



Roinn Cumarsáide, Gníomhaithe  
ar son na hAeráide & Comhshaoil  
Department of Communications,  
Climate Action & Environment

# National Mitigation Plan

Strategic Environmental Assessment  
*SEA Statement*

JULY 2017



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# 1 Introduction

This SEA Statement has been prepared as part of the Strategic Environmental Assessment (SEA) of the National Mitigation Plan (herein after referred to as NMP) in accordance with national and EU legislation. This document provides information on the decision-making process and documents how environmental considerations, the views of consultees/stakeholders and the recommendations of the Environmental Report and the assessment carried out under Article 6 of the Habitats Directive have been taken into account by, and influenced, the final adopted plan.

The NMP and the associated environmental documents have been prepared by the Department of Communications, Climate Action and Environment (DCCAE). This SEA Statement has been prepared in accordance with Schedule 2, Section 16(2) of the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations (S.I. No. 435 of 2004) as amended and having regard to Article 8 (Decision Making) of EU Directive 2001/42/EC on Strategic Environmental Assessment and Circular Letter PL 9/2013, Department of Environment, Community and Local Government.

The structure of the SEA Statement is as follows:

1. Introduction;
2. Summary of key facts;
3. Summary of the SEA process;
4. Influence of the SEA process on the NMP;
5. How consultation feedback has influenced the NMP;
6. Preferred scenario and reasons for choosing the final plan;
7. Measures to monitor significant environmental effects of the implementation of the adopted NMP;
8. Screening of changes to the National Mitigation Plan;
9. Addendum to the Environmental Report; and
10. Conclusions and next steps.

## 2 Summary of Key Facts

<b>Title of Plan:</b>	National Mitigation Plan (NMP)
<b>Purpose of Plan:</b>	To enable Ireland's transition to a low carbon, climate-resilient and environmentally sustainable economy by 2050. The Plan aims to provide a 'whole government' approach to tackle greenhouse gas (GHG) emissions, with measures focused on the four key sectors; Electricity Generation, the Built Environment, Transport and Agriculture, Forest and Land Use.
<b>Competent Authority:</b>	Department of Communications, Climate Action and Environment (DCCAE)
<b>Period Covered:</b>	The NMP sets out a mitigation strategy for a maximum period of five years as provided for in the Climate Action and Low Carbon Development Act 2015.
<b>Area of Plan:</b>	The NMP is a national plan for the mitigation of GHG emissions from the four key sectors. The plan covers the Republic of Ireland.
<b>Nature/Content of Plan:</b>	The NMP is a national plan aimed at reducing the emission of GHGs from the four key sectors in Ireland. The NMP is the first in a series of successive NMPs which will be published not less than once in each five year period.
<b>Date NMP Came into Effect:</b>	July 2017
<b>Main Contact(s):</b>	Caroline Lyons (Project Manager), Climate Policy Division, Department of Communications, Climate Action and Environment, 29-31 Adelaide Road, Dublin. D02 X285

## 3 Summary of SEA Process

The NMP has been subject to a process of Strategic Environmental Assessment (SEA), as required under the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations S.I. No. 435 of 2004, as amended by S.I. No. 200 of 2011. This has included the key steps described in the following sections.

### 3.1 Screening

Screening was carried out to establish if an SEA was required for the NMP. Screening of the NMP was undertaken by DECLG (role now transferred to the DCCAE) in March 2015. In the context of the S.I. 435 of 2004 (as amended), it was determined that the NMP would require SEA.

### 3.2 Scoping and Statutory Consultation

Scoping was carried out to establish the level of detail appropriate for the Environmental Report. A Scoping Report was prepared and published in September 2015 and this was used as the basis for statutory and non-statutory consultations. The relevant statutory consultees that were consulted as part of the SEA Scoping phase for the draft NMP were:

1. Environmental Protection Agency (EPA);
2. Department of Arts, Heritage and Gaeltacht (DAHG)<sup>1</sup>;
3. Department of Communications, Energy and Natural Resources (DCENR)<sup>2</sup>;
4. Department of Agriculture, Food and Marine (DAFM);
5. Northern Ireland Environment Agency (NIEA); and
6. Department of Environment, Community and Local Government (DECLG)<sup>3</sup>.

Consultation responses were requested before the 30th October 2015. SEA scoping consultation responses from a number of the statutory consultees (EPA, DAFM, DAHRRGA, DCCAE and NIEA), were received by DCCAE and the content of the responses were reviewed to inform the subsequent stages of the assessment.

A scoping workshop was held on the 15th October 2015 at the Custom House in Dublin to discuss the NMP and the scope and level of detail of the environmental assessment of the plan. Representatives from the EPA and DCCAE<sup>4</sup> attended the meeting.

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1 Department underwent a name-change in 2016 to Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs (DAHRRGA).

2 Department underwent a name-change in 2016 to Department of Communications, Climate Action and the Environment (DCCAE).

3 Department underwent a name-change in 2016 to Department of Housing, Planning, Community and Local Government (DHPCLG).

4 Specifically representation from Inland Fisheries Ireland (at the time part of DCENR).

Non-statutory consultation was also undertaken. To facilitate this, the Scoping Report was put out for public consultation for the consultation period in September/October 2015, on the DECLG website ([www.environ.ie](http://www.environ.ie)), announcing that scoping was underway and inviting submissions. DCCAE received responses from the following groups:

- Birdwatch Ireland
- Marine Institute
- Oxfam Ireland
- Trócaire
- Irish Wind Energy Association (IWEA)
- An Taisce

All submissions received from the statutory and non-statutory consultation were considered in preparation of the Environmental Report. All of the environmental topics listed in the SEA Directive were considered and all were scoped in for the purposes of the assessment.

### 3.3 Environmental Assessment and Environmental Report

The preparation of an Environmental Report on the likely significant effects on the environment of implementation of the NMP included consideration of:

- Baseline data relating to the current state of the environment;
- Links between the draft NMP and other relevant strategies, policies, plans, programmes and environmental protection objectives;
- Key environmental problems affecting implementation of NMP measures;
- The likely significant effects of the NMP on the environment (both positive and negative);
- Measures envisaged for the prevention, reduction and mitigation of any significant adverse effects;
- An outline of the reasons for selecting the alternatives chosen; and
- Monitoring measures to ensure that any unforeseen environmental effects will be identified, allowing appropriate remedial action to be taken.

### 3.4 Statutory Consultation on Draft NMP

On 15th March 2017, the draft *National Mitigation Plan* was published for public consultation alongside the SEA Environmental Report and the Natura Impact Statement (NIS) for a period of six weeks. Annex 1 of the draft NMP included a series of consultation questions and policy options that were employed to elicit feedback from consultees.

The draft plan, Environmental Report and NIS were made available for inspection at the DCCAE Offices, Adelaide Road, from Monday to Friday, 9am to 5pm. PDF versions of these documents were also made available for inspection online at [www.dccae.gov.ie](http://www.dccae.gov.ie). The deadline for receipt of submissions was the 26th April 2017.

There were 124 submissions received during the consultation from various stakeholders including members of the public, environmental groups, industry representatives and the statutory SEA consultees. The following feedback is taken from stakeholders' submissions with repeated themes summarised. This feedback has been reviewed by the project team and where relevant, has been taken into account in the development of the final plan and is reflected in this SEA Statement.

### General

- The importance of climate change mitigation in the development of the National Planning Framework (NPF) has been identified as a key requirement for spatial planning and mitigating future built environment and transport emissions.
- A number of respondents noted that the NMP should include carbon budgets for each of the sectors to allow for tracking of progress and the need for greater efforts following the annual reviews.
- Several stakeholders highlighted the need for the government to deliver a communications strategy and awareness campaign at national, county and local levels to inform communities and help to drive behaviour change.
- One of the main cross sectoral measures identified by stakeholders was an increase in Carbon Tax to encourage shift away from fossil fuels (both in transport and space heating) to more sustainable alternatives.
- A number of stakeholders have suggested that economic analysis on one or more sectors would be valuable to inform longer term implications for investment including such variables as the carbon price, Brexit, etc. Similarly, stakeholders suggested a macro economic analysis on the implications of non-compliance and the exchequer costs of inaction should be presented in the NMP.
- A number of respondents noted that all climate policies should be socially and rurally proofed.

### Electricity Generation Sector

- A number of submissions were made in relation to ending the use of coal and peat in the electricity generation sector and how this should be considered an urgent measure for adoption. Comments raised include the cessation of the government subsidies for fossil fuels and conversion of the Moneypoint plant to a biomass generating station.
- Conversely, other stakeholders have called for greater subsidies for renewable generation projects to promote greater investment in these projects. National renewable targets should not be constrained by EU targets and Ireland should strive to be an EU and world leader in this area. However, it is noted that some stakeholders suggested that onshore wind was at capacity in Ireland and should not be further encouraged.
- A greater emphasis on community based renewable generation projects (including micro generation) with incentivisation such as the implementation of a Danish-style shared ownership scheme mandating that developer-led projects offer 20% of the equity to local communities.

- A large number of respondents queried why solar energy was not given greater emphasis in the draft NMP and requested that this be committed to as part of the final NMP.
- Carbon capture and storage (CCS) is a mitigation option that should be considered within the NMP.

### Built Environment

- The need for national and local authority leadership in carbon mitigation and green procurement has been noted by a number of respondents.
- Greater support to incentivise deep retrofit has been called upon by a number of stakeholders.
- There are a number of conflicting submissions relating to the carbon impact of various building materials and how these materials should be accounted for in the built environment sector.
- A number of stakeholders called for a minimum thermal threshold standard for rental properties to encourage retrofit by landlords.

### Agriculture and Forest

- A number of stakeholders have suggested that forestry targets should be greater than that presented in the Forestry Programme and within the draft NMP including greater diversification of forest type and the trees that should be considered as sinks.
- Several conflicting submissions were received on the merits of nitrogen stabilisers and their potential for mitigating agricultural GHG emissions.
- Encouraging farmers and other land holders to restore peatlands has potential to increase the carbon sink capacity within the state.

### Transport Sector

- A large number of submissions were received in relation to greater investment in the cycling network to improve cycling infrastructure and promote modal shift from private cars to cycling. The need for a National Cycling Coordinator in the DTTAS was also raised to drive this investment.
- Similarly, greater investment in public transport including a sustainable rural bus network, high speed trains, greater coordination between services, etc. were also noted by a large number of stakeholders.
- Alternative transport fuels (electric vehicles, biogas for buses, CNG, etc.) have been suggested as viable replacements for fossil fuels. Coupled with this, one respondent suggested an outright ban on fossil fuel based passenger cars by 2030.
- Congestion charging in urban areas has been identified as a possible mitigation measure for the sector.
- The incentivisation of rail based freight transport over road based transport has been identified as a potential measure to reduce emissions from this sector.
- One respondent noted that transport modelling had indicated that reducing the speed on motorways (Measure T24) can negatively impact on road performance and the environment.

Further details of the key issues raised are presented in **Chapter 5** of this SEA Statement.

### 3.5 Appropriate Assessment and Natura Impact Report

In addition to the SEA, there is a requirement under the EU Habitats Directive (92/43/EEC) (as transcribed into Irish law) to assess whether the NMP, individually or in combination with other plans or projects, is likely to have significant effect on a European Site, which includes Special Protection Areas (SPAs) and Special Areas of Conservation (SACs), in view of the site's conservation objectives. The requirement for an assessment derives from Article 6 of the Directive, and in particular Article 6(3) which requires that:

*"Any plan or project not directly connected with or necessary to the conservation of a site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives."*

In recognition of this, an Appropriate Assessment (AA) Screening was carried out, in parallel with the SEA scoping process. From this it was determined that AA was required and a Natura Impact Statement (NIS) was prepared to inform an AA. The assessment of the NMP has been carried out in the context of the scope and content presented in the draft NMP.

The NIS took a precautionary approach and assessed the impacts that would be anticipated from the NMP providing the necessary inclusion of mitigation measures and guiding principles at the strategic level of the plan. The policies and objectives of the NMP have been devised, as part of an iterative approach, to anticipate and avoid as appropriate measures that would likely have a significant adverse effect upon the integrity of the European Sites. Where such measures might be permitted, on foot of provisions of the NMP, they shall be required to conform to the mitigation measures contained in the NIS (as transposed into the NMP) and to the relevant regulatory provisions aimed at preventing pollution or other environmental effects likely to adversely affect the integrity of European Sites.

All actions arising out of the mitigation measures of the NMP shall be required to conform to the mitigation measures contained within the NIS and to the relevant regulatory provisions aimed at preventing pollution or other environmental effects likely to adversely affect the integrity of European Sites. In addition, all lower level plans and projects arising from the implementation of the NMP will themselves be subject to the requirements of the Habitats Directive, as transposed into Irish law when details become known.

Based on the NIS, and with reference to the scope of the NMP, DCCAE has determined that the *National Mitigation Plan* is compliant with the requirements of Article 6 of the EU Habitats Directive as transposed into Irish law.

### 3.6 SEA Statement

In accordance with Article 16 of S.I. 435 of 2004 as amended, the Competent Authority is required to prepare a statement summarising:

- (a) How environmental considerations have been integrated into the plan or programmes, or modification to a plan or programme;*
- (b) How (i) the environmental report, prepared pursuant to Article 12, (ii) submissions and observations made to the planning authority in response to a notice under Article 13 and (iii) any consultations under Article 14 have been taken into account during the preparation of the plan or programme;*
- (c) The reasons for choosing the plan or programme, in light of other reasonable alternatives dealt with; and*
- (d) The measures decided upon to monitor, in accordance with Article 17, the significant environmental effects of implementation of the plan or programme.*

The main purpose of this SEA Statement is to provide information on the decision-making process for the NMP in order to illustrate how decisions were taken, making the process more transparent. In so doing, the SEA Statement records how the recommendations of both the Environmental Report and the NIS, as well as the views of the statutory consultees and other submissions received during public consultation, have influenced the preparation of the final plan. The SEA Statement also provides information on the arrangements put in place for monitoring and mitigation. This SEA Statement is available to the public along with the NIS and the final *National Mitigation Plan*.

### 3.7 Effective Date of the National Mitigation Plan

The NMP came into effect in July 2017.

## 4 Influence of the SEA Process on the NMP

### 4.1 Introduction

The SEA and the AA processes have been undertaken in parallel to the preparation of the draft NMP. Thus, from the outset, considerations of the environmental consequences of the alternatives have been taken into account. The iterative process ensured that the SEA/AA and the preparation of the NMP were integrated in order to meet the environmental objectives and the objectives of the plan.

A considerable effort has been made through the plan, SEA and AA processes to integrate environmental considerations into the development of the evolving NMP. To assist this, the SEA and AA teams have worked with the NMP team to provide advice and guidance in relation to the wording of certain measures, the inclusion of new measures and supporting text and modification of other measures to strengthen environmental outcomes. Specifically both the SEA and AA teams:

- Had input to meetings on alternatives;
- Provided feedback on language to address issues in particular in relation to European Sites and AA; and
- Developed additional mitigation measures for inclusion in the NMP.

The SEA and AA have, as a result, had a very positive influence on the plan evolution.

The findings of the SEA and AA have been directly integrated into the plan through recommended mitigation measures for specific actions (e.g. feasibility studies, interim reviews and monitoring programmes) which aim to reduce the emissions of GHG's resulting from the four main sectors, mitigate impacts to the environment and the Natura 2000 network potentially resulting from the proposed sectoral mitigation measures and ensuring that environmental considerations have been integrated into the NMP.

### 4.2 Summary of SEA Assessment

The approach used for the assessment in the SEA is termed an “objectives led assessment”. In this case, each of the draft plan measures was tested against defined SEA Strategic Environmental Objectives, as outlined in **Table 4.1**, which covered all SEA environmental topics under the relevant SEA legislation, e.g. population, biodiversity, material assets, etc. A matrix format was used for the assessment, which permitted a systematic approach and comparison of alternatives.

**Table 4.1 Strategic Environmental Objectives**

<b>Objective 1 Biodiversity and Flora and Fauna:</b> Preserve, protect and maintain the terrestrial, aquatic and soil biodiversity, particularly EU and nationally designated sites and protected species.
<b>Objective 2 Population and Human Health:</b> Contribute to sustainable development whilst protecting Population and Human Health.
<b>Objective 3 Soil and Landuse:</b> Avoid damage to the environment from land use change.
<b>Objective 4 Soil and Landuse:</b> Manage and Restore Peatlands.
<b>Objective 5 Water:</b> Protect the quality and management of watercourses and groundwater, in compliance with the requirements of the Water Framework Directive and associated River Basin Management Plans.
<b>Objective 6 Air Quality:</b> Minimise emissions of particulates and other pollutants to atmosphere.
<b>Objective 7 Climatic Factors:</b> Minimise emissions of GHGs.
<b>Objective 8 Material Assets:</b> Support sustainable activities without conflicting with environmental protection objectives.
<b>Objective 9 Cultural Heritage:</b> Protect places, features, buildings and landscapes of cultural, archaeological or architectural heritage.
<b>Objective 10 Landscape:</b> Protect and maintain the national landscape character.

At the broad level, implementation of the NMP is expected to bring improvements in air quality and climatic factors, since it outlines measures to reduce the levels of GHG emissions from the four main sectors. The aim of the vast majority of the measures within the NMP relate to climate mitigation measures, i.e. Renewable Heat Incentive (BE20), Renewable Electricity Support Scheme (RE6) and Afforestation Scheme (AF10A), which aim to reduce GHG emissions from the agricultural, built environment, transport and electricity generation sectors. These measures will have significant positive impacts on air quality and climatic factors in the long-term. A number of these measures however, e.g. planned afforestation, pose a potential threat to the environment, i.e. biodiversity, flora and fauna, water quality and soil and also to material assets. Therefore, the SEA identified such areas where mitigation of impacts can be achieved.

For the purposes of assessment:

- Plus (+) indicates a potential positive environmental impact;
- Minus (-) indicates a potential negative environmental impact;
- Plus/minus (+/-) indicates that both positive and negative environmental impacts are likely or that in the absence of further detail the impact is unclear; and
- Zero (0) indicates neutral or no environmental impact.

The assessment of sectoral mitigation measures which are set out in the plan are summarised in **Table 4.2**.

