shallow inlets and bays
IE0002268	Achill Head SAC	Reefs
IE0002269	Carnsore Point SAC	Mudflats and sandflats not covered by seawater at low tide
IE0002269	Carnsore Point SAC	Reefs
IE0002274	Wicklow Reef SAC	Reefs
IE0002279	Askeaton Fen Complex SAC	Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>
IE0002279	Askeaton Fen Complex SAC	Alkaline fens
IE0002280	Dunbeacon Shingle SAC	Perennial vegetation of stony banks
IE0002281	Reen Point Shingle SAC	Perennial vegetation of stony banks
IE0002283	Rutland Island and Sound SAC	Coastal lagoons
IE0002283	Rutland Island and Sound SAC	Large shallow inlets and bays
IE0002283	Rutland Island and Sound SAC	Reefs
IE0002283	Rutland Island and Sound SAC	Annual vegetation of drift lines
IE0002283	Rutland Island and Sound SAC	Embryonic shifting dunes
IE0002283	Rutland Island and Sound SAC	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")
IE0002283	Rutland Island and Sound SAC	Fixed coastal dunes with herbaceous vegetation ("grey dunes")

Site Code	Site Name	Habitat/ Species Name
IE0002283	Rutland Island and Sound SAC	Humid dune slacks
IE0002283	Rutland Island and Sound SAC	Phoca vitulina
IE0002287	Lough Swilly SAC	Estuaries
IE0002287	Lough Swilly SAC	Coastal lagoons
IE0002287	Lough Swilly SAC	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)
IE0002287	Lough Swilly SAC	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)
IE0002287	Lough Swilly SAC	Old sessile oak woods with Ilex and Blechnum in the British Isles
IE0002287	Lough Swilly SAC	Lutra lutra
IE0002293	Carrowbaun, Newhall and Ballylee Turloughs SAC	Turloughs
IE0002294	Cahermore Turlough SAC	Turloughs
IE0002295	Ballinduff Turlough SAC	Turloughs
IE0002296	Williamstown Turloughs SAC	Turloughs
IE0002298	River Moy SAC	Active raised bogs
IE0002298	River Moy SAC	Degraded raised bogs still capable of natural regeneration
IE0002298	River Moy SAC	Depressions on peat substrates of the Rhynchosporion
IE0002298	River Moy SAC	Alkaline fens
IE0002298	River Moy SAC	Old sessile oak woods with Ilex and Blechnum in the British Isles
IE0002298	River Moy SAC	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)
IE0002298	River Moy SAC	Austropotamobius pallipes
IE0002298	River Moy SAC	Petromyzon marinus
IE0002298	River Moy SAC	Lampetra planeri
IE0002298	River Moy SAC	Salmo salar
IE0002298	River Moy SAC	Lutra lutra
IE0002299	River Boyne and River Blackwater SAC	Alkaline fens
IE0002299	River Boyne and River Blackwater SAC	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)
IE0002299	River Boyne and River Blackwater SAC	Lampetra fluviatilis
IE0002299	River Boyne and River Blackwater SAC	Salmo salar
IE0002299	River Boyne and River Blackwater SAC	Lutra lutra
IE0002301	River Finn SAC	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)
IE0002301	River Finn SAC	Northern Atlantic wet heaths with Erica tetralix
IE0002301	River Finn SAC	Blanket bogs (* if active bog)

Site Code	Site Name	Habitat/ Species Name
IE0002301	River Finn SAC	Transition mires and quaking bogs
IE0002301	River Finn SAC	Salmo salar
IE0002301	River Finn SAC	Lutra lutra
IE0002303	Dunmuckrum Turloughs SAC	Turloughs
IE0002306	Carlingford Shore SAC	Annual vegetation of drift lines
IE0002306	Carlingford Shore SAC	Perennial vegetation of stony banks
IE0002312	Slieve Bernagh Bog SAC	Northern Atlantic wet heaths with Erica tetralix
IE0002312	Slieve Bernagh Bog SAC	European dry heaths
IE0002312	Slieve Bernagh Bog SAC	Blanket bogs (* if active bog)
IE0002313	Ballymore Fen SAC	Transition mires and quaking bogs
IE0002314	Old Domestic Buildings, Rylane SAC	Rhinolophus hipposideros
IE0002315	Glanlough Woods SAC	Rhinolophus hipposideros
IE0002316	Ratty River Cave SAC	Caves not open to the public
IE0002316	Ratty River Cave SAC	Rhinolophus hipposideros
IE0002317	Cregg House Stables, Crusheen SAC	Rhinolophus hipposideros
IE0002318	Knockanira House SAC	Rhinolophus hipposideros
IE0002319	Kilkishen House SAC	Rhinolophus hipposideros
IE0002320	Kildun Souterrain SAC	Rhinolophus hipposideros
IE0002324	Glendine Wood SAC	Trichomanes speciosum
IE0002327	Belgica Mound Province SAC	Reefs
IE0002328	Hovland Mound Province SAC	Reefs
IE0002329	South-West Porcupine Bank SAC	Reefs
IE0002330	North-West Porcupine Bank SAC	Reefs
IE0002331	Mouds Bog SAC	Active raised bogs
IE0002331	Mouds Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0002331	Mouds Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0002332	Coolrain Bog SAC	Active raised bogs
IE0002332	Coolrain Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0002332	Coolrain Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0002333	Knockacoller Bog SAC	Active raised bogs
IE0002333	Knockacoller Bog SAC	Degraded raised bogs still capable of natural regeneration

Site Code	Site Name	Habitat/ Species Name
IE0002333	Knockacoller Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0002336	Carn Park Bog SAC	Active raised bogs
IE0002336	Carn Park Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0002337	Crosswood Bog SAC	Active raised bogs
IE0002337	Crosswood Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0002338	Drumalough Bog SAC	Active raised bogs
IE0002338	Drumalough Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0002338	Drumalough Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0002339	Ballynamona Bog and Corkip Lough SAC	Turloughs
IE0002339	Ballynamona Bog and Corkip Lough SAC	Active raised bogs
IE0002339	Ballynamona Bog and Corkip Lough SAC	Degraded raised bogs still capable of natural regeneration
IE0002339	Ballynamona Bog and Corkip Lough SAC	Depressions on peat substrates of the Rhynchosporion
IE0002339	Ballynamona Bog and Corkip Lough SAC	Bog woodland
IE0002340	Moneybeg and Clareisland Bogs SAC	Active raised bogs
IE0002340	Moneybeg and Clareisland Bogs SAC	Degraded raised bogs still capable of natural regeneration
IE0002340	Moneybeg and Clareisland Bogs SAC	Depressions on peat substrates of the Rhynchosporion
IE0002341	Ardagullion Bog SAC	Active raised bogs
IE0002341	Ardagullion Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0002341	Ardagullion Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0002342	Mount Hevey Bog SAC	Active raised bogs
IE0002342	Mount Hevey Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0002342	Mount Hevey Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0002343	Tullaheer Lough and Bog SAC	Active raised bogs
IE0002343	Tullaheer Lough and Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0002343	Tullaheer Lough and Bog SAC	Transition mires and quaking bogs
IE0002343	Tullaheer Lough and Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0002346	Brown Bog SAC	Active raised bogs
IE0002346	Brown Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0002346	Brown Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0002347	Camderry Bog SAC	Active raised bogs
IE0002347	Camderry Bog SAC	Degraded raised bogs still capable of natural regeneration

Site Code	Site Name	Habitat/ Species Name
IE0002347	Camderry Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0002348	Clooneen Bog SAC	Active raised bogs
IE0002348	Clooneen Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0002348	Clooneen Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0002348	Clooneen Bog SAC	Bog woodland
IE0002349	Corbo Bog SAC	Active raised bogs
IE0002349	Corbo Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0002349	Corbo Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0002350	Curraglehanagh Bog SAC	Active raised bogs
IE0002350	Curraglehanagh Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0002350	Curraglehanagh Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0002351	Moanveanlagh Bog SAC	Active raised bogs
IE0002351	Moanveanlagh Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0002351	Moanveanlagh Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0002352	Monivea Bog SAC	Active raised bogs
IE0002352	Monivea Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0002352	Monivea Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0002353	Redwood Bog SAC	Active raised bogs
IE0002353	Redwood Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0002353	Redwood Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0002354	Tullaghanrock Bog SAC	Active raised bogs
IE0002354	Tullaghanrock Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0002354	Tullaghanrock Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0002356	Ardgraique Bog SAC	Active raised bogs
IE0002356	Ardgraique Bog SAC	Degraded raised bogs still capable of natural regeneration
IE0002356	Ardgraique Bog SAC	Depressions on peat substrates of the Rhynchosporion
IE0002953	Blackwater Bank SAC	Sandbanks which are slightly covered by sea water all the time
IE0002998	West Connacht Coast SAC	Tursiops truncatus
IE0002999	Hempton's Turbot Bank SAC	Sandbanks which are slightly covered by sea water all the time
IE0003000	Rockabill to Dalkey Island SAC	Reefs
IE0003000	Rockabill to Dalkey Island SAC	Phocoena phocoena

Site Code	Site Name	Habitat/ Species Name
IE0003001	Porcupine Bank Canyon SAC	Reefs
IE0003002	South East Rockall Bank SAC	Reefs
IE0003015	Codling Fault Zone SAC	Submarine structures made by leaking gases

Source: NPWS Datasheet - sac-datasheets-may-2020.