**Table 4.2 Summary Assessment of Sector-specific Measures**

Measure	BFF	PHH	SL	W	AQ	CF	MA	CH	L	Mitigation Measures
<b>Built Environment</b>										
BE1 Better Energy Homes (BEH)	0	+	0	0	0/-	+	+/-	0	0	✓
BE2 Better Energy Warmer Homes (BEWH)	0	+	0	0	0	+	+/-	0	0	✓
BE3 Housing Assistance Package for Landlords	0	+	0	0	0	+	+/-	0	0	✓
BE4 Better Energy Communities (BEC) scheme	0	+	0	0	0/-	+	+/-	0	0	✓
BE5 Warmth and Wellbeing Pilot Scheme	0	+	0	0	0	+	+/-	0	0	✓
BE6 Deep Retrofit Pilot	0	+	0	0	0/-	+	+/-	0	0	✓
BE7 Social Housing Upgrades	0	+	0	0	0	+	+/-	0	0	✓
BE8 Green Procurement and Accelerated Capital Allowances	0	+	0	0	0/-	+	+/-	0	0	✓
BE9 Energy Efficiency Fund	0	+	0	0	0	+	+/-	0	0	✓
BE10 Nearly Zero Energy Buildings (NZEB) – Building Regulations (Part L)	0	+/0	0	0	+/-	+	+/-	0	0	X
BE11 BER Certificates	0	+/0	0	0	+/0/-	+/0	+/-	0	0	X
BE12 Energy Audits for Large Energy Users	0	+/0	0	0	+/0/-	+/0	+/-	0	0	X
BE13 Energy Efficiency Obligation Scheme and Increasing the Energy Efficiency Obligation Scheme Targets	0	+/0	0	0	+/0	+	+/-	0	0	X

Measure	BFF	PHH	SL	W	AQ	CF	MA	CH	L	Mitigation Measures
BE14 Large Industry Energy Network and Enhance Support Programme for Large Energy Users	0	+/0	0	0	+/-	+	+/-	0	0	X
BE15 SME Support and New Energy Efficiency Support Programme for SMEs	0	+/0	0	0	+/0/-	+/0	+/-	0	0	X
BE16 Qualibuild	0	+/0	0	0	+/0	+/0	-/0	0	0	X
BE17 Technical Bureau	0	+/0	0	0	+/0/-	+/0	+/-	0	0	X
BE18 Behavioural Economics Unit	0	+/0	0	0	+/-	+/0	0	0	0	X
BE19 Strategy and Support Network for Delivery of Public Sector Energy Efficiency (existing)	0	+/0	0	0	+/-	+	+/-	0	0	X
BE20 Renewable Heat incentive	0	+	0	0	+	+	+/-	0	0	✓
BE21 Smart Metering	+/-	+/-	0/-	+/-	+/-	+	+	0/-	0/-	X
BE22 Minimal Thermal Standards in Rental Properties	0	+/0	0	0	+/0	+/0	-/0	0	0	X
BE23 Voluntary Housing Association Upgrades	0	+	0	0	+	+	-	0	0	✓
<b>Electricity Generation</b>										
RE1 Renewable Energy Feed-in-Tariff 1 (REFIT 1)	0	+	0	0	0	+	+/-	0	0	✓
RE2 Renewable Energy Feed-in-Tariff 2 (REFIT 2)	+/-	+	0/-	+/-	+/-	+	+	0/-	0/-	✓
RE3 Renewable Energy Feed-in-Tariff 3 (REFIT 3)	+/-	+	0/-	+/-	+/-	+	+	0/-	0/-	✓

Measure	BFF	PHH	SL	W	AQ	CF	MA	CH	L	Mitigation Measures
RE4 Alternative Energy Requirement Programme	+/-	+/-	0/-	+/-	0/-	+	+	0/-	0/-	X
RE5 Ocean Energy Prototype Development Fund	0	0	0	0	0	+	0/+	0	0	✓
RE6 Renewable Electricity Support Scheme	+/-	+	0/-	+/-	+	+	+/-	0/-	0/-	✓
RE7 Further Electricity Interconnection	+/-	+	0/-	+/-	+/-	+	+	0/-	0/-	✓
RE8 Future of Moneypoint	+/-	+/-	+/-	+/-	+	+/-	+/-	+/-	+/-	✓
<b>Agriculture (including Forest)</b>										
AF1/AF1A CAP Pillar 1 Payments Basic Farm Payment and Cross Compliance, including GAEC and Greening	0	0	0	0	0	0	0	0	0	✓
AF2 Pillar II Rural Development Programme 2014-2020	0	0	0	0	0	0	0	0	0	✓
AF2A Beef Data and Genomics Programme (BDGP)	0/+	0	0/+	0/+	0	0	+	0	+	✓
AF2B Knowledge Transfer and Innovation Measures	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	✓
AF2C Green Low Carbon Agri-Environment Scheme (GLAS)	0	0	0	0	0	+	+	0	0	✓
AF2E Targeted Agricultural Modernisation Scheme (TAMS) II	0	0	0	0	0	+	0	0	0	✓

Measure	BFF	PHH	SL	W	AQ	CF	MA	CH	L	Mitigation Measures
AF2F Organic Farming Scheme	+	0	0	+	0	+	+	+	+	✓
AF3 Smart Farming Programme	0	0	0	0	0	+	0	0	0	X
AF4 Teagasc BETTER Farm	0/+	0	0/+	0/+	0	+	0	0	0	✓
AF5 Pasture Profit Index	0/+	0	+/-	0/+	0/+	0/+	+	0	0	✓
AF6 Use of Animal By-Products (ABP)	-	+/-	-	-	+/-	-	+	+/-	+/-	✓
AF7 Research Initiatives	+/-	+/-	+/-	+/-	+/-	+/-	+	+/-	+/-	X
AF8 Origin Green – Sustainability Programme	0	+/-	0	0	+/-	+	+	0	0	X
AF9 Carbon Navigator	0	0	0	0	0	+	0	0	0	✓
AF10 Forestry Programme 2014-2020	0/+	+/-	+/-	+/-	+/-	+/-	+	+/-	+/-	✓
AF10A Afforestation Scheme	+/-	0	+/-	+/-	+/-	+	+	0	0	✓
AF10B Forest Roads Scheme	+/-	+/-	+/-	+/-	+	+	+/-	+/-	+/-	✓
AF10C Woodland Improvement Scheme	+/-	0	+/-	+/-	0	+	+	+/-	+	✓
AF10D Reconstitution of Woodlands Scheme	+/-	0	0	+/-	0	+	0	0	0	✓
AF10E Native Woodland Conservation Scheme	+	0	+/-	+/-	0	+	+	+/-	+	✓
AF10F Neighbourwood Scheme	+	0	+/-	+/-	0	+	+	+/-	+	✓
AF10G Innovative Forest Technology Scheme	+	0	+	+	0	+	+	+	+	✓

Measure	BFF	PHH	SL	W	AQ	CF	MA	CH	L	Mitigation Measures
AF10H Forest Genetic Reproductive Material Scheme	+/-	+	+/-	+/-	0	+	+	+/-	0	✓
AF10I Forest Management Plans (FMPs)	0	0	0	0	0	0	0	0	0	✓
AF10J Forest Cover Expansion Post 2020	0	0	0	0	0	0	0	0	0	✓
<b>Transport</b>										
T1 Public Transport Investment	0	0	0	0	0	0	0	0	0	✓
T2 Smarter Travel Initiative Investment	+/-	0	+/-	+/-	0	+	+	+/-	0	✓
T3 Low Emission Vehicle (LEV) Incentivisation	+/-	+	+/-	+/-	+	+	+	+/-	+/-	✓
T4 Taxation Policy	+/-	+	+/-	+/-	+	+	+	+/-	+/-	✓
T5 Public Transport Energy Efficiency	+/0	+	0	0	+	+	+	0	0	✓
T6 Biofuels Obligation Scheme	+/0	+	0	0	+	+	+	+/-	+/-	✓
T7 National Policy Framework on Alternative Fuels Infrastructure for Transport	0	0	0	0	+	+	+/-	0	0	✓
T8 Review of Public Transport Policy	0/-	+/-	+/-	0/-	0	+	+/-	0/-	0/-	✓
T9 Review of Active Travel Policy	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	✓
T10 National Intelligent Transport Systems (ITS) Strategy	0	0	0	0	0	0	0	0	0	X
T11 National Planning Framework	+/-	+	+/-	+/-	+	+	+/-	+/-	+/-	✓

Measure	BFF	PHH	SL	W	AQ	CF	MA	CH	L	Mitigation Measures
T12 Aviation Efficiency	0	+	0	0	+	+	+	0	0	X
T13 EU CO <sub>2</sub> Cars/Vans Regulation	+/-	+	+/-	+/-	+	+	+/-	+/-	+/-	✓
T14 Public Sector Energy Efficiency Strategy	0	0	0	0	+	+	+	0	0	✓
T15 Research and Development	0	+	0	0	+	+	+	0	0	X
T16 Further Public Transport Investment	0	0/+	0	0	+	+	+	0	0	✓
T17 Supports and Incentives to Modal Shift	+/0	+	0	+/0	+	+	+	+/0	+/0	✓
T18 Further Low Emission Vehicle (LEV) Incentivisation	0	0	0	0	0	+	0	0	0	✓
T19 Taxation Policy Development – Motor Tax	+/0	+/0	0	0	+	+	+	0	0	✓
T20 Taxation Policy Development – Other	0	+	0	0	+	+	+	0	0	✓
T21 Biofuels Obligation Scheme Development	0	+/-	0	0	+	+	+	0	0	✓
T22 Eco-driving	0	+/-	0	0	+	+	+	0	0	X
T23 National Policy on Parking	0/-	0/-	0/-	0/-	+	+	+/-	0/-	0/-	✓
T24 Reduction of Top Speed Limits on Motorways	0	-	0	0	+	+	0	0	0	✓

Key: BFF – Biodiversity, Flora and Fauna; PHH – Population, Human Health; SL – Soils and Landuse; W – Water; AQ – Air Quality; CF – Climatic Factors; MA – Material Assets; CH – Cultural Heritage; L – Landscape.

### 4.3 Integration of SEA Process

The SEA and AA processes were ongoing throughout the development of the draft NMP, with the corresponding project teams working together to identify potential environmental issues/constraints at the earliest possible stage in the plan-making process. The SEA and AA teams were involved in the:

- Development of the alternatives;
- Evolution of NMP actions; and
- Recommendation of mitigation measures to address the potential impacts arising from the alternatives considered.

The SEA and AA processes have ensured that potential environmental impacts (both positive and negative) associated with the draft NMP have been given due consideration in the preparation of the plan. **Table 4.3** shows how environmental considerations and the input of the SEA and AA have been taken into account in the final NMP.

**Table 4.3 How Environmental Considerations have been taken into account in the NMP**

Environmental Consideration	How has this been accounted for in the Plan?
Identification of environmental constraints	The SEA team undertook an audit of baseline environmental conditions for the plan with reference to human health, water quality, biodiversity, flora and fauna, population, soils and geology, air quality, climatic factors, material assets, cultural heritage and landscape. This information was used to focus the SEA objectives, develop alternatives and assess positive and negative impacts associated with the implementation of the proposed NMP.
Assessment of alternatives	The environmental baseline and objectives were used to identify key sensitivities and inform development of the alternatives and ultimately the assessment of the preferred alternative. The SEA team and the NMP departmental teams liaised on possible alternatives during preparation of the SEA scoping document and subsequently as the NMP evolved through meetings and workshops.
Recommendation of mitigation measures	Mitigation measures were proposed to address any negative environmental impacts identified during the assessment process. These included amendments to the wording of proposed measures in the plan and inclusion of a set of environmental mitigation measures to reflect protection of the environment.
Required Environmental Monitoring Programme	An environmental monitoring programme to track progress towards achieving Strategic Environmental Objectives (SEOs) and reaching targets was presented in the SEA Environmental Report and has been integrated into the NMP. This programme will facilitate the ongoing monitoring of the implementation of the NMP.
Consultation	<p>Statutory consultation was undertaken with the environmental consultees for SEA in Ireland and Northern Ireland in relation to scoping of the environmental report. Issues raised were used to inform the overall scope and context of the environmental assessment. Public consultation was undertaken at the Scoping stage and this stakeholder feedback also helped to shape the environmental assessment.</p> <p>Subsequently, the SEA Environmental Report, the Natura Impact Statement (from the Appropriate Assessment Process) and the draft NMP were published. Submissions received have been reviewed by the SEA and plan teams and amendments have been made where appropriate. All changes to the NMP have been screened by the SEA and AA teams to determine if these would result in significant effects.</p>

The assessment of the alternatives and the sectoral mitigation measures for the NMP resulted in the recommendation of mitigation measures (**Table 4.4** and **Table 4.5**). It is notable that the mitigation proposed by the SEA process was, in the main, integrated into the plan to improve its overall environmental benefits.

**Table 4.4 Mitigation Measures Relating to Assessment of Alternatives**

Alternative	Mitigation Measure	Included in the NMP
Strategic Alternative – Inclusion of the Waste Sector	In advance of the next five year NMP, carry out a detailed analysis of the annual trend and key contributory factors for the waste sector GHG Emissions. If this sector does not show a downward trend then this sector should be considered for inclusion in future iterations of the NMP.	Not listed as an Action in the final plan but DCCAE commit that trends will continue to be considered and inform climate policy development as new data emerges from the EPA on an annual basis (refer <b>Annex 2</b> of the final NMP).
Strategic Alternative – CCS	Within the next five years and in advance of the subsequent NMP, a feasibility study should be undertaken to determine the potential application of CCS in Ireland in the future. The review should consider international best practice and experience as well as a life cycle analysis of environmental impacts. In addition, the study should be set in the context of Ireland’s changing electricity generation mix and the move to decarbonisation of the power-generation sector as well as the future of coal (Measure RE8 in the draft NMP).	This measure is now included as <b>Action 26</b> requiring DCCAE to explore the feasibility of utilising suitable reservoirs for CO <sub>2</sub> storage within the next five years.
Built Environment – Increased Performance Requirements for New Builds	Carry out an interim review of the “Towards Nearly Zero Energy Buildings in Ireland – Planning for 2020 and beyond” programme within five years of implementation of the programme to determine the success of implementation of the plan and lessons learned. The study should also consider international best practice in building design and emerging technologies that may be employed to further reduce the proposed target of 45kWh/m <sup>2</sup> /annum.	Commitment to carry out a cost optimal performance and NZEB in 2018 as noted in <b>Annex 2</b> of the final NMP.
Built Environment – Incentivising Demand for Retrofit in the existing Residential Sector	This measure should not be ruled out and it is recommended that within the next five years an economic analysis of the existing and potential funding options is undertaken to consider the optimum approach to incentivise retrofit beyond the existing models and this should be used to inform future iterations of the NMP.	The final NMP notes the existing SEAI grant programmes and the implementation of the Deep Retrofit Pilot (Measure BE6).

Alternative	Mitigation Measure	Included in the NMP
Built Environment – Implementation of a national ban on coal and/or peat in domestic heating systems	In tandem with the development of the National Clean Air Strategy, a feasibility study should be undertaken in the implementation of a ban on the use of coal and/or peat in domestic heating systems. The study should consider the environmental implications in addition to the economic and technical implementation. The outcome of this study should be used to inform future iterations of the NMP.	<b>Annex 2</b> of the final NMP sets out the position relating to a national ban on coal and/or peat in home heating systems. Consideration of the merits of any such study to inform future iterations of the NMP would need to involve many stakeholders including Environment and Energy perspectives. Any such study would need to have regard to the feasibility, practicality of available alternatives for home heating, potential adverse consequences (including attitudinal impacts on the climate action agenda) and the potential to achieve reductions in the use of such fuels through the market and support schemes. This measure remains open for future consideration but is not included in this NMP.
Built Environment – Increase of Carbon Tax on fossil fuels for domestic heating	An environmental and economic study of the impact analysis for options to increase the Carbon Tax on home heating solid fuels and liquid/gas fossil fuels to levels that promote real behaviour change should be undertaken within the next five years to inform the next phase of NMP development.	<b>Action 3</b> of the final NMP seeks to commence an examination of the impact of carbon tax and the future tax rate which may impact on future incentivisation of fuel use in the built environment sector.
Electricity Generation – Large Scale Solar PV	Continue to assess solar PV as part of the development of the Renewable Electricity Support Scheme (RESS) currently under development by DCCAE, while taking account of international best practice.	Further details on solar opportunities are provided in <b>Section 3.3</b> of the final NMP. Solar PV is one of a range of technologies under consideration by the DCCAE under the new Renewable Electricity Support Scheme currently under development (Measure RE6) which will be in place by 2018.

Alternative	Mitigation Measure	Included in the NMP
Electricity Generation – Large Scale Geothermal	It is recommended that a technical and economic feasibility study is carried out, building on the 2004 report, to consider the option of future development of this energy source in Ireland.	As noted in <b>Annex 2</b> of the final NMP, the GSI continue to assess Ireland's geo-thermal energy potential, from both shallow and deep sources over the next five years. Large-scale shallow heat management in urban areas will be investigated. Targeted deep geological settings will include deeply karstified limestone and fracture zones, requiring exploration by onshore seismic surveys and borehole drilling.
Electricity Generation – Eliminate Peat Powered Plants	Undertake a feasibility study to address the measures required to discontinue the combustion of peat for electricity. All options for discontinuation of these plants should be considered and a multi criteria analysis undertaken to determine the optimum approach. Environmental criteria should be the primary driver for the decision making process. This study should be undertaken within the next five years to inform decision making for the next NMP and provide a clear roadmap for the phased cessation of peat in this sector.	<b>Action 24</b> of the final NMP commits to oversight by DCCAIE of a review of future peat generation plants in line with Bord na Mona's Sustainability Strategy to be completed by 2019.
Agriculture – Use of Nitrogen Stabilisers	An economic analysis should be undertaken in potential funding models to support farmers and incentivise the application of N-stabilisers in fertiliser application.	Not directly. <b>Annex 2</b> of the final NMP notes that the DAFM are reluctant to force the market too rapidly and will continue to monitor the use of these stabilisers.
Transport – Increase of Carbon Tax	An environmental and economic study of the impact analysis for options to increase Carbon Taxation to levels that promote real behaviour change should be undertaken within the next five years to inform the next phase of NMP development.	<b>Action 3</b> of the final NMP seeks to commence an examination of the impact of carbon tax and the future tax rate.

Alternative	Mitigation Measure	Included in the NMP
Transport – Greater Investment in Public Transport to encourage Modal Shift	A mid-term review of the Capital Investment Plan is taking place in 2017. This review is considered a critical opportunity to consider the long term investment needs in the road network and public transport projects (such as BRT). The development of the NMP and the NPF are key cornerstones informing the transport investment in the Capital Plan.	<b>Annex 2</b> of the final NMP notes that the Minister has already signalled the intention to make the case for public transport investment to be both increased and accelerated as part of the review in order to address growing transport needs. The NMP and the NPF are essential roadmaps in informing transport investment in the Capital Plan.

**Table 4.5 Mitigation Measures Relating to Assessment of the Plan Measures**

Measure(s)	Proposed Mitigation	Included in the NMP
Built Environment – Various	Any funding mechanism that provides for the installation of biomass burning appliances should specify the environmental performance requirements of these appliances in relation to direct emissions to atmosphere in keeping with European air quality performance standards for appliances. Schemes providing support for the uptake of biomass boilers should require that biomass used meet a set of sustainable acceptance criteria.	The DCCAE have noted that the SEAI will incorporate Air Quality guidelines for the 2018 requirements for installation of all new stoves/boilers as shown in <b>Annex 2</b> of the final NMP. Where a project receives funding for a stove, the SEAI inspection process, as part of their overall quality assurance programme, will also include adherence to the (to be published) air quality guidelines.

Measure(s)	Proposed Mitigation	Included in the NMP
Built Environment – Various	Projects that involve the installation of large heat pumps should consider an accompanying installation for the generation of renewable electricity, e.g. solar photovoltaic panels, to offset the indirect impacts due to the consumption of fossil fuels in the power-generation sector. In addition, any new heat pump needs to be appropriately sized and that this can be encouraged by supporting the installation in a property that has received an extensive energy efficiency upgrade. This “fabric first” to fuel switching in general is current government policy.	Not included in the final NMP as the offsets from electricity generation are covered by the Electricity Generation Section (Chapter 3 of the final Plan).
BE20	Develop an emission performance standard for all conversion technology utilised as part of RHI scheme. The RHI scheme will outline that sustainable biomass should be from indigenous sources.	<p>In the final NMP (<b>Annex 2</b>) it is noted that the DCCAE is considering fuel quality standards, minimum technology and energy efficiency standards and whether an emissions performance standard will form part of the final RHI design. The recent public consultation on the design and implementation of the RHI covered these issues, and final decisions on these have yet to be made.</p> <p>The RHI will develop sustainability criteria based around lifecycle gas emissions which in all likelihood will result in biomass from Ireland and Europe becoming the primary source of fuel for the RHI. While there is good quality biomass available internationally, it generally falls down in regard to lifecycle gas emissions criteria.</p>

Measure(s)	Proposed Mitigation	Included in the NMP
RE1, RE2, RE3 and RE6	<ul style="list-style-type: none"> <li>■ Continue to support the implementation of the REFIT schemes.</li> <li>■ Publish revised guidelines for wind energy developments to ensure environmental protection measures are a core requirement of such developments.</li> <li>■ Prior to any future support scheme or update to the existing schemes a review of the uptake by community based/ local schemes should be undertaken to determine if barriers exist which could be addressed in future schemes.</li> <li>■ Continue to fund research and incentivise market uptake of new bioenergy sources (such as marine renewable energy) which reduces the demand for land use change.</li> </ul>	<p><b>Section 3.4</b> of the final NMP notes that REFIT 1, REFIT 2 and REFIT 3 will remain in place until 2027, 2032, and 2030 respectively.</p> <p><b>Action 20</b> of the final NMP commits to the finalisation of the Wind Energy Guidelines.</p> <p><b>Action 27</b> commits to the finalisation of the RESS and obtain Government and EU State Aid approval for the scheme by 2018 (Measure RE6).</p> <p><b>Action 19</b> of the final NMP notes that as part of the development of the new RESS, approaches to community participation in renewable energy projects to be finalised.</p> <p><b>Annex 2</b> of the NMP notes that funding from the Department's Vote supports the development of the renewable energy test sites in counties Mayo, Galway and Cork, the Integrated Maritime Energy Resource Cluster (IMERC) at Ringaskiddy, and the Prototype Development Fund operated by the SEAI. Also noted is the importance of providing ongoing Government funding to support ocean research, development and technology as set out in 3.4 (Measure RE5).</p>

Measure(s)	Proposed Mitigation	Included in the NMP
RE5	In regulating any future prototype technology the requirements of environmental impact assessment and habitat legislation, as appropriate, should be applied to ensure that this funding mechanism does not have significant negative impacts on environmental receptors. An additional policy should be included as follows: <i>All investigative and feasibility studies to be carried out in relation to ocean energy infrastructure must include an environmental appraisal which considers the potential effects on the Natura 2000 Network.</i>	While not specifically stated as a requirement of RE5 in <b>Section 3.4</b> of the final NMP, <b>Annex 2</b> of the NMP shows the DCCAE commitment to this reworded measure as follows:  <i>'Investigative and feasibility studies carried out in relation to the at sea deployment of ocean energy infrastructure must be screened for AA to consider the potential effects on the Natura 2000 Network. Based on the screening exercise the relevant competent authority will confirm the level of further environmental appraisal required.'</i>
RE7	It is recommended that the DCCAE commission research on future demand for interconnection requirements, including the technical, regulatory and economic aspects.	<b>Action 21</b> commits the DCCAE to commission and complete economic and technical research on the merits of further interconnection for Ireland by 2017.  <b>Action 22</b> requires the CER to develop a regulatory policy for electricity interconnectors for Ireland by 2020.
RE8	Undertake a feasibility study to identify the most suitable replacement low-carbon technology for the Moneypoint Power Station. All options for the plant should be considered and a multi criteria analysis undertaken to determine the optimum approach. Environmental criteria should be a key driver for the decision making process. This study should be undertaken within the next two years to inform decision making for the next NMP and provide a clear roadmap for the future of the Moneypoint facility.	<b>Action 23</b> of the NMP commits the ESB to carrying out a study to identify the most suitable replacement low carbon technology for the Moneypoint generation plant. This study is to be completed in 2018/2019 in advance of the next NMP.

Measure(s)	Proposed Mitigation	Included in the NMP
AF1	<p>Consideration should be given to the inclusion of this measure in the draft NMP without additional information to support the GHG reduction credentials. In future negotiations with the EU on CAP reform the DAFM should request the option of including GHG based measures within the mandatory GAEC requirements across the EU.</p>	<p>In <b>Annex 2</b> of the NMP, the DAFM note that this measure warrants inclusion in the final NMP given that the Nitrates directive forms a key component of CAP cross compliance and Ireland has a whole territory approach to its implementation, it forms a key measure to limit nitrogen applications to land and to limit stocking intensity.</p> <p>Also it is recognised that GAEC and greening requirements of Pillar 1 form a key means to protect soil carbon pools such as under permanent pasture. In Ireland's case it is estimated that the carbon pool under grassland extends to 2.2bn tonnes CO<sub>2</sub>eq.</p> <p>Under the current CAP reform discussion just commenced it is recognised that climate action should form an important element of the future CAP. However it should be noted that CAP is common across MS so there must be general agreement.</p> <p>These comments are accepted and the proposed mitigation recommendation is no longer proposed.</p>
AF2	<p>DAFM should undertake annual reviews of the reported reductions under GLAS to correlate the gains reported under this scheme against the annual emissions trends reported by the EPA for the Agriculture Sector. Such a measure will be required to track the real gains achieved by measures such as the GLAS.</p>	<p>Not included in the final NMP. However, in <b>Annex 2</b> of the NMP, the DAFM are open to considering incorporation of any additional information to facilitate answering the additional common evaluation questions (CEQs) to be answered in 2017 and 2019 under the RDP.</p>

Measure(s)	Proposed Mitigation	Included in the NMP
AF4	It is recommended that this measure is removed from the draft NMP in the absence of further details on the GHG reduction capacities offered by the BETTER Farm programme. While the programme has its merits, it offers little net gain in relation to mitigation of GHG measures.	DAFM have noted that in the final NMP, four measures have been highlighted (AF4, AF7 BETTER Farms, AF5 Pasture Profit Index and AF9 Carbon Navigator). Each of these measures as stand alone would do little to reduce GHG emissions. However, taken as part of a linked strategy between research, knowledge transfer and policy, they are key tools for achieving climate targets. This is accepted and this SEA mitigation measure is withdrawn.

Measure(s)	Proposed Mitigation	Included in the NMP
AF5	<p>As part of the PPI tool, an analysis of the environmental implications of each of the grass varieties should be undertaken to determine the net benefits/impacts associated with grass types. Where net negative impacts are identified for any variety this should be communicated to farmers and the continued use of such varieties should be reviewed.</p>	<p>In <b>Annex 2</b> of the final NMP, the DAFM have provided further context on Measure AF5 and the listed SEA mitigation measure. The Pasture Profit Index was developed in order to help farmers maximise utilisation of pasture by paddock grazing, along with optimising levels of Lime, NPK will help to maximise output per livestock unit. Taken in isolation maximising grass growth might lead to an increase in GHG due to increased use of fertilisers. However, combined with nutrient management planning and optimised slurry management, optimal pasture utilisation could reduce N<sub>2</sub>O and also enhance carbon sequestration as long as overstocking does not occur. The related, PastureBase Ireland aims to get livestock out to grass early and ensure an adequate supply of good-quality leafy grass. This will reduce methane emissions by minimising the amount of silage and supplemental feed in the diet and improving feed quality and promote grass regrowth.</p>

Measure(s)	Proposed Mitigation	Included in the NMP
AF6	Carry out a detailed emissions study on the combustion of all types of ABP employed in Ireland to devise a set of guidance/ regulations to restrict the use of combustion installations where there is no net negative emission to atmosphere.	DAFM has advised that the EU Animal By-Products Regulations take account of air quality issues. Specifically, Regulation (EC) No. 1069/2009 laying down health rules as regards animal by-products and derived products not intended for human consumption and repealing Regulation (EC) No 1774/2002 (Animal by-products Regulation) sets out the requirements. This regulation states that the disposal of animal by-products and derived products should take place in accordance with environmental legislation regarding landfilling and waste incineration. In this regard air emissions are heavily regulated in terms of EU emission limits and only registered operators are permitted to incinerate or co-incinerate this material in Ireland. With this existing level of regulation, this SEA mitigation measure is no longer proposed.

Measure(s)	Proposed Mitigation	Included in the NMP
AF9	<p>Annual reviews of the update in the Carbon Navigator should be undertaken to correlate the gains reported under this scheme against the annual emissions trends reported by the EPA for the Agriculture Sector. Such a measure will be required to track the real gains achieved by measures such as the Carbon Navigator and Origin Green.</p>	<p>Teagasc and Bord Bia have jointly developed the Farm Carbon Navigator and Bord Bia publishes an annual sustainability report which describes trends in Carbon Navigator results. Teagasc also prepare annual sustainability indicators as part of the national farm survey work. Two further actions have been added to the final NMP to drive the development of the Carbon Navigator by these parties. <b>Action 101</b> requires Teagasc to continue to enhance and rollout at farm level the Carbon Navigator Initiative on an ongoing basis. Similarly, <b>Action 102</b> requires Bord Bia to expand the Carbon Navigator initiative to other enterprises on an ongoing basis.</p>

Measure(s)	Proposed Mitigation	Included in the NMP
AF10	<p>Afforestation in sensitive catchments e.g. Freshwater Pearl Mussels (FPM) catchments, oligotrophic lakes and hard water lakes, should be carefully considered, subject to the requirements of Article 6(3) and, where necessary, Article 6(4) of the Habitats Directive. While the top eight FPM catchments are being prioritised, the strategy for the remaining 19 remains unclear within the plan.</p>	<p>Clarity has been provided in relation to Appropriate Assessment and forestry in <b>Annex 2</b> of the final NMP. The Forest Service Forestry and FPM Requirements have been in force since the year 2008, and apply to all forestry activities, including afforestation, within six km of Freshwater Pearl Mussel populations in rivers designated as SACs for the species. The DAFM's Plan for Forestry and FPM in Ireland is currently being drafted, and this will apply to all 27 FPM catchments, including the Priority 8. In addition, <b>Action 103</b> has been added to the final NMP requiring DAFM to undertake a review of the Current Afforestation Programme in 2018 specifically to consider participation rates, climate change, environmental impact, rural communities and land use policy.</p>

Measure(s)	Proposed Mitigation	Included in the NMP
T3 and T18	To further incentivise purchase and operation of the Low Emission Vehicles (LEV) (Measures T3 and T18), DTTAS should carry out an economic analysis to consider the options for further subsidies for these vehicles and how such measures may be financed. As outlined in Chapter 8 of this report, an alternative for consideration relates to the further increase in carbon tax on fossil fuels (over and above that proposed in T20) in transport with subsequent ring fencing of these funds for more sustainable transport and/or alternative fuels.	The Low Emission Vehicles (LEV) Taskforce has been established by DTTAS and this taskforce will be required to undertake economic analysis for these vehicles. In addition Measure T3, <b>Action 54</b> requires DTTAS to broaden the accelerated capital allowance (ACA) tax incentive for companies to encourage investment in refuelling infrastructure and equipment for natural gas, both CNG and LNG. Specifically in relation to Measure T18, <b>Action 73</b> commits to recommendation of incentives and optimal regulatory framework for early adoption of LEV technology.
T11	The integration of the transport measures listed in the draft NMP and any broader principles relating to sustainable travel should be fully incorporated and enhanced into the NPF to ensure the potential for synergy between the plans is maximised.	In a broad sense, the integration of climate measures within the NPF is addressed as <b>Action 10</b> (ensure climate considerations are fully addressed in the new NPF). However, specifically relating to transport and Measure T11, <b>Action 65</b> has been added which seeks the <i>NPF to secure better integration of land use and transport planning to reduce travel demand and encourage more sustainable modes of travel (walking, cycling, and public transport) as well as more efficient and cleaner transport.</i>

Measure(s)	Proposed Mitigation	Included in the NMP
T21	<p>Future development of the Biofuel Obligation Scheme under Measure T21 should ensure that the biofuel blend is maintained at less than 15% in the absence of any new research on the broader environmental implications.</p>	<p>The following text is included with reference to Measure T21 in the final NMP:</p> <p><i>It is intended that the biofuel obligation scheme will be incrementally increased on a sustainable basis between 2018 and 2020 to assist meeting the renewable transport target of 10% in 2020. The incremental increases will take cognisance of technical developments and broader environmental considerations. It is proposed to hold a public consultation on further increases to the obligation rate to 2020 in 2017.</i></p> <p>The need for broader environmental considerations and public consultation will be the initial step in the implementation of this SEA mitigation measure. In addition a new action (<b>Action 75</b>) has been specified in the final NMP to conduct a public consultation on progressively increasing the biofuel obligation rate by 2020.</p>

Measure(s)	Proposed Mitigation	Included in the NMP
T23	<p>Any development of a National Policy on Parking should be devised primarily based on the hierarchy of environmental impact with primacy for walking, cycling followed by public transport, followed by low emission vehicles (such as electric vehicles) and finally private petrol/diesel vehicles. The policy needs to provide precise guidelines for local authorities and should be rigorously enforced to ensure the policy is not employed as a revenue stream and retains integrity as an effective environmental measure. A trial implementation in a number of areas should be considered.</p>	<p>The National Policy on Parking is a longer term mitigation measure which is currently under consideration by DTTAS. The potential impact of the measure will be subject to the evolution and outcomes of complementary policies and mitigation measures (T1-T22). As such no specific actions have been detailed for the development of the Parking Policy.</p> <p>Should the Policy develop in the future, stated recommendations will be considered.</p>

## **5 How Consultation Feedback has Influenced the NMP**

The key issues raised in the submissions received from stakeholders are listed in Section 3.4 of the report and summarised in this section by theme. Following a comprehensive review and consideration of all the submissions, DCCAE have responded with changes to the final NMP. Significant changes made after the publication of the draft plan have been screened, for potential significant environmental effects in accordance with both the SEA Directive and the Habitats Directive and are presented in Chapter 8 of this report.

## 5.1 Main Issues Relating to General Queries

### Issue raised: Integration with Spatial Planning

The importance of climate change mitigation in the development of the NPF has been identified as a key requirement for spatial planning and mitigating future built environment and transport emissions. The NPF 2017 is currently under preparation by the DHPCLG and will provide context for planning development for the next decade and beyond. It will have a focus on economic development and investment in housing, water services, transport, communications, energy, and health and education infrastructure. The objectives of the NPF will be to establish a broad national plan for the Government in relation to the strategic planning of urban and rural areas, to secure regional development, and to secure the co-ordination of regional spatial and economic strategies and city and county development plans. The NPF will be a long-term, 20 year development strategy which sets out the vision for Ireland in terms of economic activity, social progress and environmental quality, through co-ordinated policy, investment and action at national, regional and local levels. This NPF will also be subject to SEA and will consider the climate change mitigation potential in this analysis.

### Influence on the final NMP

It is agreed that this is a critical matter for driving behaviour change and climate mitigation, in particular in the transport sector and this is why this measure has been included in the draft NMP as Measure T11, NPF. Amongst a number of strategic goals, the Framework aims to ensure better integration of land use and transport planning policy in order to reduce commuter travel demand and support more efficient patterns of development and travel. This measure remains as a key component of the transport sector in the final NMP.

### Changes to the final NMP

In Chapter 2 of the NMP a number of cross sectoral actions have been added to the final NMP to identify tasks, assign responsibilities and set target dates. Section 2.6 of the final NMP includes the following action assigned to DHPCLG for completion in 2017:

**Action 10: Ensure climate considerations are fully addressed in new National Planning Framework.**

In addition to the listed Measure T11, the final NMP includes a specific action as follows:

**Action 65: NPF to secure better integration of land use and transport planning to reduce travel demand and encourage more sustainable modes of travel (walking, cycling, and public transport) as well as more efficient and cleaner transport.**

### Issue raised: Sectoral Carbon Budgets

A number of respondents noted that the NMP should include carbon budgets for each of the sectors to allow for tracking of progress and the need for greater efforts following the annual reviews. Respondents note that in the absence of such budgets and associated targets, there will be a lack of accountability and momentum within sectors to achieve the reductions required for the national transition.

### Influence on the final NMP

No requirement for sectoral carbon budgeting is presented in the draft NMP and this remains unchanged in the final NMP. Annual sectoral mitigation transition statements are required by each of the four sectors under Section 14 of the 2015 Act and this will track sectoral progress. In addition, progress may also be tracked independently by the EPA in the Annual National GHG Emissions Inventory reporting.

### Changes to the final NMP

The following text is added to Annex 2 as a commitment to the monitoring regime presented in the SEA Environmental Report.

**Implementation of the National Mitigation Plan will require strong governance and accountability, including oversight by the Oireachtas, independent advice from the Climate Change Advisory Council and as coordination across Government supported by continuing investment and robust technical and analytical input.**

**A National Mitigation Plan High Level Steering Group will be established to drive implementation of the Plan. The relevant Steering Group will meet at least once every quarter and will report to the relevant Cabinet Committee.**

**Reported progress on implementation will be via Annual Transition Statements, provided for in the Climate Action and Low Carbon Development Act 2015. The Annual Transition Statement will include an annual progress report on the implementation of the National Mitigation Plan from 2018 onwards.**

### Issue raised: Climate Change Communications Strategy

During the consultation event, several stakeholders highlighted the need for the government to deliver a communications strategy and awareness campaign to inform communities and help to drive behaviour change. Stakeholders indicated that this should not only be at the national level but should also be implemented at local authority and community level to inform people of the impact of their choices and the measures to mitigate individual impact.

### Influence on the final NMP

Section 1.2 of the draft NMP included reference to the implementation of a National Dialogue on Climate Action. This national dialogue is a system of community engagement to build public support for the action plans. This National Dialogue on Climate Action (NDCA) has been further developed in the final NMP and lists four objectives as follows:

- Create awareness, engagement and motivation to act (locally, regionally and nationally) in relation to the challenges presented by climate change;
- Create structures and information flows to facilitate people gathering to discuss, deliberate and maximise consensus on appropriate responses to these challenges, and to enable and empower appropriate action;
- Establish, on a long term basis, appropriate networks for people to meet periodically to consider evidence-based inputs on the economic, social, behavioural, environmental and public aspects of climate and energy policy; and
- Provide regular input, through the NDCA, into the prioritisation and implementation of climate and energy policy which can be reported and monitored at local/regional/national levels.

The final NMP also commits to an initial run of two years as a pilot with administrative support to be provided by the EPA.

### Changes to the final NMP

Further context is added on the National Dialogue on Climate Action section of Section 2.6 of the final NMP and the following action is included to formalise the approach:

#### **Action 8: Implement National Dialogue on Climate Action on a two-year pilot basis.**

In addition, a further action is presented to define the role for local authorities to implement the plan:

#### **Action 9: Develop proposals to establish regional climate action offices to coordinate Local Authority response to climate action.**

### Issue raised: Carbon Tax

One of the main cross sectoral measures identified by stakeholders was an increase in Carbon Tax and general changes to existing fiscal measures to encourage a shift away from fossil fuels to more sustainable alternatives. These comments were raised both in relation to transport fuels as well as domestic heating fuels as covered by the existing carbon tax.

These issues were also raised in the SEA environmental report in relation to imposing an increased carbon tax on all fossil fuels in both the Built Environment and Transport Sectors.

### Influence on the final NMP

The draft NMP included a measure to identify options for pricing carbon emissions, in particular in relation to carbon tax. This commitment has been discussed in greater detail in the final NMP (Section 2.6, Carbon Pricing). The plan notes that the CCAC see carbon pricing as an important tool to achieve decarbonisation. The final plan also notes that clear long-term signalling by Government on the future evolution of carbon tax is vital.

### Changes to the final NMP

Further context is added to Section 2.6 of the final NMP and the following action is included to formalise the approach:

**Action 3: Examination of impact of carbon tax and future tax rate.**

### Issue raised: Economic Analysis

A number of stakeholders have suggested that economic analysis on one or more sectors would be valuable to inform longer term implications for investment. Uncertainty around the carbon price and the future of this market may act as a barrier to investment and some certainty on the outlook for this price would promote such investment. Similarly, the outcome of the Brexit negotiations was noted as a possible economic barrier to investment, especially in relation to the Single Energy Market.

In a related note, several stakeholders suggested a macro economic analysis on the implications of non-compliance and the exchequer costs of inaction should be presented in the NMP.

### Influence on the final NMP

No such economic analysis is presented in the draft NMP as this is not the scope of the document.

The draft NMP does commit to an evaluation of exchequer and non-exchequer options for financing Ireland's transition. This is further developed in the final NMP (Section 2.6) entitled "appraisal and evaluation of public expenditure". The plan notes that "it is essential that Government's expenditure choices are informed by an assessment of the full range of such impacts at the appraisal stage" and this implies an economic analysis of the sector and the evaluation of the planned measures. Current carbon price analysis is based on the EU ETS price and the EU Reference Scenario price but these are subject to review so the implications of a changing carbon price is inherent in the analysis.

### Changes to the final NMP

Further context is added to Section 2.6 of the final NMP and the following action is included to formalise the approach:

**Action 2: Undertake a review of guidance on public expenditure appraisal and evaluation to ensure their suitability to capturing key costs and benefits of climate measures.**

### **Issue raised: Social and Rural Proofing**

A number of respondents noted that all climate policies should be socially and rurally proofed. Respondents note that there is considerable need for a plan to respond to the social and economic needs of individuals and communities affected by any of the planned mitigation measures. This social and economic need has been assessed through the SEA process for all of the mitigation measures listed within the draft and final plans. The population and human health (PHH) and material assets (MA) criteria for the SEA analysis has factored in the social, economic and rural factors into the assessment of all measures and alternatives considered. All future iterations of the NMP will undergo a similar analysis.

### **Influence on the final NMP**

No formal mechanism for review of the NMP on a five year cycle is presented in the final NMP but this is noted in the legislation. Any subsequent iteration of the NMP or addendum to the NMP will require analysis under the SEA Directive to ensure that all measures have been assessed for the relevant environmental, social and economic criteria required.

### **Changes to the final NMP**

None proposed.

## 5.2 Main Issues Relating to Electricity Generation

### Issue raised: Peat and Coal Powered Stations

A number of submissions were made in relation to ending the use of coal and peat in the electricity generation sector and how this should be considered an urgent measure for adoption. Details were provided on the relative emissions associated with coal and peat and the need for urgent action in this regard. Comments raised include the cessation of the government subsidies for fossil fuel electricity generation and how these subsidies are at odds with the national transition objective. A number of respondents noted that the continued operation of the peat powered plants to 2030 is not sustainable. The conversion of the Moneypoint plant to a biomass generating station was also presented as a potential option for consideration.

### Influence on the final NMP

These issues have been raised in the SEA analysis and have been used to inform the draft NMP. The draft NMP does include a commitment to consider options for the removal of fossil fuel subsidies – in particular for the peat powered plants. The PSO for Edenderry ceased in 2015 and the PSO for the other two peat power plants will cease in 2019. This detail is now provided in the final NMP along with a formalised commitment through Action 4. Action 4 of the final NMP commits to a review on fossil fuel subsidies. While this is clearly not a commitment to an outright ban on the peat plants, this action will inform policy in advance of the next NMP.

Furthermore, Action 24 of the final NMP commits to oversight by DCCA of a review of future peat generation plants in line with Bord na Mona's sustainability strategy to be completed by 2019.

The consideration of the future of Moneypoint, in particular the use of coal, was identified as a key measure in the draft NMP (Measure RE8). The purpose of this measure was to arrive at decisions on optimal future low carbon technical solutions for Moneypoint. Action 23 of the final NMP commits the ESB to carrying out a study to identify the most suitable replacement low carbon technology for Moneypoint. This study is to be completed in 2018/2019 in advance of the next NMP.

### Changes to the final NMP

Further details are supplied on the fossil fuel PSO in the final NMP along with a committed action and timeframe for same:

**Action 4: Prepare a report identifying fossil fuel subsidies in place for consideration by Government.**

The following actions have been added to identify options and future direction for these fossil fuel generating plants:

**Action 23: Carry out a study to identify the most suitable replacement low carbon technology for Moneypoint generation plant.**

**Action 24: In line with Bord na Mona's Sustainability Strategy, oversee review of future of peat generation plants.**

### Issue raised: Incentivising Renewables

Stakeholders have also called for greater subsidies for renewable generation projects to promote greater investment in these projects. The current primary support mechanisms for renewable electricity development in Ireland are the REFIT (Renewable Energy Feed-in Tariff) schemes. The schemes were designed to provide certainty to renewable electricity generators by providing them with a minimum price for each unit of electricity exported to the grid over a 15 year period.