Appendix C
**List of SPAs in the
Republic of Ireland**

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004002	Saltee Islands SPA	<i>Alca torda</i>
IE0004002	Saltee Islands SPA	<i>Fratercula arctica</i>
IE0004002	Saltee Islands SPA	<i>Fulmarus glacialis</i>
IE0004002	Saltee Islands SPA	<i>Larus argentatus</i>
IE0004002	Saltee Islands SPA	<i>Larus fuscus</i>
IE0004002	Saltee Islands SPA	<i>Morus bassanus</i>
IE0004002	Saltee Islands SPA	<i>Phalacrocorax aristotelis</i>
IE0004002	Saltee Islands SPA	<i>Phalacrocorax carbo</i>
IE0004002	Saltee Islands SPA	<i>Rissa tridactyla</i>
IE0004002	Saltee Islands SPA	<i>Uria aalge</i>
IE0004003	Puffin Island SPA	<i>Alca torda</i>
IE0004003	Puffin Island SPA	<i>Fratercula arctica</i>
IE0004003	Puffin Island SPA	<i>Fulmarus glacialis</i>
IE0004003	Puffin Island SPA	<i>Hydrobates pelagicus</i>
IE0004003	Puffin Island SPA	<i>Larus fuscus</i>
IE0004003	Puffin Island SPA	<i>Puffinus puffinus</i>
IE0004004	Inishkea Islands SPA	<i>Arenaria interpres</i>
IE0004004	Inishkea Islands SPA	<i>Branta leucopsis</i>
IE0004004	Inishkea Islands SPA	<i>Calidris alba</i>
IE0004004	Inishkea Islands SPA	<i>Calidris alpina schinzii</i>
IE0004004	Inishkea Islands SPA	<i>Calidris maritima</i>
IE0004004	Inishkea Islands SPA	<i>Charadrius hiaticula</i>
IE0004004	Inishkea Islands SPA	<i>Larus argentatus</i>
IE0004004	Inishkea Islands SPA	<i>Larus canus</i>
IE0004004	Inishkea Islands SPA	<i>Phalacrocorax aristotelis</i>
IE0004004	Inishkea Islands SPA	<i>Sterna albifrons</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004004	Inishkea Islands SPA	<i>Sterna paradisaea</i>
IE0004005	Cliffs of Moher SPA	<i>Alca torda</i>
IE0004005	Cliffs of Moher SPA	<i>Fratercula arctica</i>
IE0004005	Cliffs of Moher SPA	<i>Fulmarus glacialis</i>
IE0004005	Cliffs of Moher SPA	<i>Pyrhocorax pyrrhocorax</i>
IE0004005	Cliffs of Moher SPA	<i>Rissa tridactyla</i>
IE0004005	Cliffs of Moher SPA	<i>Uria aalge</i>
IE0004006	North Bull Island SPA	<i>Anas acuta</i>
IE0004006	North Bull Island SPA	<i>Anas clypeata</i>
IE0004006	North Bull Island SPA	<i>Anas crecca</i>
IE0004006	North Bull Island SPA	<i>Arenaria interpres</i>
IE0004006	North Bull Island SPA	<i>Branta bernicla hrota</i>
IE0004006	North Bull Island SPA	<i>Calidris alba</i>
IE0004006	North Bull Island SPA	<i>Calidris alpina</i>
IE0004006	North Bull Island SPA	<i>Calidris canutus</i>
IE0004006	North Bull Island SPA	<i>Chroicocephalus ridibundus</i>
IE0004006	North Bull Island SPA	<i>Haematopus ostralegus</i>
IE0004006	North Bull Island SPA	<i>Limosa lapponica</i>
IE0004006	North Bull Island SPA	<i>Limosa limosa</i>
IE0004006	North Bull Island SPA	<i>Numenius arquata</i>
IE0004006	North Bull Island SPA	<i>Pluvialis apricaria</i>
IE0004006	North Bull Island SPA	<i>Pluvialis squatarola</i>
IE0004006	North Bull Island SPA	<i>Tadorna tadorna</i>
IE0004006	North Bull Island SPA	<i>Tringa totanus</i>
IE0004006	North Bull Island SPA	<i>Wetland and Waterbirds</i>
IE0004007	Skelligs SPA	<i>Fratercula arctica</i>
IE0004007	Skelligs SPA	<i>Fulmarus glacialis</i>
IE0004007	Skelligs SPA	<i>Hydrobates pelagicus</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004007	Skelligs SPA	<i>Morus bassanus</i>
IE0004007	Skelligs SPA	<i>Puffinus puffinus</i>
IE0004007	Skelligs SPA	<i>Rissa tridactyla</i>
IE0004007	Skelligs SPA	<i>Uria aalge</i>
IE0004008	Blasket Islands SPA	<i>Alca torda</i>
IE0004008	Blasket Islands SPA	<i>Fratercula arctica</i>
IE0004008	Blasket Islands SPA	<i>Fulmarus glacialis</i>
IE0004008	Blasket Islands SPA	<i>Hydrobates pelagicus</i>
IE0004008	Blasket Islands SPA	<i>Larus argentatus</i>
IE0004008	Blasket Islands SPA	<i>Larus fuscus</i>
IE0004008	Blasket Islands SPA	<i>Phalacrocorax aristotelis</i>
IE0004008	Blasket Islands SPA	<i>Puffinus puffinus</i>
IE0004008	Blasket Islands SPA	<i>Pyrhrocorax pyrrhocorax</i>
IE0004008	Blasket Islands SPA	<i>Rissa tridactyla</i>
IE0004008	Blasket Islands SPA	<i>Sterna paradisaea</i>
IE0004009	Lady's Island Lake SPA	<i>Anas strepera</i>
IE0004009	Lady's Island Lake SPA	<i>Chroicocephalus ridibundus</i>
IE0004009	Lady's Island Lake SPA	<i>Sterna dougallii</i>
IE0004009	Lady's Island Lake SPA	<i>Sterna hirundo</i>
IE0004009	Lady's Island Lake SPA	<i>Sterna paradisaea</i>
IE0004009	Lady's Island Lake SPA	<i>Sterna sandvicensis</i>
IE0004009	Lady's Island Lake SPA	<i>Wetland and Waterbirds</i>
IE0004013	Drumcliff Bay SPA	<i>Calidris alba</i>
IE0004013	Drumcliff Bay SPA	<i>Limosa lapponica</i>
IE0004013	Drumcliff Bay SPA	<i>Wetland and Waterbirds</i>
IE0004014	Rockabill SPA	<i>Calidris maritima</i>
IE0004014	Rockabill SPA	<i>Sterna dougallii</i>
IE0004014	Rockabill SPA	<i>Sterna hirundo</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004014	Rockabill SPA	<i>Sterna paradisaea</i>
IE0004015	Rogerstown Estuary SPA	<i>Anas clypeata</i>
IE0004015	Rogerstown Estuary SPA	<i>Anser anser</i>
IE0004015	Rogerstown Estuary SPA	<i>Branta bernicla hrota</i>
IE0004015	Rogerstown Estuary SPA	<i>Calidris alpina</i>
IE0004015	Rogerstown Estuary SPA	<i>Calidris canutus</i>
IE0004015	Rogerstown Estuary SPA	<i>Charadrius hiaticula</i>
IE0004015	Rogerstown Estuary SPA	<i>Haematopus ostralegus</i>
IE0004015	Rogerstown Estuary SPA	<i>Limosa limosa</i>
IE0004015	Rogerstown Estuary SPA	<i>Pluvialis squatarola</i>
IE0004015	Rogerstown Estuary SPA	<i>Tadorna tadorna</i>
IE0004015	Rogerstown Estuary SPA	<i>Tringa totanus</i>
IE0004015	Rogerstown Estuary SPA	<i>Wetland and Waterbirds</i>
IE0004016	Baldoyle Bay SPA	<i>Branta bernicla hrota</i>
IE0004016	Baldoyle Bay SPA	<i>Charadrius hiaticula</i>
IE0004016	Baldoyle Bay SPA	<i>Limosa lapponica</i>
IE0004016	Baldoyle Bay SPA	<i>Pluvialis apricaria</i>
IE0004016	Baldoyle Bay SPA	<i>Pluvialis squatarola</i>
IE0004016	Baldoyle Bay SPA	<i>Tadorna tadorna</i>
IE0004016	Baldoyle Bay SPA	<i>Wetland and Waterbirds</i>
IE0004017	Mongan Bog SPA	<i>Anser albifrons flavirostris</i>
IE0004019	The Raven SPA	<i>Anser albifrons flavirostris</i>
IE0004019	The Raven SPA	<i>Calidris alba</i>
IE0004019	The Raven SPA	<i>Gavia stellata</i>
IE0004019	The Raven SPA	<i>Melanitta nigra</i>
IE0004019	The Raven SPA	<i>Phalacrocorax carbo</i>
IE0004019	The Raven SPA	<i>Pluvialis squatarola</i>
IE0004019	The Raven SPA	<i>Wetland and Waterbirds</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004020	Ballyteige Burrow SPA	<i>Branta bernicla hrota</i>
IE0004020	Ballyteige Burrow SPA	<i>Limosa lapponica</i>
IE0004020	Ballyteige Burrow SPA	<i>Limosa limosa</i>
IE0004020	Ballyteige Burrow SPA	<i>Pluvialis apricaria</i>
IE0004020	Ballyteige Burrow SPA	<i>Pluvialis squatarola</i>
IE0004020	Ballyteige Burrow SPA	<i>Tadorna tadorna</i>
IE0004020	Ballyteige Burrow SPA	<i>Vanellus vanellus</i>
IE0004020	Ballyteige Burrow SPA	<i>Wetland and Waterbirds</i>
IE0004021	Old Head of Kinsale SPA	<i>Rissa tridactyla</i>
IE0004021	Old Head of Kinsale SPA	<i>Uria aalge</i>
IE0004022	Ballycotton Bay SPA	<i>Anas crecca</i>
IE0004022	Ballycotton Bay SPA	<i>Arenaria interpres</i>
IE0004022	Ballycotton Bay SPA	<i>Charadrius hiaticula</i>
IE0004022	Ballycotton Bay SPA	<i>Larus canus</i>
IE0004022	Ballycotton Bay SPA	<i>Larus fuscus</i>
IE0004022	Ballycotton Bay SPA	<i>Limosa lapponica</i>
IE0004022	Ballycotton Bay SPA	<i>Limosa limosa</i>
IE0004022	Ballycotton Bay SPA	<i>Numenius arquata</i>
IE0004022	Ballycotton Bay SPA	<i>Pluvialis apricaria</i>
IE0004022	Ballycotton Bay SPA	<i>Pluvialis squatarola</i>
IE0004022	Ballycotton Bay SPA	<i>Vanellus vanellus</i>
IE0004022	Ballycotton Bay SPA	<i>Wetland and Waterbirds</i>
IE0004023	Ballymacoda Bay SPA	<i>Anas crecca</i>
IE0004023	Ballymacoda Bay SPA	<i>Anas penelope</i>
IE0004023	Ballymacoda Bay SPA	<i>Arenaria interpres</i>
IE0004023	Ballymacoda Bay SPA	<i>Calidris alba</i>
IE0004023	Ballymacoda Bay SPA	<i>Calidris alpina</i>
IE0004023	Ballymacoda Bay SPA	<i>Charadrius hiaticula</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004023	Ballymacoda Bay SPA	<i>Chroicocephalus ridibundus</i>
IE0004023	Ballymacoda Bay SPA	<i>Larus canus</i>
IE0004023	Ballymacoda Bay SPA	<i>Larus fuscus</i>
IE0004023	Ballymacoda Bay SPA	<i>Limosa lapponica</i>
IE0004023	Ballymacoda Bay SPA	<i>Limosa limosa</i>
IE0004023	Ballymacoda Bay SPA	<i>Numenius arquata</i>
IE0004023	Ballymacoda Bay SPA	<i>Pluvialis apricaria</i>
IE0004023	Ballymacoda Bay SPA	<i>Pluvialis squatarola</i>
IE0004023	Ballymacoda Bay SPA	<i>Tringa totanus</i>
IE0004023	Ballymacoda Bay SPA	<i>Vanellus vanellus</i>
IE0004023	Ballymacoda Bay SPA	<i>Wetland and Waterbirds</i>
IE0004024	South Dublin Bay and River Tolka Estuary SPA	<i>Branta bernicla hrota</i>
IE0004024	South Dublin Bay and River Tolka Estuary SPA	<i>Calidris alba</i>
IE0004024	South Dublin Bay and River Tolka Estuary SPA	<i>Calidris alpina</i>
IE0004024	South Dublin Bay and River Tolka Estuary SPA	<i>Calidris canutus</i>
IE0004024	South Dublin Bay and River Tolka Estuary SPA	<i>Charadrius hiaticula</i>
IE0004024	South Dublin Bay and River Tolka Estuary SPA	<i>Chroicocephalus ridibundus</i>
IE0004024	South Dublin Bay and River Tolka Estuary SPA	<i>Haematopus ostralegus</i>
IE0004024	South Dublin Bay and River Tolka Estuary SPA	<i>Limosa lapponica</i>
IE0004024	South Dublin Bay and River Tolka Estuary SPA	<i>Pluvialis squatarola</i>
IE0004024	South Dublin Bay and River Tolka Estuary SPA	<i>Sterna dougallii</i>
IE0004024	South Dublin Bay and River Tolka Estuary SPA	<i>Sterna hirundo</i>
IE0004024	South Dublin Bay and River Tolka Estuary SPA	<i>Sterna paradisaea</i>
IE0004024	South Dublin Bay and River Tolka Estuary SPA	<i>Tringa totanus</i>
IE0004024	South Dublin Bay and River Tolka Estuary SPA	<i>Wetland and Waterbirds</i>
IE0004025	Malahide Estuary SPA	<i>Anas acuta</i>
IE0004025	Malahide Estuary SPA	<i>Branta bernicla hrota</i>
IE0004025	Malahide Estuary SPA	<i>Bucephala clangula</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004025	Malahide Estuary SPA	<i>Calidris alpina</i>
IE0004025	Malahide Estuary SPA	<i>Calidris canutus</i>
IE0004025	Malahide Estuary SPA	<i>Haematopus ostralegus</i>
IE0004025	Malahide Estuary SPA	<i>Limosa lapponica</i>
IE0004025	Malahide Estuary SPA	<i>Limosa limosa</i>
IE0004025	Malahide Estuary SPA	<i>Mergus serrator</i>
IE0004025	Malahide Estuary SPA	<i>Pluvialis apricaria</i>
IE0004025	Malahide Estuary SPA	<i>Pluvialis squatarola</i>
IE0004025	Malahide Estuary SPA	<i>Podiceps cristatus</i>
IE0004025	Malahide Estuary SPA	<i>Tadorna tadorna</i>
IE0004025	Malahide Estuary SPA	<i>Tringa totanus</i>
IE0004025	Malahide Estuary SPA	<i>Wetland and Waterbirds</i>
IE0004026	Dundalk Bay SPA	<i>Anas acuta</i>
IE0004026	Dundalk Bay SPA	<i>Anas crecca</i>
IE0004026	Dundalk Bay SPA	<i>Anas platyrhynchos</i>
IE0004026	Dundalk Bay SPA	<i>Anser anser</i>
IE0004026	Dundalk Bay SPA	<i>Branta bernicla hrota</i>
IE0004026	Dundalk Bay SPA	<i>Calidris alpina</i>
IE0004026	Dundalk Bay SPA	<i>Calidris canutus</i>
IE0004026	Dundalk Bay SPA	<i>Charadrius hiaticula</i>
IE0004026	Dundalk Bay SPA	<i>Chroicocephalus ridibundus</i>
IE0004026	Dundalk Bay SPA	<i>Haematopus ostralegus</i>
IE0004026	Dundalk Bay SPA	<i>Larus argentatus</i>
IE0004026	Dundalk Bay SPA	<i>Larus canus</i>
IE0004026	Dundalk Bay SPA	<i>Limosa lapponica</i>
IE0004026	Dundalk Bay SPA	<i>Limosa limosa</i>
IE0004026	Dundalk Bay SPA	<i>Melanitta nigra</i>
IE0004026	Dundalk Bay SPA	<i>Mergus serrator</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004026	Dundalk Bay SPA	<i>Numenius arquata</i>
IE0004026	Dundalk Bay SPA	<i>Pluvialis apricaria</i>
IE0004026	Dundalk Bay SPA	<i>Pluvialis squatarola</i>
IE0004026	Dundalk Bay SPA	<i>Podiceps cristatus</i>
IE0004026	Dundalk Bay SPA	<i>Tadorna tadorna</i>
IE0004026	Dundalk Bay SPA	<i>Tringa totanus</i>
IE0004026	Dundalk Bay SPA	<i>Vanellus vanellus</i>
IE0004026	Dundalk Bay SPA	<i>Wetland and Waterbirds</i>
IE0004027	Tramore Back Strand SPA	<i>Branta bernicla hrota</i>
IE0004027	Tramore Back Strand SPA	<i>Calidris alpina</i>
IE0004027	Tramore Back Strand SPA	<i>Limosa lapponica</i>
IE0004027	Tramore Back Strand SPA	<i>Limosa limosa</i>
IE0004027	Tramore Back Strand SPA	<i>Numenius arquata</i>
IE0004027	Tramore Back Strand SPA	<i>Pluvialis apricaria</i>
IE0004027	Tramore Back Strand SPA	<i>Pluvialis squatarola</i>
IE0004027	Tramore Back Strand SPA	<i>Vanellus vanellus</i>
IE0004027	Tramore Back Strand SPA	<i>Wetland and Waterbirds</i>
IE0004028	Blackwater Estuary SPA	<i>Anas penelope</i>
IE0004028	Blackwater Estuary SPA	<i>Calidris alpina</i>
IE0004028	Blackwater Estuary SPA	<i>Limosa lapponica</i>
IE0004028	Blackwater Estuary SPA	<i>Limosa limosa</i>
IE0004028	Blackwater Estuary SPA	<i>Numenius arquata</i>
IE0004028	Blackwater Estuary SPA	<i>Pluvialis apricaria</i>
IE0004028	Blackwater Estuary SPA	<i>Tringa totanus</i>
IE0004028	Blackwater Estuary SPA	<i>Vanellus vanellus</i>
IE0004028	Blackwater Estuary SPA	<i>Wetland and Waterbirds</i>
IE0004029	Castlemaine Harbour SPA	<i>Anas acuta</i>
IE0004029	Castlemaine Harbour SPA	<i>Anas penelope</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004029	Castlemaine Harbour SPA	<i>Anas platyrhynchos</i>
IE0004029	Castlemaine Harbour SPA	<i>Arenaria interpres</i>
IE0004029	Castlemaine Harbour SPA	<i>Aythya marila</i>
IE0004029	Castlemaine Harbour SPA	<i>Branta bernicla hrota</i>
IE0004029	Castlemaine Harbour SPA	<i>Calidris alba</i>
IE0004029	Castlemaine Harbour SPA	<i>Charadrius hiaticula</i>
IE0004029	Castlemaine Harbour SPA	<i>Gavia stellata</i>
IE0004029	Castlemaine Harbour SPA	<i>Haematopus ostralegus</i>
IE0004029	Castlemaine Harbour SPA	<i>Limosa lapponica</i>
IE0004029	Castlemaine Harbour SPA	<i>Melanitta nigra</i>
IE0004029	Castlemaine Harbour SPA	<i>Phalacrocorax carbo</i>
IE0004029	Castlemaine Harbour SPA	<i>Pyrhacorax pyrrhocorax</i>
IE0004029	Castlemaine Harbour SPA	<i>Tringa nebularia</i>
IE0004029	Castlemaine Harbour SPA	<i>Tringa totanus</i>
IE0004029	Castlemaine Harbour SPA	<i>Wetland and Waterbirds</i>
IE0004030	Cork Harbour SPA	<i>Anas acuta</i>
IE0004030	Cork Harbour SPA	<i>Anas clypeata</i>
IE0004030	Cork Harbour SPA	<i>Anas crecca</i>
IE0004030	Cork Harbour SPA	<i>Anas penelope</i>
IE0004030	Cork Harbour SPA	<i>Ardea cinerea</i>
IE0004030	Cork Harbour SPA	<i>Calidris alpina</i>
IE0004030	Cork Harbour SPA	<i>Chroicocephalus ridibundus</i>
IE0004030	Cork Harbour SPA	<i>Haematopus ostralegus</i>
IE0004030	Cork Harbour SPA	<i>Larus canus</i>
IE0004030	Cork Harbour SPA	<i>Larus fuscus</i>
IE0004030	Cork Harbour SPA	<i>Limosa lapponica</i>
IE0004030	Cork Harbour SPA	<i>Limosa limosa</i>
IE0004030	Cork Harbour SPA	<i>Mergus serrator</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004030	Cork Harbour SPA	<i>Numenius arquata</i>
IE0004030	Cork Harbour SPA	<i>Phalacrocorax carbo</i>
IE0004030	Cork Harbour SPA	<i>Pluvialis apricaria</i>
IE0004030	Cork Harbour SPA	<i>Pluvialis squatarola</i>
IE0004030	Cork Harbour SPA	<i>Podiceps cristatus</i>
IE0004030	Cork Harbour SPA	<i>Sterna hirundo</i>
IE0004030	Cork Harbour SPA	<i>Tachybaptus ruficollis</i>
IE0004030	Cork Harbour SPA	<i>Tadorna tadorna</i>
IE0004030	Cork Harbour SPA	<i>Tringa totanus</i>
IE0004030	Cork Harbour SPA	<i>Vanellus vanellus</i>
IE0004030	Cork Harbour SPA	<i>Wetland and Waterbirds</i>
IE0004031	Inner Galway Bay SPA	<i>Anas crecca</i>
IE0004031	Inner Galway Bay SPA	<i>Anas penelope</i>
IE0004031	Inner Galway Bay SPA	<i>Ardea cinerea</i>
IE0004031	Inner Galway Bay SPA	<i>Arenaria interpres</i>
IE0004031	Inner Galway Bay SPA	<i>Branta bernicla hrota</i>
IE0004031	Inner Galway Bay SPA	<i>Calidris alpina</i>
IE0004031	Inner Galway Bay SPA	<i>Charadrius hiaticula</i>
IE0004031	Inner Galway Bay SPA	<i>Chroicocephalus ridibundus</i>
IE0004031	Cork Harbour SPA	<i>Gavia arctica</i>
IE0004031	Inner Galway Bay SPA	<i>Gavia immer</i>
IE0004031	Inner Galway Bay SPA	<i>Larus canus</i>
IE0004031	Inner Galway Bay SPA	<i>Limosa lapponica</i>
IE0004031	Inner Galway Bay SPA	<i>Mergus serrator</i>
IE0004031	Inner Galway Bay SPA	<i>Numenius arquata</i>
IE0004031	Inner Galway Bay SPA	<i>Phalacrocorax carbo</i>
IE0004031	Inner Galway Bay SPA	<i>Pluvialis apricaria</i>
IE0004031	Inner Galway Bay SPA	<i>Sterna hirundo</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004031	Inner Galway Bay SPA	<i>Sterna sandvicensis</i>
IE0004031	Inner Galway Bay SPA	<i>Tringa totanus</i>
IE0004031	Inner Galway Bay SPA	<i>Vanellus vanellus</i>
IE0004031	Inner Galway Bay SPA	<i>Wetland and Waterbirds</i>
IE0004032	Dungarvan Harbour SPA	<i>Arenaria interpres</i>
IE0004032	Dungarvan Harbour SPA	<i>Branta bernicla hrota</i>
IE0004032	Dungarvan Harbour SPA	<i>Calidris alpina</i>
IE0004032	Dungarvan Harbour SPA	<i>Calidris canutus</i>
IE0004032	Dungarvan Harbour SPA	<i>Haematopus ostralegus</i>
IE0004032	Dungarvan Harbour SPA	<i>Limosa lapponica</i>
IE0004032	Dungarvan Harbour SPA	<i>Limosa limosa</i>
IE0004032	Dungarvan Harbour SPA	<i>Mergus serrator</i>
IE0004032	Dungarvan Harbour SPA	<i>Numenius arquata</i>
IE0004032	Dungarvan Harbour SPA	<i>Pluvialis apricaria</i>
IE0004032	Dungarvan Harbour SPA	<i>Pluvialis squatarola</i>
IE0004032	Dungarvan Harbour SPA	<i>Podiceps cristatus</i>
IE0004032	Dungarvan Harbour SPA	<i>Tadorna tadorna</i>
IE0004032	Dungarvan Harbour SPA	<i>Tringa totanus</i>
IE0004032	Dungarvan Harbour SPA	<i>Vanellus vanellus</i>
IE0004032	Dungarvan Harbour SPA	<i>Wetland and Waterbirds</i>
IE0004033	Bannow Bay SPA	<i>Anas acuta</i>
IE0004033	Bannow Bay SPA	<i>Branta bernicla hrota</i>
IE0004033	Bannow Bay SPA	<i>Calidris alpina</i>
IE0004033	Bannow Bay SPA	<i>Calidris canutus</i>
IE0004033	Bannow Bay SPA	<i>Haematopus ostralegus</i>
IE0004033	Bannow Bay SPA	<i>Limosa lapponica</i>
IE0004033	Bannow Bay SPA	<i>Limosa limosa</i>
IE0004033	Bannow Bay SPA	<i>Numenius arquata</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004033	Bannow Bay SPA	<i>Pluvialis apricaria</i>
IE0004033	Bannow Bay SPA	<i>Pluvialis squatarola</i>
IE0004033	Bannow Bay SPA	<i>Tadorna tadorna</i>
IE0004033	Bannow Bay SPA	<i>Tringa totanus</i>
IE0004033	Bannow Bay SPA	<i>Vanellus vanellus</i>
IE0004033	Bannow Bay SPA	<i>Wetland and Waterbirds</i>
IE0004034	Trawbreaga Bay SPA	<i>Branta bernicla hrota</i>
IE0004034	Trawbreaga Bay SPA	<i>Branta leucopsis</i>
IE0004034	Trawbreaga Bay SPA	<i>Pyrhacorax pyrrhacorax</i>
IE0004034	Trawbreaga Bay SPA	<i>Wetland and Waterbirds</i>
IE0004035	Cummeen Strand SPA	<i>Branta bernicla hrota</i>
IE0004035	Cummeen Strand SPA	<i>Haematopus ostralegus</i>
IE0004035	Cummeen Strand SPA	<i>Tringa totanus</i>
IE0004035	Cummeen Strand SPA	<i>Wetland and Waterbirds</i>
IE0004036	Killala Bay/Moy Estuary SPA	<i>Calidris alba</i>
IE0004036	Killala Bay/Moy Estuary SPA	<i>Calidris alpina</i>
IE0004036	Killala Bay/Moy Estuary SPA	<i>Charadrius hiaticula</i>
IE0004036	Killala Bay/Moy Estuary SPA	<i>Limosa lapponica</i>
IE0004036	Killala Bay/Moy Estuary SPA	<i>Numenius arquata</i>
IE0004036	Killala Bay/Moy Estuary SPA	<i>Pluvialis apricaria</i>
IE0004036	Killala Bay/Moy Estuary SPA	<i>Pluvialis squatarola</i>
IE0004036	Killala Bay/Moy Estuary SPA	<i>Tringa totanus</i>
IE0004036	Killala Bay/Moy Estuary SPA	<i>Wetland and Waterbirds</i>
IE0004037	Blacksod Bay/Broad Haven SPA	<i>Branta bernicla hrota</i>
IE0004037	Blacksod Bay/Broad Haven SPA	<i>Calidris alba</i>
IE0004037	Blacksod Bay/Broad Haven SPA	<i>Calidris alpina</i>
IE0004037	Blacksod Bay/Broad Haven SPA	<i>Calidris alpina schinzii</i>
IE0004037	Blacksod Bay/Broad Haven SPA	<i>Charadrius hiaticula</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004037	Blacksod Bay/Broad Haven SPA	<i>Gavia immer</i>
IE0004037	Blacksod Bay/Broad Haven SPA	<i>Gavia stellata</i>
IE0004037	Blacksod Bay/Broad Haven SPA	<i>Limosa lapponica</i>
IE0004037	Blacksod Bay/Broad Haven SPA	<i>Melanitta nigra</i>
IE0004037	Blacksod Bay/Broad Haven SPA	<i>Mergus serrator</i>
IE0004037	Blacksod Bay/Broad Haven SPA	<i>Numenius arquata</i>
IE0004037	Blacksod Bay/Broad Haven SPA	<i>Podiceps auritus</i>
IE0004037	Blacksod Bay/Broad Haven SPA	<i>Sterna sandvicensis</i>
IE0004037	Blacksod Bay/Broad Haven SPA	<i>Wetland and Waterbirds</i>
IE0004038	Killarney National Park SPA	<i>Anser albifrons flavirostris</i>
IE0004038	Killarney National Park SPA	<i>Falco columbarius</i>
IE0004039	Derryveagh and Glendowan Mountains SPA	<i>Calidris alpina schinzii</i>
IE0004039	Derryveagh and Glendowan Mountains SPA	<i>Falco columbarius</i>
IE0004039	Derryveagh and Glendowan Mountains SPA	<i>Falco peregrinus</i>
IE0004039	Derryveagh and Glendowan Mountains SPA	<i>Gavia stellata</i>
IE0004039	Derryveagh and Glendowan Mountains SPA	<i>Pluvialis apricaria</i>
IE0004040	Wicklow Mountains SPA	<i>Falco columbarius</i>
IE0004040	Wicklow Mountains SPA	<i>Falco peregrinus</i>
IE0004041	Ballyallia Lough SPA	<i>Anas clypeata</i>
IE0004041	Ballyallia Lough SPA	<i>Anas crecca</i>
IE0004041	Ballyallia Lough SPA	<i>Anas penelope</i>
IE0004041	Ballyallia Lough SPA	<i>Anas platyrhynchos</i>
IE0004041	Ballyallia Lough SPA	<i>Anas strepera</i>
IE0004041	Ballyallia Lough SPA	<i>Fulica atra</i>
IE0004041	Ballyallia Lough SPA	<i>Limosa limosa</i>
IE0004041	Ballyallia Lough SPA	<i>Wetland and Waterbirds</i>
IE0004042	Lough Corrib SPA	<i>Anas clypeata</i>
IE0004042	Lough Corrib SPA	<i>Anas strepera</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004042	Lough Corrib SPA	<i>Anser albifrons flavirostris</i>
IE0004042	Lough Corrib SPA	<i>Aythya ferina</i>
IE0004042	Lough Corrib SPA	<i>Aythya fuligula</i>
IE0004042	Lough Corrib SPA	<i>Chroicocephalus ridibundus</i>
IE0004042	Lough Corrib SPA	<i>Circus cyaneus</i>
IE0004042	Lough Corrib SPA	<i>Fulica atra</i>
IE0004042	Lough Corrib SPA	<i>Larus canus</i>
IE0004042	Lough Corrib SPA	<i>Melanitta nigra</i>
IE0004042	Lough Corrib SPA	<i>Pluvialis apricaria</i>
IE0004042	Lough Corrib SPA	<i>Sterna hirundo</i>
IE0004042	Lough Corrib SPA	<i>Sterna paradisaea</i>
IE0004042	Lough Corrib SPA	<i>Wetland and Waterbirds</i>
IE0004043	Lough Derravarragh SPA	<i>Aythya ferina</i>
IE0004043	Lough Derravarragh SPA	<i>Aythya fuligula</i>
IE0004043	Lough Derravarragh SPA	<i>Cygnus cygnus</i>
IE0004043	Lough Derravarragh SPA	<i>Fulica atra</i>
IE0004043	Lough Derravarragh SPA	<i>Wetland and Waterbirds</i>
IE0004044	Lough Ennell SPA	<i>Aythya ferina</i>
IE0004044	Lough Ennell SPA	<i>Aythya fuligula</i>
IE0004044	Lough Ennell SPA	<i>Fulica atra</i>
IE0004044	Lough Ennell SPA	<i>Wetland and Waterbirds</i>
IE0004045	Glen Lough SPA	<i>Cygnus cygnus</i>
IE0004046	Lough Iron SPA	<i>Anas clypeata</i>
IE0004046	Lough Iron SPA	<i>Anas crecca</i>
IE0004046	Lough Iron SPA	<i>Anas penelope</i>
IE0004046	Lough Iron SPA	<i>Anser albifrons flavirostris</i>
IE0004046	Lough Iron SPA	<i>Cygnus cygnus</i>
IE0004046	Lough Iron SPA	<i>Fulica atra</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004046	Lough Iron SPA	<i>Pluvialis apricaria</i>
IE0004046	Lough Iron SPA	<i>Wetland and Waterbirds</i>
IE0004047	Lough Owel SPA	<i>Anas clypeata</i>
IE0004047	Lough Owel SPA	<i>Fulica atra</i>
IE0004047	Lough Owel SPA	<i>Wetland and Waterbirds</i>
IE0004048	Lough Gara SPA	<i>Anser albifrons flavirostris</i>
IE0004048	Lough Gara SPA	<i>Cygnus cygnus</i>
IE0004049	Lough Oughter Complex SPA	<i>Anas penelope</i>
IE0004049	Lough Oughter Complex SPA	<i>Cygnus cygnus</i>
IE0004049	Lough Oughter Complex SPA	<i>Podiceps cristatus</i>
IE0004049	Lough Oughter Complex SPA	<i>Wetland and Waterbirds</i>
IE0004050	Lough Arrow SPA	<i>Aythya fuligula</i>
IE0004050	Lough Arrow SPA	<i>Tachybaptus ruficollis</i>
IE0004050	Lough Arrow SPA	<i>Wetland and Waterbirds</i>
IE0004051	Lough Carra SPA	<i>Larus canus</i>
IE0004052	Carrowmore Lake SPA	<i>Sterna sandvicensis</i>
IE0004056	Lough Cutra SPA	<i>Phalacrocorax carbo</i>
IE0004057	Lough Derg (Donegal) SPA	<i>Larus argentatus</i>
IE0004057	Lough Derg (Donegal) SPA	<i>Larus fuscus</i>
IE0004058	Lough Derg (Shannon) SPA	<i>Aythya fuligula</i>
IE0004058	Lough Derg (Shannon) SPA	<i>Bucephala clangula</i>
IE0004058	Lough Derg (Shannon) SPA	<i>Phalacrocorax carbo</i>
IE0004058	Lough Derg (Shannon) SPA	<i>Sterna hirundo</i>
IE0004058	Lough Derg (Shannon) SPA	<i>Wetland and Waterbirds</i>
IE0004060	Lough Fern SPA	<i>Aythya ferina</i>
IE0004060	Lough Fern SPA	<i>Wetland and Waterbirds</i>
IE0004061	Lough Kinale and Derragh Lough SPA	<i>Aythya ferina</i>
IE0004061	Lough Kinale and Derragh Lough SPA	<i>Aythya fuligula</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004061	Lough Kinale and Derragh Lough SPA	<i>Wetland and Waterbirds</i>
IE0004062	Lough Mask SPA	<i>Anser albifrons flavirostris</i>
IE0004062	Lough Mask SPA	<i>Aythya fuligula</i>
IE0004062	Lough Mask SPA	<i>Chroicocephalus ridibundus</i>
IE0004062	Lough Mask SPA	<i>Larus canus</i>
IE0004062	Lough Mask SPA	<i>Larus fuscus</i>
IE0004062	Lough Mask SPA	<i>Sterna hirundo</i>
IE0004062	Lough Mask SPA	<i>Wetland and Waterbirds</i>
IE0004063	Poulaphouca Reservoir SPA	<i>Anser anser</i>
IE0004063	Poulaphouca Reservoir SPA	<i>Larus fuscus</i>
IE0004064	Lough Ree SPA	<i>Anas clypeata</i>
IE0004064	Lough Ree SPA	<i>Anas crecca</i>
IE0004064	Lough Ree SPA	<i>Anas penelope</i>