Furthermore, a number of stakeholders suggested that the renewable targets for Ireland should not be constrained by EU renewable targets and Ireland should strive to be an EU and world leader in this area. Examples such as Scotland and Sweden have been cited as achieving renewable penetration in excess of EU targets.

Finally, some stakeholders suggested that onshore wind was at capacity in Ireland and should not be further encouraged. However, no evidence base was presented for this assertion.

### Influence on the final NMP

The continued support for renewables through the AER and REFIT schemes are planned measures as outlined in the draft NMP through the following stated mitigation measures:

- RE1 Renewable Energy Feed-in-Tariff 1 (REFIT 1)
- RE2 Renewable Energy Feed-in-Tariff 2 (REFIT 2)
- RE3 Renewable Energy Feed-in-Tariff 3 (REFIT 3)
- RE4 Alternative Energy Requirement Scheme (AER)

These measures are unchanged in the final NMP and REFIT 1, REFIT 2 and REFIT 3 will remain in place until 2027, 2032, and 2030 respectively providing ongoing support and certainty for investors. A new PSO-funded Renewable Electricity Support Scheme (RESS) is currently being designed as noted in the draft NMP and recorded as Measure RE6 Renewable Electricity Support Scheme. This measure is unchanged in the final NMP along with a specific action to implement (Action 27) and a further action to encourage community participation (Action 19).

The specific targets for renewables presented in the draft NMP (Table 1.2) are those set by the RES Directive. In the final NMP there are no stated targets for renewable penetration.

In relation to onshore wind, Action 20 of the final NMP includes for the finalisation of the reviewed Wind Energy Guidelines which will be subjected to SEA and AA to ensure future development under these guidelines is sustainable.

### Changes to the final NMP

Further context is added to the description of the REFIT Schemes and also in relation to the RESS scheme along with the following direct actions:

**Action 27: Finalise RESS and obtain Government and EU State Aid approval for the scheme.**

**Action 19: As part of the development of the new RESS, approaches to community participation in renewable energy projects to be finalised.**

In relation to onshore wind the following action has been specified:

**Action 20: Finalise Wind Energy Guidelines.**

### Issue raised: Community-Based Renewable Projects

A greater emphasis on community-based renewable generation projects (including micro generation) with incentivisation such as the implementation of a Danish-style shared ownership scheme mandating that developer-led projects offer 20% of the equity to local communities.

### Influence on the final NMP

Details were provided in the draft NMP on the role of community engagement and participation in renewable projects and this is further developed in the final NMP. The final NMP states that “effective community engagement is essential for building public confidence and will help Ireland achieve our transition to renewable electricity. To ensure successful community acceptance of renewable infrastructure, flexible approaches to community engagement are required”. DCCAIE is working with relevant agencies and industry to design optimum models to increase community participation in renewable electricity projects. As noted earlier, the final NMP includes a specific action to further encourage community participation in renewable projects (Action 19) through the development of RESS (Measure RE6).

### Changes to the final NMP

Further context is added on community engagement, participation and acceptance, spatial planning and regulation. In particular the following direct action is specified:

**Action 19: As part of the development of the new RESS, approaches to community participation in renewable energy projects to be finalised.**

### Issue raised: Role of Solar Power

A large number of respondents queried why solar energy was not given greater emphasis in the draft NMP and requested that this be committed to as part of the final NMP. It is noted that while not explicitly listed in the draft NMP, the development of solar PV is included through the development of the RESS Scheme (Measure RE6) which is listed in the draft NMP. In this regard, solar has been included in the draft NMP but warrants greater detail in the final NMP.

Solar PV was considered through the SEA analysis as a reasonable alternative for the sector and was considered to have a largely positive impact once development of the infrastructure is suitably located and sustainable.

### Influence on the final NMP

A new section on Solar is now included in Section 3.3 of the final NMP. The plan notes that financial support is available for solar thermal heating technology through the provision of grants offered by the SEAI. The plan also states that as solar costs become more competitive, solar (both roof top and ground mounted) and micro generation technologies will further contribute to the renewable generation portfolio.

### Changes to the final NMP

No specific measures or actions have been added to the final NMP to cover solar over and above Measure RE6 and Action 27 on the RESS Scheme.

### Issue raised: Carbon Capture and Storage

A number of consultation responses noted the CCS is a viable mitigation option that should be considered within the NMP. Stakeholders noted areas such as the Kinsale Gas field as a potential area for CCS. There was no reference to CCS in the draft NMP.

This was previously assessed in the SEA Alternative Report as a strategic alternative and it was suggested that within the next five years and in advance of the subsequent NMP, a feasibility study should be undertaken to determine the potential application of CCS in Ireland in the future. The review should consider international best practice and experience as well as a life cycle analysis of environmental impacts. In addition, the study should be set in the context of Ireland's changing electricity generation mix and the move to decarbonisation of the power-generation sector as well as the future of coal (Measure RE8 in the draft NMP).

### Influence on the final NMP

This measure is now included as Action 26 requiring DCCAE to explore the feasibility of utilising suitable reservoirs for CO<sub>2</sub> storage. Further details on CCS are also provided in Section 3.3 of the final NMP.

### Changes to the final NMP

Background and detail on CCS has been added to Section 3.3 of the final NMP along with the following direct action:

**Action 26:** DCCAE to explore the feasibility of utilising suitable reservoirs for CO<sub>2</sub> storage.

## 5.3 Main Issues Related to Built Environment Mitigation Measures

### Issue raised: Public Sector Leadership

Several stakeholders have noted that national and local authority leadership in carbon mitigation and green procurement is required to promote wider community action. Examples cited include all new public buildings to be passive or NZEB, all older building stock to undergo retrofit, green procurement policies for all public sectors, revision of car parking policies for the public sector and revision of public sector mileage rates that incentivise larger vehicles.

### Influence on the final NMP

Section 3.3 of the draft NMP highlights the leadership role of the public sector in relation to energy management, use of sustainable energy and retrofitting central government buildings. In addition, two discreet measures were proposed – BE17 relating to facilitating energy management in schools and BE19 relating to the delivery of public sector energy efficiency targets. Under BE17, future support is likely to include metering to help analyse energy usage and identify efficiency opportunities among specific cohorts of the 3,000+ schools. BE17 is unchanged in the final NMP.

BE19 is intended to develop an enhanced support network to assist public sector bodies in achieving the energy efficiency target of 33% set in the new Strategy for Public Sector Energy Efficiency. A series of six actions have been added to BE19 to implement the proposed measure including a retrofit pilot (Action 44) and a school upgrade pilot (Action 45).

Outside of these measures there are no further additions to the public sector commitments in Built Environment. Measure T14 in the Transport Sector relates to a public sector energy efficiency strategy and relates to public sector fleets. Action 66 has been added to implement this measure.

### Changes to the final NMP

BE17 remains unchanged and BE19 has the following actions added:

**Action 40: Implementation of Public Sector Energy Efficiency Strategy (PSEES).**

**Action 41: PSEES – All PSBs will have nominated Energy Performance Officers (EPOs) and the Steering Group will be in place.**

**Action 42: PSEES – Initial pipeline projects identified.**

**Action 43: PSEES – First progress report to Government.**

**Action 44: PSEES – Implement the 2017 Central Government Building Energy Retrofit Fund Pilot and report to DCCAE on outcomes.**

**Action 45: PSEES – Deliver the 2017 National Energy Efficiency Upgrade Pilot Programme for Schools.**

Measure T14 in the Transport Sector will be implemented through Action 66 as follows:

**Action 66: Continued Development and Implementation Of Sectoral Energy Saving Projects.**

### Issue raised: Deep Retrofit

SEAI has begun a Deep Retrofit Pilot scheme in 2017 which will see homes taken off fossil fuels and upgraded to an A rated Building Energy Rating (BER). The scheme provides financial support for the improvement of the energy performance of homes through increased energy efficiency and/or uptake of renewable energy technologies. As the scheme is still in pilot phase, a number of stakeholders have requested greater government support to incentivise deep retrofit.

### Influence on the final NMP

The Deep Retrofit Pilot was included as Measure BE6 in the draft NMP and this remains unchanged in the final NMP. Further incentivisation of the scheme beyond the pilot at this point is likely premature and no further changes are proposed in the final NMP.

### Changes to the final NMP

To support Measure BE6, the following action is specified in the final NMP:

**Action 33: Implement the Deep Retrofit pilot.**

### Issue raised: Embodied Emissions in Construction Materials

There are a number of conflicting submissions relating to the carbon impact of various building materials and how these materials should be accounted for in the Built Environment sector. Industry groups representing cement, concrete and timber have provided data to support claims that the building material is sustainable relative to others. This issue is outside of the scope of this analysis and is not directly related to any of the measures under consideration in the Built Environment Sector.

### Influence on the final NMP

Not applicable.

### Changes to the final NMP

Not applicable.

### Issue raised: Thermal Threshold for Rental Properties

A number of stakeholders called for a minimum thermal threshold standard for rental properties to encourage retrofit by landlords. This is echoed by the *National Strategy to Combat Energy Poverty* findings as referenced in the NMP. The proposed approach would remove lower BER rated properties from the rental market and incentivise landlords to invest in retrofit.

### Influence on the final NMP

This requirement is listed in the draft NMP as Measure BE22 – minimum thermal standards for rental properties, as a measure currently under consideration. In the final NMP this is unchanged and the measure is still under consideration but two direct actions have been specified relating to consultation on the proposed approach during 2017 on how such a standard may be regulated.

### Changes to the final NMP

The following actions have been applied to Measure BE22:

**Action 46: Minimal Thermal Standards in rental properties – Public Consultation underway.**

**Action 47: Minimal Thermal Standards in rental properties – Consider consultation submissions and where warranted, introduce measures to help facilitate land-lords achieve compliance with envisaged new regulations.**

## 5.4 Main Issues Related to Agriculture Mitigation Measures

### Issue raised: Forestry Targets

A number of stakeholders have suggested that forestry targets should be greater than that presented in the Forestry Programme and within the draft NMP. The addition of more forest cover is considered a “win-win” by some respondents especially as this can be accommodated on marginal, flooded or peatland areas. However, as noted in the alternatives assessment in the Environmental Report, while increased afforestation over the 18% target has significant positive potential for climate change, there are several potential negative impacts associated with such an increase (biodiversity, water quality, etc.). The DAFM have advised that the 18% target by 2046 is based on sustainable economic and environmental projections for the sector and the option to increase this cover has been excluded from the draft NMP.

Some comments received during the consultation also raised a concern about the lack of diversification on the trees planned as part of the afforestation programme.

### Influence on the final NMP

No significant change to the proposed measure (AF10A – Afforestation Scheme) which is based on the Forestry Programme 2014-2020. However, a new action is specified to review the current afforestation programme by mid-2018 by the DAFM and consider future developments. It is unclear if this review will consider higher afforestation targets or levels of diversification but this is considered unlikely given the sustainable economic and environmental projections used to underpin the current target.

### Changes to the final NMP

A new action has been added to the measure as follows:

**Action 103: Current Afforestation Programme review to consider participation rates, climate change, environmental impact, rural communities and land use policy.**

### Issue raised: Use of Nitrogen Stabilisers

Several conflicting submissions were received on the merits of nitrogen stabilisers and their potential for mitigating agricultural GHG emissions. Some stakeholders argue the merits of these stabilisers versus conventional fertilisers and others argue against with the Teagasc submission likely providing the best independent analysis.

The use of these stabilisers was considered as an alternative measure for the sector in the Environmental Report analysis. This report recommended an economic analysis should be undertaken in potential funding models to support farmers. The DAFM advised that stabilised Nitrogen is already reasonably cost competitive so are reluctant to force the market too rapidly and will continue to monitor the use of these stabilisers.

### Influence on the final NMP

Section 6.5 of the final NMP (Mitigation Measures under Consideration) includes reference to changing in fertiliser type and the following text is presented:

*One such measure is a switch in fertiliser type, with research showing that switching to a protected urea product can be effective in reducing both greenhouse gas emissions and ammonia emissions. The research supporting the benefits of this protected urea product is also showing that updated emission factors can have a positive impact on the sector's emission profile. This suggests that further innovation in fertiliser nitrogen types and use will be essential to reducing N<sub>2</sub>O emissions.*

As such, while not included as a specific measure in this NMP the measure is under consideration for future NMP subject to the outcomes of further research.

### Changes to the final NMP

Not applicable.

### Issue raised: Peat Restoration

The role of peat in GHG sequestration is well established and once peat is restored, it functions as a sink but once disturbed may act as a source of carbon to the atmosphere. Several stakeholders referenced that encouraging farmers and other land holders to restore peatlands has potential to increase the carbon sink capacity within the state. This is certainly true but this measure was not under consideration by DAFM in the draft NMP.

### Influence on the final NMP

The final NMP includes a more detailed background to the sector and the carbon neutrality concept for agriculture, forest and land use. A note on the five pathways considered by Teagasc for assessing agriculture and land use combined to determine carbon neutrality are described. Further to this analysis, a specific action has been included in the final NMP relating to “rewetting” in the national inventory. This rewetting is not specific to peatlands but this action seeks to progress a working group to explore these opportunities. However it should be noted that “managed wetlands” is not under the remit of DAFM.

### Changes to the final NMP

A new action is added to the introductory text of the Agriculture, Forest and Land Use section of the final NMP as follows:

**Action 80: Progress the cross departmental working group to analyse the feasibility of including Wetland Draining and Rewetting in the national inventory.**

No further elaboration is provided on this concept within the final NMP however, two further actions are listed in relation to land management and in particular the National Peatlands Strategy:

**Action 89: Continue to support climate and land based research at national and international levels.**

**Action 90: Continue to engage with international projects for investigating sequestration and land-use change such as the GRA and the French Initiative “4 per 1000”.**

## 5.5 Main Issues Related to Transport Mitigation Measures

### Issue raised: Promotion of Cycling

A large number of submissions were received in relation to greater investment in the cycling network to improve cycling infrastructure and promote modal shift from private cars to cycling. These issues were raised by individual respondents, cycling groups as well other interested parties.

Respondents welcomed the Active Travel component of the NMP but concerns have been raised in relation to the achievement of targets under the Smarter Travel Policy and the National Cycle Policy Framework are being achieved.

The need for a National Cycling Coordinator in the DTTAS was also raised to drive this investment.

### Influence on the final NMP

In the draft NMP, Measure T9 related to a Review of the National Cycle Policy Network which was first published in April 2009. This framework set a target of 10% of all journeys to be made by bicycle in 2020.

In the final NMP, the title of this measure has been changed to “Review of the Active Travel Policy” and includes a broader cycling remit including the *Smarter Travel Policy*, *Active Travel Towns*, *Smarter Travel Areas* and the *Greenway Strategy*.

Furthermore a series of specific actions have been added to Measure T11 (National Planning Framework) to encourage cycling and other sustainable transport forms.

### Changes to the final NMP

A series of new actions have also been added to Measure T9 to commit to the above strategies and plans as follows:

**Action 61: Publish a review of the *National Cycle Policy Framework*.**

**Action 62: Review the *Smarter Travel Policy*.**

**Action 63: Publish the *Greenway Strategy*.**

In addition, the specific action for Measure T11 will seek to integrate cycling needs into the NPF:

**Action 65: NPF to secure better integration of land use and transport planning to reduce travel demand and encourage more sustainable modes of travel (walking, cycling, and public transport) as well as more efficient and cleaner transport.**

### Issue raised: Investment in Public Transport

Like cycling, a large number of respondents requested greater investment in public transport including a sustainable rural bus network, high speed trains, greater coordination between services, etc.

DTTAS have advised that the Minister has already signalled the intention to make the case for public transport investment to be both increased and accelerated as part of that review in order to address growing transport needs.

### Influence on the final NMP

Measure T1 Public Transport Investment was a key measure in the draft NMP and remains unchanged in the final NMP as does Measure T16 relating to Further Public Transport Investment through fiscal support.

Similarly, Measure T8 relating to a Review of Public Transport Policy also remains unchanged in the final NMP. This review is a commitment under the Programme for a Partnership Government.

### Changes to the final NMP

Further introductory text on the Government's Capital Plan and a new set of actions specifically relating to a number of public transport projects have been added to the Measure T1 as follows:

**Action 48: Completion of the Luas Cross City integrated light rail network.**

**Action 49: Support Government funding commitments to rail and bus improvements, including completion of the City Centre Re-signalling Programme and investment in the bus fleet and bus priority measures.**

**Action 50: Electrification of the Northern DART Line to extend the DART to Balbriggan.**

A new action has been added to Measure T8 as follows:

**Action 60: Publish a new Public Transport Policy Statement.**

Two new actions have also been added to Measure T16 as follows:

**Action 69: Investment in improved and additional public transport capacity.**

**Action 70: Utilisation of the Green Public Transport Fund to support the uptake of low carbon, energy efficient technologies within the public transport sector.**

### Issue raised: Alternative Fuels

Alternative transport fuels (electric vehicles, biogas for buses, CNG, etc.) have been suggested as viable replacements for fossil fuels. Coupled with this, one respondent suggested an outright ban on fossil fuel based passenger cars by 2030. While an outright ban may not be possible in the specified timeframe, it is clear that a transition from fossil fuel vehicles to low carbon or zero carbon transport fuels is a key measure for the sector.

### Influence on the final NMP

The integration of the NMP with the National Policy Framework: Alternative Fuels Infrastructure for Transport in Ireland: 2017-2030 is a key element of the transport measure and the following text has been provided for context in the chapter:

*By 2050, the technological ambition is for the nation's car fleet, along with some of our public transport buses and rail lines, to be low/near zero emissions. This follows on from the stated ambition in the National Policy Framework: Alternative Fuels Infrastructure for Transport in Ireland: 2017-2030 that all new cars and vans sold in Ireland from 2030 will be zero emission (or zero emission capable).*

Measure T7 of the draft NMP relates to the National Policy Framework on Alternative Fuels Infrastructure for Transport and this measure is unchanged for the final NMP.

Measure T3 (Low Emission Vehicle (LEV) Incentivisation) remains in the final NMP and additional text has been added for context relating to research by GNI on large scale renewable gas injection points on the gas network and the National Policy Framework: Alternative Fuels Infrastructure for Transport in Ireland: 2017-2030. This is projected in the longer term with Measure T18 (Low Emission Vehicle (LEV) Incentivisation).

### Changes to the final NMP

Further introductory text and a new set of actions specifically relating Measure T3 have been added as follows:

**Action 52: Maintain a grant scheme for EVs. Support levels to be reviewed annually.**

**Action 53: Deployment of 14 CNG refuelling stations and a renewable gas injection facility.**

**Action 54: Broaden the accelerated capital allowance (ACA) tax incentive for companies to encourage investment in refuelling infrastructure and equipment for natural gas, both CNG and LNG.**

Furthermore, there is an additional action specified to implement Measure T7 National Policy Framework on Alternative Fuels Infrastructure for Transport:

**Action 59: Implement the National Policy Framework on Alternative Fuels Infrastructure for Transport: 2017-2030.**

A new action has been added to Measure T18 as follows:

**Action 73: Recommend incentives and optimal regulatory framework for early adoption of LEV Technology.**

### Issue raised: Congestion Charging

Congestion charging in urban areas has been identified as a possible mitigation measure for the sector. Congestion in urban areas reduces the efficiency of the transport system and results in greater emissions relative to steady speed driving. As such, congestion has impacts for GHG emissions, air quality and human health.

### Influence on the final NMP

While not specified as a mitigation measure for the Transport Sector, the Concluding Comments on Mitigating Transport Emissions does note that: *To meet the considerable additional transport demand which is expected to arise in the coming years, while also addressing congestion, climate mitigation and air quality concerns, it will be necessary to undertake a significant expansion in public transport capacity, concentrating particularly on suitable urban areas.* In this regard, the co-benefits of reducing congestion and reducing transport emissions are well established. However, at this point, the introduction of congestion charging is not considered for inclusion in the final NMP.

### Changes to the final NMP

None.

### Issue raised: Rail Based Freight

The incentivisation of rail based freight transport over road based transport has been identified as a potential measure to reduce emissions from this sector. The Environmental Report presents Central Statistics Office (CSO) statistics that illustrate the following volumes of freight transport in Ireland:

- By rail: 0.54 million tonnes of freight
- By road: 118.1 million tonnes of freight.

As such, freight transport by rail accounts for less than 1% of corresponding transport by road. Submissions by several operators made reference to the need to incentivise operators to use lower emission rail based freight transport.

### Influence on the final NMP

There are no specific measures or actions relating to freight transport in Ireland listed in the final NMP. All measures and actions relating to rail are predominately related to public transport as opposed to freight. However in the concluding remarks to the sector there is reference to greater deployment of alternative fuels within the freight sector. The main focus in this NMP relates to seeking greater diversification of fuels in the freight sector to include a mix of natural gas, biogas, electricity (light vans) and renewable diesel or other biofuels. However, the potential for encouraging rail based freight over road based freight may be considered in subsequent NMPs.

### Changes to the final NMP

None.

**Issue raised: Motorway Speed Limit**

One respondent noted that transport modelling had indicated that reducing the speed on motorways (Measure T24) can negatively impact on road performance and the environment.