IE0004064	Lough Ree SPA	<i>Anas platyrhynchos</i>
IE0004064	Lough Ree SPA	<i>Aythya fuligula</i>
IE0004064	Lough Ree SPA	<i>Bucephala clangula</i>
IE0004064	Lough Ree SPA	<i>Cygnus cygnus</i>
IE0004064	Lough Ree SPA	<i>Fulica atra</i>
IE0004064	Lough Ree SPA	<i>Melanitta nigra</i>
IE0004064	Lough Ree SPA	<i>Pluvialis apricaria</i>
IE0004064	Lough Ree SPA	<i>Sterna hirundo</i>
IE0004064	Lough Ree SPA	<i>Tachybaptus ruficollis</i>
IE0004064	Lough Ree SPA	<i>Vanellus vanellus</i>
IE0004064	Lough Ree SPA	<i>Wetland and Waterbirds</i>
IE0004065	Lough Sheelin SPA	<i>Aythya ferina</i>
IE0004065	Lough Sheelin SPA	<i>Aythya fuligula</i>
IE0004065	Lough Sheelin SPA	<i>Bucephala clangula</i>
IE0004065	Lough Sheelin SPA	<i>Podiceps cristatus</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004065	Lough Sheelin SPA	<i>Wetland and Waterbirds</i>
IE0004066	The Bull and The Cow Rocks SPA	<i>Fratercula arctica</i>
IE0004066	The Bull and The Cow Rocks SPA	<i>Hydrobates pelagicus</i>
IE0004066	The Bull and The Cow Rocks SPA	<i>Morus bassanus</i>
IE0004068	Inishmurray SPA	<i>Branta leucopsis</i>
IE0004068	Inishmurray SPA	<i>Larus argentatus</i>
IE0004068	Inishmurray SPA	<i>Phalacrocorax aristotelis</i>
IE0004068	Inishmurray SPA	<i>Sterna paradisaea</i>
IE0004069	Lambay Island SPA	<i>Alca torda</i>
IE0004069	Lambay Island SPA	<i>Anser anser</i>
IE0004069	Lambay Island SPA	<i>Fratercula arctica</i>
IE0004069	Lambay Island SPA	<i>Fulmarus glacialis</i>
IE0004069	Lambay Island SPA	<i>Larus argentatus</i>
IE0004069	Lambay Island SPA	<i>Larus fuscus</i>
IE0004069	Lambay Island SPA	<i>Phalacrocorax aristotelis</i>
IE0004069	Lambay Island SPA	<i>Phalacrocorax carbo</i>
IE0004069	Lambay Island SPA	<i>Rissa tridactyla</i>
IE0004069	Lambay Island SPA	<i>Uria aalge</i>
IE0004072	Stags of Broad Haven SPA	<i>Hydrobates pelagicus</i>
IE0004072	Stags of Broad Haven SPA	<i>Oceanodroma leucorhoa</i>
IE0004073	Tory Island SPA	<i>Alca torda</i>
IE0004073	Tory Island SPA	<i>Crex crex</i>
IE0004073	Tory Island SPA	<i>Fratercula arctica</i>
IE0004073	Tory Island SPA	<i>Fulmarus glacialis</i>
IE0004074	Illanmaster SPA	<i>Hydrobates pelagicus</i>
IE0004075	Lough Swilly SPA	<i>Anas clypeata</i>
IE0004075	Lough Swilly SPA	<i>Anas crecca</i>
IE0004075	Lough Swilly SPA	<i>Anas penelope</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004075	Lough Swilly SPA	<i>Anas platyrhynchos</i>
IE0004075	Lough Swilly SPA	<i>Anser albifrons flavirostris</i>
IE0004075	Lough Swilly SPA	<i>Anser anser</i>
IE0004075	Lough Swilly SPA	<i>Ardea cinerea</i>
IE0004075	Lough Swilly SPA	<i>Aythya marila</i>
IE0004075	Lough Swilly SPA	<i>Bucephala clangula</i>
IE0004075	Lough Swilly SPA	<i>Calidris alpina</i>
IE0004075	Lough Swilly SPA	<i>Calidris canutus</i>
IE0004075	Lough Swilly SPA	<i>Chroicocephalus ridibundus</i>
IE0004075	Lough Swilly SPA	<i>Cygnus cygnus</i>
IE0004075	Lough Swilly SPA	<i>Fulica atra</i>
IE0004075	Lough Swilly SPA	<i>Haematopus ostralegus</i>
IE0004075	Lough Swilly SPA	<i>Larus canus</i>
IE0004075	Lough Swilly SPA	<i>Mergus serrator</i>
IE0004075	Lough Swilly SPA	<i>Numenius arquata</i>
IE0004075	Lough Swilly SPA	<i>Podiceps cristatus</i>
IE0004075	Lough Swilly SPA	<i>Sterna hirundo</i>
IE0004075	Lough Swilly SPA	<i>Sterna sandvicensis</i>
IE0004075	Lough Swilly SPA	<i>Tadorna tadorna</i>
IE0004075	Lough Swilly SPA	<i>Tringa nebularia</i>
IE0004075	Lough Swilly SPA	<i>Tringa totanus</i>
IE0004075	Lough Swilly SPA	<i>Wetland and Waterbirds</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Anas acuta</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Anas crecca</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Anas penelope</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Anas platyrhynchos</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Anser albifrons flavirostris</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Ardea cinerea</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004076	Wexford Harbour and Slobs SPA	<i>Aythya marila</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Branta bernicla hrota</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Bucephala clangula</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Calidris alba</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Calidris alpina</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Calidris canutus</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Chroicocephalus ridibundus</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Circus cyaneus</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Cygnus columbianus bewickii</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Cygnus cygnus</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Fulica atra</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Haematopus ostralegus</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Larus fuscus</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Limosa lapponica</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Limosa limosa</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Mergus serrator</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Numenius arquata</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Phalacrocorax carbo</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Pluvialis apricaria</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Pluvialis squatarola</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Podiceps cristatus</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Sterna albifrons</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Tachybaptus ruficollis</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Tadorna tadorna</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Tringa totanus</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Vanellus vanellus</i>
IE0004076	Wexford Harbour and Slobs SPA	<i>Wetland and Waterbirds</i>
IE0004077	River Shannon and River Fergus Estuaries SPA	<i>Anas acuta</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004077	River Shannon and River Fergus Estuaries SPA	<i>Anas clypeata</i>
IE0004077	River Shannon and River Fergus Estuaries SPA	<i>Anas crecca</i>
IE0004077	River Shannon and River Fergus Estuaries SPA	<i>Anas penelope</i>
IE0004077	River Shannon and River Fergus Estuaries SPA	<i>Aythya marila</i>
IE0004077	River Shannon and River Fergus Estuaries SPA	<i>Branta bernicla hrota</i>
IE0004077	River Shannon and River Fergus Estuaries SPA	<i>Calidris alpina</i>
IE0004077	River Shannon and River Fergus Estuaries SPA	<i>Calidris canutus</i>
IE0004077	River Shannon and River Fergus Estuaries SPA	<i>Charadrius hiaticula</i>
IE0004077	River Shannon and River Fergus Estuaries SPA	<i>Chroicocephalus ridibundus</i>
IE0004077	River Shannon and River Fergus Estuaries SPA	<i>Cygnus cygnus</i>
IE0004077	River Shannon and River Fergus Estuaries SPA	<i>Limosa lapponica</i>
IE0004077	River Shannon and River Fergus Estuaries SPA	<i>Limosa limosa</i>
IE0004077	River Shannon and River Fergus Estuaries SPA	<i>Numenius arquata</i>
IE0004077	River Shannon and River Fergus Estuaries SPA	<i>Phalacrocorax carbo</i>
IE0004077	River Shannon and River Fergus Estuaries SPA	<i>Pluvialis apricaria</i>
IE0004077	River Shannon and River Fergus Estuaries SPA	<i>Pluvialis squatarola</i>
IE0004077	River Shannon and River Fergus Estuaries SPA	<i>Tadorna tadorna</i>
IE0004077	River Shannon and River Fergus Estuaries SPA	<i>Tringa nebularia</i>
IE0004077	River Shannon and River Fergus Estuaries SPA	<i>Tringa totanus</i>
IE0004077	River Shannon and River Fergus Estuaries SPA	<i>Vanellus vanellus</i>
IE0004077	River Shannon and River Fergus Estuaries SPA	<i>Wetland and Waterbirds</i>
IE0004078	Carlingford Lough SPA	<i>Branta bernicla hrota</i>
IE0004078	Carlingford Lough SPA	<i>Wetland and Waterbirds</i>
IE0004080	Boyne Estuary SPA	<i>Arenaria interpres</i>
IE0004080	Boyne Estuary SPA	<i>Calidris alba</i>
IE0004080	Boyne Estuary SPA	<i>Calidris canutus</i>
IE0004080	Boyne Estuary SPA	<i>Haematopus ostralegus</i>
IE0004080	Boyne Estuary SPA	<i>Limosa limosa</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004080	Boyne Estuary SPA	<i>Pluvialis apricaria</i>
IE0004080	Boyne Estuary SPA	<i>Pluvialis squatarola</i>
IE0004080	Boyne Estuary SPA	<i>Sterna albifrons</i>
IE0004080	Boyne Estuary SPA	<i>Tadorna tadorna</i>
IE0004080	Boyne Estuary SPA	<i>Tringa totanus</i>
IE0004080	Boyne Estuary SPA	<i>Vanellus vanellus</i>
IE0004080	Boyne Estuary SPA	<i>Wetland and Waterbirds</i>
IE0004081	Clonakilty Bay SPA	<i>Calidris alpina</i>
IE0004081	Clonakilty Bay SPA	<i>Limosa limosa</i>
IE0004081	Clonakilty Bay SPA	<i>Numenius arquata</i>
IE0004081	Clonakilty Bay SPA	<i>Tadorna tadorna</i>
IE0004081	Clonakilty Bay SPA	<i>Wetland and Waterbirds</i>
IE0004082	Greers Isle SPA	<i>Chroicocephalus ridibundus</i>
IE0004082	Greers Isle SPA	<i>Larus canus</i>
IE0004082	Greers Isle SPA	<i>Sterna sandvicensis</i>
IE0004083	Inishbofin, Inishdoeey and Inishbeg SPA	<i>Branta leucopsis</i>
IE0004083	Inishbofin, Inishdoeey and Inishbeg SPA	<i>Crex crex</i>
IE0004083	Inishbofin, Inishdoeey and Inishbeg SPA	<i>Larus canus</i>
IE0004083	Inishbofin, Inishdoeey and Inishbeg SPA	<i>Larus fuscus</i>
IE0004083	Inishbofin, Inishdoeey and Inishbeg SPA	<i>Sterna paradisaea</i>
IE0004084	Inishglora and Inishkeeragh SPA	<i>Branta leucopsis</i>
IE0004084	Inishglora and Inishkeeragh SPA	<i>Hydrobates pelagicus</i>
IE0004084	Inishglora and Inishkeeragh SPA	<i>Larus argentatus</i>
IE0004084	Inishglora and Inishkeeragh SPA	<i>Larus fuscus</i>
IE0004084	Inishglora and Inishkeeragh SPA	<i>Phalacrocorax aristotelis</i>
IE0004084	Inishglora and Inishkeeragh SPA	<i>Phalacrocorax carbo</i>
IE0004084	Inishglora and Inishkeeragh SPA	<i>Sterna paradisaea</i>
IE0004086	River Little Brosna Callows SPA	<i>Anas acuta</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004086	River Little Brosna Callows SPA	<i>Anas clypeata</i>
IE0004086	River Little Brosna Callows SPA	<i>Anas crecca</i>
IE0004086	River Little Brosna Callows SPA	<i>Anas penelope</i>
IE0004086	River Little Brosna Callows SPA	<i>Anser albifrons flavirostris</i>
IE0004086	River Little Brosna Callows SPA	<i>Chroicocephalus ridibundus</i>
IE0004086	River Little Brosna Callows SPA	<i>Cygnus cygnus</i>
IE0004086	River Little Brosna Callows SPA	<i>Limosa limosa</i>
IE0004086	River Little Brosna Callows SPA	<i>Pluvialis apricaria</i>
IE0004086	River Little Brosna Callows SPA	<i>Vanellus vanellus</i>
IE0004086	River Little Brosna Callows SPA	<i>Wetland and Waterbirds</i>
IE0004087	Lough Foyle SPA	<i>Anas crecca</i>
IE0004087	Lough Foyle SPA	<i>Anas penelope</i>
IE0004087	Lough Foyle SPA	<i>Anas platyrhynchos</i>
IE0004087	Lough Foyle SPA	<i>Anser anser</i>
IE0004087	Lough Foyle SPA	<i>Branta bernicla hrota</i>
IE0004087	Lough Foyle SPA	<i>Calidris alpina</i>
IE0004087	Lough Foyle SPA	<i>Calidris canutus</i>
IE0004087	Lough Foyle SPA	<i>Chroicocephalus ridibundus</i>
IE0004087	Lough Foyle SPA	<i>Cygnus columbianus bewickii</i>
IE0004087	Lough Foyle SPA	<i>Cygnus cygnus</i>
IE0004087	Lough Foyle SPA	<i>Gavia stellata</i>
IE0004087	Lough Foyle SPA	<i>Haematopus ostralegus</i>
IE0004087	Lough Foyle SPA	<i>Larus argentatus</i>
IE0004087	Lough Foyle SPA	<i>Larus canus</i>
IE0004087	Lough Foyle SPA	<i>Limosa lapponica</i>
IE0004087	Lough Foyle SPA	<i>Mergus serrator</i>
IE0004087	Lough Foyle SPA	<i>Numenius arquata</i>
IE0004087	Lough Foyle SPA	<i>Pluvialis apricaria</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004087	Lough Foyle SPA	<i>Podiceps cristatus</i>
IE0004087	Lough Foyle SPA	<i>Somateria mollissima</i>
IE0004087	Lough Foyle SPA	<i>Tadorna tadorna</i>
IE0004087	Lough Foyle SPA	<i>Tringa totanus</i>
IE0004087	Lough Foyle SPA	<i>Vanellus vanellus</i>
IE0004087	Lough Foyle SPA	<i>Wetland and Waterbirds</i>
IE0004089	Rahasane Turlough SPA	<i>Anas penelope</i>
IE0004089	Rahasane Turlough SPA	<i>Anser albifrons flavirostris</i>
IE0004089	Rahasane Turlough SPA	<i>Cygnus cygnus</i>
IE0004089	Rahasane Turlough SPA	<i>Limosa limosa</i>
IE0004089	Rahasane Turlough SPA	<i>Pluvialis apricaria</i>
IE0004089	Rahasane Turlough SPA	<i>Wetland and Waterbirds</i>
IE0004090	Sheskinmore Lough SPA	<i>Anser albifrons flavirostris</i>
IE0004091	Stabannan-Braganstown SPA	<i>Anser anser</i>
IE0004092	Tacumshin Lake SPA	<i>Anas acuta</i>
IE0004092	Tacumshin Lake SPA	<i>Anas clypeata</i>
IE0004092	Tacumshin Lake SPA	<i>Anas crecca</i>
IE0004092	Tacumshin Lake SPA	<i>Anas penelope</i>
IE0004092	Tacumshin Lake SPA	<i>Anas strepera</i>
IE0004092	Tacumshin Lake SPA	<i>Aythya fuligula</i>
IE0004092	Tacumshin Lake SPA	<i>Cygnus columbianus bewickii</i>
IE0004092	Tacumshin Lake SPA	<i>Cygnus cygnus</i>
IE0004092	Tacumshin Lake SPA	<i>Fulica atra</i>
IE0004092	Tacumshin Lake SPA	<i>Limosa limosa</i>
IE0004092	Tacumshin Lake SPA	<i>Pluvialis apricaria</i>
IE0004092	Tacumshin Lake SPA	<i>Pluvialis squatarola</i>
IE0004092	Tacumshin Lake SPA	<i>Tachybaptus ruficollis</i>
IE0004092	Tacumshin Lake SPA	<i>Vanellus vanellus</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004092	Tacumshin Lake SPA	<i>Wetland and Waterbirds</i>
IE0004093	Termoncarragh Lake and Annagh Machair SPA	<i>Anser albifrons flavirostris</i>
IE0004093	Termoncarragh Lake and Annagh Machair SPA	<i>Branta leucopsis</i>
IE0004093	Termoncarragh Lake and Annagh Machair SPA	<i>Calidris alpina schinzii</i>
IE0004093	Termoncarragh Lake and Annagh Machair SPA	<i>Crex crex</i>
IE0004093	Termoncarragh Lake and Annagh Machair SPA	<i>Cygnus cygnus</i>
IE0004093	Termoncarragh Lake and Annagh Machair SPA	<i>Pyrhhorcorax pyrrhorcorax</i>
IE0004093	Termoncarragh Lake and Annagh Machair SPA	<i>Vanellus vanellus</i>
IE0004093	Termoncarragh Lake and Annagh Machair SPA	<i>Wetland and Waterbirds</i>
IE0004094	Blackwater Callows SPA	<i>Anas crecca</i>
IE0004094	Blackwater Callows SPA	<i>Anas penelope</i>
IE0004094	Blackwater Callows SPA	<i>Cygnus cygnus</i>
IE0004094	Blackwater Callows SPA	<i>Limosa limosa</i>
IE0004094	Blackwater Callows SPA	<i>Wetland and Waterbirds</i>
IE0004095	Kilcolman Bog SPA	<i>Anas clypeata</i>
IE0004095	Kilcolman Bog SPA	<i>Anas crecca</i>
IE0004095	Kilcolman Bog SPA	<i>Cygnus cygnus</i>
IE0004095	Kilcolman Bog SPA	<i>Wetland and Waterbirds</i>
IE0004096	Middle Shannon Callows SPA	<i>Anas penelope</i>
IE0004096	Middle Shannon Callows SPA	<i>Chroicocephalus ridibundus</i>
IE0004096	Middle Shannon Callows SPA	<i>Crex crex</i>
IE0004096	Middle Shannon Callows SPA	<i>Cygnus cygnus</i>
IE0004096	Middle Shannon Callows SPA	<i>Limosa limosa</i>
IE0004096	Middle Shannon Callows SPA	<i>Pluvialis apricaria</i>
IE0004096	Middle Shannon Callows SPA	<i>Vanellus vanellus</i>
IE0004096	Middle Shannon Callows SPA	<i>Wetland and Waterbirds</i>
IE0004097	River Suck Callows SPA	<i>Anas penelope</i>
IE0004097	River Suck Callows SPA	<i>Anser albifrons flavirostris</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004097	River Suck Callows SPA	<i>Cygnus cygnus</i>
IE0004097	River Suck Callows SPA	<i>Pluvialis apricaria</i>
IE0004097	River Suck Callows SPA	<i>Vanellus vanellus</i>
IE0004097	River Suck Callows SPA	<i>Wetland and Waterbirds</i>
IE0004098	Owenduff/Nephin Complex SPA	<i>Falco columbarius</i>
IE0004098	Owenduff/Nephin Complex SPA	<i>Pluvialis apricaria</i>
IE0004099	Pettigo Plateau Nature Reserve SPA	<i>Anser albifrons flavirostris</i>
IE0004100	Inishtrahull SPA	<i>Branta leucopsis</i>
IE0004100	Inishtrahull SPA	<i>Larus canus</i>
IE0004100	Inishtrahull SPA	<i>Phalacrocorax aristotelis</i>
IE0004101	Ballykenny-Fisherstown Bog SPA	<i>Anser albifrons flavirostris</i>
IE0004102	Garriskil Bog SPA	<i>Anser albifrons flavirostris</i>
IE0004103	All Saints Bog SPA	<i>Anser albifrons flavirostris</i>
IE0004105	Bellanagare Bog SPA	<i>Anser albifrons flavirostris</i>
IE0004107	Coole-Garryland SPA	<i>Cygnus cygnus</i>
IE0004108	Eirk Bog SPA	<i>Anser albifrons flavirostris</i>
IE0004109	The Gearagh SPA	<i>Anas crecca</i>
IE0004109	The Gearagh SPA	<i>Anas penelope</i>
IE0004109	The Gearagh SPA	<i>Anas platyrhynchos</i>
IE0004109	The Gearagh SPA	<i>Fulica atra</i>
IE0004109	The Gearagh SPA	<i>Wetland and Waterbirds</i>
IE0004110	Lough Nillan Bog SPA	<i>Anser albifrons flavirostris</i>
IE0004110	Lough Nillan Bog SPA	<i>Calidris alpina schinzii</i>
IE0004110	Lough Nillan Bog SPA	<i>Falco columbarius</i>
IE0004110	Lough Nillan Bog SPA	<i>Pluvialis apricaria</i>
IE0004111	Duvillaun Islands SPA	<i>Branta leucopsis</i>
IE0004111	Duvillaun Islands SPA	<i>Fulmarus glacialis</i>
IE0004111	Duvillaun Islands SPA	<i>Hydrobates pelagicus</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004113	Howth Head Coast SPA	<i>Rissa tridactyla</i>
IE0004114	Illauonearaun SPA	<i>Branta leucopsis</i>
IE0004115	Inishduff SPA	<i>Phalacrocorax aristotelis</i>
IE0004116	Inishkeel SPA	<i>Branta leucopsis</i>
IE0004117	Ireland's Eye SPA	<i>Alca torda</i>
IE0004117	Ireland's Eye SPA	<i>Larus argentatus</i>
IE0004117	Ireland's Eye SPA	<i>Phalacrocorax carbo</i>
IE0004117	Ireland's Eye SPA	<i>Rissa tridactyla</i>
IE0004117	Ireland's Eye SPA	<i>Uria aalge</i>
IE0004118	Keeragh Islands SPA	<i>Phalacrocorax carbo</i>
IE0004119	Loop Head SPA	<i>Rissa tridactyla</i>
IE0004119	Loop Head SPA	<i>Uria aalge</i>
IE0004120	Rathlin O'Birne Island SPA	<i>Branta leucopsis</i>
IE0004121	Roaninish SPA	<i>Branta leucopsis</i>
IE0004121	Roaninish SPA	<i>Larus argentatus</i>
IE0004122	Skerries Islands SPA	<i>Arenaria interpres</i>
IE0004122	Skerries Islands SPA	<i>Branta bernicla hrota</i>
IE0004122	Skerries Islands SPA	<i>Calidris maritima</i>
IE0004122	Skerries Islands SPA	<i>Larus argentatus</i>
IE0004122	Skerries Islands SPA	<i>Phalacrocorax aristotelis</i>
IE0004122	Skerries Islands SPA	<i>Phalacrocorax carbo</i>
IE0004124	Sovereign Islands SPA	<i>Phalacrocorax carbo</i>
IE0004125	Magharee Islands SPA	<i>Branta leucopsis</i>
IE0004125	Magharee Islands SPA	<i>Hydrobates pelagicus</i>
IE0004125	Magharee Islands SPA	<i>Larus canus</i>
IE0004125	Magharee Islands SPA	<i>Phalacrocorax aristotelis</i>
IE0004125	Magharee Islands SPA	<i>Sterna albifrons</i>
IE0004125	Magharee Islands SPA	<i>Sterna hirundo</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004125	Magharee Islands SPA	<i>Sterna paradisaea</i>
IE0004127	Wicklow Head SPA	<i>Rissa tridactyla</i>
IE0004129	Ballysadare Bay SPA	<i>Branta bernicla hrota</i>
IE0004129	Ballysadare Bay SPA	<i>Calidris alpina</i>
IE0004129	Ballysadare Bay SPA	<i>Limosa lapponica</i>
IE0004129	Ballysadare Bay SPA	<i>Pluvialis squatarola</i>
IE0004129	Ballysadare Bay SPA	<i>Tringa totanus</i>
IE0004129	Ballysadare Bay SPA	<i>Wetland and Waterbirds</i>
IE0004132	Illancrone and Inishkeeragh SPA	<i>Branta leucopsis</i>
IE0004132	Illancrone and Inishkeeragh SPA	<i>Sterna albifrons</i>
IE0004132	Illancrone and Inishkeeragh SPA	<i>Sterna hirundo</i>
IE0004132	Illancrone and Inishkeeragh SPA	<i>Sterna paradisaea</i>
IE0004133	Aughris Head SPA	<i>Rissa tridactyla</i>
IE0004134	Lough Rea SPA	<i>Anas clypeata</i>
IE0004134	Lough Rea SPA	<i>Fulica atra</i>
IE0004134	Lough Rea SPA	<i>Wetland and Waterbirds</i>
IE0004135	Ardboline Island and Horse Island SPA	<i>Branta leucopsis</i>
IE0004135	Ardboline Island and Horse Island SPA	<i>Phalacrocorax carbo</i>
IE0004136	Clare Island SPA	<i>Alca torda</i>
IE0004136	Clare Island SPA	<i>Fulmarus glacialis</i>
IE0004136	Clare Island SPA	<i>Larus canus</i>
IE0004136	Clare Island SPA	<i>Phalacrocorax aristotelis</i>
IE0004136	Clare Island SPA	<i>Pyrhacorax pyrrhocorax</i>
IE0004136	Clare Island SPA	<i>Rissa tridactyla</i>
IE0004136	Clare Island SPA	<i>Uria aalge</i>
IE0004137	Dovegrove Callows SPA	<i>Anser albifrons flavirostris</i>
IE0004139	Lough Croan Turlough SPA	<i>Anas clypeata</i>
IE0004139	Lough Croan Turlough SPA	<i>Anser albifrons flavirostris</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004139	Lough Croan Turlough SPA	<i>Pluvialis apricaria</i>
IE0004139	Lough Croan Turlough SPA	<i>Wetland and Waterbirds</i>
IE0004140	Four Roads Turlough SPA	<i>Anser albifrons flavirostris</i>
IE0004140	Four Roads Turlough SPA	<i>Pluvialis apricaria</i>
IE0004140	Four Roads Turlough SPA	<i>Wetland and Waterbirds</i>
IE0004142	Cregganna Marsh SPA	<i>Anser albifrons flavirostris</i>
IE0004143	Cahore Marshes SPA	<i>Anas penelope</i>
IE0004143	Cahore Marshes SPA	<i>Anser albifrons flavirostris</i>
IE0004143	Cahore Marshes SPA	<i>Pluvialis apricaria</i>
IE0004143	Cahore Marshes SPA	<i>Vanellus vanellus</i>
IE0004143	Cahore Marshes SPA	<i>Wetland and Waterbirds</i>
IE0004144	High Island, Inishshark and Davillaun SPA	<i>Branta leucopsis</i>
IE0004144	High Island, Inishshark and Davillaun SPA	<i>Fulmarus glacialis</i>
IE0004144	High Island, Inishshark and Davillaun SPA	<i>Sterna paradisaea</i>
IE0004145	Durnesh Lough SPA	<i>Anser albifrons flavirostris</i>
IE0004145	Durnesh Lough SPA	<i>Cygnus cygnus</i>
IE0004146	Malin Head SPA	<i>Crex crex</i>
IE0004148	Fanad Head SPA	<i>Crex crex</i>
IE0004149	Falcarragh to Meenlaragh SPA	<i>Crex crex</i>
IE0004150	West Donegal Coast SPA	<i>Alca torda</i>
IE0004150	West Donegal Coast SPA	<i>Falco peregrinus</i>
IE0004150	West Donegal Coast SPA	<i>Fulmarus glacialis</i>
IE0004150	West Donegal Coast SPA	<i>Larus argentatus</i>
IE0004150	West Donegal Coast SPA	<i>Phalacrocorax aristotelis</i>
IE0004150	West Donegal Coast SPA	<i>Phalacrocorax carbo</i>
IE0004150	West Donegal Coast SPA	<i>Pyrhocorax pyrrhocorax</i>
IE0004150	West Donegal Coast SPA	<i>Rissa tridactyla</i>
IE0004151	Donegal Bay SPA	<i>Branta bernicla hrota</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004151	Donegal Bay SPA	<i>Calidris alba</i>
IE0004151	Donegal Bay SPA	<i>Gavia immer</i>
IE0004151	Donegal Bay SPA	<i>Melanitta nigra</i>
IE0004151	Donegal Bay SPA	<i>Wetland and Waterbirds</i>
IE0004152	Inishmore SPA	<i>Rissa tridactyla</i>
IE0004152	Inishmore SPA	<i>Sterna albifrons</i>
IE0004152	Inishmore SPA	<i>Sterna paradisaea</i>
IE0004152	Inishmore SPA	<i>Uria aalge</i>
IE0004153	Dingle Peninsula SPA	<i>Falco peregrinus</i>
IE0004153	Dingle Peninsula SPA	<i>Fulmarus glacialis</i>
IE0004153	Dingle Peninsula SPA	<i>Pyrhcorax pyrrhcorax</i>
IE0004154	Iveragh Peninsula SPA	<i>Falco peregrinus</i>
IE0004154	Iveragh Peninsula SPA	<i>Fulmarus glacialis</i>
IE0004154	Iveragh Peninsula SPA	<i>Pyrhcorax pyrrhcorax</i>
IE0004154	Iveragh Peninsula SPA	<i>Rissa tridactyla</i>
IE0004154	Iveragh Peninsula SPA	<i>Uria aalge</i>
IE0004155	Beara Peninsula SPA	<i>Fulmarus glacialis</i>
IE0004155	Beara Peninsula SPA	<i>Pyrhcorax pyrrhcorax</i>
IE0004156	Sheep's Head to Toe Head SPA	<i>Falco peregrinus</i>
IE0004156	Sheep's Head to Toe Head SPA	<i>Pyrhcorax pyrrhcorax</i>
IE0004158	River Nanny Estuary and Shore SPA	<i>Calidris alba</i>
IE0004158	River Nanny Estuary and Shore SPA	<i>Calidris canutus</i>
IE0004158	River Nanny Estuary and Shore SPA	<i>Charadrius hiaticula</i>
IE0004158	River Nanny Estuary and Shore SPA	<i>Haematopus ostralegus</i>
IE0004158	River Nanny Estuary and Shore SPA	<i>Larus argentatus</i>
IE0004158	River Nanny Estuary and Shore SPA	<i>Pluvialis apricaria</i>
IE0004158	River Nanny Estuary and Shore SPA	<i>Wetland and Waterbirds</i>
IE0004159	Slyne Head to Ardmore Point Islands SPA	<i>Branta leucopsis</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004159	Slyne Head to Ardmore Point Islands SPA	<i>Sterna albifrons</i>
IE0004159	Slyne Head to Ardmore Point Islands SPA	<i>Sterna paradisaea</i>
IE0004159	Slyne Head to Ardmore Point Islands SPA	<i>Sterna sandvicensis</i>
IE0004160	Slieve Bloom Mountains SPA	<i>Circus cyaneus</i>
IE0004161	Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA	<i>Circus cyaneus</i>
IE0004162	Mullaghanish to Musheramore Mountains SPA	<i>Circus cyaneus</i>
IE0004165	Slievefelim to Silvermines Mountains SPA	<i>Circus cyaneus</i>
IE0004167	Slieve Beagh SPA	<i>Circus cyaneus</i>
IE0004168	Slieve Aughty Mountains SPA	<i>Circus cyaneus</i>
IE0004168	Slieve Aughty Mountains SPA	<i>Falco columbarius</i>
IE0004170	Cruagh Island SPA	<i>Branta leucopsis</i>
IE0004170	Cruagh Island SPA	<i>Puffinus puffinus</i>
IE0004172	Dalkey Islands SPA	<i>Sterna dougallii</i>
IE0004172	Dalkey Islands SPA	<i>Sterna hirundo</i>
IE0004172	Dalkey Islands SPA	<i>Sterna paradisaea</i>
IE0004175	Deenish Island and Scariff Island SPA	<i>Fulmarus glacialis</i>
IE0004175	Deenish Island and Scariff Island SPA	<i>Hydrobates pelagicus</i>
IE0004175	Deenish Island and Scariff Island SPA	<i>Larus fuscus</i>
IE0004175	Deenish Island and Scariff Island SPA	<i>Puffinus puffinus</i>
IE0004175	Deenish Island and Scariff Island SPA	<i>Sterna paradisaea</i>
IE0004177	Bills Rocks SPA	<i>Fratercula arctica</i>
IE0004177	Bills Rocks SPA	<i>Hydrobates pelagicus</i>
IE0004181	Connemara Bog Complex SPA	<i>Falco columbarius</i>
IE0004181	Connemara Bog Complex SPA	<i>Larus canus</i>
IE0004181	Connemara Bog Complex SPA	<i>Phalacrocorax carbo</i>
IE0004181	Connemara Bog Complex SPA	<i>Pluvialis apricaria</i>
IE0004182	Mid-Clare Coast SPA	<i>Arenaria interpres</i>
IE0004182	Mid-Clare Coast SPA	<i>Branta leucopsis</i>


Site Code	Site Name	Special Conservation Interest (SCI)
IE0004182	Mid-Clare Coast SPA	<i>Calidris alba</i>
IE0004182	Mid-Clare Coast SPA	<i>Calidris alpina</i>
IE0004182	Mid-Clare Coast SPA	<i>Calidris maritima</i>
IE0004182	Mid-Clare Coast SPA	<i>Charadrius hiaticula</i>
IE0004182	Mid-Clare Coast SPA	<i>Phalacrocorax carbo</i>
IE0004182	Mid-Clare Coast SPA	Wetland and Waterbirds
IE0004186	The Murrough SPA	<i>Anas crecca</i>
IE0004186	The Murrough SPA	<i>Anas penelope</i>
IE0004186	The Murrough SPA	<i>Anser anser</i>
IE0004186	The Murrough SPA	<i>Branta bernicla hrota</i>
IE0004186	The Murrough SPA	<i>Chroicocephalus ridibundus</i>
IE0004186	The Murrough SPA	<i>Gavia stellata</i>
IE0004186	The Murrough SPA	<i>Larus argentatus</i>
IE0004186	The Murrough SPA	<i>Sterna albifrons</i>
IE0004186	The Murrough SPA	Wetland and Waterbirds
IE0004187	Sligo/Leitrim Uplands SPA	<i>Falco peregrinus</i>
IE0004187	Sligo/Leitrim Uplands SPA	<i>Pyrhocorax pyrrhocorax</i>
IE0004188	Tralee Bay Complex SPA	<i>Anas acuta</i>
IE0004188	Tralee Bay Complex SPA	<i>Anas crecca</i>
IE0004188	Tralee Bay Complex SPA	<i>Anas penelope</i>
IE0004188	Tralee Bay Complex SPA	<i>Anas platyrhynchos</i>
IE0004188	Tralee Bay Complex SPA	<i>Arenaria interpres</i>
IE0004188	Tralee Bay Complex SPA	<i>Aythya marila</i>
IE0004188	Tralee Bay Complex SPA	<i>Branta bernicla hrota</i>
IE0004188	Tralee Bay Complex SPA	<i>Calidris alba</i>
IE0004188	Tralee Bay Complex SPA	<i>Calidris alpina</i>
IE0004188	Tralee Bay Complex SPA	<i>Charadrius hiaticula</i>
IE0004188	Tralee Bay Complex SPA	<i>Chroicocephalus ridibundus</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004188	Tralee Bay Complex SPA	<i>Cygnus cygnus</i>
IE0004188	Tralee Bay Complex SPA	<i>Haematopus ostralegus</i>
IE0004188	Tralee Bay Complex SPA	<i>Larus canus</i>
IE0004188	Tralee Bay Complex SPA	<i>Limosa lapponica</i>
IE0004188	Tralee Bay Complex SPA	<i>Limosa limosa</i>
IE0004188	Tralee Bay Complex SPA	<i>Numenius arquata</i>
IE0004188	Tralee Bay Complex SPA	<i>Pluvialis apricaria</i>
IE0004188	Tralee Bay Complex SPA	<i>Pluvialis squatarola</i>
IE0004188	Tralee Bay Complex SPA	<i>Tadorna tadorna</i>
IE0004188	Tralee Bay Complex SPA	<i>Tringa totanus</i>
IE0004188	Tralee Bay Complex SPA	<i>Vanellus vanellus</i>
IE0004188	Tralee Bay Complex SPA	<i>Wetland and Waterbirds</i>
IE0004189	Kerry Head SPA	<i>Fulmarus glacialis</i>
IE0004189	Kerry Head SPA	<i>Pyrrhocorax pyrrhocorax</i>
IE0004190	Galley Head to Duneen Point SPA	<i>Pyrrhocorax pyrrhocorax</i>
IE0004191	Seven Heads SPA	<i>Pyrrhocorax pyrrhocorax</i>
IE0004192	Helvick Head to Ballyquin SPA	<i>Falco peregrinus</i>
IE0004192	Helvick Head to Ballyquin SPA	<i>Larus argentatus</i>
IE0004192	Helvick Head to Ballyquin SPA	<i>Phalacrocorax carbo</i>
IE0004192	Helvick Head to Ballyquin SPA	<i>Pyrrhocorax pyrrhocorax</i>
IE0004192	Helvick Head to Ballyquin SPA	<i>Rissa tridactyla</i>
IE0004193	Mid-Waterford Coast SPA	<i>Falco peregrinus</i>
IE0004193	Mid-Waterford Coast SPA	<i>Larus argentatus</i>
IE0004193	Mid-Waterford Coast SPA	<i>Phalacrocorax carbo</i>
IE0004193	Mid-Waterford Coast SPA	<i>Pyrrhocorax pyrrhocorax</i>
IE0004194	Horn Head to Fanad Head SPA	<i>Alca torda</i>
IE0004194	Horn Head to Fanad Head SPA	<i>Anser albifrons flavirostris</i>
IE0004194	Horn Head to Fanad Head SPA	<i>Branta leucopsis</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004194	Horn Head to Fanad Head SPA	<i>Falco peregrinus</i>
IE0004194	Horn Head to Fanad Head SPA	<i>Fulmarus glacialis</i>
IE0004194	Horn Head to Fanad Head SPA	<i>Phalacrocorax aristotelis</i>
IE0004194	Horn Head to Fanad Head SPA	<i>Phalacrocorax carbo</i>
IE0004194	Horn Head to Fanad Head SPA	<i>Pyrhrocorax pyrrhocorax</i>
IE0004194	Horn Head to Fanad Head SPA	<i>Rissa tridactyla</i>
IE0004194	Horn Head to Fanad Head SPA	<i>Uria aalge</i>
IE0004212	Cross Lough (Killadoon) SPA	<i>Sterna sandvicensis</i>
IE0004219	Courtmacsherry Bay SPA	<i>Anas penelope</i>
IE0004219	Courtmacsherry Bay SPA	<i>Calidris alpina</i>
IE0004219	Courtmacsherry Bay SPA	<i>Chroicocephalus ridibundus</i>
IE0004219	Courtmacsherry Bay SPA	<i>Gavia immer</i>
IE0004219	Courtmacsherry Bay SPA	<i>Larus canus</i>
IE0004219	Courtmacsherry Bay SPA	<i>Limosa lapponica</i>
IE0004219	Courtmacsherry Bay SPA	<i>Limosa limosa</i>
IE0004219	Courtmacsherry Bay SPA	<i>Mergus serrator</i>
IE0004219	Courtmacsherry Bay SPA	<i>Numenius arquata</i>
IE0004219	Courtmacsherry Bay SPA	<i>Pluvialis apricaria</i>
IE0004219	Courtmacsherry Bay SPA	<i>Tadorna tadorna</i>
IE0004219	Courtmacsherry Bay SPA	<i>Vanellus vanellus</i>
IE0004219	Courtmacsherry Bay SPA	<i>Wetland and Waterbirds</i>
IE0004220	Corofin Wetlands SPA	<i>Anas crecca</i>
IE0004220	Corofin Wetlands SPA	<i>Anas penelope</i>
IE0004220	Corofin Wetlands SPA	<i>Cygnus cygnus</i>
IE0004220	Corofin Wetlands SPA	<i>Limosa limosa</i>
IE0004220	Corofin Wetlands SPA	<i>Tachybaptus ruficollis</i>
IE0004220	Corofin Wetlands SPA	<i>Wetland and Waterbirds</i>
IE0004221	Illaunnaon SPA	<i>Sterna sandvicensis</i>

Site Code	Site Name	Special Conservation Interest (SCI)
IE0004227	Mullet Peninsula SPA	<i>Crex crex</i>
IE0004228	Lough Conn and Lough Cullin SPA	<i>Anser albifrons flavirostris</i>
IE0004228	Lough Conn and Lough Cullin SPA	<i>Aythya fuligula</i>
IE0004228	Lough Conn and Lough Cullin SPA	<i>Larus canus</i>
IE0004228	Lough Conn and Lough Cullin SPA	<i>Melanitta nigra</i>
IE0004228	Lough Conn and Lough Cullin SPA	<i>Wetland and Waterbirds</i>
IE0004230	West Donegal Islands SPA	<i>Branta leucopsis</i>
IE0004230	West Donegal Islands SPA	<i>Crex crex</i>
IE0004230	West Donegal Islands SPA	<i>Larus argentatus</i>
IE0004230	West Donegal Islands SPA	<i>Larus canus</i>
IE0004230	West Donegal Islands SPA	<i>Phalacrocorax aristotelis</i>
IE0004231	Inishbofin, Omey Island and Turbot Island SPA	<i>Crex crex</i>
IE0004232	River Boyne and River Blackwater SPA	<i>Alcedo atthis</i>
IE0004233	River Nore SPA	<i>Alcedo atthis</i>
IE0004234	Ballintemple and Ballygilgan SPA	<i>Branta leucopsis</i>
IE0004235	Doogort Machair SPA	<i>Calidris alpina schinzii</i>

Source: NPWS Datasheet - spa-datasheets-june-2020.