**Influence on the final NMP**

Measure T24 of the draft NMP was a measure under consideration and related to the Reduction of Top Speed Limits on Motorways. The research indicated that energy use increases at higher speeds and various sources suggest that moving from 100km/h to 120km/h increases fuel consumption by up to 20%. One option for consideration was to reduce maximum speed limits on motorways from 120km/h to 110km/h for cars/LGVs and from 90km/h to 80km/h for HGVs. The draft NMP noted that there is a lack of official and robust data on this issue and this measure would only be further developed on the back of a robust evidence base.

**Changes to the final NMP**

None.

## 6 Preferred Scenario and Reason for Choosing the Final (Draft) NMP

The consideration of alternatives is a requirement of the SEA Directive (2001/42/EC). It states under Article 5(1) that:

*Where an environmental assessment is required under Article 3(1), an environmental report shall be prepared in which the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme, are identified, described and evaluated. The information to be given for this purpose is referred to in Annex I.*

Annex 1(h) of the Directive clarifies that the information to be provided on alternatives under Article 5(1) is *inter alia* an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information. Article 9 of the Directive requires that a statement shall be prepared providing information on the reasons for choosing the plan as adopted, in the light of the other reasonable alternatives considered.

Annex 1(f) details the environmental topics to be considered in the evaluation of the alternatives, which is the same as that addressed in the assessment of the plan itself: biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors.

In summary, the Directive emphasises that the SEA process must consider alternatives that are “reasonable”, and take into account “the objectives” of the plan, and “the geographical scope of the plan”.

### 6.1 Alternatives Considered for the NMP

The approach used for assessing alternatives for the draft NMP was an objectives-led assessment. Each alternative has been assessed against the strategic environmental assessment objectives (See **Chapter 4** for details of these objectives). The assessment compares the likely impacts in terms of the Strategic Environmental Objectives to see how alternatives perform in relation to the stated environmental objectives.

For the purposes of the alternatives assessment:

- Plus (+) indicates a potential positive environmental impact;
- Minus (-) indicates a potential negative environmental impact;
- Plus/minus (+/-) indicates that both positive and negative environmental impacts are likely or that in the absence of further detail the impact is unclear; and
- Zero (0) indicates neutral or no environmental impact.

The following notation is used in the assessment tables: PHH (population and human health); W (water); BFF (biodiversity, flora and fauna); SL (soils and land use); AQ (air quality); CF (climatic factors); MA (material assets); CH (cultural heritage) and L (landscape).

Under each alternative a discussion is presented to support the assessment parameters shown and the reason for choosing the preferred alternative. Assessments include qualitative and where possible quantitative information.

### 6.1.1 Strategic Alternatives

A number of strategic alternatives were considered for the development of the NMP and these are presented in detail in the Environmental Report issued for consultation. **Table 6.1** shows the strategic alternatives considered in the process along with the relevant cores for each of the environmental criteria applied in the analysis.

**Table 6.1 Strategic Alternatives**

Scenario	BFF	PHH	SL	W	AQ	CF	MA	CH	L
No Plan	-	-	+/-	-	-	-	-	0	0
95% Aggregate Reduction	+	+	+/-	+	+	+	-	0	0
Including Agriculture in the aggregate reduction	+	+	+	+	+	+	-	0	0
Inclusion of the Waste Sector in the aggregate reduction	0	0	0	0	+	+	+	0	0
Carbon Capture and Storage	+/-	0	+/-	+/-	+/-	+	-	+/-	+/-

Key: BFF – Biodiversity, Flora and Fauna; PHH – Population, Human Health; SL – Soils and Landuse; W – Water; AQ – Air Quality; CF – Climatic Factors; MA – Material Assets; CH – Cultural Heritage; L – Landscape.

The Do-Nothing Option is not viable given the requirement for the NMP under Section 3 of the Climate Act 2015 which makes the development of the plan mandatory. The Do-Nothing Option is projected to show an increase in annual emissions which is at odds with Ireland's commitments under the EU effort sharing decision. As a consequence, this scenario represents a significant negative impact in relation to climate change relative to the preferred NMP scenario.

The 2011 EU objective aims to reduce GHG emissions by 80% to 95% by 2050 (relative to 1990). The National Policy Position has set the target at 80% but the more ambitious 95% reduction is considered a reasonable alternative for consideration. Studies<sup>5</sup> illustrate a significant reduction in GHG under this scenario by 2050 relative to the Do-Nothing scenario. The report also illustrated the additional reduction under this scenario relative to the 80%

<sup>5</sup> Technical support on developing low carbon sector roadmaps for Ireland – Low Carbon Energy Roadmap for Ireland, ESRI/E4sma/UCC (2013).

aggregate reduction scenario by 2050. As such, this scenario offers a significant net positive climate impact relative to the preferred NMP scenario. However the report notes that the carbon reduction ambitions under the CO<sub>2</sub>-95 scenario are much more onerous (relative to the CO<sub>2</sub>-80 scenario) and the economic implications of carbon reductions escalate. The report identified that “price increases of this order in such a short period of time would have a detrimental impact on the economy, invariably causing substantial restructuring and associated effects”.

The National Policy Position sets out the approach to an aggregate reduction of 80% in emissions from three of the four main emission sectors, i.e. transport, electricity generation and the built environment. Agriculture (including forest) is tasked with achieving an approach to carbon neutrality by 2050. Given that agriculture contributes the largest fraction of GHG emissions over any of the other three sectors (33% of national emissions in 2015 compared to a 24% global average for agriculture) it is reasonable to query why the agriculture sector is not included in the aggregate reduction. Given the existing pressures on biodiversity, soils and water quality by the agriculture sector, a significant reduction in agricultural practices (cattle numbers, extent of pasture, fertiliser use, etc.) would likely have a significant positive impact for these environmental areas. To a lesser degree, air quality and human health may also experience some positive impact relative to the draft NMP scenario but this would not be as significant as water and biodiversity. The remaining environmental topics would be largely neutral for this scenario.

The waste sector accounts for 1.6% of national GHG emissions in 2015 but the sector is not included in the policy position and as such, is not included in the draft NMP. It is reasonable to consider that for completeness and equity, the waste sector should be included in the plan and should contribute to the 80% aggregated emissions reduction. The Environmental report recommended that in advance of the next five year NMP, a detailed analysis of the annual trend and key contributory factors for the waste sector GHG Emissions should be carried out. If this sector does not show a downward trend then this sector should be considered for inclusion in future iterations of the NMP.

Carbon capture and storage (CCS) involves capturing carbon dioxide released by power stations and other industrial sources, and burying it deep underground. It is considered to be one of the medium term 'bridging technologies' in the options of available mitigation actions for stabilising concentrations of atmospheric GHG. The Environmental report recommended that within the next five years and in advance of the subsequent NMP, a feasibility study should be undertaken to determine the potential application of CCS in Ireland in the future. The review should consider international best practice and experience as well as a life cycle analysis of environmental impacts. In addition, the study should be set in the context of Ireland's changing electricity generation mix and the move to decarbonisation of the powergen sector as well as the future of Moneypoint (Measure RE8 in the draft NMP). This alternative is now built into the final NMP as Action 26, which commits to this study in the next five years as part of the electricity generation sector.

6.1.2 Alternative Mitigation Measures for the Built Environment Sector

There are a number of existing plans and policies in place for this sector and it is against this framework that the consideration of alternatives in this sector is undertaken. **Table 6.2** shows the main reasonable alternatives considered and assessed for the built environment sector.

**Table 6.2 Alternatives in the Built Environment Sector**

Scenario	BFF	PHH	SL	W	AQ	CF	MA	CH	L
Increased Performance Requirements for New Builds	+	+	0	+	+	+	+/-	0	0
Increasing demand for Retrofit	+	+	0	+	+	+	+/-	0	0
Ban on Coal in Domestic Heating Systems	+	+	0	+	+	+	-	0	0
Ban on Peat in Domestic Heating Systems	+	+	+	+	+	+	-	+	+
Increase in Carbon Tax on Home Heating Fossil Fuels	+	+	0	+	+	+	+/-	0	0

Key: BFF – Biodiversity, Flora and Fauna; PHH – Population, Human Health; SL – Soils and Landuse; W – Water; AQ – Air Quality; CF – Climatic Factors; MA – Material Assets; CH – Cultural Heritage; L – Landscape.

The requirement for new builds in the residential sector are currently set by Part L (Conservation of Fuel and Energy) of the Building Regulations 1997 which sets out the statutory minimum energy performance standards that apply to the construction of new dwellings. In 2012, the DECLG (now DHPCLG) published a new programme entitled *Towards Nearly Zero Energy Buildings (NZEB) in Ireland – Planning for 2020 and beyond*. The move towards “nearly zero-energy buildings” (NZEB) will present a potentially significant positive impact in the sector once fully implemented and fully enforced.

A potential alternative to this scenario is a move to “zero-energy buildings” as opposed to “nearly zero-energy buildings”. In other words, implement a system whereby Ireland exceeds the EU performance requirements possibly to a point where new builds are passive houses or zero-energy houses. Such an approach would have direct positive impacts for climate, air and human health through reduced emissions as well as indirect effects for biodiversity and water quality. However, there are a number of technical and economic reasons why this alternative is not feasible in the short term. The DCCAE and DHPCLG advise that the technology is not currently available to install “zero-energy buildings” on a mass scale in the economic climate. Such houses are possible as one-off schemes which are well funded but the cost per unit on a national scale would result in significant cost increases per unit and this is not feasible in the housing crisis faced in the short term. Such an approach would have potentially significant negative material

assets impacts. However, the existing housing asset would be improved by such a measure. The government is committed to carrying out a cost optimal performance and NZEB in 2018.

Currently, demand for retrofit in Ireland is low for a range of reasons including lack of awareness of property holders and the costs of retrofit. The SEAI is currently supporting property owners in retrofitting and estimates that in order to meet current energy efficiency targets it would be necessary to ramp up to 75,000 structures retrofit per annum (based on current scale of retrofit). The impact of large scale improvement in BER and increased energy efficiency would result in the direct positive impacts for climate, air quality and human health through reduced emissions as well as indirect effects for biodiversity and water quality. However, the material asset impacts would be significant either for the state (if the funding measure was employed) or the property owner if the other options are employed but the existing housing asset would be improved by such a measure.

A reasonable alternative for the sector is to impose a ban on the use of all coal and peat in home heating appliances across the state. Combustion of coal and peat in domestic heating systems emit much higher levels of GHG (and some other pollutants such as particulate matter) per kWh when compared to oil and gas and to some extent renewables (although the particulate emissions from burning biomass are a subject of concern). A prohibition on the sale and use of any coal and peat within the state would lead to direct positive impacts for climate, air and human health through reduced emissions as well as indirect positive effects for biodiversity and water quality. The Environmental Report recommends that a feasibility study should be undertaken in the implementation of a ban on the use of coal and/or peat in domestic heating systems. A proposed ban on peat products is currently not included in the Consultation paper for the National Clean Air Strategy. The study should consider the environmental implications in addition to the economic and technical implementation and have regard to available alternatives in rural areas including their feasibility and affordability. The outcome of this study should be used to inform future iterations of the NMP.

A modification on the outright ban is through prohibition to de-incentivise use of these fuels by imposing an increased carbon tax on all fossil fuels including peat, coal, oil and natural gas used in home heating. The environmental implications for such a measure would generally be positive reducing in direct emissions to atmosphere from home heating. Again a potential negative material asset impact is predicted given the increased financial implications for householders. Conversely, the generating capacity would increase resulting is a positive enhancement of this asset. The Environmental Report recommends that an environmental and economic study of the impact analysis for options to increase the Carbon Tax on home heating solid fuels and liquid/gas fossil fuels to levels that promote real behaviour change should be undertaken within the next five years to inform the next phase of NMP development.

Action 4 of the final NMP commits to a review on fossil fuel subsidies for peat and coal – while this is clearly not an outright ban, this action will inform policy in advance of the next NMP. In addition, Action 3 seeks to commence an examination of the impact of carbon tax and the future tax rate which may impact on future incentivisation of fuel use in the Built Environment sector.

6.1.3 Alternative Mitigation Measures for the Electricity Generation Sector

Table 6.3 shows the main reasonable alternatives considered and assessed for the electricity generation sector.

Table 6.3 Alternatives in the Electricity Generation Sector

Scenario	BFF	PHH	SL	W	AQ	CF	MA	CH	L
Solar PV	+/-	+	-	+	+	+	-	+/-	-
Geothermal Energy	+/-	+	+/-	+/-	+	+	+/-	0	0
Phase out the Peat/Coal Plants from the Sector and replace with renewables	+	+	+	+	+	+	+	+	+
Phase out the Peat/Coal Plants from the Sector and replace with Gas/Oil	+	+	+	+	+	+	-	+	+
Replace Peat/Coal with sustainable Biomass	+	+/-	+	+	+/-	+	+	+	+
Eliminate Liquid/Gaseous Fossil Fuels from the Sector	+	+	0	+	+	+	+	0	0

Key: BFF – Biodiversity, Flora and Fauna; PHH – Population, Human Health; SL – Soils and Landuse; W – Water; AQ – Air Quality; CF – Climatic Factors; MA – Material Assets; CH – Cultural Heritage; L – Landscape.

Solar PV is supported by government and the SEAI report that over €2m of funding has been committed to solar projects since 2005 under the SEAI R&D programme. This includes grants for research as well as larger demonstration projects, including a 300kW solar PV array, the largest installation in Ireland. Solar PV is not currently supported under the REFIT schemes but the Environmental Report recommended that the DCCAE continue to review and evaluate the potential for solar PV as part of the development of the new RESS. Further details on solar opportunities are provided in Section 3.2 of the final NMP. Solar PV is one of a range of technologies under consideration by the DCCAE under the new Renewable Electricity Support Scheme currently under development (Measure RE6) which will be in place by 2018.

Geothermal energy refers to heat energy stored in the ground and can be classified as either ‘deep’ or ‘shallow’ depending on the depths involved. Larger scale geothermal is typically associated with deep geothermal and these may be used to feed district heating networks (as an example in Southampton, UK). The Environmental Report recommended that a technical and economic feasibility study is carried out, building on the 2004 report, to consider the option of future development of this energy source in Ireland. As noted in Annex 2 of the final NMP, the GSI continue to assess Ireland’s geo-thermal energy potential, from both shallow and

deep sources over the next five years. Large-scale shallow heat management in urban areas will be investigated. Targeted deep geological settings will include deeply karstified limestone and fracture zones, requiring exploration by onshore seismic surveys and borehole drilling.

The planned phase out of the four coal/peat powered generating stations was considered in the Environmental Report across a number of scenarios. As a consequence of contractual agreements, the phasing out of these plants completely in the short term is not considered an option for the NMP. The scenarios assessed included the following:

- Phase out the Peat/Coal Plants from the Sector and replace with renewables
- Phase out the Peat/Coal Plants from the Sector and replace with Gas/Oil
- Replace Peat/Coal with sustainable Biomass

These alternative scenarios were discussed in detail at the alternatives workshop with the DCCAE held in April 2016 as part of the SEA process. While these measures were considered alternatives at that point, the value of their inclusion has been informed by the SEA process and one of these measures now listed in the final NMP is Measure RE8 (Future of Moneypoint Generation Station). Furthermore, Action 24 of the final NMP commits to oversight of a review of future peat generation plants in line with Bord na Mona's sustainability strategy to be completed by 2019.

The option of phasing out the coal and peat fired stations presented above provides a very clear set of environmental benefits, including indirect benefits associated with the cessation of peat harvesting. However, the use of gas and oil are still significant emitters of GHG emissions and their long term use is at odds with the national transition objective to a low carbon economy. However, it should be noted that oil fuelled generation represents less than 1% of installed capacity. Unlike the scenario whereby the peat/coal plants are phased out and there are alternatives (renewables and/or oil/gas) available, the phasing out of the gas plants is only an option where a reasonable alternative exists. The renewables capacity is not available in the short or medium term to cover any shortfall in generating capacity if the gas and oil plants were phased out. As such, this alternative option for the sector is not technically or economically viable in the short to medium term.

### 6.1.4 Alternative Mitigation Measures for the Agriculture and Forest Sector

The alternatives addressed for the agriculture sector and the forest sector and the summary of the findings and analysis of the environmental impacts of each alternative is presented in the following sections. **Table 6.4** shows the main reasonable alternatives considered and assessed for the sector.

**Table 6.4 Alternatives in the Agriculture and Forest Sector**

Scenario	BFF	PHH	SL	W	AQ	CF	MA	CH	L
Anaerobic Digestion	0	0	+	0	0/+	+	0	0	0
Feed Systems	0	0	-	0	0	+	0	0	0
Fertiliser Efficiency	+	0	0	+	+	+	0	0	0
Use of Nitrogen Stabilisers	+	0	+	+	0	+	-	0	0
Reduction in the National Herd	+	0	+	+	+	+	-	0	0
Increase in Forestry Cover by more than 18%	+/-	0	+/-	+/-	0	+	+	+/-	+
Increase in the 30% broadleaf fraction	+	0	0	+	0	-	0/-	0	+

Key: BFF – Biodiversity, Flora and Fauna; PHH – Population, Human Health; SL – Soils and Landuse; W – Water; AQ – Air Quality; CF – Climatic Factors; MA – Material Assets; CH – Cultural Heritage; L – Landscape.

The use of anaerobic digestion (AD) as a means to partially convert manure to energy in the form of biogas is a well-established mechanism for using the animal waste as a resource to generate energy. However, there are a number of barriers to the development of large scale AD in Ireland and hence the omission as a stand-alone measure within the NMP. At large scale, this measure would have potentially positive impacts for climate by reducing fugitive methane and to a lesser extent air quality and human health.

At EU level, a degree of research into alternative diets and feedstocks is being carried out to reduce enteric fermentation from livestock (this source accounts for 55% of all agriculture emissions in Ireland in 2015). The measure is shown to have positive climate impact by reducing (albeit slightly) emissions per animal. However, there are some concerns relating to land use change in developing countries for the purposes of cultivating palm oil and other feed stocks. As such, this option has potential for negative land use impacts.

The Commission has funded research into the effects of more efficient fertiliser use and the effects on pasture and crop output. The research has indicated that reducing fertiliser by as much as 30% in some circumstances can be carried out with limited impact on output – note that this research is aimed at areas where over application of fertiliser poses a significant threat.

However, the DAFM has identified that Irish farmers apply lower levels of fertiliser than the current EU recommendations and Irish farmers are subject to annual audit on fertiliser use. As a consequence, DAFM have ruled out this measure for this first NMP on technical grounds.

Nitrogen stabilisers are compounds used in fertilisers that slow the conversion of ammonium to nitrate, thus reducing nitrogen losses from the soil. Their use in agriculture is known to reduce the losses of nitrous oxide (N<sub>2</sub>O) to the atmosphere which is one of the key sources in the agriculture industry from soil management. Currently, these nitrogen stabiliser fertilisers make up only a fraction of the fertiliser sold in Ireland as these are considerably more expensive than regular fertilisers. The environmental report recommends that an economic analysis is undertaken in potential funding models to support farmers and incentivise the application of nitrogen stabilisers in fertiliser application. DAFM advised that stabilised nitrogen is already reasonably cost competitive so are reluctant to force the market too rapidly and will continue to monitor the use of these stabilisers.

Reducing the number of livestock in the national herd would have a direct and proportional reduction on the emissions from enteric fermentation (over half the agriculture emissions). Depending on the extent of any reduction, there would be potential direct positive impacts for climate and air quality and indirect positive impacts for water quality and biodiversity. However, given that the agri-food sector in Ireland contributes a value of €24 billion to the national economy annually and provides up to 10% of national employment, any reduction in the national herd would potentially have a net negative social and economic impact.

One of the main measures presented in the draft NMP for the forest sector is afforestation in line with the proposals contained within the Forestry Programme 2014-2020. One of the aims of Ireland's Forestry Programme 2014-2020 is to encourage planting by private landholders, primarily farmers, in order to achieve a forest cover of 18% by 2046. This target is reflected as the long term measure under the NMP. Given the EU average of 37% forest cover, it is reasonable to consider why a greater level of ambition above 18% cover is not proposed in the NMP. It is clear in the analysis presented in the Environmental Report, that while increased afforestation over the 18% target has significant positive potential for climate change, there are several potential negative impacts associated with such an increase. The DAFM have advised that the 18% target by 2046 is based on sustainable economic and environmental projections for the sector and the option to increase this cover has been excluded from the draft NMP.

Another key objective of the forest policy and the Forestry Programme 2014-2020 is to provide at least 30% of the area afforested with broadleaved species, which will include Areas for Biodiversity Enhancement (ABEs) during the programme period. This 30% fraction is stated in the Forestry Programme and has formed DAFM policy and for the purpose of the NMP, the increase in broadleaf fraction would offer no climate advantage over the use of conifers. However, it is acknowledged that this measure would generally be positive for the environment.

6.1.5 Alternative Mitigation Measures for the Transport Sector

Table 6.5 shows the main reasonable alternatives considered and assessed for the electricity generation sector.