Appendix D
List of SPAs in Northern
Ireland

Site Code	Site Name	Interest Feature
UK0030318	Aughnadarragh Lough	Euphydryas (Eurodryas, Hypodryas) aurinia
UK0030319	Ballykilbeg	Euphydryas (Eurodryas, Hypodryas) aurinia
UK0016599	Ballynahone Bog	Active raised bogs
UK0016599	Ballynahone Bog	Degraded raised bogs still capable of natural regeneration
UK0016599	Ballynahone Bog	Depressions on peat substrates of the Rhynchosporion
UK0030083	Banagher Glen	Northern Atlantic wet heaths with Erica tetralix
UK0030083	Banagher Glen	Tilio-Acerion forests of slopes, screes and ravines
UK0030083	Banagher Glen	Old sessile oak woods with Ilex and Blechnum in the British Isles
UK0030083	Banagher Glen	Lutra lutra
UK0030084	Bann Estuary	Mudflats and sandflats not covered by seawater at low tide
UK0030084	Bann Estuary	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)
UK0030084	Bann Estuary	Embryonic shifting dunes
UK0030084	Bann Estuary	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")
UK0030084	Bann Estuary	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
UK0030084	Bann Estuary	Dunes with Hippophae rhamnoides
UK0030084	Bann Estuary	Humid dune slacks
UK0030084	Bann Estuary	Petromyzon marinus
UK0030084	Bann Estuary	Lampetra fluviatilis
UK0030084	Bann Estuary	Salmo salar
UK0030084	Bann Estuary	Lutra lutra
UK0030089	Binevenagh	Species-rich Nardus grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)
UK0030089	Binevenagh	Calcareous and calcshist screes of the montane to alpine levels (Thlaspietea rotundifolii)
UK0030089	Binevenagh	Calcareous rocky slopes with chasmophytic vegetation
UK0016609	Black Bog	Active raised bogs
UK0016609	Black Bog	Degraded raised bogs still capable of natural regeneration
UK0030097	Breen Wood	Northern Atlantic wet heaths with Erica tetralix
UK0030097	Breen Wood	Old sessile oak woods with Ilex and Blechnum in the British Isles

Site Code	Site Name	Interest Feature
UK0030097	Breen Wood	Bog woodland
UK0030097	Breen Wood	Lutra lutra
UK0030110	Carn-Glenshane Pass	Northern Atlantic wet heaths with Erica tetralix
UK0030110	Carn-Glenshane Pass	Blanket bogs (* if active bog)
UK0030116	Cladagh (Swanlinbar) River	Water courses of plain to montane levels with the Ranunculus fluitantis and Callitriche-Batrachion vegetation
UK0030116	Cladagh (Swanlinbar) River	Lampetra planeri
UK0030116	Cladagh (Swanlinbar) River	Salmo salar
UK0030116	Cladagh (Swanlinbar) River	Margaritifera margaritifera
UK0030116	Cladagh (Swanlinbar) River	Lutra lutra
UK0030321	Cranny Bogs	Active raised bogs
UK0030321	Cranny Bogs	Degraded raised bogs still capable of natural regeneration
UK0016603	Cuilcagh Mountain	Natural dystrophic lakes and ponds
UK0016603	Cuilcagh Mountain	Northern Atlantic wet heaths with Erica tetralix
UK0016603	Cuilcagh Mountain	European dry heaths
UK0016603	Cuilcagh Mountain	Alpine and Boreal heaths
UK0016603	Cuilcagh Mountain	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)
UK0016603	Cuilcagh Mountain	Blanket bogs (* if active bog)
UK0016603	Cuilcagh Mountain	Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)
UK0016603	Cuilcagh Mountain	Siliceous rocky slopes with chasmophytic vegetation
UK0016603	Cuilcagh Mountain	Limestone pavements
UK0030322	Curran Bog	Active raised bogs
UK0030322	Curran Bog	Degraded raised bogs still capable of natural regeneration
UK0030323	Dead Island Bog	Active raised bogs
UK0030323	Dead Island Bog	Degraded raised bogs still capable of natural regeneration
UK0030324	Deroran Bog	Active raised bogs
UK0030324	Deroran Bog	Degraded raised bogs still capable of natural regeneration
UK0016620	Derryleckagh	Transition mires and quaking bogs
UK0016620	Derryleckagh	Old sessile oak woods with Ilex and Blechnum in the British Isles

Site Code	Site Name	Interest Feature
UK0016620	Derryleckagh	Euphydryas (Eurodryas, Hypodryas) aurinia
UK0016615	Eastern Mournes	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea
UK0016615	Eastern Mournes	Northern Atlantic wet heaths with Erica tetralix
UK0016615	Eastern Mournes	European dry heaths
UK0016615	Eastern Mournes	Alpine and Boreal heaths
UK0016615	Eastern Mournes	Siliceous alpine and boreal grasslands
UK0016615	Eastern Mournes	Blanket bogs (* if active bog)
UK0016615	Eastern Mournes	Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)
UK0016615	Eastern Mournes	Siliceous rocky slopes with chasmophytic vegetation
UK0016611	Fairy Water Bogs	Active raised bogs
UK0016611	Fairy Water Bogs	Degraded raised bogs still capable of natural regeneration
UK0016611	Fairy Water Bogs	Transition mires and quaking bogs
UK0016611	Fairy Water Bogs	Depressions on peat substrates of the Rhynchosporion
UK0030068	Fardrum and Roosky Turloughs	Turloughs
UK0016606	Garron Plateau	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea
UK0016606	Garron Plateau	Natural dystrophic lakes and ponds
UK0016606	Garron Plateau	Northern Atlantic wet heaths with Erica tetralix
UK0016606	Garron Plateau	European dry heaths
UK0016606	Garron Plateau	Blanket bogs (* if active bog)
UK0016606	Garron Plateau	Transition mires and quaking bogs
UK0016606	Garron Plateau	Alkaline fens
UK0016606	Garron Plateau	Saxifraga hirculus
UK0016610	Garry Bog	Active raised bogs
UK0016610	Garry Bog	Degraded raised bogs still capable of natural regeneration
UK0016610	Garry Bog	Depressions on peat substrates of the Rhynchosporion
UK0030169	Hollymount	Old sessile oak woods with Ilex and Blechnum in the British Isles
UK0030169	Hollymount	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)
UK0030169	Hollymount	Lutra lutra

Site Code	Site Name	Interest Feature
UK0030045	Largalinny	Northern Atlantic wet heaths with <i>Erica tetralix</i>
UK0030045	Largalinny	European dry heaths
UK0030045	Largalinny	Blanket bogs (* if active bog)
UK0030045	Largalinny	Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>)
UK0030045	Largalinny	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles
UK0030045	Largalinny	Bog woodland
UK0030045	Largalinny	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)
UK0030045	Largalinny	<i>Austropotamobius pallipes</i>
UK0030180	Lecale Fens	Alkaline fens
UK0030047	Lough Melvin	Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoëto-Nanojuncetea</i>
UK0030047	Lough Melvin	Northern Atlantic wet heaths with <i>Erica tetralix</i>
UK0030047	Lough Melvin	<i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>)
UK0030047	Lough Melvin	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles
UK0030047	Lough Melvin	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)
UK0030047	Lough Melvin	<i>Salmo salar</i>
UK0030047	Lough Melvin	<i>Lutra lutra</i>
UK0016621	Magheraveely Marl Loughs	Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.
UK0016621	Magheraveely Marl Loughs	Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>
UK0016621	Magheraveely Marl Loughs	Alkaline fens
UK0016621	Magheraveely Marl Loughs	<i>Austropotamobius pallipes</i>
UK0016613	Magilligan	Mudflats and sandflats not covered by seawater at low tide
UK0016613	Magilligan	Embryonic shifting dunes
UK0016613	Magilligan	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")
UK0016613	Magilligan	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
UK0016613	Magilligan	Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>)
UK0016613	Magilligan	Humid dune slacks
UK0016613	Magilligan	<i>Euphydryas</i> (<i>Eurodryas</i> , <i>Hypodryas</i>) <i>aurinia</i>
UK0016613	Magilligan	<i>Lutra lutra</i>

Site Code	Site Name	Interest Feature
UK0016613	Magilligan	Petalophyllum ralfsii
UK0030199	Main Valley Bogs	Active raised bogs
UK0030199	Main Valley Bogs	Degraded raised bogs still capable of natural regeneration
UK0030199	Main Valley Bogs	Depressions on peat substrates of the Rhynchosporion
UK0016619	Monawilkin	Northern Atlantic wet heaths with Erica tetralix
UK0016619	Monawilkin	European dry heaths
UK0016619	Monawilkin	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)
UK0016619	Monawilkin	Alkaline fens
UK0016619	Monawilkin	Old sessile oak woods with Ilex and Blechnum in the British Isles
UK0030211	Moneygal Bog	Active raised bogs
UK0030211	Moneygal Bog	Degraded raised bogs still capable of natural regeneration
UK0030211	Moneygal Bog	Depressions on peat substrates of the Rhynchosporion
UK0030212	Moninea Bog	Active raised bogs
UK0030212	Moninea Bog	Degraded raised bogs still capable of natural regeneration
UK0030212	Moninea Bog	Depressions on peat substrates of the Rhynchosporion
UK0030214	Montiaghs Moss	Northern Atlantic wet heaths with Erica tetralix
UK0030214	Montiaghs Moss	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)
UK0030214	Montiaghs Moss	Transition mires and quaking bogs
UK0030214	Montiaghs Moss	Euphydryas (Eurodryas, Hypodryas) aurinia
UK0016612	Murlough	Sandbanks which are slightly covered by sea water all the time
UK0016612	Murlough	Mudflats and sandflats not covered by seawater at low tide
UK0016612	Murlough	Large shallow inlets and bays
UK0016612	Murlough	Annual vegetation of drift lines
UK0016612	Murlough	Salicornia and other annuals colonizing mud and sand
UK0016612	Murlough	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)
UK0016612	Murlough	Embryonic shifting dunes
UK0016612	Murlough	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")
UK0016612	Murlough	Fixed coastal dunes with herbaceous vegetation ("grey dunes")

Site Code	Site Name	Interest Feature
UK0016612	Murlough	Atlantic decalcified fixed dunes (Calluno-Ulicetea)
UK0016612	Murlough	Dunes with Hippophya rhamnoides
UK0016612	Murlough	Dunes with Salix repens ssp. argentea (Salicion arenariae)
UK0016612	Murlough	Salmo salar
UK0016612	Murlough	Euphydryas (Eurodryas, Hypodryas) aurinia
UK0016612	Murlough	Lutra lutra
UK0016612	Murlough	Phoca vitulina
UK0030224	North Antrim Coast	Annual vegetation of drift lines
UK0030224	North Antrim Coast	Vegetated sea cliffs of the Atlantic and Baltic Coasts
UK0030224	North Antrim Coast	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)
UK0030224	North Antrim Coast	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")
UK0030224	North Antrim Coast	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
UK0030224	North Antrim Coast	Humid dune slacks
UK0030224	North Antrim Coast	European dry heaths
UK0030224	North Antrim Coast	Species-rich Nardus grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)
UK0030224	North Antrim Coast	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)
UK0030224	North Antrim Coast	Alkaline fens
UK0030224	North Antrim Coast	Vertigo angustior
UK0030233	Owenkillew River	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation
UK0030233	Owenkillew River	Old sessile oak woods with Ilex and Blechnum in the British Isles
UK0030233	Owenkillew River	Bog woodland
UK0030233	Owenkillew River	Lampetra planeri
UK0030233	Owenkillew River	Salmo salar
UK0030233	Owenkillew River	Margaritifera margaritifera
UK0030233	Owenkillew River	Lutra lutra
UK0030236	Peatlands Park	Active raised bogs
UK0030236	Peatlands Park	Degraded raised bogs still capable of natural regeneration
UK0030236	Peatlands Park	Old sessile oak woods with Ilex and Blechnum in the British Isles

Site Code	Site Name	Interest Feature
UK0030236	Peatlands Park	Bog woodland
UK0016607	Pettigoe Plateau	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea
UK0016607	Pettigoe Plateau	Natural dystrophic lakes and ponds
UK0016607	Pettigoe Plateau	Northern Atlantic wet heaths with Erica tetralix
UK0016607	Pettigoe Plateau	European dry heaths
UK0016607	Pettigoe Plateau	Blanket bogs (* if active bog)
UK0016607	Pettigoe Plateau	Transition mires and quaking bogs
UK0016607	Pettigoe Plateau	Depressions on peat substrates of the Rhynchosporion
UK0030055	Rathlin Island	Sandbanks which are slightly covered by sea water all the time
UK0030055	Rathlin Island	Reefs
UK0030055	Rathlin Island	Annual vegetation of drift lines
UK0030055	Rathlin Island	Vegetated sea cliffs of the Atlantic and Baltic Coasts
UK0030055	Rathlin Island	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)
UK0030055	Rathlin Island	Submerged or partially submerged sea caves
UK0030055	Rathlin Island	Halichoerus grypus
UK0030055	Rathlin Island	Phoca vitulina
UK0030244	Rea`s Wood and Farr`s Bay	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)
UK0030365	Red Bay	Sandbanks which are slightly covered by sea water all the time
UK0030361	River Faughan and Tributaries	Old sessile oak woods with Ilex and Blechnum in the British Isles
UK0030361	River Faughan and Tributaries	Petromyzon marinus
UK0030361	River Faughan and Tributaries	Lampetra planeri
UK0030361	River Faughan and Tributaries	Lampetra fluviatilis
UK0030361	River Faughan and Tributaries	Salmo salar
UK0030361	River Faughan and Tributaries	Lutra lutra
UK0030320	River Foyle and Tributaries	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation
UK0030320	River Foyle and Tributaries	Petromyzon marinus
UK0030320	River Foyle and Tributaries	Lampetra planeri
UK0030320	River Foyle and Tributaries	Lampetra fluviatilis

Site Code	Site Name	Interest Feature
UK0030320	River Foyle and Tributaries	Salmo salar
UK0030320	River Foyle and Tributaries	Margaritifera margaritifera
UK0030320	River Foyle and Tributaries	Lutra lutra
UK0030360	River Roe and Tributaries	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation
UK0030360	River Roe and Tributaries	Old sessile oak woods with Ilex and Blechnum in the British Isles
UK0030360	River Roe and Tributaries	Petromyzon marinus
UK0030360	River Roe and Tributaries	Lampetra fluviatilis
UK0030360	River Roe and Tributaries	Salmo salar
UK0030360	River Roe and Tributaries	Lutra lutra
UK0030268	Rostrevor Wood	Old sessile oak woods with Ilex and Blechnum in the British Isles
UK0030383	Skerries and Causeway	Sandbanks which are slightly covered by sea water all the time
UK0030383	Skerries and Causeway	Reefs
UK0030383	Skerries and Causeway	Submerged or partially submerged sea caves
UK0030383	Skerries and Causeway	Tursiops truncatus
UK0030383	Skerries and Causeway	Phocoena phocoena
UK0030383	Skerries and Causeway	Halichoerus grypus
UK0030383	Skerries and Causeway	Phoca vitulina
UK0016622	Slieve Beagh	Natural dystrophic lakes and ponds
UK0016622	Slieve Beagh	European dry heaths
UK0016622	Slieve Beagh	Blanket bogs (* if active bog)
UK0030277	Slieve Gullion	Northern Atlantic wet heaths with Erica tetralix
UK0030277	Slieve Gullion	European dry heaths
UK0030277	Slieve Gullion	Blanket bogs (* if active bog)
UK0030277	Slieve Gullion	Transition mires and quaking bogs
UK0016618	Strangford Lough	Sandbanks which are slightly covered by sea water all the time
UK0016618	Strangford Lough	Estuaries
UK0016618	Strangford Lough	Mudflats and sandflats not covered by seawater at low tide
UK0016618	Strangford Lough	Coastal lagoons

Site Code	Site Name	Interest Feature
UK0016618	Strangford Lough	Large shallow inlets and bays
UK0016618	Strangford Lough	Reefs
UK0016618	Strangford Lough	Annual vegetation of drift lines
UK0016618	Strangford Lough	Perennial vegetation of stony banks
UK0016618	Strangford Lough	Salicornia and other annuals colonizing mud and sand
UK0016618	Strangford Lough	Spartina swards (<i>Spartinion maritimae</i>)
UK0016618	Strangford Lough	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)
UK0016618	Strangford Lough	Fixed coastal dunes with herbaceous vegetation ("grey dunes")
UK0016618	Strangford Lough	<i>Lutra lutra</i>
UK0016618	Strangford Lough	<i>Halichoerus grypus</i>
UK0016618	Strangford Lough	<i>Phoca vitulina</i>
UK0016608	Teal Lough	Natural dystrophic lakes and ponds
UK0016608	Teal Lough	Northern Atlantic wet heaths with <i>Erica tetralix</i>
UK0016608	Teal Lough	European dry heaths
UK0016608	Teal Lough	Blanket bogs (* if active bog)
UK0016608	Teal Lough	Depressions on peat substrates of the <i>Rhynchosporion</i>
UK0030384	The Maidens	Sandbanks which are slightly covered by sea water all the time
UK0030384	The Maidens	Reefs
UK0030384	The Maidens	<i>Phocoena phocoena</i>
UK0030384	The Maidens	<i>Halichoerus grypus</i>
UK0030384	The Maidens	<i>Phoca vitulina</i>
UK0030325	Tonnagh Beg Bog	Active raised bogs
UK0030325	Tonnagh Beg Bog	Degraded raised bogs still capable of natural regeneration
UK0030326	Tully Bog	Active raised bogs
UK0030326	Tully Bog	Degraded raised bogs still capable of natural regeneration
UK0030291	Turmennan	Transition mires and quaking bogs
UK0030296	Upper Ballinderry River	Water courses of plain to montane levels with the <i>Ranunculon fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation
UK0030296	Upper Ballinderry River	Blanket bogs (* if active bog)

Site Code	Site Name	Interest Feature
UK0030296	Upper Ballinderry River	Old sessile oak woods with Ilex and Blechnum in the British Isles
UK0030296	Upper Ballinderry River	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)
UK0030296	Upper Ballinderry River	Salmo salar
UK0030296	Upper Ballinderry River	Margaritifera margaritifera
UK0030296	Upper Ballinderry River	Austropotamobius pallipes
UK0030296	Upper Ballinderry River	Lutra lutra
UK0016614	Upper Lough Erne	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation
UK0016614	Upper Lough Erne	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)
UK0016614	Upper Lough Erne	Alkaline fens
UK0016614	Upper Lough Erne	Old sessile oak woods with Ilex and Blechnum in the British Isles
UK0016614	Upper Lough Erne	Bog woodland
UK0016614	Upper Lough Erne	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)
UK0016614	Upper Lough Erne	Salmo salar
UK0016614	Upper Lough Erne	Lutra lutra
UK0030300	West Fermanagh Scarplands	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea
UK0030300	West Fermanagh Scarplands	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation
UK0030300	West Fermanagh Scarplands	Natural dystrophic lakes and ponds
UK0030300	West Fermanagh Scarplands	Northern Atlantic wet heaths with Erica tetralix
UK0030300	West Fermanagh Scarplands	European dry heaths
UK0030300	West Fermanagh Scarplands	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)
UK0030300	West Fermanagh Scarplands	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)
UK0030300	West Fermanagh Scarplands	Blanket bogs (* if active bog)
UK0030300	West Fermanagh Scarplands	Transition mires and quaking bogs
UK0030300	West Fermanagh Scarplands	Petrifying springs with tufa formation (Cratoneurion)
UK0030300	West Fermanagh Scarplands	Alkaline fens
UK0030300	West Fermanagh Scarplands	Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)
UK0030300	West Fermanagh Scarplands	Calcareous and calcshist screes of the montane to alpine levels (Thlaspietea rotundifolii)
UK0030300	West Fermanagh Scarplands	Calcareous rocky slopes with chasmophytic vegetation

Site Code	Site Name	Interest Feature
UK0030300	West Fermanagh Scarplands	Limestone pavements
UK0030300	West Fermanagh Scarplands	Tilio-Acerion forests of slopes, screes and ravines
UK0030300	West Fermanagh Scarplands	Old sessile oak woods with Ilex and Blechnum in the British Isles
UK0030300	West Fermanagh Scarplands	Austropotamobius pallipes
UK0030300	West Fermanagh Scarplands	Lutra lutra
UK0030303	Wolf Island Bog	Active raised bogs
UK0030303	Wolf Island Bog	Degraded raised bogs still capable of natural regeneration
UK0030303	Wolf Island Bog	Depressions on peat substrates of the Rhynchosporion
UK0030399	North Channel	Phocoena phocoena

Source: JNCC datasheet - UK-Natura2000-2019-10-31.



Appendix E
List of SPAs in Northern
Ireland

Site Code	Site Name	Species
UK9020011	Rathlin Island	Falco peregrinus
UK9020011	Rathlin Island	Rissa tridactyla
UK9020011	Rathlin Island	Uria aalge
UK9020011	Rathlin Island	Alca torda
UK9020021	Sheep Island	Phalacrocorax carbo
UK9020031	Lough Foyle	Cygnus cygnus
UK9020031	Lough Foyle	Limosa lapponica
UK9020031	Lough Foyle	Branta bernicla hrota [Canada/Ireland]
UK9020042	Larne Lough	Larus melanocephalus
UK9020042	Larne Lough	Sterna sandvicensis
UK9020042	Larne Lough	Sterna dougallii
UK9020042	Larne Lough	Sterna hirundo
UK9020042	Larne Lough	Branta bernicla hrota [Canada/Ireland]
UK9020051	Pettigoe Plateau	Pluvialis apricaria
UK9020071	Upper Lough Erne	Cygnus cygnus
UK9020091	Lough Neagh and Lough Beg	Cygnus columbianus bewickii
UK9020091	Lough Neagh and Lough Beg	Cygnus cygnus
UK9020091	Lough Neagh and Lough Beg	Aythya ferina
UK9020091	Lough Neagh and Lough Beg	Aythya fuligula
UK9020091	Lough Neagh and Lough Beg	Bucephala clangula
UK9020091	Lough Neagh and Lough Beg	Sterna hirundo
UK9020101	Belfast Lough	Limosa lapponica
UK9020101	Belfast Lough	Tringa totanus
UK9020101	Belfast Lough	Sterna hirundo
UK9020101	Belfast Lough	Sterna paradisaea
UK9020101	Belfast Lough	Limosa limosa islandica

Site Code	Site Name	Species
UK9020111	Strangford Lough	Calidris canutus
UK9020111	Strangford Lough	Tringa totanus
UK9020111	Strangford Lough	Sterna sandvicensis
UK9020111	Strangford Lough	Sterna hirundo
UK9020111	Strangford Lough	Sterna paradisaea
UK9020111	Strangford Lough	Branta bernicla hrota [Canada/Ireland]
UK9020161	Carlingford Lough	Sterna sandvicensis
UK9020161	Carlingford Lough	Sterna hirundo
UK9020161	Carlingford Lough	Branta bernicla hrota [Canada/Ireland]
UK9020221	Killough Bay	Branta bernicla hrota [Canada/Ireland]
UK9020271	Outer Ards	Charadrius hiaticula
UK9020271	Outer Ards	Pluvialis apricaria
UK9020271	Outer Ards	Arenaria interpres
UK9020271	Outer Ards	Sterna paradisaea
UK9020271	Outer Ards	Branta bernicla hrota [Canada/Ireland]
UK9020290	Belfast Lough Open Water	Podiceps cristatus
UK9020291	Copeland Islands	Puffinus puffinus
UK9020291	Copeland Islands	Sterna paradisaea
UK9020301	Antrim Hills	Circus cyaneus
UK9020301	Antrim Hills	Falco columbarius
UK9020302	Slieve Beagh - Mullaghfad - Lisnaskea	Circus cyaneus

Source: JNCC datasheet - UK-Natura2000-2019-10-31.

A large, light gray, rounded rectangular graphic element on the left side of the page. It has a dark purple, rounded rectangular shape overlapping its right edge. The text 'Appendix F Conservation Status of EU Habitats and Species' is positioned within the gray area.

Appendix F
**Conservation Status of EU
Habitats and Species**

NATURA IMPACT STATEMENT

The following tables are sourced from the NPWS 2019 report entitled *The Status of Protected EU Habitats and Species in Ireland. Volume 1: Summary Overview*. This report is available online at <https://www.npws.ie/publications/article-17-reports/article-17-reports-2019> (accessed September 2019).

Summary Conservation Status of QI Habitats and Species in the Republic of Ireland

Code	Common name	2007 Overall Status	2013 Overall Status and operator	2019 Overall Status and trend	2019 Range	2019 Area	2019 Structure & Functions	2019 Future Prospects
1110	Sandbanks	●	●	=	=	=	=	●
1130	Estuaries	●	▲	▼	=	=	▼	●
1140	Tidal mudflats and sandflats	●	▲	▼	=	=	▼	●
1150	Lagoons*	●	=	▼	=	=	▼	●
1160	Large shallow inlets and bays	●	▲	▼	=	=	▼	●
1170	Reefs	●	▼	=	=	=	=	●
1180	Submarine structures made by leaking gases			=	=	=	=	●
1210	Drift lines	●	▼	▼	=	▼	=	●
1220	Vegetated shingle	●	=	=	=	=	=	●
1230	Vegetated sea cliffs	●	=	=	=	=	=	●
1310	Salicornia mud	●	▼	=	=	=	=	●
1320	Spartinion	●						
1330	Atlantic salt meadows	●	=	▼	=	▼	=	●
1410	Mediterranean salt meadows	●	=	▼	=	▼	=	●
1420	Halophilous scrub	●	▼	▼	▼	▼	=	●
2110	Embryonic shifting dunes	●	=	=	=	=	=	●
2120	Marram dunes (white dunes)	●	=	=	=	▼	=	●
2130	Fixed dunes (grey dunes)*	●	=	▼	=	=	▼	●
2140	Empetrum dunes*	●	=	=	=	=	=	●
2150	Dune heath*	●	=	=	=	=	=	●
2170	Dunes with creeping willow	●	=	=	=	=	=	●
2190	Dune slacks	●	▼	▼	▼	▼	=	●
21A0	Machair*	●	=	=	=	▼	=	●
3110	Oligotrophic isoetid lake habitat	●	▼	=	=	=	=	●
3130	Mixed Najas flexilis lake habitat	●	=	▼	=	=	▼	●
3140	Hard water lakes	●	▼	▼	=	=	▼	●
3150	Rich pondweed lake habitat	●	=	=	=	=	=	●
3160	Acid oligotrophic lakes	●	▼	=	=	=	×	●
3180	Turloughs*	●	=	=	=	=	=	●
3260	Vegetation of flowing waters	●	▼	▼	=	=	▼	●
3270	Chenopodium rubri	●	●	=	=	=	=	●

STATUS: ● Favourable ● Unfavourable-Inadequate ● Unfavourable-Bad ● Unknown ● Vagrant

TREND: ▲ Improving = Stable ▼ Declining × Unknown

NATURA IMPACT STATEMENT

Code	Common name	2007 Overall Status	2013 Overall Status and operator	2019 Overall Status and trend	2019 Range	2019 Area	2019 Structure & Functions	2019 Future Prospects
4010	Wet heaths	●	▬	▼	▬	▼	▬	●
4030	Dry heaths	●	▬	▬	▬	▼	▬	●
4060	Alpine and subalpine heath	●	▲	▲	▬	▼	▲	●
5130	Juniper scrub	●	▬	▬	▬	▬	▬	●
6130	Calaminarian grasslands	●	▬	▼	▼	▼	▼	●
6210	Orchid-rich calcareous grassland*	●	▬	▼	▬	▼	▬	●
6230	Species-rich <i>Nardus</i> grassland*	●	▼	▬	▬	▬	▬	●
6410	<i>Molinia</i> meadows	●	▼	▼	▼	▼	▬	●
6430	Hydrophilous tall-herb swamp	●	▬	▼	▼	▼	▬	●
6510	Hay meadows	●	▬	▼	▼	▼	▼	●
7110	Raised bog (active)*	●	▼	▼	▬	▼	▼	●
7120	Degraded raised bogs	●	▼	▼	▬	▼	▼	●
7130	Blanket bog (active)*	●	▼	▼	▬	▼	▼	●
7140	Transition mires	●	×	▬	▬	▬	×	●
7150	Rhynchosporion depressions	●	▼	▼	▬	▼	▼	●
7210	<i>Cladium</i> fens*	●	×	▬	▬	▬	×	●
7220	Petrifying springs*	●	▬	▼	▬	▬	▼	●
7230	Alkaline fens	●	×	▼	▬	▼	×	●
8110	Siliceous scree	●	▲	▬	▬	▬	▬	●
8120	Eutric scree	●	▬	▬	▬	▬	▬	●
8210	Calcareous rocky slopes	●	▬	▬	▬	▬	▬	●
8220	Siliceous rocky slopes	●	▬	▬	▬	▬	▬	●
8240	Limestone pavement*	●	▬	▬	▬	▼	▲	●
8310	Caves	●	●	▬	▬	▬	▬	●
8330	Sea caves	●	●	▬	▬	▬	▬	●
91A0	Old oak woodland	●	▲	▼	▬	▼	▬	●
91D0	Bog woodland*	●	●	▬	▬	▬	▬	●
91E0	Alluvial woodland*	●	▲	▼	▬	▼	▼	●
91J0	Yew woodland*	●	▲	▬	▬	▬	▬	●

STATUS: ● Favourable ● Unfavourable-Inadequate ● Unfavourable-Bad ● Unknown ● Vagrant

TREND: ▲ Improving ▬ Stable ▼ Declining × Unknown

NATURA IMPACT STATEMENT

Code	Species name	Annex	2007 Overall Status	2013 Overall Status and operator	2019 Overall Status and trend	2019 Range	2019 Population	2019 Habitat for the species	2019 Future Prospects
6985	Killamey fern (<i>Vandenboschia speciosa</i>)	II, IV	●	●	=	=	=	=	●
1528	Marsh saxifrage (<i>Saxifraga hirculus</i>)	II, IV	●	●	=	=	=	=	●
1833	Slender naiad (<i>Najas flexilis</i>)	II, IV	●	▼	▼	▼	▼	▼	●
6216	Slender green feather moss (<i>Hamatocaulis vernicosus</i>)	II	●	●	=	=	=	=	●
1395	Petalwort (<i>Petalophyllum ralfsii</i>)	II	●	●	=	=	=	=	●
1376	Maërl (<i>Lithothamnium coralloides</i>)	V	●	▲	▼	=	=	▼	●
1377	Maërl (<i>Phymatholithon calcareum</i>)	V	●	▲	▼	=	=	▼	●
1400	White cushion moss (<i>Leucobryum glaucum</i>)	V	●	●	=	=	=	=	●
1409	Sphagnum genus (<i>Sphagnum spp.</i>)	V	●	=	=				
1413	Lycopodium group (<i>Lycopodium spp.</i>)	V	●	=	=				
1378	Cladonia subgenus cladina (<i>Cladonia (Cladonia) subsp.</i>)	V	●	=	=				
1013	Geyer's whorl snail (<i>Vertigo geyeri</i>)	II	●	▼	▼	▼	▼	▼	●
1014	Narrow-mouthed whorl snail (<i>Vertigo angustior</i>)	II	●	▼	▼	▼	▼	▼	●
1016	Desmoulin's whorl snail (<i>Vertigo moulinsiana</i>)	II	●	▼	▼	▼	▼	▼	●
1024	Kerry slug (<i>Geomalacus maculosus</i>)	II, IV	●	●	▲	▲	▲	=	●
1029	Freshwater pearl mussel (<i>Margaritifera margaritifera</i>)	II, V	●	▼	▼	=	▼	▼	●
1990	Nore pearl mussel (<i>Margaritifera durrovensis</i>)	II, V	●	▼					
1092	White-clawed crayfish (<i>Austropotamobius pallipes</i>)	II, V	●	=	▼	▼	▼	=	●
1065	Marsh fritillary (<i>Euphydryas aurinia</i>)	II	●	▼	▲	▲	▲	=	●
1095	Sea lamprey (<i>Petromyzon marinus</i>)	II	●	=	=	=	=	=	●
1096	Brook lamprey (<i>Lampetra planeri</i>)	II	●	●	=	=	=	=	●
1099	River lamprey (<i>Lampetra fluviatilis</i>)	II, V	●	●	●	×	×	=	●
5046	Killamey shad (<i>Alosa killamensis</i>)	II, V	●	●	=	=	=	=	●
1103	Twaite shad (<i>Alosa fallax</i>)	II, V	●	=	=	=	=	=	●
5076	Pollan (<i>Coregonus pollan</i>)	V	●	×	=	=	=	=	●
1106	Atlantic salmon (<i>Salmo salar</i>)	II, V	●	=	=	=	▼	=	●
6284	Natterjack toad (<i>Epidaleia calamita</i>)	IV	●	▲	=	=	×	▲	●
1213	Common frog (<i>Rana temporaria</i>)	V	●	●	=	=	=	=	●
1223	Leatherback turtle (<i>Dermochelys coriacea</i>)	IV	●	●	●	×	×	●	●
1303	Lesser horseshoe bat (<i>Rhinolophus hipposideros</i>)	II, IV	●	●	▼	▼	▲	▼	●
1309	Common pipistrelle (<i>Pipistrellus pipistrellus</i>)	IV	●	●	▲	=	▲	=	●
5009	Soprano pipistrelle (<i>Pipistrellus pygmaeus</i>)	IV	●	●	▲	=	▲	=	●
1317	Nathusius' pipistrelle (<i>Pipistrellus nathusii</i>)	IV	●	●	●	×	▲	=	●
1322	Natterer's bat (<i>Myotis nattereri</i>)	IV	●	●	=	=	=	=	●

STATUS: ● Favourable ● Unfavourable-Inadequate ● Unfavourable-Bad ● Unknown ● Vagrant
TREND: ▲ Improving = Stable ▼ Declining × Unknown

NATURA IMPACT STATEMENT

Code	Species name	Annex	2007 Overall Status	2013 Overall Status and operator	2019 Overall Status and trend	2019 Range	2019 Population	2019 Habitat for the species	2019 Future Prospects
1314	Daubenton's bat (<i>Myotis daubentonii</i>)	IV	●	●	▲	=	▲	=	●
1330	Whiskered bat (<i>Myotis mystacinus</i>)	IV	●	●	=	=	=	=	●
1326	Brown long-eared bat (<i>Plecotus auritus</i>)	IV	●	●	▲	=	▲	=	●
1331	Leisler's bat (<i>Nyctalus leisler</i>)	IV	●	●	▲	=	▲	=	●
1334	Mountain hare (<i>Lepus timidus</i>)	V	●	●	=	=	×	×	●
1355	Otter (<i>Lutra lutra</i>)	II, IV	●	●	▲	=	▲	=	●
1357	Pine marten (<i>Martes martes</i>)	V	●	●	▲	▲	▲	▲	●
1364	Grey seal (<i>Halichoerus grypus</i>)	II, V	●	●	▲	=	▲	=	●
1365	Harbour seal (<i>Phoca vitulina</i>)	II, V	●	●	=	=	=	=	●
1345	Humpback whale (<i>Megaptera novaeangliae</i>)	IV	●	●	●	=	×	=	●
1349	Common bottlenose dolphin (<i>Tursiops truncatus</i>)	II, IV	●	●	=	=	×	=	●
1350	Common dolphin (<i>Delphinus delphis</i>)	IV	●	●	=	=	×	=	●
1351	Harbour porpoise (<i>Phocoena phocoena</i>)	II, IV	●	●	=	=	×	=	●
2027	Killer whale (<i>Orcinus orca</i>)	IV	●	●	●	=	×	=	●
2029	Long-finned pilot whale (<i>Globicephala melas</i>)	IV	●	●	=	=	×	=	●
2030	Risso's dolphin (<i>Grampus griseus</i>)	IV	●	●	=	=	×	=	●
2031	White-sided dolphin (<i>Lagenorhynchus acutus</i>)	IV	●	●	=	=	×	=	●
2032	White-beaked dolphin (<i>Lagenorhynchus albirostris</i>)	IV	●	●	=	=	×	=	●
2034	Striped dolphin (<i>Stenella coeruleoalba</i>)	IV	●	●	=	=	×	=	●
2035	Cuvier's beaked whale (<i>Ziphius cavirostris</i>)	IV	●	●	=	=	×	=	●
2038	Sowerby's beaked whale (<i>Mesoplodon bidens</i>)	IV	●	●	=	=	×	=	●
2618	Minke whale (<i>Balaenoptera acutorostrata</i>)	IV	●	●	=	=	×	=	●
2621	Fin whale (<i>Balaenoptera physalus</i>)	IV	●	●	=	=	×	=	●
5020	Blue whale (<i>Balaenoptera musculus</i>)	IV	●	●	●	=	×	=	●
2624	Sperm whale (<i>Physeter macrocephalus</i>)	IV	●	●	=	=	×	=	●
5033	Northern bottlenose whale (<i>Hyperoodon ampullatus</i>)	IV	●	●	●	=	×	=	●
2619	Sei whale (<i>Balaenoptera borealis</i>)	IV	●	●	●	=	×	=	●
1348	Northern right whale (<i>Eubalaena glacialis</i>)	IV	●	●	●	●	●	●	●
2028	False killer whale (<i>Pseudorca crassidens</i>)	IV	●	●	●	●	●	●	●
2037	True's beaked whale (<i>Mesoplodon mirus</i>)	IV	●	●	●	●	●	●	●
2622	Pygmy sperm whale (<i>Kogia breviceps</i>)	IV	●	●	●	●	●	●	●
5029	Beluga/White whale (<i>Delphinapterus leucas</i>)	IV	●	●	●	●	●	●	●
5034	Gervais' beaked whale (<i>Mesoplodon europaeus</i>)	IV	●	●	●	●	●	●	●
1102	Allis shad (<i>Alosa alosa</i>)	II, V	●	●	●	●	●	●	●
1320	Brandt's bat (<i>Myotis brandtii</i>)	IV	●	●	●	●	●	●	●

STATUS: ● Favourable ● Unfavourable-Inadequate ● Unfavourable-Bad ● Unknown ● Vagrant
 TREND: ▲ Improving = Stable ▼ Declining × Unknown

Summary Status Description for QI Habitats in the ROI

QI Habitat Code	Summary Status Description (based on 2019 NPWS Article 17 report)
1110	Improvements over time due to declining pressures. Stable status in 2019, as no significant pressures identified. Overall favourable future prospect for this habitat.
1130	Overall status is deteriorating. Trend changes seen from improving in 2013 to declining in 2019 is a result of more accurate data. This decline is considered to have been ongoing since the beginning of the last assessment.
1140	Overall status is deteriorating. Changes from improving to deteriorating are due to a genuine decline in the quality of this habitat since 2013. Causes of this have been identified as; pollution from agricultural, forestry and wastewater sources, as well as impacts associated with marine aquaculture, particularly the Pacific oyster (<i>Magallana gigas</i>).
1150*	The Overall Status for Lagoons is assessed as Bad, unchanged since the 2013 assessment. High ranking pressures on this habitat are identified as; eutrophication, modification of hydrological flow, drainage, erosion and silting up, accumulation of seaweed, and sedimentation from peat related to turf cutting and/or forestry. The change from stable to declining is a result of a genuine decline since 2013.
1160	Previous trends of inadequate and improving are now assessed as bad, owing to more detailed information. Bad status as a result of pressures including; nutrient enrichment, dredging and invasive alien species.
1170	Inadequate yet stable status. Change in status from bad is mainly attributed to better knowledge gained from recent surveys, while genuine improvements have occurred by the implementation of an EU Regulation restricting the use of bottom trawls therefore reducing pressures to the seafloor.
1180	Not assessed in reports prior to 2019. Favourable with a stable trend based on the physical and geological nature of this habitat in addition to no identified significant pressures on their long-term viability.
1210	A deteriorating trend due to anthropogenic area losses. Inadequate status caused by pressures associated with activities such as recreation and coastal defences, which can interfere with sediment dynamics, and the fact that the current area is still below the favourable reference area.
1220	This assessment is unchanged since 2013. The Overall Status is assessed as Inadequate, mainly due to pressures associated with coastal defences (which can interfere with sediment dynamics), recreation and shingle removal. The trend is stable.
1230	Overall Status remains Inadequate with a stable trend. Subject to various pressures including; trampling by walkers, invasive non-native species, gravel extraction, and sea-level and wave exposure changes due to climate change. The Habitats Directive has prevented significant losses, however close monitoring is required for this vulnerable habitat.
1310	The Overall Status is Favourable with a stable trend, an improvement since 2013. This change is due partly to a change in the threshold for favourable structure and functions, and partly because of a lack of evidence for the recent spread of the invasive non-native species, common cordgrass (<i>Spartina anglica</i>).
1320	No information.
1330	Inadequate status. Unchanged since 2013. Deterioration represents a genuine decline due to losses in area, while Inadequate status is due to pressures from agriculture, including ecologically unsuitable grazing regimes and land reclamation, and the invasive non-native species common cord-grass (<i>Spartina anglica</i>).
1410	Inadequate status. Unchanged since 2013. Deterioration represents a genuine decline due to losses in area, while Inadequate status is due to pressures associated with agriculture, including overgrazing, under grazing and land reclamation.
1420	Continuing decline since 2013, assessed as Bad with a deteriorating trend. This trend is due to recent area losses, associated with algal mats formed as a consequence of water pollution, which resulted in a contraction of the range of the habitat.
2110	Unchanged since 2013, Inadequate and stable trend associated with pressures from recreation and coastal defences, which can interfere with sediment dynamics.
2120	Unchanged since 2013, Inadequate and stable trend mainly associated with pressures from recreation and coastal defences, which can interfere with local sediment dynamics.
2130	Overall Bad status. Deteriorating trend due to poor results for structure and functions, but this is largely attributed to use of a different methodology and decline is considered to have been on-going since before the last assessment. Pressures are associated with recreation and ecologically unsuitable grazing practices.
2140	Improving trend attributed to more accurate monitoring data rather than actual change, and the habitat is considered to have been in Favourable condition since before the last assessment. Overall status is therefore favourable. Pressures include; grassland abandonment, recreational activities, and bracken encroachment; however, none were considered to impact the long-term viability of the habitat.
2150	The Overall Status is assessed as Inadequate with a stable trend due to pressures associated with land abandonment, recreational activities, and bracken encroachment. This assessment is unchanged since 2013.
2170	Inadequate status unchanged from 2013 due to pressures associated with ecologically unsuitable grazing, invasive non-native species and agricultural intensification.
2190	Unchanged condition since last assessment. Inadequate and deteriorating agricultural fertilisers, sports and leisure activities, and drainage. Succession to scrub is also problematic for the status of this habitat.