Table 6.5 Alternatives in the Transport Sector

Scenario	BFF	PHH	SL	W	AQ	CF	MA	CH	L
Higher Targets in the Biofuels Obligation Scheme	0	+/-	0	0	+/-	+	-	0	0
Increases in Carbon Tax on Transport Fuels	0	0	0	0	0	0	0	0	0
Greater Investment in Public Transport to encourage Modal Shift	+	+	0	0	+	+	0	0	0

Key: BFF – Biodiversity, Flora and Fauna; PHH – Population, Human Health; SL – Soils and Landuse; W – Water; AQ – Air Quality; CF – Climatic Factors; MA – Material Assets; CH – Cultural Heritage; L – Landscape.

Measure T6 of the draft NMP refers to the existing Biofuels Obligation Scheme (BOS) while Measure T21 relates to the future BOS development and the need to increase the penetration of renewable energy in the transport energy mix in order to meet the 10% RES-T target. The BOS is currently not sustainable in Ireland as the vast majority of Irish transport biofuels are being imported and hence a higher BOS target as a reasonable alternative is not considered sustainable without an indigenous supply of biofuel. The Environmental Report recommends that the future development of Measure T21 should be considered on the basis of the analysis presented in the report for this alternative. Action 75 of the final NMP notes that an incremental increase in the BOS rate for Measure 21 will take cognisance of the broader environmental considerations and will be subject to public consultation.

The Carbon Tax in Ireland currently equates to approximately 5.586 cent per litre of petrol and 6.517 cent per litre of diesel and these rates would be considered too low to effect any meaningful behaviour change among consumers. This is particularly pertinent in rural areas where alternative modes of transport are limited. The analysis presented in the Environmental Report illustrated that a major step change in carbon tax with increases of the order of 100-200% would place Ireland in the same category as the Nordic countries (albeit still below Sweden) in terms of level of taxation and at such rates real behaviour change may be driven. The report recommends that an environmental and economic study of the impact analysis for options to increase the Carbon Tax to levels that promote real behaviour change should be undertaken within the next five years to inform the next phase of NMP development. Action 3 of the final NMP seeks to commence an examination of the broader impact of carbon tax and the future tax rate (including transport).

It is questionable given the extent of road traffic emissions, why the government is investing circa 60% of transport capital funds in the road network and only 40% of funds in public transport and an alternative strategy is considered in the environmental report. It is noted that Measures T1 and T16 as presented in the draft NMP both directly relate to investments in public transport and the provision of additional public transport capacity. The Environmental Report notes that a mid-term review of the Capital Investment Plan is taking place in 2017 and this review is considered a critical opportunity to redress the balance between investment in the road network and public transport projects. Annex 2 of the final NMP notes that DTTAS has advised that the Minister has already signalled the intention to make the case for public transport investment to be both increased and accelerated as part of that review in order to address growing transport needs. The NMP and the NPF are essential roadmaps in informing transport investment in the Capital Plan.

### 6.2 Overall Preferred Scenario

The preferred scenario directly reflects the National Policy Position and envisages that development of plans (including the first plan) will be guided by a long-term vision of low carbon transition based on the following:

- An aggregate reduction in carbon dioxide (CO<sub>2</sub>) emissions of at least 80% (compared to 1990 levels) by 2050 across the electricity generation, built environment and transport sectors; and
- In parallel, an approach to carbon neutrality in the agriculture and land-use sector, including forestry, which does not compromise capacity for sustainable food production.

This is the scenario adopted for the first NMP. However, for subsequent iterations of the NMP, it is possible that the alternative strategic options may be explored again and options such as the inclusion of the waste sector or the re-evaluation of the level of ambition for the existing sectors may also be undertaken.

## 7 Measures to Monitor Significant Environmental Effects of the Implementation of the Adopted NMP

### 7.1 Introduction

Article 10 of the SEA Directive requires that monitoring be carried out in order to identify, at an early stage, any unforeseen adverse effects due to implementation of a Plan or Programme, and to be able to take remedial action. Monitoring is carried out by reporting on a set of indicators, which enable positive and negative impacts on the environment to be measured. The environmental targets and indicators of relevance to this NMP were identified from the SEA process. These targets and indicators will be used to identify unforeseen adverse effects from implementation of the NMP.

### 7.2 Responsibility for Monitoring

It is the responsibility of DCCAE to undertake or supervise the monitoring of the implementation of the NMP. It is envisaged that DCCAE would oversee the monitoring of the NMP, with direct input from the relevant sectors. It has been proposed that reporting on monitoring for the NMP will be aligned with the cycle of reviews of the NMP.

### 7.3 Sources of Information for Monitoring

Monitoring will focus on aspects of the environment that are likely to be significantly impacted by the NMP.

The primary purpose of monitoring is to cross-check significant environmental effects which arise during the NMP implementation stage against those predicted during the NMP preparation stage. A monitoring programme has been developed based on the indicators selected to track progress towards reaching the targets paired with each SEO, thereby enabling positive and negative impacts on the environment to be measured. The environmental indicators have been developed to show changes that would be attributable to implementation of the NMP.

**Table 7.1** shows the Environmental Monitoring Programme to track progress towards achieving SEOs and reaching targets, and includes sources of relevant information. It can be seen that the majority of information required is already being actively collected (by the EPA, NPWS, SEAI, CSO and other programmes).

**Table 7.1 Environmental Monitoring Programme**

Strategic Objective	SEO Target	SEA Indicator	Data Sources
<b>Objective 1 Biodiversity and Flora and Fauna:</b> Preserve, protect and maintain the terrestrial, aquatic and soil biodiversity, particularly EU and nationally designated sites and protected species.	Majority of habitats or species in, or moving towards, favourable conservation status by 2020. [Based on national Target 17 of Ireland’s Action Plan for Biodiversity 2011-2016].	The status of protected habitats and species as reported to the EU (report due every six years, first report in 2007).	The Status of EU Protected Habitats and Species in Ireland report. Published every six years, National Parks and Wildlife Service (NPWS)
	Ensure all mitigation measures from the plan SEA and AA are fully implemented within the plan period.	Mid-term appraisal of progress in the implementation of mitigation measures (after 2.5 years) post adoption of the plan and at completion of the plan period (5 years).	DCCAE
<b>Objective 2 Population and Human Health:</b> Contribute to sustainable development whilst protecting Population and Human Health.	Track the annual trends in ambient air pollutant levels in all EPA monitoring zones relative to the legislation (S.I. 180 of 2011) and the WHO Guideline for Air Quality.	EPA Annual Ambient Quality Monitoring Reports.	EPA
<b>Objective 3 Soil and Landuse:</b> Avoid damage to the environment from land use change.	Ensure the requirements in the ILUC Directive, 2012 to cap at 7% the contribution of biofuels from food crops are adhered to and implemented.	Food crops contributing to biofuels >7%.	DAFM/Teagasc
<b>Objective 4 Soil and Landuse:</b> Manage and Restore Peat Lands.	Manage and Restore Peat Lands	Ensure all mitigation measures relating to the minimisation of peat harvesting are fully implemented.	SEAI and EPA Fuel Statistics

Strategic Objective	SEO Target	SEA Indicator	Data Sources
<p><b>Objective 5 Water:</b> Protect the quality and management of watercourses and groundwater, in compliance with the requirements of the Water Framework Directive and associated River Basin Management Plans.</p>	<p>No deterioration in water status attributable to land use.</p>	<p>Status of water bodies as reported by the EPA.</p>	<p>Water quality in Ireland report, Environmental Protection Agency (EPA)</p>
	<p>Comply with the Water Framework Directive to prevent any deterioration of quality status of water bodies currently with high or 'good status'</p>	<p>The % increase in water bodies achieving and maintaining at least 'good status'.</p>	<p>Interim Water Status (WFD) and Water Status Reports EPA and the National River Basin Management Plan 2017 Programme of Measures</p>
<p><b>Objective 6 Air Quality:</b> Minimise emissions of particulates and other pollutants to atmosphere.</p>	<p>Minimise emissions of particulates and other pollutants to atmosphere.</p>	<p>Track correlation between the reductions in GHG emissions under the NMP versus the reductions (if any) in the National Emissions Ceilings Pollutants (NO<sub>x</sub>, SO<sub>2</sub>, VOCs, NH<sub>3</sub>, PM). Correlation to be tracked on an annual basis.</p>	<p>EPA Annual National Emissions Ceilings Inventory reporting.</p>

Strategic Objective	SEO Target	SEA Indicator	Data Sources
<p><b>Objective 7 Climatic Factors:</b> Minimise emissions of greenhouse gasses.</p>	<p>A net reduction in the annual GHG emissions from the State.</p>	<p>A net annual reduction in the GHG emissions from the relevant sectors (electricity generation, built environment and transport).  Carbon neutrality in the agriculture/ forestry sector.</p>	<p>EPA Annual National GHG Emissions Inventory reporting.</p>
	<p>A net reduction in the GHG emissions from the electricity generation, built environment and transport sectors year on year.  No annual increase in GHG emissions from the Agriculture Sector.</p>	<p>GHG Sectoral Inventory reporting tracking the trend in sectoral emissions, the contributory factors and the efficiency of the measures proposed within the NMP</p>	<p>Annual sectoral mitigation transition statement required by each of the four Sectors under Section 14 of the 2015 Act.</p>
	<p>Develop Key Performance Indicators (KPIs) within one year of implementation to track progress in implementing mitigation measures against the projected CO<sub>2</sub> savings as presented in the NMP.</p>	<p>Measure of achieved CO<sub>2</sub> reduction for the measure versus projected reductions (as % achieved) as listed within the final NMP.</p>	<p>Sectoral Lead Departments</p>

Strategic Objective	SEO Target	SEA Indicator	Data Sources
<p><b>Objective 8</b>  <b>Material Assets:</b>                      Support sustainable activities without conflicting with environmental protection objectives.</p>	<p>Contribute to meeting the requirement of RES-H (12% from heat) and RES-T (10% from transport) as set out in the National Renewable Energy Action Plan.</p>	<p>Audit of progress in achieving 2020 target for RES-H.                       Audit of progress in contribution biofuel scheme is making towards achieving 2020 target for RES-T.</p>	<p>Sustainable Energy Authority of Ireland (SEAI)</p>
	<p>Implementation of Third Renewable Energy Feed-In Tariff (REFIT3) Scheme.</p>	<p>Number of applications for REFIT 3.</p>	<p>DCCAE</p>
<p><b>Objective 9</b>  <b>Cultural Heritage:</b>                      Protect places, features, buildings and landscapes of cultural, archaeological or architectural heritage.</p>	<p>More appropriately dealt with at project (EIA) level.</p>	<p>More appropriately dealt with at project level.</p>	<p>Record of Monuments and Places, DAHRRGA                       The Archaeological Survey monitoring programme, Ireland Buildings at Risk Register, Heritage Council Ireland</p>
<p><b>Objective 10</b>  <b>Landscape:</b> Protect and maintain the national landscape character.</p>	<p>Provide input to Action 6 of the National Landscape Strategy (2015). To ensure that the development of the bioenergy sector is clearly outlined in the 'State of the Landscape' reports which are being prepared by the relevant public authorities.</p>	<p>Review every two years to establish that bioenergy policy and information on development of land and facilities for bioenergy are integrated within the Landscape reports.</p>	<p>DAHRRGA</p>

## 8 Screening of Changes to the Final NMP

An Environmental Report was prepared in March 2017 which recorded the strategic environmental assessment of the draft NMP. That report and draft plan were the subject of a statutory public consultation and on foot of this consultation, the plan has been updated to reflect concerns raised. It is further acknowledged that the layout of the final plan is significantly evolved with additional background material added, however, the amendments proposed are not of such an extent that changes to the content or outcome of the assessment contained within the Environmental Report will be required. This section of the report presents a review of the changes made to the NMP and screens the proposed changes for SEA. Changes are set out in a chapter by chapter approach. Separately, the NIS has also been updated to include the changes to the final plan.

### 8.1 Changes to Chapter 1 (Climate Action and the Climate Challenge)

This chapter in the draft NMP has been separated into two separate chapters in the final NMP as follows:

- Chapter 1: Introduction providing general background information on climate change, the need for action, national policy and legislation and an outline of the structure of the plan.
- Chapter 2: Climate Action Policy Framework which provides more detailed contextual information on climate action at global, EU and national level, national emissions trends and projections and the challenges to 2030.

The text, tables and graphics provided in these chapters of the final NMP have provided greater elaboration on the information supplied in the draft NMP. This is factual information relating to policy/legislation and EPA derived emission data. This supporting information provides valuable context for the plan but will not result in any changes to the assessment included in the Environmental Report. Similarly, no significant negative impacts on European sites are anticipated as a result of these factual and contextual amendments.

Section 2.6 of the final plan (Enabling the National Transition) builds on a section of Chapter 1 of the draft NMP. In the draft NMP, a series of 14 cross-cutting actions were listed with these action items presented against relevant timelines. In the final NMP, these actions are presented in a more formalised fashion with each action assigned a unique numerical reference and details on the lead organisation, key stakeholders and timeline added. In addition, there are a number of changes to the listed actions. **Table 8.1** lists the actions presented in Section 2.6 of the final NMP along with an assessment of the potential for significant environmental impact.

All 14 of the actions listed in Section 2.6 of the final NMP are administrative actions designed to help implement the plan through review, reporting, economic analysis and communications. In this regard, these measures are not predicted to have any direct or indirect impacts on the environment and do not alter the assessment presented in the Environmental Report.

**Table 8.1 Screening of Actions in Chapter 2 of the final NMP**

Action	Proposal	Potential for Significant Impact
1	Publish updated analysis on transition pathway scenarios to 2050.	No
2	Undertake a review of guidance on public expenditure appraisal and evaluation to ensure their suitability to capturing key costs and benefits of climate measures.	No
3	Examination of impact of carbon tax and future tax rate.	No
4	Prepare a report identifying fossil fuel subsidies in place for consideration by Government.	No
5	Prepare periodic reports on the electricity and gas prices for households and businesses.	No
6	Prepare a report on the economic and employment implications of the transition.	No
7	Address the just transition as part of the National Dialogue on Climate Action	No
8	Implement National Dialogue on Climate Action on a two-year pilot basis.	No
9	Develop proposals to establish regional climate action offices to coordinate Local Authority response to climate action.	No
10	Ensure climate considerations are fully addressed in new National Planning Framework.	No
11	Annual report from National Climate Research Coordination Group.	No
12	Develop proposals for identifying, monitoring and reporting of climate related expenditure through the Exchequer.	No
13	Prepare a report for Government on options for non-Exchequer sources of financing for climate measures in advance of Budget 2019.	No
14	TRAM to support ongoing development and implementation of the National Mitigation Plan.	No

## 8.2 Changes to Decarbonising Electricity Generation

This chapter is presented as Chapter 3 of the final plan whereas it was presented as Chapter 2 of the draft plan. The key text changes to this section of the final plan are highlighted in **Table 8.2** along with an assessment of potential implications for the findings of the environmental assessment.

**Table 8.2 Screening of changes in the Decarbonising Electricity Generation Section of the final NMP**

NMP Reference	Proposed Change	SEA/AA Screening
3.1 Vision for the Sector	<p>Additional text has been added to this section of the plan to outline the DCCAE vision for the sector to contribute to the low carbon transition. At a high level the following concepts are presented:</p> <ul style="list-style-type: none"> <li>■ The move from fossil fuel based power to low carbon power.</li> <li>■ Carbon pricing and the ETS.</li> <li>■ Commitment to REFIT and RESS.</li> <li>■ Moneypoint power station.</li> <li>■ Renewables development such as solar, wave and tidal.</li> </ul>	<p><i>These changes are contextual and are further elaborated on in the specified measures presented.</i></p> <p><i>This change will not result in any changes to the assessment included in the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
3.1 Overview	<p>Additional text is added in the EU 2017 Renewable Energy Progress Report and estimates for future requirements.</p>	<p><i>This change will not result in any changes to the assessment included in the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
3.3 Solar	<p>New text and background has been added on the costs and future of solar PV and the potential for future development in Ireland. The text also notes that solar PV is one of the technologies for consideration under the RESS (Measure RE6).</p>	<p><i>These aspects have been addressed in the environmental report under Measure RE6 and no change is required.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>

NMP Reference	Proposed Change	SEA/AA Screening
3.3 Bioenergy	<p>While some summary text on bioenergy is provided in the draft NMP a set of three discreet actions have been added to the final NMP to implement the Bioenergy Plan as follows:</p> <p><b>Action 15: Oversee the establishment of Bord na Móna Bioenergy.</b></p> <p><b>Action 16: Finalise the Bioenergy Plan.</b></p> <p><b>Action 17: Progress actions arising from Bioenergy Plan.</b></p>	<p><i>While the Bioenergy Plan is not listed as a stand alone measure in the Electricity Generation Sector, it is included within the REFIT 3 scheme (Measure RE3) for the sector which supports the use of bioenergy. No change to the assessment presented in the Environmental Report. No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
3.3 Offshore Energy	<p>As above, the text presented in the draft NMP is supplemented with a specific action in the final NMP as follows:</p> <p><b>Action 18: Carry out an interim review of the OREPD.</b></p>	<p><i>The OREPD has been assessed in the Environmental Report as Measure RE5 Support for Ocean Research, Development and Demonstration. This interim review is an administrative task with no potential for direct or indirect impacts on the environment. No change to the assessment presented in the Environmental Report. No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
3.3 Community Engagement, Participation and Acceptance, Spatial Planning and Regulation	<p>The text regarding Community Engagement, Participation and Acceptance, Spatial Planning and Regulation has been supplemented in the final NMP. The following text is added: <i>To ensure successful community engagement flexible approaches to community engagement are required. In December 2016 the DCCAIE published a new Code of Practice for Wind Energy Development in Ireland on Guidelines for Community Engagement. The code cites ten key areas for delivery on the part of wind energy developers.</i> In addition a specific action is added:</p> <p><b>Action 19: As part of the development of the new RESS, approaches to community participation in renewable energy projects to be finalised.</b></p>	<p><i>These changes are contextual and are further elaborated on in the specified measures presented and in the new action. These changes will not result in any changes to the assessment included in the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>

NMP Reference	Proposed Change	SEA/AA Screening
3.3 Financing and Delivering Renewable Electricity Projects	<p>Some text amendments have been included along with a specific action:</p> <p><b>Action 20: Finalise review of Wind Energy Guidelines.</b></p>	<p><i>The publication of these guidelines will be subject to SEA and AA processes and as such no direct impact is predicted. These changes will not result in any changes to the assessment included in the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
3.3 Inter-connection	<p>Two specific actions have been added in relation to interconnection:</p> <p><b>Action 21: Commission and complete economic and technical research on the merits of further interconnection for Ireland.</b></p> <p><b>Action 22: Develop a regulatory policy for electricity interconnectors for Ireland.</b></p>	<p><i>These measures are administrative with no potential for direct or indirect impacts to the environment. These changes will not result in any changes to the assessment included in the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
3.3 Coal and Peat	<p>Some minor modifications to the context on the future of coal and peat in the sector. In addition, two specific actions are noted:</p> <p><b>Action 23: Carry out a study to identify the most suitable replacement low carbon technology for the Moneypoint generation plant.</b></p> <p><b>Action 24: In line with Bord na Mona's Sustainability Strategy, DCCA to oversee a review of future peat generation plants to be completed by 2019.</b></p>	<p><i>These measures are generally positive and may result in the initial step to remove these fuels from the sector as recommended in the Environmental Report. However, the actual measures are administrative with no direct or indirect impacts.</i></p> <p><i>These changes will not result in any changes to the assessment included in the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>

NMP Reference	Proposed Change	SEA/AA Screening
3.3 Energy Storage	<p>A new section has been added to the final NMP relating to energy storage technologies such as pumped storage, batteries, etc. Furthermore a specific action has been added:</p> <p><b>Action 25: Ongoing research into technology to assist the increase of variable renewable electricity generation.</b></p>	<p><i>Further research has no potential for direct or indirect impacts and so these changes will not result in any alteration to the assessment included in the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
3.3 Carbon Capture and Storage	<p>As above, a new section has been added to the final NMP outlining the potential role of CCS within the Irish energy sector. In addition an action to implement is presented:</p> <p><b>Action 26: DCCAE to explore the feasibility of utilising suitable reservoirs for CO<sub>2</sub> storage.</b></p>	<p><i>CCS was presented as a strategic alternative in the Environmental Report and the analysis presented remains valid. The feasibility study proposed will not alter the findings of the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
3.5 Measure RE6 Renewable Electricity Support Scheme	<p>The text for Measure RE6 has been supplemented with a direct action:</p> <p><b>Action 27: Finalise RESS and obtain Government and EU State Aid approval for the scheme.</b></p>	<p><i>This measure has been addressed in full as Measure RE6 in the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
3.6 Overview of Costs and Emissions Reductions Potential	<p>Additional text has been included to reflect the DCCAE commitment to undertake an update of existing analysis to enable the impact of support schemes on the electricity systems cost to be addressed. The following direct action is included:</p> <p><b>Action 28: To inform future energy policy, undertake a study of the costs and savings arising from renewable electricity deployment.</b></p>	<p><i>These measures are administrative with no potential for direct or indirect impacts to the environment. These changes will not result in any changes to the assessment included in the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>

### 8.3 Changes to Decarbonising the Built Environment

The Decarbonising the Built Environment Section was originally Chapter 3 of the draft NMP and is changed to Chapter 4 in the final NMP. The chapter has been updated and a number of specific actions and additional text have been added as presented in **Table 8.3**.