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QI Habitat Code	Summary Status Description (based on 2019 NPWS Article 17 report)
21AO	The Overall Status is assessed as Inadequate, which differs from the 2013 Bad assessment. The overall trend is stable. A different method was used to determine the proportion of habitat in good condition and the status is considered to have been Inadequate since before the last assessment.
3110	The Overall Status is assessed as Bad with a stable trend. The change in trend from deteriorating to stable is because of the use of a different method. The future of this habitat requires action to address peatland damage at a catchment scale, as well as to reduce nutrient and other pollution.
3130	No change since the 2013 assessment except a move from stable to a deteriorating trend. This was based on improved knowledge through dedicated survey during the reporting cycle while also being subject to significant pressures from drainage, agriculture, peat extraction, forestry and wastewaters.
3140	Significant pressures have given this habitat a Bad and deteriorating status. These include nutrient and organic pollution being agriculture and municipal and industrial wastewaters while movement of pollutants, especially phosphorus, through groundwater is a significant concern.
3150	Unchanging status since last assessment due to anthropogenic influences. Associated with catchments dominated by mineral soil and, hence, some of the most intensive agricultural lands. Eutrophication is primary issue. Inadequate but stable trend.
3160	In Inadequate condition, this habitat trend has changed from deteriorating to stable due to use of a different assessment method and the trend is considered to have been stable since before the last assessment.
3180	Because of on-going pressures related to drainage, groundwater pollution and ecologically unsuitable grazing, the Overall Status has been assessed as Inadequate and stable, unchanged since 2013. The pressures mentioned gravely impact turlough ecology due to its hydrological dynamics.
3260	The inadequate and deteriorating trend of this habitat is of significant concern and is continually highlighted by the EPA. Agriculture, municipal, industrial discharges and damage through hydrological and morphological change are the leading issues causing sedimentation and high nutrient conditions.
3270	This habitat is upkeeping its favourable status since 2013 with intensive grazing causing poaching being the only significant pressure recorded.
4010	Bad and deteriorating with a change in trend from stable in 2013 associated with continued area losses due to new forestry, paths, tracks and land clearance while Overgrazing, burning, wind farm development and erosion are ongoing issues. In addition to this, N deposition from agriculture that generate air pollution and climate change have been recognised as causing negative impacts and causing poor future prospects for this habitat.
4030	Bad and stable with no change since 2013. Multiple significant pressures are associated with dry heath habitats. Overgrazing by sheep and burning for agriculture are particular issues here causing habitat degradation and losses through erosion. Afforestation and win farms also contribute to their bad status.
4060	Ongoing pressures and threats have given this habitat a Bad status. These include climate change (temp. increase & precip. decrease), upland sheep grazing, hill walking, and agricultural activities causing both current and future threats. An improving trend here assumes that the reduced grazing brought about by the Commonage Framework Plans continues to have a positive effect on this habitat.
5130	The Overall Status is assessed as Favourable and the trend is stable. The apparent improvement in status since the 2013 report is due to use of a different assessment method rather than a genuine change, and the habitat is considered to have been Favourable since before the last assessment.
6130	The Overall Status is assessed as Inadequate with a declining trend. The change in trend since 2013 is due to improved knowledge, and decline is considered to have been on-going since before the last assessment.
6210	The Bad deteriorating status here represents a genuine decline since the 2013 report in which the trend was assessed as stable. On-going habitat losses are associated with this such as agricultural intensification causing loss of species-rich communities, or abandonment of farmland resulting in succession to scrub despite conservation-focused farming schemes aiming to improve such habitats.
6230	The Overall Status is assessed as Bad due to on-going pressures such as bracken encroachment and succession. The trend is stable, and may represent a genuine improvement since the 2013 report however there was limited monitoring undertaken.
6410	Bad and deteriorating trend, unchanged since 2013. On-going losses of habitat due to agricultural intensification (e.g. land drainage, fertiliser application), under grazing and forestry. Significant historical losses of this habitat have also occurred since the EU Habitats Directive came into force contributing to this poor status.
6430	The Overall Status is assessed as Bad with a deteriorating trend. This change in trend since the 2013 report represents a genuine decline due to range contraction and a decline in structure and functions.
6510	This change in trend since the 2013 report (in which it was judged to be stable) is attributed to improved knowledge/more accurate data, and decline is considered to have been on-going since before the last assessment.
7110	Overall Status of the habitat is Bad and deteriorating, unchanged since the last assessment. The main pressures on active raised bog are peat extraction, drainage, afforestation and burning. Climate change is also considered a threat in the future
7120	Overall Status is assessed as Bad and deteriorating, unchanged since the last assessment. The main pressures on Degraded raised bog come from peat extraction, drainage, afforestation, burning and climate change.

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QI Habitat Code	Summary Status Description (based on 2019 NPWS Article 17 report)
7130	Overall Status is assessed as Bad and deteriorating, unchanged since the 2013 report. Main pressures include overgrazing, burning, afforestation, peat extraction, and agricultural activities causing nitrogen deposition. Erosion, drainage and wind farm construction are other issues of concern for blanket bog status.
7140	The Overall Status is assessed as Bad, as in the last two reporting periods. The trend is assessed as stable. The main pressures facing transition mires in Ireland are afforestation, water pollution, drainage and hydrological changes. Grazing/agricultural management is also prominent as an issue.
7150	The Overall Status is assessed as bad with a deteriorating trend. The change in status since 2013 is primarily due to use of a different method in the definition and interpretation of the habitat. The main pressures on the habitat are associated with impacts on the supporting bog habitats, especially overgrazing, burning, peat extraction, drainage and conversion to forestry.
7210	The Overall Status is assessed as Inadequate but stable. Improved knowledge/more data resulted in the status change since 2013 and the trend is considered to have been stable since before the last assessment.
7220	The Overall Status is assessed as Inadequate, which is unchanged since the last reporting period. The trend is assessed as deteriorating (reported as stable in 2013), which is due to improved knowledge, and decline is considered to have been ongoing since before the last assessment.
7230	The main pressures facing the habitat in Ireland are land abandonment (and associated succession), overgrazing, drainage and pollution. The Overall Status is assessed as Bad with a deteriorating trend due to losses of area and habitat quality, as well as the pressures and threats faced by the habitat.
8110	The Overall Status is Inadequate, as in the 2013 assessment, but the trend has changed. Structure and functions were assessed as improving in the previous reporting period due to destocking associated with the Commonage Framework Plans; however, as overgrazing, under grazing and succession were recorded as medium-importance pressures in this reporting period, and Structure and functions were again assessed as Inadequate, the trend is considered to be stable rather than improving. This change is due to improved knowledge and the habitat is considered to have been stable since before the last assessment
8120	The Overall Status is assessed as Inadequate with a stable trend due to pressures associated with overgrazing, unchanged since the 2013 assessment.
8210	The Overall Status is assessed as Inadequate with a stable trend due to pressures associated with overgrazing and the non-native invasive species New Zealand willowherb (<i>Epilobium brunnescens</i>). This is unchanged since the previous assessment in 2013.
8220	The Overall Status is assessed as Inadequate with a stable trend due to pressures associated with the non-native invasive species New Zealand willowherb (<i>Epilobium brunnescens</i>). There have been no significant changes since 2013.
8240	The Overall Status is assessed as Inadequate due to continuing area losses associated with conversion to agricultural land and housing construction, as well as scrub encroachment caused by under grazing. The trend is stable as some of these impacts are being offset to some degree by conservation measures undertaken in the Burren and Aran Islands. This is unchanged since the 2013 assessment.
8310	Although some threats have been identified, some of which might have appreciable localised effects, none is considered likely to have a significant impact on this habitat in Ireland. Overall the future prospects for this habitat are considered to be good. Although the overall conservation assessment for the lesser horseshoe bat in Ireland is now Inadequate due to a small contraction in range, these concerns do not relate to areas with bats in caves, and the Overall Status of caves is Favourable and stable, as it has been over the last two reporting periods. Many vulnerable bat caves are already protected from disturbance through grilling. Regular monitoring is underway and if further vulnerable cave sites are identified these will also be grilled.
8330	Sea caves appear to be extensive around the coast of Ireland, although their distribution along the south-east coast appears to be limited due to geological factors. The occurrence of sandstone/limestone is highly correlated with the formation of sea caves, accounting for nearly 85% of documented occurrences around Ireland. The Overall Status is assessed as Favourable as there are no pressures impacting on this habitat. This is the same assessment as in the last two reporting periods.
91A0	Historical habitat loss has occurred and still continues, although at a very low level. However, the greatest on-going pressures on these woods come from invasive non-native species such as Rhododendron ponticum, cherry laurel (<i>Prunus laurocerasus</i>) and beech (<i>Fagus sylvatica</i>) as well as overgrazing by deer. These impacts severely reduce tree regeneration, which is essential for the long-term viability of woodlands. Measures such as the Native Woodland Scheme are expected to have a positive long-term effect but are as yet insufficient to outweigh the pressures, as development of Annex-quality woodland takes decades. These pressures, in conjunction with the continued fragmentation of remaining stands, lead to an Overall Status of Bad with a deteriorating trend. The change in trend from improving in 2013 is due to the availability of more accurate data, particularly in relation to recent habitat loss, and decline is considered to have been on-going since before the last assessment.
91D0	A number of low-level pressures affect bog woodlands, including drainage, invasive species and burning, but none are considered significant enough at a national level to adversely affect the long-term viability of the habitat. The Overall Status is therefore Favourable with a stable trend, unchanged since the previous assessment.
91E0	A number of pressures affect this habitat in Ireland, the most serious being invasive species, particularly sycamore (<i>Acer pseudoplatanus</i>), beech (<i>Fagus sylvatica</i>), Indian balsam (<i>Impatiens glandulifera</i>) and currant species (<i>Ribes nigrum</i> and <i>R. rubrum</i>). Some native species such as brambles (<i>Rubus fruticosus</i> agg.) and common nettle can also become over-vigorous. Small area losses due to clear-felling have also occurred. As a result, the Overall Status is bad, and the trend is

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QI Habitat Code	Summary Status Description (based on 2019 NPWS Article 17 report)
	declining. This poorer trend since the previous assessment is mainly due to the availability of more accurate data, and the decline is considered to have been ongoing since before the last assessment.
91J0	Pressures are mainly linked to the presence of alien species such as sycamore (<i>Acer pseudoplatanus</i>), beech (<i>Fagus sylvatica</i>), cherry laurel (<i>Prunus laurocerasus</i>) and traveller's-joy (<i>Clematis vitalba</i>), with overgrazing by deer also posing a serious problem. The Overall Status of Yew woodland is therefore Bad. The change in trend from improving to stable since the previous assessment is due to improved knowledge and more accurate data, and the trend is considered to have been stable since before the last assessment.

Summary Status Description for QI Species in ROI

QI Species Code	Summary Status Description (based on 2019 NPWS Article 17 report)
6985	The pressures identified are generally local issues and none were considered to be impacting on the long-term viability of the species or its habitat. The problem of invasive non-native species, identified at a number of sites, is difficult to manage as they often provide essential cover to Killarney fern colonies. The Overall Status of the species continues to be Favourable, as it has been over the last two assessments.
1528	There is no evidence of any major pressures currently impacting this species nationally, and therefore the Overall Status is assessed as Favourable.
1833	The species is threatened by enrichment (eutrophication), acidification and peatland damage. The Overall Status is assessed as Inadequate and the trend as deteriorating, because of population extinctions, population decreases and decreasing habitat quality in the current reporting period. The trend differs from the previous assessment because of the availability of improved data to inform the assessments.
6216	Although its population has almost certainly declined in historic times, due to loss of intact peatlands, recent surveys indicate that there continues to be sufficient good quality habitat to support the long-term survival of the species. There are also no significant pressures currently impacting the species. Therefore, the Overall Status is assessed as Favourable, as it has been for the last two assessments.
1395	Petalwort has an Atlantic-Mediterranean distribution and in Ireland is most common on the west coast. Some of the largest populations in the world are thought to occur in Ireland. The area and quality of the occupied habitat for the species is deemed to be sufficient for the species' long-term survival. There are also no negative pressures currently impacting seriously on the habitat at a national level. Therefore, the Overall Status is assessed as Favourable, the same result as the last two reporting periods.
1376/1377	The Overall Status of maërl is Bad and declining, due to deterioration in the quality of the maërl beds caused by the deposition of pseudofaeces and/or extensive algal cover on the beds, the presence of negative indicator species such as the opportunistic ascidian <i>Asciidiella aspersa</i> , and the presence of the invasive alien <i>Sargassum muticum</i> .
1400	Although some of the habitats in which the species occurs are impacted by pressures, there is enough habitat of sufficient quality to support the species and there is no evidence that pressures are operating to compromise the status of this species. Therefore, this species has been assessed as Favourable, as in the previous assessment, with a stable trend.
1409	Collection of Sphagnum spp. is unlikely to pose a conservation problem. However, although this genus occurs in many widespread habitats, the condition of these habitats is considered to be inadequate due to pressures such as peat extraction, drainage and eutrophication and as a result the taxon's future prospects are rated as Inadequate. The Overall Status for the group is thus Inadequate.
1413	The Overall Status of the Lycopodium sub-group is assessed as Unfavourable/Inadequate. This is based on unfavourable assessments for the Habitat for the species and Future prospects parameters for <i>Huperzia selago</i> and <i>Lycopodium clavatum</i> . <i>Lycopodium clavatum</i> also received an unfavourable assessment for Population. The overall trend in conservation status was assessed as stable.
1378	The Overall Status of this taxon is Inadequate due to pressures on the habitats in which it occurs. This is unchanged since the previous reporting period.
1013	The Overall Status of <i>V. geyeri</i> is assessed as Bad and deteriorating. Grazing levels are considered critical at many sites, the species requiring areas of short vegetation within larger areas of wetland habitat, and given the small size of most sites, damage can happen very quickly. The species is considered very sensitive to changes in hydrology and this has been implicated in causing some of the losses from sites during the current and earlier reporting periods.
1014	The Overall Status of <i>V. angustior</i> is Inadequate and deteriorating. Grazing is critical for the maintenance of the habitat of <i>V. angustior</i> , especially on the extensive sand dune populations. These habitats are easily modified by inappropriate grazing, changes in stocking type and the impact of wild herbivores, especially rabbits. Sand dune systems have been impacted by leisure activities – caravan sites and golf courses, mainly – and expansion of these activities has exerted significant pressure on some large sites.
1016	The Overall Status of <i>V. moulinsiana</i> is assessed as Inadequate and deteriorating. The main pressures are associated with natural succession resulting in species composition change and drying out of the habitat. The sites are mainly unmanaged because of their natural wetness, so grazing and mowing are less significant on a national scale and equally should be easily rectified in the short and medium term.

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QI Species Code	Summary Status Description (based on 2019 NPWS Article 17 report)
1024	Studies have shown that the Kerry slug can be abundant on conifer trees. The species will also recolonise boulder habitat when the wood is clear-felled. The Overall Status is Favourable and improving, driven in part by the large populations in conifer plantations
1029	The Overall Status of <i>M. margaritifera</i> is Bad and deteriorating, unchanged since the 2013 assessment. The species is critically endangered in Ireland and across Europe, mainly because of habitat deterioration: a combination of hydrological and morphological changes, sedimentation and enrichment.
1092	The Overall Status of the species is Bad with a deteriorating trend. This represents a genuine decline since the last reporting period and is mainly due to bad Future prospects for the species due to the presence of the Crayfish Plague organism across six catchments.
1065	The Overall Status of the species is Inadequate but improving. There has been genuine spread into areas where there have not been previous records. Marsh Fritillary sites are often on marginal land in upland areas and the edges of wetlands and peatlands which are subject to pressures from agricultural conversion and afforestation.
1095	The Overall Status of this species is assessed as Bad with a stable trend, unchanged since the last 2013 assessment. Barriers to upstream migration (e.g. weirs) are considered the major impediment to good conservation status for sea lamprey as these limit access to spawning beds and juvenile habitat.
1096	Lamprey surveys in Ireland have necessarily focused on ammocoete abundances and to a lesser extent upon observations of adult spawning events. Distribution records can only be definitively assigned to one species or the other where adult records exist. For brook lamprey in Ireland there are extensive areas of suitable habitat and no significant pressures impacting this species. The Overall Status is therefore assessed as Favourable.
1099	The inability to distinguish between river lamprey and brook lamprey larvae, and the challenges associated with sampling for adult river lamprey, means that an evaluation of their actual range and population size cannot be undertaken. The Overall Status for river lamprey is therefore assessed as Unknown. The previous reporting period used primarily juvenile <i>Lampetra</i> sp. distribution data for this species.
5046	The entire range of the Killarney shad is protected within Killarney National Park. The Overall Status is assessed as Favourable, as it has been in the last two assessments.
1103	The Overall Status of this species is assessed as Bad with a stable trend, unchanged from the previous assessment. A number of pressures were identified, mainly relating to pollution, alteration of flow patterns, and habitat disturbance. Introduced species were also recorded, with a large population of the Asian clam (<i>Corbicula fluminea</i>) recorded within kilometres of the twaite shad spawning ground on the River Barrow. Furthermore, barriers to migration, such as weirs, can impede or prevent twaite shad accessing spawning habitat, and can also increase the potential for hybridisation between converging populations of twaite and Allis shad simultaneously obstructed below barriers.
5076	Pressures identified for the species include pollution due to agricultural fertiliser application and urban waste water discharge. Invasive species, specifically zebra mussel (<i>Dreissena polymorpha</i>) and Asian clam (<i>Corbicula fluminea</i>), have also been identified as a significant pressure. Water level regulation may become a concern, as significant alterations or fluctuations in water surface level could have a severe impact on the success of pollan spawning or on the survival of the newly released fertilised eggs. Introduced fish species, namely perch and roach, are a substantial component of the fish community in these lakes and may compete with pollan for food. The Overall Status is assessed as Bad, as in the previous two assessments, but the trend is now known to be stable.
1106	There is considered to be sufficient habitat in Ireland to support a viable salmon population. Freshwater quality in Ireland continues to remain a concern but ongoing pressures linked with habitat quality are not considered to be compromising the viability of the species. The Overall Status is assessed as Inadequate, the same as the last assessment. Although a short-term negative trend is reported for this species, the trend has reversed in the last 5 years. Therefore, an overall stable trend is reported.
6284	Poor water quality is the most common pressure on the species, followed by lack of grassland management and predation of tadpoles and eggs by invertebrates. Also of concern are ponds becoming overgrown with emergent vegetation, making them unsuitable for breeding. Invasive species – New Zealand pigmyweed (<i>Crassula helmsii</i>) and sea-buckthorn (<i>Hippophae rhamnoides</i>) – can also cause problems for the toad. Due to historical declines in range, the Overall Status of the natterjack toad is Bad, as in the previous two assessments. The change in overall trend (from increasing to stable) reflects the most recent survey data, which indicate that the uptake of constructed ponds has not continued at the rate seen in the previous report.
1213	The Common Frog appears largely unaffected in Ireland by pollution and disturbance. The most recent national survey estimated the population at over 150,000,000 adults, making it one of the most numerous vertebrates in the country. No significant threats to the frog population have been identified. Overall Status is considered to be Favourable.
1223	There are significant difficulties associated with reporting on this species. Despite some recent progress, the population ecology, range and habitat utilisation of this species in the North-East Atlantic are not well understood. Although there is evidence of significant declines of leatherbacks in the Pacific, there are some indications that the Atlantic populations may be faring better, with recent surveys suggesting that numbers of females may be increasing at some nesting beaches. Nonetheless, mortalities of nesting adults and juveniles is a cause for concern in some areas and fishing causes further mortality during the animal's trans-Atlantic migrations. The Overall Status of this species is assessed as Unknown.
1303	The population overall is doing well; monitoring has demonstrated significant increases in numbers in the core areas. Over much of its distribution, both range and the area of suitable habitat have remained stable. In Limerick and North Kerry, however, worrying declines in habitat, and consequently in range, have been observed. These are considered likely to continue without significant intervention. For these reasons, Habitat, Range and their associated Future prospects, which

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	were all considered to be Favourable in the last report, are now considered Inadequate, and the Overall Status of this species is assessed as Inadequate and declining
1309	There is no indication of any major pressures currently impacting populations and future prospects are considered good. The Overall Status is assessed as Favourable and the overall trend is demonstrating an on-going increase.
5009	There is no indication of any significant pressures impacting on the species, and numbers appear to be increasing. The Overall Status of the species is therefore assessed as Favourable and improving, the same conclusion as the previous assessment.
1317	The population of Nathusius' pipistrelle in Ireland is cautiously estimated to be 3,000-5,000 individuals. It remains unclear whether the species is successfully reproducing here and what level of population would be required to ensure long-term viability. No pressures appear to be acting on the species, and there are many buildings similar to those used by nursery colonies in Northern Ireland, so suitable habitat does not appear to be a limiting factor. However, given the uncertainty about range and population, the Overall Status is assessed as Unknown, unchanged since the last assessment
1322	Building renovation and loss of foraging habitat are potential threats for this species but are not considered to be significant. There is no monitoring scheme in place for this species, but the most recent Red Data List for Irish Mammals lists Natterer's bat as Least Concern and the Overall Status has been assessed as Favourable, as in the last two assessments.
1314	Although some pressures/threats have been noted, there is no indication of any major pressures currently impacting on the species and future prospects are considered good. The Overall Status is assessed as Favourable and the overall trend is demonstrating an on-going increase.
1330	Building renovation and loss of foraging habitat are potential threats for this species but are not considered to be significant. There is no monitoring scheme in place for this species, but the most recent Red Data List for Irish Mammals lists whiskered bat as Least Concern and the Overall Status is assessed as Favourable, unchanged over the last two reporting periods.
1326	There is no indication of any major pressures currently impacting the population. The Overall Status is assessed as Favourable and the overall trend is demonstrating an ongoing increase.
1331	Two threats/pressures have been identified and need to be investigated further: wind energy, and the impact on roosts associated with deliberate/accidental exclusion from houses. However, there is no evidence of decline in range or habitat and future prospects are considered good. The Overall Status is assessed as Favourable and the overall trend is demonstrating an on-going increase.
1334	Agricultural intensification is leading to some reduction in habitat quality and a number of related threats have been identified, but the hare has a broad habitat niche, so the impacts of these changes on habitat extent and quality are unknown. The Overall Status of the hare is Favourable.
1355	The main threats to the otter include pollution, particularly organic pollution resulting in fish kills; and accidental deaths (road traffic and fishing gear). Although recent studies on territory overlaps and animal movements suggest that refinements to the population estimation formula are needed, the otter population (estimated at between 7,000 and 10,000 breeding females) is considered to be increasing and none of the threats or pressures identified are considered likely to impact significantly on the species. The Overall Status of otter is therefore considered to be Favourable, unchanged since the previous reporting period.
1357	There is ample habitat available across the country to allow the species to continue its spread and to allow the population to expand as well. While some threats have been identified, none of them are considered sufficiently serious to undermine the continued recovery of the species. Therefore, the Overall Status of the pine marten is assessed as Favourable, unchanged since the previous reporting period.
1364	Pressures on this species in Irish waters mainly involve commercial vessel-based activities such as geophysical seismic exploration or local/regional prey removal by fisheries or by-catch in fisheries. While these pressures may act on a temporary and/ or regional scale and some are likely to continue to act as pressures in the future, none is considered sufficiently serious to adversely impact on grey seal populations in Irish waters. Given the current state of knowledge of the species' distribution, population, ecology and prevailing pressures, the Overall Status is Favourable with an increasing trend.
1365	Pressures on this species in Irish waters mainly involve commercial vessel-based activities such as local/regional prey removal by fisheries or by-catch in fisheries, or geophysical seismic exploration; other possible impacts may occur from coastal tourism and localised human disturbance at haul-out sites. None of these pressures are considered to be of sufficient magnitude to adversely impact on populations of harbour seals in Irish waters. The Overall Status of the harbour seal in Ireland is considered to be Favourable, given the current knowledge of the species' population size, distribution, ecology and prevailing pressures on the species.
1345	Pressures acting on this species in Irish waters mainly involve commercial vessel-based activities such as impacts arising from shipping movements, geophysical seismic exploration or local/regional prey removal by fisheries. While the effect of these pressures may act on a temporary and/or regional scale, none is considered to be of sufficient magnitude to adversely impact on populations of humpback whale in Irish waters. The Overall Status of humpback whale in Ireland remains Unknown. This overall result is the same as in the previous two assessments due to limited ongoing information on the species' occurrence and population ecology in Irish waters
1349	Pressures on this species in Irish waters mainly involve commercial vessel-based activities such as impacts arising from geophysical seismic exploration or from local/ regional prey removal by fisheries. While the effect of these pressures may act on a temporary and/or regional scale, none is considered to be of sufficient magnitude to adversely impact on

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QI Species Code	Summary Status Description (based on 2019 NPWS Article 17 report)
	populations of bottlenose dolphin in Irish waters. The Overall Status of bottlenose dolphin in Ireland remains Favourable. This overall result is the same as the previous two assessments.
1350	Pressures acting on this species in Irish waters mainly involve commercial vessel-based activities such as impacts from geophysical seismic exploration or from local/ regional prey removal by fisheries. While these pressures may act on a temporary and/or regional scale, none is considered to be of sufficient magnitude to adversely impact on populations of common dolphin in Irish waters. The Overall Status of common dolphin in Ireland remains Favourable. This overall result is the same as the previous assessment.
1351	Pressures acting on this species in Irish waters mainly involve commercial vessel-based activities such as impacts arising from geophysical seismic exploration or from local/regional prey removal by fisheries. While these pressures may act on a temporary and/or regional scale, none is considered to be of sufficient magnitude to adversely impact on populations of harbour porpoise in Irish waters. The Overall Status of harbour porpoise in Ireland remains Favourable. This overall result is the same as the previous two assessments.
2027	Pressures on this species in Irish waters involve potential pollutant burdens from man-made Polychlorinated Biphenyl compounds plus other persistent organic pollutants, as well as impacts from commercial vessel-based activities such as geophysical seismic exploration and local/regional prey removal by fisheries. With the exception of pollution, which could be having a significant and wider impact in the North-East Atlantic, no pressures are considered to be adversely impacting on populations of killer whale in Irish waters. The Overall Status of killer whale in Ireland remains Unknown. This overall result is the same as the previous two assessments since there has been no significant improvement in knowledge of the conservation status of the species.
2029	Pressures acting on this species in Irish waters mainly involve commercial vessel-based activities that occur primarily on a local or regional scale and/or on a temporary or intermittent basis, such as impacts arising from shipping movements or geophysical seismic exploration. None of these pressures are considered to be adversely impacting on populations of long-finned pilot whale in Irish waters. The Overall Status of long-finned pilot whale in Ireland remains Favourable, given the current knowledge of the species' population size, distribution, ecology and the prevailing pressures on the species. This overall result is the same as in the previous two assessments
2030	Pressures acting on this species in Irish waters mainly involve commercial shipping-based or vessel-based activities such as impacts arising from geophysical seismic exploration and from local/regional prey removal by fisheries. Another potential pressure is the use of military sonars in the deeper ocean and adjacent continental margins which, while not employed by the Irish Naval Service, is known and documented to occur in the waters of Ireland's EEZ. None of these pressures are considered to adversely impact populations of the species in Irish waters. The Overall Status of Risso's dolphin in Ireland is assessed as Favourable, given the current knowledge of the species' population size, distribution, ecology and the prevailing pressures on the species. This overall result is different from the previous two assessments, in which the status was assessed as Unknown, and it represents a significant improvement in knowledge of the conservation status of the species.
2031	Pressures acting on this species in Irish waters mainly involve commercial vessel-based activities such as impacts arising from geophysical seismic exploration and from local/regional prey removal by fisheries. None of these are considered to be having an adverse impact on the population in Irish waters. The Overall Status of Atlantic white-sided dolphin in Ireland therefore remains Favourable, given the current knowledge of the species' population size, distribution, ecology and the prevailing pressures on the species. This overall result is the same as the previous two assessments
2032	The main pressures acting on this species in Irish waters involve commercial shipping-based or vessel-based activities such as impacts arising from geophysical seismic exploration and from local/regional prey removal by fisheries. While the effect of these pressures may act on a temporary and/or regional scale, none is considered to be of sufficient magnitude to be causing an adverse impact on populations of white-beaked dolphin in Irish waters. The Overall Status of white-beaked dolphin in Ireland remains Favourable, given the current knowledge of its population size, distribution, ecology and the prevailing pressures on the species. This overall result is the same as the previous assessment.
2034	The main pressures acting on this species in Irish waters involve commercial shipping-based or vessel-based activities such as impacts arising from geophysical seismic exploration and from local/regional prey removal by fisheries. While the effect of these pressures may act on a temporary and/or regional scale, none is considered to be of sufficient magnitude to be causing an adverse impact on populations of striped dolphin in Irish waters. The Overall Status of striped dolphin in Ireland remains Favourable, given the current knowledge of the species' distribution, ecology and the prevailing pressures on the species. This result is the same as the previous assessment.
2035	Pressures acting on this species in Irish waters mainly involve commercial shipping based or vessel-based activities such as impacts arising from geophysical seismic exploration and from local/regional prey removal by fisheries. Another potential pressure is the use of military sonars in the deeper ocean and adjacent continental margins which, while not employed by the Irish Naval Service, is known and documented to occur in the waters of Ireland's EEZ. None of these pressures are considered to be significantly impacting on populations of the species in Irish waters. The Overall Status of Cuvier's beaked whale in Ireland is assessed as Favourable. This is different from the previous two assessments (in which the status was assessed as Unknown), due to improved knowledge, higher quality data, and new methods used in the assessment of the conservation status of the species.
2038	Pressures acting on this species in Irish waters mainly involve commercial shipping-based or vessel-based activities such as impacts arising from geophysical seismic exploration and from local/regional prey removal by fisheries. None of these pressures are considered to be of sufficient magnitude to adversely impact on populations of Sowerby's beaked whale in Irish waters. The Overall Status of Sowerby's beaked whale in Ireland is assessed as Favourable. This is different from the previous two assessments (in which the status was assessed as Unknown), due to improved knowledge, higher quality data, and new methods used in the assessment of the conservation status of the species.

QI Species Code	Summary Status Description (based on 2019 NPWS Article 17 report)
2618	Pressures on this species in Irish waters mainly involve commercial shipping-based or vessel-based activities such as impacts arising from shipping movements, geophysical seismic exploration or from local/regional prey removal by fisheries. None of these pressures are considered to be of sufficient magnitude to adversely impact on populations of minke whale in Irish waters. The Overall Status of minke whale in Ireland remains Favourable, given current knowledge of the species' population size, distribution, ecology and prevailing pressures on the species. This overall result is the same as in the previous two assessments.
2621	Pressures acting on this species in Irish waters mainly involve commercial shipping-based or vessel-based activities such as shipping movements, geophysical seismic exploration or local/regional prey removal by fisheries. None of these are considered to be of sufficient magnitude to adversely impact on populations of fin whale in Irish waters. The Overall Status of fin whale in Ireland is assessed as Favourable, given the current knowledge of the species' distribution, ecology and prevailing pressures on the species. This overall result is the same as in the previous two assessments.
5020	Pressures acting on this species in Irish waters mainly involve commercial shipping-based or vessel-based activities such as impacts arising from shipping movements or geophysical seismic exploration. None of these are considered to be of sufficient magnitude to adversely impact on populations of blue whale in Irish waters. The Overall Status of the blue whale is considered to be Unknown due to limitations in information on its occurrence and population ecology in Ireland's extensive marine waters. This overall result is the same as in the previous two assessments.
2624	Pressures acting on this species in Irish waters mainly involve commercial shipping-based or vessel-based activities such as impacts arising from shipping movements or geophysical seismic exploration. None of these are considered to be of sufficient magnitude to adversely impact on populations of sperm whale in Irish waters. The Overall Status of sperm whale is assessed as Favourable given the current knowledge of the species' population size, distribution, ecology and prevailing pressures on the species. This is different from the previous Unknown assessments, due to improved knowledge, higher quality data, and new methods used in the assessment of its conservation status.
5033	Pressures acting on this species in Irish waters mainly involve commercial shipping-based or vessel-based activities such as impacts arising from geophysical seismic exploration and from shipping movements. Another potential pressure is the use of military sonars in the deeper ocean and adjacent continental margins which, while not employed by the Irish Naval Service, is known and documented to occur in the waters of Ireland's EEZ. None of these pressures are considered to adversely impact populations of the species in Irish waters. The Overall Status of the northern bottlenose whale is Unknown, as it was for the last two assessments, due to limited ongoing information on the species' occurrence and population ecology in Irish waters.
2619	Pressures acting on this species in Irish waters mainly involve commercial shipping-based or vessel-based activities such as impacts arising from shipping movements or geophysical seismic exploration. None of these are of sufficient magnitude to adversely impact on populations of sei whale in Irish waters. The Overall Status of sei whale in Ireland remains Unknown. This result is the same as in the previous two assessments due to limited ongoing information on the species' occurrence and population ecology in Irish waters.
1348	Little is now known about the occurrence or ecology of this species in the North-East Atlantic, while remnant populations inhabiting North American waters remain extremely vulnerable to ongoing human impacts and potential extinction. No live records have been confirmed from Irish waters in recent decades. In the last 50 years sightings have occurred very occasionally off the European continental shelf and in the mid-Atlantic.
2028	Little is known about the occurrence or ecology of this species in the North-East Atlantic, but it is assumed to be a tropical, sub-tropical and warm temperate deep-water species that feeds on fish and squid and which very occasionally occurs in offshore Irish waters. In the last 50 years rare sightings have occurred off the European continental shelf and in the mid-Atlantic, while only a few sporadic live records have been confirmed from Irish waters in the last 15-20 years.
2037	True's beaked whale (<i>Mesoplodon mirus</i>) is one of six species of cetacean (i.e., whales, dolphins and porpoises) that have been very rarely recorded in Irish waters and are therefore termed vagrant species. Difficult to identify in the open ocean, like many beaked whale species its presence and identifying features can be elusive in the field. True's beaked whales are also tricky to separate from their close relatives the Gervais' beaked whales but both are identifiable by a distinct medium-sized beak and adult male True's beaked whales have two prominent teeth at the tip of the lower jaw.
2622	Little is known about the population distribution or ecology of this species in the North-East Atlantic, but it is considered to be a deep-water species that feeds on squid and octopus, and which may occasionally occur in offshore Irish waters. Since only one live record has emerged so far from oceanic waters very far from shore, most information on the species in Ireland has come from the isolated and rare stranding of individual animals.
5029	Little is known about the occurrence or ecology of this species in the North-East Atlantic. It is normally a polar or sub-polar species found in Arctic regions where it feeds on fish and crustaceans. Only three live records have been confirmed from Ireland, one from County Mayo, another from County Cork, and the third sighting, comprising three individuals, made far offshore during an aerial survey in December 2015.
5034	Little is known about the occurrence or ecology of this species in the North-East Atlantic, but it is assumed to be a warm temperate or sub-tropical deep-water species that feeds on squid and possibly fish. Only one record is available from Ireland so far, that being from a stranding in County Sligo.
1102	The Allis shad (<i>Alosa alosa</i>) is a large member of the herring family. It spends much of its life in coastal waters and samples of marine-caught Allis shad have been collected off the south-east coast. This species enters freshwater to breed, with significant penetration of large rivers reported on the continent. There is some evidence of Allis shad entering Irish rivers, with one fish recorded some 40km from the sea on the Slaney. Nonetheless, only a small number of Allis shad have ever been recovered from Irish freshwaters and while there is good evidence of the presence of breeding populations of twaite shad in Irish rivers, the only evidence of breeding by Allis shad is the presence of Allis-twaite hybrids. No juvenile Allis shad have been found during survey work of Irish river systems. Overall it would appear that the Allis

NATURA IMPACT STATEMENT

QI Species Code	Summary Status Description (based on 2019 NPWS Article 17 report)
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	shad is an opportunistic spawner in Irish waters. Until evidence of an established breeding population is found, Allis shad is considered a vagrant.
1320	Brandt's bat (<i>Myotis brandtii</i>) is a cryptic species, requiring genetic determination to separate it from the whiskered bat (<i>M. mystacinus</i>). Following the initial confirmation of a specimen of Brandt's bat in Wicklow in 2006, further records were expected. However, extensive survey work at potential roosts and swarming sites since then has failed to locate any. The species is now considered a vagrant and was not assessed in the current report.



Appendix G
Threats and Pressures to
EU Protected Habitats and
Species

NATURA IMPACT STATEMENT

Code	Description
A	Agriculture
A01	Cultivation
A02	Modification of cultivation practices
A02.01	Agricultural intensification
A02.02	Crop change
A02.03	Grassland removal for arable land
A04	Grazing
A04.01	Intensive grazing
A04.02	Non-intensive grazing
A04.03	Abandonment of pastoral systems, lack of grazing
A05	Livestock farming and animal breeding (without grazing)
A05.01	Animal breeding
A05.03	Lack of animal breeding
A06	Annual and perennial non-timber crops
A06.03	Biofuel production
A06.04	Abandonment of crop production
B	Silviculture, forestry
B01	Forest planting on open ground
B01.01	Forest planting on open ground (native trees)
B01.02	Artificial planting on open ground (non-native trees)
B02	Forest and Plantation management & use
B02.01	Forest replanting
B02.01.01	Forest replanting (native trees)
B02.01.02	Forest replanting (non-native trees)
B02.02	Forestry clearance
B02.03	Removal of forest undergrowth
B02.04	Removal of dead and dying trees
B02.05	Non- intensive timber production (leaving dead wood/ old trees untouched)
B02.06	Thinning of tree layer
B03	Forest exploitation without replanting or natural regrowth
C	Mining, extraction of materials and energy production
C01	Mining and quarrying
C01.01	Sand and gravel extraction
C01.01.01	Sand and gravel quarries
C01.01.02	Removal of beach materials
C01.02	Loam and clay pits
C01.03	Peat extraction
C01.03.01	Hand cutting of peat
C01.03.02	Mechanical removal of peat
C01.04	Mines

NATURA IMPACT STATEMENT

Code	Description
C01.04.01	Open cast mining
C01.04.02	Underground mining
C01.05	Salt works
C01.05.01	Abandonment of salt pans (salinas)
C01.05.02	Conversion of salt pans
C01.06	Geotechnical survey
C01.07	Mining and extraction activities not referred to above
C02	Exploration and extraction of oil or gas
C02.01	Exploration drilling
C02.02	Production drilling
C02.03	Jack-up drilling rig
C02.04	Semi-submersible rig
C02.05	Drill ship
C03	Renewable abiotic energy use
C03.01	Geothermal power production
C03.02	Solar energy production
C03.03	Wind energy production
C03.04	Tidal energy production
D	Transportation and service corridors
D01	Roads, paths and railroads
D01.01	Paths, tracks, cycling tracks
D01.02	Roads, motorways
D02	Utility and service lines
D02.01	Electricity and phone lines
D02.01.01	Suspended electricity and phone lines
D02.01.02	Underground/submerged electricity and phone lines
D02.02	Pipe lines
D02.03	Communication masts and antennas
D02.09	Other forms of energy transport
D03	Shipping lanes, ports, marine constructions
D03.01	Port areas
D03.01.04	Industrial ports
D03.02	Shipping lanes
D03.02.01	Cargo lanes
D03.02.02	Passenger ferry lanes (high speed)
D03.03	Marine constructions
D04	Airports, flightpaths
E	Urbanisation, residential and commercial development
E01	Urbanised areas, human habitation
E01.01	Continuous urbanisation

NATURA IMPACT STATEMENT

Code	Description
E01.03	Dispersed habitation
E02	Industrial or commercial areas
E02.01	Factory
E02.02	Industrial stockage
E02.03	Other industrial / commercial area
E03	Discharges
E03.01	Disposal of household / recreational facility waste
E03.02	Disposal of industrial waste
E03.03	Disposal of inert materials
E03.04	Other discharges
E03.04.01	Coastal sand suppletion/ beach nourishment
E04	Structures, buildings in the landscape
E04.01	Agricultural structures, buildings in the landscape
E04.02	Military constructions and buildings in the landscape
E05	Storage of materials
E06	Other urbanisation, industrial and similar activities
E06.01	Demolishment of buildings & human structures
H	Pollution
H04	Air pollution, air-borne pollutants
H04.02	Nitrogen-input
H04.03	Other air pollution
H06	Excess energy
H07	Other forms of pollution
I	Invasive, other problematic species and genes
I01	Invasive non-native species
I02	Problematic native species
J	Natural System modifications
J01	Fire and fire suppression
J02	Human induced changes in hydraulic conditions
J02.01	Landfill, land reclamation and drying out, general
J03	Other ecosystem modifications
J03.01	Reduction or loss of specific habitat features
K	Natural biotic and abiotic processes (without catastrophes)
K01	Abiotic (slow) natural processes
L	Geological events, natural catastrophes
L01	Volcanic activity
L09	Fire (natural)
M	Climate change
M01	Changes in abiotic conditions
M01.01	Temperature changes (e.g. rise of temperature & extremes)

NATURA IMPACT STATEMENT

Code	Description
M01.02	Droughts and less precipitations
M01.03	Flooding and rising precipitations
M01.04	pH-changes
M01.05	Water flow changes (limnic, tidal and oceanic)
M01.06	Wave exposure changes
M01.07	Sea-level changes
M02	Changes in biotic conditions
M02.01	Habitat shifting and alteration
M02.02	Desynchronisation of processes
M02.03	Decline or extinction of species
M02.04	Migration of species (natural newcomers)
XO	Threats and pressures from outside the Member State