**Table 8.3 Screening of changes in the Decarbonising the Built Environment Section of the final NMP**

NMP Reference	Proposed Change	SEA/AA Screening
4.1 Vision for the Sector	<p>Additional text has been added to this section of the plan to outline the vision for the sector to contribute to the low carbon transition. The key aspects for the sector are highlighted as:</p> <ol style="list-style-type: none"> <li>1. Energy management: understand existing energy use – how and when energy is being used.</li> <li>2. Energy efficiency: undertake energy efficiency improvements to reduce usage and make your demand for energy more flexible.</li> <li>3. Fuel switching: meet this reduced energy use with less energy intensive/low carbon heating solutions.</li> </ol>	<p><i>These changes are contextual and are further elaborated on in the specified measures presented.</i></p> <p><i>This change will not result in any changes to the assessment included in the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
4.1 Overview	<p>Additional text is added in relation to the benefits of energy efficiency, sectoral progress to date as well as energy and climate targets. This information builds on that presented in Section 2 of the final NMP</p>	<p><i>This change will not result in any changes to the assessment included in the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
4.3 Opportunities and Challenges	<p>New text and background has been added exploring cost benefit potential of gas network extensions and adding the following action:</p> <p><b>Action 29: Commission study on the wider economic costs and benefits – including in the areas of climate, decarbonisation and rural development – of potential extensions of the Irish Natural Gas network, and related funding options.</b></p>	<p><i>The execution of a feasibility study on the gas network will not in itself have direct or indirect implications for the environment. This change will not result in any changes to the assessment included in the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>

NMP Reference	Proposed Change	SEA/AA Screening
Measure BE3 Rental Sector Housing Assistance Package	<p>An action to implement this measure has been added to the final NMP:</p> <p><b>Action 30: Housing Assistance Package – Local Authorities signed up to participate and scheme operational.</b></p>	<p><i>This action has been considered as part of the wider analysis of the Measure presented in the Environmental Report. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
Measure BE5 Warmth and Wellbeing Pilot Scheme	<p>Two actions to implement this measure have been added to the final NMP:</p> <p><b>Action 31: Warmth and Wellbeing Scheme – 1,500 homes will be upgraded for occupants who qualify for the scheme.</b></p> <p><b>Action 32: Warmth and Wellbeing Scheme evaluated with a view to a possible national rollout.</b></p>	<p><i>These actions have been considered as part of the wider analysis of the Measure presented in the Environmental Report. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
Measure BE6 Deep Retrofit Pilot	<p>An action to implement this measure has been added to the final NMP:</p> <p><b>Action 33: Implement the Deep Retrofit pilot.</b></p>	<p><i>This action has been considered as part of the wider analysis of the Measure presented in the Environmental Report. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
Measure BE11 Better Energy Rating Certificates	<p>An action to implement this measure has been added to the final NMP:</p> <p><b>Action 34: New BER Advisory report to be introduced.</b></p>	<p><i>This action has been considered as part of the wider analysis of the Measure presented in the Environmental Report. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>

NMP Reference	Proposed Change	SEA/AA Screening
Measure BE14 Large Industry Energy Network	<p>An action to implement this measure has been added to the final NMP:</p> <p><b>Action 35: Roll out EXEED Programme.</b></p>	<p><i>This action has been considered as part of the wider analysis of the Measure presented in the Environmental Report. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
Measure BE15 SME Support	<p>Three actions to implement this measure have been added to the final NMP:</p> <p><b>Action 36: SME Support – Publish new Energy Audit Handbook.</b></p> <p><b>Action 37: SME Support – Publish new Interactive SME Guide.</b></p> <p><b>Action 38: SME Support – Develop and pilot new targeted grant support actions (Variable Speed Drives (VSD’s) in the farming sector and lighting in SMEs).</b></p>	<p><i>These actions have been considered as part of the wider analysis of the Measure presented in the Environmental Report. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
Measure BE18 Behavioural Economics Unit	<p>An action to implement this measure has been added to the final NMP:</p> <p><b>Action 39: Establish new Behaviour Economics Unit in SEAI.</b></p>	<p><i>This action has been considered as part of the wider analysis of the Measure presented in the Environmental Report. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>

NMP Reference	Proposed Change	SEA/AA Screening
<p>Measure BE19 Support Network for the Delivery of Public Sector Energy Efficiency Targets</p>	<p>A series of actions to implement this measure have been added to the final NMP:</p> <p><b>Action 40: Implementation of Public Sector Energy Efficiency Strategy (PSEES).</b></p> <p><b>Action 41: PSEES – All PSBs will have nominated Energy Performance Officer’s (EPOs) and the Steering Group will be in place.</b></p> <p><b>Action 42: PSEES – Initial pipeline projects identified.</b></p> <p><b>Action 43: PSEES – First progress report to Government.</b></p> <p><b>Action 44: PSEES – Implement the 2017 Central Government Building Energy Retrofit Fund Pilot and report to DCCAE on outcomes.</b></p> <p><b>Action 45: PSEES – Deliver the 2017 National Energy Efficiency Upgrade Pilot programme for schools.</b></p>	<p><i>These actions have been considered as part of the wider analysis of the Measure presented in the Environmental Report. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
<p>Measure BE22 Minimal thermal standards in rental properties</p>	<p>Two actions to implement this measure have been added to the final NMP:</p> <p><b>Action 46: Minimal Thermal Standards in rental properties – Public Consultation underway.</b></p> <p><b>Action 47: Minimal Thermal Standards in rental properties – Consider consultation submissions and where warranted, introduce measures to help facilitate landlords achieve compliance with envisaged new regulations.</b></p>	<p><i>These actions have been considered as part of the wider analysis of the Measure presented in the Environmental Report. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>

## 8.4 Changes to Decarbonising Transport

The Decarbonising Transport section was originally Chapter 4 of the draft NMP and is changed to Chapter 5 in the final NMP. The chapter is largely unchanged but a number of specific actions and additional text have been added as presented in **Table 8.4**.

**Table 8.4 Screening of changes in the Decarbonising Transport Section of the final NMP**

NMP Reference	Proposed Change	SEA/AA Screening
5.1 Vision for the Sector	Additional text has been added to this section of the plan to outline the vision for the sector to contribute to the low carbon transition.	<p><i>These changes are contextual and are further elaborated on in the specified measures presented.</i></p> <p><i>This change will not result in any changes to the assessment included in the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
5.1 Background	Minor modification of the text presented in the draft NMP including reference to the National Policy Framework: Alternative Fuels Infrastructure for Transport in Ireland: 2017-2030.	<p><i>This change will not result in any changes to the assessment included in the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
5.3 Technology and Behavioural Change	Additional text added in relation to behaviour change and the importance of same for mitigation in the transport sector.	<p><i>This change will not result in any changes to the assessment included in the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>

NMP Reference	Proposed Change	SEA/AA Screening
5.3 Fuel Tourism	A new section has been added to provide background on Fuel Tourism and the estimated emissions associated with this aspect of the transport sector.	<p><i>This change will not result in any changes to the assessment included in the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
Measure T1 Public Transport Investment	<p>Three actions to implement this measure have been added to the final NMP:</p> <p><b>Action 48: Completion of the Luas Cross City integrated light rail network.</b></p> <p><b>Action 49: Support Government funding commitments to rail and bus improvements, including completion of the City Centre Re-signalling Programme and investment in the bus fleet and bus priority measures.</b></p> <p><b>Action 50: Electrification of the Northern DART Line to extend the DART to Balbriggan.</b></p>	<p><i>These actions have been considered as part of the wider analysis of the Measure presented in the Environmental Report. Project specific measures are addressed through EIA and AA for these projects to mitigate impacts. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
Measure T2 Smarter Travel Initiative Investment	<p>An action to implement this measure has been added to the final NMP:</p> <p><b>Action 51: Investment in infrastructure and behavioural change interventions to encourage and support a shift to sustainable modes of transport.</b></p>	<p><i>This action has been considered as part of the wider analysis of the Measure presented in the Environmental Report. No further changes to the Environmental Report.</i></p>
Measure T3 Low Emission Vehicles (LEV) Incentivisation	<p>Three actions to implement this measure have been added to the final NMP:</p> <p><b>Action 52: Maintain a grant scheme for electric vehicles. Support levels to be reviewed annually.</b></p> <p><b>Action 53: Deployment of 14 CNG refuelling stations and a renewable gas injection facility.</b></p> <p><b>Action 54: Broaden the accelerated capital allowance (ACA) tax incentive for companies to encourage investment in refuelling infrastructure and equipment for natural gas, both CNG and LNG.</b></p>	<p><i>These actions have been considered as part of the wider analysis of the Measure presented in the Environmental Report. Project specific measures are addressed through EIA and AA for these projects to mitigate impacts. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>

NMP Reference	Proposed Change	SEA/AA Screening
Measure T4 Taxation Policy	<p>Two actions to implement this measure have been added to the final NMP:</p> <p><b>Action 55: Maintain under continuous review the use of the VRT/Motor Tax system in incentivising the uptake of lower emission technologies.</b></p> <p><b>Action 56: Continue to encourage the adoption of natural gas as a cleaner transport fuel by maintaining the excise rate applied at the minimum rate allowable under the Energy Tax Directive.</b></p>	<p><i>These actions have been considered as part of the wider analysis of the Measure presented in the Environmental Report. Project specific measures are addressed through EIA and AA for these projects to mitigate impacts. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment</i></p>
Measure T5 Public Transport Energy Efficiency	<p>An action to implement this measure has been added to the final NMP:</p> <p><b>Action 57: Continue to optimise current energy efficiency actions in place in the area of public transport.</b></p>	<p><i>This action has been considered as part of the wider analysis of the Measure presented in the Environmental Report. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment</i></p>
Measure T6 Biofuels Obligation Scheme	<p>An action to implement this measure has been added to the final NMP:</p> <p><b>Action 58: Sustain the current Biofuels Obligation Scheme to ensure that bio-fuels continue to be an increasing part of the road transport fuel mix.</b></p>	<p><i>This action has been considered as part of the wider analysis of the Measure presented in the Environmental Report. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment</i></p>
Measure T7 National Policy on Alternative Fuels Infrastructure for Transport	<p>An action to implement this measure has been added to the final NMP:</p> <p><b>Action 59: Implement the <i>National Policy Framework on Alternative Fuels Infrastructure for Transport: 2017-2030</i>.</b></p>	<p><i>This action has been considered as part of the wider analysis of the Measure presented in the Environmental Report. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment</i></p>

NMP Reference	Proposed Change	SEA/AA Screening
Measure T8 Review of Public Transport	<p>An action to implement this measure has been added to the final NMP:</p> <p><b>Action 60: Publish a new <i>Public Transport Policy Statement</i>.</b></p>	<p><i>This action has been considered as part of the wider analysis of the Measure presented in the Environmental Report. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment</i></p>
Measure T9 Review of Active Travel Policy	<p>Three actions to implement this measure have been added to the final NMP:</p> <p><b>Action 61: Publish a review of the <i>National Cycle Policy</i>.</b></p> <p><b>Action 62: Review the <i>Smarter Travel Policy</i>.</b></p> <p><b>Action 63: Publish the <i>Greenway Strategy</i>.</b></p>	<p><i>These actions have been considered as part of the wider analysis of the Measure presented in the Environmental Report. Project specific measures are addressed through EIA and AA for these projects to mitigate impacts. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
Measure T10 National Intelligent Transport Systems (ITS) Strategy	<p>An action to implement this measure has been added to the final NMP:</p> <p><b>Action 64: Draft a comprehensive <i>National Strategy on ITS</i>.</b></p>	<p><i>This action has been considered as part of the wider analysis of the Measure presented in the Environmental Report. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment</i></p>
Measure T11 National Planning Framework	<p>An action to implement this measure has been added to the final NMP:</p> <p><b>Action 65: NPF to secure better integration of land use and transport planning to reduce travel demand and encourage more sustainable modes of travel (walking, cycling, and public transport) as well as more efficient and cleaner transport.</b></p>	<p><i>This action has been considered as part of the wider analysis of the Measure presented in the Environmental Report. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment</i></p>

NMP Reference	Proposed Change	SEA/AA Screening
Measure T14 Public Sector Energy Efficiency Strategy	<p>An action to implement this measure has been added to the final NMP:</p> <p><b>Action 66: Continued development and implementation of sectoral energy saving projects.</b></p>	<p><i>This action has been considered as part of the wider analysis of the Measure presented in the Environmental Report. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment</i></p>
Measure T15 Research and Development	<p>Two actions to implement this measure have been added to the final NMP:</p> <p><b>Action 67: Continue support for the International Transport Forum's (ITF) Decarbonising Transport Worldwide research and modelling project</b></p> <p><b>Action 68: Undertake and fund climate change and air quality research and analysis within the Irish transport sector.</b></p>	<p><i>These actions have been considered as part of the wider analysis of the Measure presented in the Environmental Report. Project specific measures are addressed through EIA and AA for these projects to mitigate impacts. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
Measure T16 Further Public Transport Investment	<p>Two actions to implement this measure have been added to the final NMP:</p> <p><b>Action 69: Investment in improved and additional public transport capacity.</b></p> <p><b>Action 70: Utilisation of the Green Public Transport Fund to support the uptake of low carbon, energy efficient technologies within the public transport sector.</b></p>	<p><i>These actions have been considered as part of the wider analysis of the Measure presented in the Environmental Report. Project specific measures are addressed through EIA and AA for these projects to mitigate impacts. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>

NMP Reference	Proposed Change	SEA/AA Screening
Measure T17 Supports and Incentives to Modal Shift	<p>Two actions to implement this measure have been added to the final NMP:</p> <p><b>Action 71: Examine the expansion of existing support schemes.</b></p> <p><b>Action 72: Establish a Behavioural Economics Working Group to consider behavioural change.</b></p>	<p><i>These actions have been considered as part of the wider analysis of the Measure presented in the Environmental Report. Project specific measures are addressed through EIA and AA for these projects to mitigate impacts. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
Measure T18 Further Low Emission Vehicle (LEV) Incentivisation	<p>An action to implement this measure has been added to the final NMP:</p> <p><b>Action 73: Recommend incentives and optimal regulatory framework for early adoption of LEV technology.</b></p>	<p><i>This action has been considered as part of the wider analysis of the Measure presented in the Environmental Report. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
Measures T19 and T20 – Taxation Policy Development	<p>An action to implement this measure has been added to the final NMP:</p> <p><b>Action 74: Conduct a review of vehicle and fuel taxation measures within the context of evolving technology development and need to chart a sustainable pathway to the decarbonisation of transport by 2050.</b></p>	<p><i>This action has been considered as part of the wider analysis of these Measures presented in the Environmental Report. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
Measure T21 Biofuels Obligation Scheme Development	<p>An action to implement this measure has been added to the final NMP:</p> <p><b>Action 75: Conduct a public consultation on progressively increasing the biofuel obligation rate by 2020.</b></p>	<p><i>This action has been considered as part of the wider analysis of the Measure presented in the Environmental Report. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>

NMP Reference	Proposed Change	SEA/AA Screening
Measure T22 Eco-driving	An action to implement this measure has been added to the final NMP:  <b>Action 76: Consider the introduction of a grant scheme to encourage eco-driving for HGVs and buses.</b>	<i>This action has been considered as part of the wider analysis of the Measure presented in the Environmental Report. No further changes to the Environmental Report.</i>  <i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i>

### 8.5 Changes to An Approach to Carbon Neutrality for Agriculture, Forest and Land Use Sectors

The Agriculture, Forest and Land Use section was originally Chapter 5 of the draft NMP and is changed to Chapter 6 in the final NMP. Unlike the other sectoral chapters discussed, this chapter was subject to significant change with additional background and context added on the sector and the approach to carbon neutrality. This entire context is helpful in understanding the sector and does not have any implications for the SEA process. Where there are significant text changes and/or specific actions added to the chapter, these are assessed for significance in **Table 8.5**.

**Table 8.5 Screening of changes in the Approach to Carbon Neutrality in the Agriculture, Forest and Land Use Section of the final NMP**

NMP Reference	Proposed Change	SEA/AA Screening
6.1 Vision for the Sector	Additional text has been added to this section of the plan to outline the vision for the sector to contribute to the low carbon transition.	<i>These changes are contextual and are further elaborated on in the specified measures presented.</i>  <i>This change will not result in any changes to the assessment included in the Environmental Report.</i>  <i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i>

NMP Reference	Proposed Change	SEA/AA Screening
6.2 LULUCF	<p>Further background material is added to this section in relation to soils and carbon sequestration and the implications for land use management. A text box is also included to define LULUCF. A specific action to track the sectors inventory in future years:</p> <p><b>Action 77: Continue the work of the cross departmental and agency working group established in 2016 to further improve the monitoring reporting and verification of agricultural abatement options in the inventory to enhance transparency of agricultural and land use actions.</b></p>	<p><i>This change adds value to the detail of the plan but will not result in any changes to the assessment included in the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
6.3 The Carbon Neutrality Concept	<p>This new section has been added to the final NMP to describe this concept and sets out the long term ambition for the sector. In addition, a text box is provided with details on “Carbon Neutrality as a Horizon point for Irish Agriculture”. To further the concept, three actions have been specified:</p> <p><b>Action 78: Undertake research to further elaborate the concept of carbon neutrality from an Irish agriculture and land use perspective, to include a number of scenarios.</b></p> <p><b>Action 79: Assess relevant climate change proposals submitted in relation to European Innovation Partnerships (EIP) under the RDP.</b></p> <p><b>Action 80: Progress the cross departmental working group to analyse the feasibility of including Wetland Draining and Rewetting in the national inventory.</b></p>	<p><i>These actions are largely administrative and will not have any direct or indirect impacts on the environment. This change will not result in any changes to the assessment included in the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>

NMP Reference	Proposed Change	SEA/AA Screening
6.3 Reducing Greenhouse Gas Emissions in Agriculture	<p>A new section has been added to provide background on the potential for reductions in the sector. These reductions are largely through efficiency measures in farming practices but also in relation to carbon sequestration on farmlands.</p> <p>A text box is presented to summarise what the sector is currently undertaking through the sustainable intensification principles of FoodWise 2025. Three specific actions have been added for this aspect of the plan:</p> <p><b>Action 81: Continue engagement at EU and international levels to ensure ambition and transparency of agricultural and land use pledges is enhanced in line with the objectives of the Paris Agreement.</b></p> <p><b>Action 82: Undertake research to evaluate abatement actions across the areas of Climate, Air (including GHG), Water and Biodiversity to develop an integrated abatement strategy and cost curve.</b></p> <p><b>Action 83: Undertake an in-house review to consider additional synergies between the Nitrates Action Plan and climate change policy, with a view to feeding into future updates of the Nitrates Action Plan.</b></p>	<p><i>As above, these actions are largely administrative and will not have any direct or indirect impacts on the environment. This change will not result in any changes to the assessment included in the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
6.3 Circular Bioeconomy	<p>This new section has been added to the final NMP to provide background detail on the biological element of the circular economy, i.e. the potential for the sector to generate bioenergy and biofuels. Two actions have been specified in relation to the circular bioeconomy:</p> <p><b>Action 84: Publish a high-level Policy Statement on the Bioeconomy in Ireland.</b></p> <p><b>Action 85: Explore potential for higher value uses of forest and agri residues.</b></p>	<p><i>These actions are largely administrative and will not have any direct or indirect impacts on the environment. This change will not result in any changes to the assessment included in the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>

NMP Reference	Proposed Change	SEA/AA Screening
6.3 Renewable Energy	<p>Some additional text has been added to this section along with three specific actions for the Forest Sector and DAFM:</p> <p><b>Action 86: Continue efforts to mobilise forest biomass.</b></p> <p><b>Action 87: Support the expansion of the use of Forest-based Biomass (FBB) including through the Wood Fuel Quality Assurance Scheme.</b></p> <p><b>Action 88: Seek to bridge the short term supply gap in indigenous biomass.</b></p>	<p><i>These measures have synergies with the Electricity Generation and Built Environment Sectors which have been established in the analysis to date. This change will not result in any changes to the assessment included in the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
6.3 Land Management	<p>Another new section added to the chapter outlining the potential for carbon sequestration in agricultural lands and how this may be integrated with the National Biodiversity Plan and the National Peatlands Strategy. To this end, two further actions are specified:</p> <p><b>Action 89: Continue to support climate and land based research at national and international levels.</b></p> <p><b>Action 90: Continue to engage with international projects for investigating sequestration and land-use change such as the GRA and the French Initiative “4 per 1000”.</b></p>	<p><i>Again these actions are largely administrative and will not have any direct or indirect impacts on the environment. This change will not result in any changes to the assessment included in the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>

NMP Reference	Proposed Change	SEA/AA Screening
6.2 Behavioural Change	<p>While addressed in summary in the draft NMP, greater details are provided in the final NMP highlighting the need for knowledge transfer among farmers. In addition, details on the uptake and effect of existing sustainable farming schemes is provided as background. Three actions are specified in relation to behaviour change:</p> <p><b>Action 91: Carry out further research to understand the behavioural barriers which influence farmer’s participation in environmental schemes.</b></p> <p><b>Action 92: Continue to improve farm sustainability through GLAS and the Origin Green Programme.</b></p> <p><b>Action 93: Environmental Sustainability Committee (ESC) to continue to monitor and drive the implementation of the sustainability actions.</b></p>	<p><i>The environmental impacts of these sustainable farming schemes have been addressed in the environmental report. Further research into the schemes will have no direct or indirect impact. This change will not result in any changes to the assessment included in the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
6.4 CAP Pillar One and Two	<p>New introductory text has been added to Section 6.4 (Mitigating Measures in Place) highlighting the role of CAP and Pillars One and Two. Evaluation of the Rural Development Programme (RDP) by the Commission is also noted as background context and DAFM would seek to reform the CAP in line with the sustainable intensification principles. Two specific actions are noted:</p> <p><b>Action 94: Focus Policy Assessment of the 2014-2020 RDP to be carried out.</b></p> <p><b>Action 95: Improve the transparency of CAP and RDP measures in the National Inventory that contribute to climate action with a view to better understanding the contribution of agriculture and land use abatement to Ireland’s ESR targets.</b></p>	<p><i>Again these actions are largely administrative and will not have any direct or indirect impacts on the environment. This change will not result in any changes to the assessment included in the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>

NMP Reference	Proposed Change	SEA/AA Screening
Measure AF2A – Beef Data and Genomics Programme (BDGP)	<p>A specific action has been included to implement this measure:</p> <p><b>Action 96: Carry out further research to analyse the benefits of beef genomics.</b></p>	<p><i>This action has been considered as part of the wider analysis of these Measures presented in the Environmental Report. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
Measure AF2B Knowledge Transfer Programme	<p>Two specific actions have been included to implement this measure:</p> <p><b>Action 97: Continue to improve knowledge transfer and exchange to farmers by developing a network across State agencies and relevant advisory bodies.</b></p> <p><b>Action 98: Further develop the range and depth of sustainability information collected for beef, dairy and other agriculture sectors.</b></p>	<p><i>These actions have been considered as part of the wider analysis of the Measure presented in the Environmental Report. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
Measure AF2C Green, Low Carbon, Agri-Environment Scheme (GLAS)	<p>A specific action has been included to implement this measure:</p> <p><b>Action 99: Online Nutrient Management software tool rolled out.</b></p>	<p><i>This action has been considered as part of the wider analysis of the Measure presented in the Environmental Report. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
Measure AF8 Origin Green	<p>A specific action has been included to implement this measure:</p> <p><b>Action 100: Continue to develop and enhance Origin Green.</b></p>	<p><i>This action has been considered as part of the wider analysis of these Measures presented in the Environmental Report. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>

NMP Reference	Proposed Change	SEA/AA Screening
Measure AF9 The Carbon Navigator	<p>Two specific actions have been included to implement this measure:</p> <p><b>Action 101: Continue to enhance and rollout at farm level, the Carbon Navigator Initiative.</b></p> <p><b>Action 102: Expand the Carbon Navigator initiative to other enterprises.</b></p>	<p><i>These actions have been considered as part of the wider analysis of the Measure presented in the Environmental Report. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
Measure AF10A – Afforestation Scheme	<p>A specific action has been included to implement this measure:</p> <p><b>Action 103: Current Afforestation Programme review to consider participation rates, climate change, environmental impact, rural communities and land use policy.</b></p>	<p><i>This action has been considered as part of the wider analysis of these Measures presented in the Environmental Report. No further changes to the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>
6.5 Mitigation Measures under Consideration	<p>Some additional text has been added to this section of the final NMP along with three specific actions:</p> <p><b>Action 104: Evaluate the updated MACC with a view to identifying further measures for consideration.</b></p> <p><b>Action 105: Analyse the barriers to the diversification of farm incomes related to supply of materials and residues for renewable energy and adoption of AD.</b></p> <p><b>Action 106: Scope out the most cost-effective and appropriate technologies to improve energy efficiency at farm level and assist with decarbonisation of energy use.</b></p>	<p><i>These actions are largely administrative and will not have any direct or indirect impacts on the environment. This change will not result in any changes to the assessment included in the Environmental Report.</i></p> <p><i>No significant negative impacts on European sites are anticipated as a result of this proposed amendment.</i></p>

## 9 Addendum to Environmental Report

### 9.1 Introduction

This is the addendum to the Environmental Report for the NMP. This chapter serves two purposes:

- To provide clarification and/or additional information following comments in the submissions received during the consultation period on the draft NMP and Environmental Report; and
- To identify where the Environmental Report has been updated in following consideration of comments received in submissions during the public consultation period.

It should be noted that this document supplements and should be read in conjunction with the original Environmental Report prepared in March 2017.

The clarifications and additional information contained herein have been provided in order to increase the usefulness of the document for the public and decision makers. However, the amendments proposed are not of such an extent that changes to the content or outcome of the assessment contained within the Environmental Report will be required.

### 9.2 Amendments to the SEA

As noted in Section 8 of this report, the changes to the final plan relative to the draft plan may be largely broken down into two areas:

- Further contextual material has been added to a number of the chapters, in particular Chapters 1, 2 and 6. This additional text, tables and graphics provided in the final NMP have provided greater elaboration on the information supplied in the draft NMP. This is factual information relating to policy/legislation, EPA derived emission data and policy/practice relevant to the individual sectors. This supporting information provides valuable context for the plan but will not result in any changes to the assessment included in the Environmental Report. Similarly, no significant negative impacts on European sites are anticipated as a result of these factual and contextual amendments.
- The second major change in the final NMP relative to the draft NMP is the inclusion of 106 specific actions including a number of cross sectoral actions and sector specific actions. These actions have been included following calls from consultees for an Implementation Programme for the various measures. In the majority of cases, the sector specific actions are devised to implement the measures proposed in the draft plan (and unchanged in the final plan) and these have been addressed in full in the analysis presented in the Environmental Report. For the remaining actions that are unlinked to the sectoral mitigation measures, these have been screened in Section 8 of this report for significance. In all cases the proposed measures are administrative and relate to feasibility studies, research, reviews of existing practices, reporting, etc. As such, these actions will have no potential for direct or indirect impact on the environment and no changes to the analysis presented in the Environmental Report are required. Similarly, no significant negative impacts on European sites are anticipated as a result of these factual and contextual amendments.

Furthermore, it is noted that all 8 Electricity Generation Measures, 23 Built Environment Measures, 24 Transport Measures and 23 Agriculture/Forest/Land use measures (including measures under consideration) have remained unchanged with no significant alteration (Measure T9 has been renamed but the scope of the measure is unchanged). As such, the analysis of these measures presented in the Environmental Report is unchanged.

Similarly, there have been no additional measures added or measures included in the draft plan removed from the final plan.

On this basis, the only amendments to the Environmental Report are based on information supplied during the consultation feedback and these changes are outlined in the following sections.

### 9.2.1 Chapter 6 Baseline

NIEA advised of a number of updates to the environmental baseline for Northern Ireland presented in Chapter 6 of the Environmental Report. The changes are as a result of the new Northern Ireland Environmental Statistics Report (2017) which was published during the consultation period for the Environmental Report. These changes are noted in this section with omissions shown as strikethrough (~~strikethrough~~) and additions noted in bold (**bold**). The listed amendments are to the baseline section (Chapter 6) of the Environmental Report but these changes also apply to the relevant sections in Table 1.4.2 and Section 1.5 of the Non-Tech Summary where this information is reproduced.

The following text amendments are made to Table 6.3 of the Environmental Report:

*The ~~eighth~~ **ninth** annual Northern Ireland Environmental Statistics Report (~~2016~~ **2017**) provides an annual update to the figures and provides commentary around the trends outlined in the second State of the Environment Report for Northern Ireland (2013). The relevant aspects of the current state of the environment in Northern Ireland has been summarised in **Table 6.5**.*

**Table 9.5 Summary of Current State of the Environment in Northern Ireland**

Theme	Key Findings
Air Quality	There are 26 Active Air Quality Management Areas that are leading the activity to tackle air quality problems. There is continued improvement in air quality but problems do remain for nitrogen dioxide emissions due to transport. Agricultural emissions of ammonia still remain high and threaten ecosystems and habitats. Continued effort is required to reduce air pollution from key sources such as road transport and agriculture.

Theme	Key Findings
Climate	<p><i>There is evidence that the climate in Northern Ireland is changing. There has been a reduction in greenhouse gases (GHGs) but road transport emissions are still increasing. There are government targets towards reducing GHG emissions of at least 35% by 2025 based on 1990 levels but this will prove challenging. A key priority for climate change has been the implementation of Northern Ireland's Climate Change Adaptation Programme in 2014. The Northern Ireland Environmental Statistics Report <del>2016</del> <b>2017</b> reported GHG emissions in Northern Ireland have decreased since 1990, with a reduction of <del>16%</del> <b>17% by 2014. The largest sources of emissions in 2014 were agriculture (28%), transport (21%) and energy supply (19%).</b> Most sectors have shown a decrease on the levels in the base year, with the exception of transport <b>which increased by 30% from the base year due to growth in demand for transport.</b> Whilst the emissions have increased by 0.7 million tonnes of CO<sub>2</sub> equivalent since the base year there has been a reduction over the last six reported years partly due to improvements in average fuel efficiency of vehicles and a switch from petrol to diesel cars. <b>In 2014, Northern Ireland emissions of carbon dioxide (CO<sub>2</sub>) amounted to 13.8 million tonnes of carbon dioxide equivalent (MtCO<sub>2</sub>e), a decrease of 16% on emissions of CO<sub>2</sub> in the base year.</b></i></p>
Water	<p><i>The overall status of water bodies in Northern Ireland has not significantly changed from that recorded in 2009 but improvements have been identified in water utility discharges and drinking water quality. In 2015, 32.7% of the river waterbodies were classified as 'high' or 'good' quality. There has been an increase in the number of water incidents reports but substantiated incidents have fallen. The key challenges for the water bodies relate to diffuse nutrient pollution, chemical status of the water environment and measures to address physical modifications of beds, banks and shore of surface waters. For the second cycle of River Basin Management Planning in Northern Ireland there are 496 surface water bodies including 450 river, 21 lakes and 25 transitional and coastal waters.</i></p>
Marine	<p><i>There has been an improvement to the overall quality of the marine environment, including bathing water quality and beaches, around Northern Ireland's shores. This can be directly linked to improvements in wastewater treatment. One key remaining issue is marine litter. The implementation of the Marine Strategy Framework Directive programme of measures will protect marine waters. The Northern Ireland Environmental Statistics Report <del>2016</del> <b>2017</b> reported that almost 36% of marine water bodies around Northern Ireland's shores are classified as 'high' or 'good', with the remaining water body areas being classified as 'moderate' (56%), 'poor' (8%). This is a significant drop as in 2015 almost 50% of waters were classified as high or good.</i></p>

Theme	Key Findings
Land and Landscape	<p>There is a marked change in the landscape with the development of upland wind farms and the significant decline in housing development has reduced pressure on land use. The number of planning applications for environmental installation for renewable energy has fallen since its peak of over 800 in 2011/2012. This may be due to a reduction in funding and a lack of grid capacity. The Northern Ireland Environmental Statistics Report 2016 2017 reported that at the end of 2015 2016, <del>305,000</del> <b>46,000</b> hectares of land in Northern Ireland were under the agri-environment scheme agreement (29% of NI farmland) which is a <b>significant decrease</b> on the 2014 2015 figure of <del>364,000</del> <b>305,000</b> hectares. <b>This decrease is attributable to the conclusion of the Countryside Management Scheme and New Environmentally Sensitive Areas Scheme in 2015 and 2016 respectively.</b></p>
Biodiversity	<p>Despite continued action many key elements of biodiversity continues to decline, however the wild bird population has increased by 49% but the underlying bird populations are not increasing with the thrush and skylark in decline. In particular since 2000, grassland habitats have shown the most declines, but in contrast woodland habitats have increased. The key pressures identified relate to land-use changes through agriculture and development with additional pressures such as pollution, invasive species and fisheries practices. The Northern Ireland Environmental Statistics Report 2015 reported that as of 31st March 2015, a total of 385 sites had been declared as Areas of Special Scientific Interest (ASSI), 57 sites as Special Areas of Conservation (SACs), 17 sites as Special Protection Areas (SPAs) and 21 sites as Ramsar sites (areas of wetland and waterfowl conservation). <b>The Northern Ireland Environmental Statistics Report 2017 notes that at the 31 March 2016, a total of 110,700 hectares across 387 sites had been declared as Areas of Special Scientific Interest (ASSI), 85,900 hectares across 57 sites as Special Areas of Conservation (SACs), 114,600 hectares across 17 sites as Special Protection Areas (SPAs) and 77,700 hectares across 21 sites as Ramsar sites (areas of wetland and waterfowl conservation). There are now 387 <b>390</b> ASSIs as of November 2016 <b>April 2017</b>.</b></p>
Built Heritage	<p>The key risks identified to archaeological resources come from agricultural land use and urban activities. It has been identified that protected sites have fared better. Through the Second Survey of Buildings of architectural or historic interest there has been an increase in the number of listed buildings. Built heritage has provided emerging opportunities in relation to regeneration, tourism and economic development. The Northern Ireland Environmental Statistics Report 2016 2017, reported that in <del>2014/15</del> <b>2015/16</b>, there were a total of <del>1,972</del> <b>1,977</b> scheduled historic monuments protected under Article 3 of the Historic Monuments and Archaeological Objects (NI) Order 1995. Listed buildings are those of special architectural or historic interest and there were a total of <del>8,702</del> <b>8,744</b> buildings recorded by NIEA in <del>2014/15</del> <b>2015/16</b> with <del>496</del> <b>487</b> listed buildings and structures classified as 'at risk' on the online Built Heritage at Risk in Northern Ireland (BHARNI) database.</p>

Theme	Key Findings
Waste and Resources	Recycling has seen a significant increase and is becoming much more common in Northern Ireland. The revised version of the Northern Ireland Waste Management Strategy proposed to introduce a 60% recycling target by 2020 for local authority collected municipal waste. In <del>2014/15</del> <b>2015/16</b> the total amount of local authority collected municipal waste arising's declined by <del>40.5</del> <b>8.9%</b> between 2005/06 and <del>2014/15</del> <b>2015/16</b> . It was noted by the Environmental Statistics Report 2016-2017 that the most common actions taken by households for environmental reasons were to reuse plastic bags and ensure that clothes and furniture were reused.

The following text amendments are made to Table 6.5 of the Environmental Report:

Biodiversity	Despite continued action many key elements of biodiversity continues to decline, however the wild bird population has increased by 49% but the underlying bird populations are not increasing with the thrush and skylark in decline. In particular since 2000, grassland habitats have shown the most declines, but in contrast woodland habitats have increased. The key pressures identified relate to land-use changes through agriculture and development with additional pressures such as pollution, invasive species and fisheries practices. The Northern Ireland Environmental Statistics Report 2015 reported that as of 31st March 2015, a total of 385 sites had been declared as Areas of Special Scientific Interest (ASSI), 57 sites as Special Areas of Conservation (SACs), 17 sites as Special Protection Areas (SPAs) and 21 sites as Ramsar sites (areas of wetland and waterfowl conservation). There are now <del>387</del> <b>390</b> ASSIs as of <del>November 2016</del> <b>April 2017</b> .
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The following text amendments are made to Section 6.4.1.1 of the Environmental Report:

*In Northern Ireland there are 57 SACs, 16 SPAs, 20 Ramsar and ~~387~~ **390** Areas of Special Scientific Interest (ASSIs). The ASSIs are areas of land with national conservation value. Some designations, such as Carlingford Lough SPA and Carlingford Shore SAC extend into Northern Ireland and as such present potential for transboundary effects.*

The amendments made to the baseline section for Northern Ireland will not alter the findings made in the Environmental Report and no further changes are proposed based on this consultation feedback.

### 9.2.2 Chapter 7 Environmental Objectives and SEA Framework

The submission from the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs (DAHRRGA) noted the following points in relation to the SEA:

- *While the Strategic Environmental Objective (SEO) for Biodiversity, Flora and Fauna includes protected species, the indicators and targets don't cover protected species, including those protected under the Wildlife Acts 1976-2012, outside of designated sites.*
- *In Appendix B the Wildlife Acts are referred to as the Wildlife Acts 1976-2010, these should be cited as the Wildlife Acts 1976-2012, while the European Communities (Birds and Natural Habitats) Regulations 2011 and its amendments should be cited as the European Communities (Birds and Natural Habitats) Regulations 2011 to 2015. The earlier Birds and Natural Habitats regulations cited have been revoked.*

In relation to the Strategic Environmental Objective (SEO) for Biodiversity, Flora and Fauna, the targets and indicators presented in the Environmental Report are those that are currently tracked and reported to the EU on a six year cycle. As such these are the EU protected habitats and species which does not include protected species, including those protected under the Wildlife Acts 1976-2012, outside of designated sites. There is currently no formalised and systematic approach to monitoring and reporting these species on an ongoing basis in Ireland and hence assigning targets and indicators may have limited value. The targets and indicators chosen are designed to be indicative of the impacts of the plan on biodiversity and in this regard, the evolving status of EU protected habitats and species (as planned by the SEO in the Environmental Report) is employed as an indicator of all biodiversity. Hence, no changes to the planned SEO targets and indicators presented in the Environmental Report are proposed.

The table in Appendix B of the Environmental Report is amended as follows:

Title	Summary of Objectives
Wildlife Acts <del>1976–2010</del> <b>1976-2012</b>	The purpose of the Wildlife Acts 1976- <del>2010</del> <b>2012</b> is to provide for the protection of wildlife (both flora and fauna) and the control of activities, which may impact adversely on the conservation of wildlife.
European Communities (Natural Habitats) Regulations, <del>SI 94/1997, as amended S.I. 233/1998 and S.I. 378/2005</del> <b>2011 to 2015</b>	These Regulations give effect to Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (Habitats Directive) and the Minister to designate special areas of conservation (endangered species and habitats of endangered species) as a contribution to an EU Community network to be known as NATURA 2000. See EU Habitats Directive.

The amendments made to Appendix B will not alter the findings made in the Environmental Report and no further changes are proposed based on this consultation feedback.

### 9.2.3 Chapter 9 Assessment

The EPA consultation response called for greater emphasis on planning, programming and integration of the various sectoral measures to maximise synergies and efficiencies. In addition, the EPA noted the following:

*Where reviews of the NMP identify that additional sectoral measures/actions are required or amendments to existing Plans/Programmes/Strategies are needed to advance achieving the aims of the NMP, the wider environmental implications of implementing these actions/measures must be assessed. The requirements of the SEA and Habitats Directive will also need to be taken into account. Establishing a close link between the monitoring/review of the NMP and the SEA-related monitoring is therefore needed.*

And separately the following note is presented by the EPA:

*Where modifications to the NMP are proposed, these should be screened for potential for likely significant effects in accordance with the criteria as set out in Schedule 1 of the SEA Regulations (S.I. No. 435 of 2004) and should be subject to the same method of assessment applied in the “environmental assessment” of the Draft NMP.*

The Environmental Report prepared in March 2017 included a full assessment of the sectoral mitigation measures proposed in the draft NMP (and unchanged in the final NMP). As per the 2015 Act, the NMP covers a maximum time horizon of five years after which a revised NMP will be prepared and subjected to similar SEA analysis.

However, it is accepted that in the interim it is possible that new measures may be added or existing measures may be modified. In such circumstances, these new or modified measures will be subjected to the analysis presented in Chapter 9 of the Environmental Report. Where required, additional mitigation and monitoring will be specified within the framework presented in Chapter 10 of the Environmental Report.

### **9.3 Amendments to the Natura Impact Statement**

Based on the changes outlined in the final NMP relative to the draft NMP, the Natura Impact Statement (NIS) prepared on the NMP has also been revised. This NIS has been revised based on changes to the NMP and consultation feedback and the updated NIS will be available for inspection with the final NMP and this SEA Statement.

## 10 Conclusions and Next Steps

The SEA and AA processes carried out during the preparation of the National Mitigation Plan have ensured that the potential significant environmental impacts associated with implementation of the plan have been identified and that these impacts have been given appropriate consideration. Consultation on the draft Plan, Environmental Report and NIS has further contributed to the development and finalisation of the adopted National Mitigation Plan.

It is envisaged that monitoring and reporting of environmental impacts, both positive and negative, resulting from implementation of the National Mitigation Plan will continue over the course of the lifetime of the plan. In addition, as new sectoral measures are added to the plan (either as addenda to this plan or as part of the successive NMPs) each will be assessed for environmental impact, assigned mitigation and included in the specified monitoring and reporting requirements.

The EPA annual emissions inventories and the annual sectoral mitigation transition statement required by each of the four Sectors under Section 14 of the 2015 Act will form a substantial element of the Environmental Monitoring Programme required under the SEA; thereby ensuring that the Environmental Monitoring Programme will be implemented and data will be gathered regularly.





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