

SEA STATEMENT

Fourth National Hazardous Waste Management Plan

This report was prepared on behalf of the Environmental Protection Agency



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1 INTRODUCTION

The Environmental Protection Agency (EPA) has prepared the draft fourth National Hazardous Waste Management Plan which will cover the period 2021 – 2027. It sets out the objectives and recommendations to be pursued over the next six years and beyond to improve the management of hazardous waste in Ireland, with a particular emphasis on prevention and reduction principles.

This Strategic Environmental Assessment (SEA) Statement has been prepared as part of the SEA of the Fourth National Hazardous Waste Management Plan (NHWMP). It has been prepared in accordance with Article 8 (Decision Making) of EU Directive 2001/42/EC on Strategic Environmental Assessment; Article 16(2) of the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations (S.I. No. 435 of 2004) as amended; and Circular Letter PL 9/2013, Department of Environment, Community and Local Government.

This document provides information on the decision-making process and documents how environmental considerations, the views of consultees/ stakeholders and the recommendations of the SEA Environmental Report and the assessment carried out under Article 6 of the Habitats Directive have influenced the final Plan to be adopted.

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 NHWMP;
5. How Consultation Feedback has influenced the NHWMP;
6. Preferred scenario and reasons for choosing the final Plan;
7. Measures to monitor significant environmental effects of the implementation of the adopted NHWMP; and
8. Addendum to the Environmental Report.

2 SUMMARY OF KEY FACTS

Title of Plan:	Fourth National Hazardous Waste Management Plan 2021 – 2027
Purpose of Plan:	The NHWMP sets out the objectives and recommendations to be pursued over the next six years and beyond to improve the management of hazardous waste in Ireland, with a particular emphasis on prevention and reduction principles.
Competent Authority:	Environmental Protection Agency (EPA)
Period Covered:	A National Hazardous Waste Management Plan is required to be prepared and reviewed every six years under Section 26 of the Waste Management Act 1996, as amended. This fourth iteration of the NHWMP covers the period 2021 – 2027.
Area Covered:	The NHWMP will apply to all hazardous wastes generated and managed in Ireland.
Nature and Content of the Plan:	<p>The key objectives of the fourth NHWMP 2021 – 2027 are:</p> <ol style="list-style-type: none"> 1. <i>Support and drive priority prevention actions by industry and the public to reduce the generation of hazardous waste;</i> 2. <i>Support the identification of adequate and appropriate collection infrastructure for all hazardous wastes with a view to mitigating environmental and health impacts;</i> 3. <i>Endorse the proximity principle such that hazardous wastes are treated as close to the point of production as possible – including within Ireland, taking into account the need for specialised installations for certain types of waste;</i> 4. <i>Support effective regulation of the movement and management of hazardous wastes in line with national policy priorities; and</i> 5. <i>Promotion of safe reuse and recycling pathways in support of the circular economy.</i> <p>The Plan articulates a set of recommendations and actions to be implemented by the EPA, governmental departments, regional and local authorities, as well as other agencies and authorities. It makes recommendations for actions and infrastructure based on data analysis and indicates a clear strategic need for hazardous waste to be treated in Ireland and exports to be reduced.</p>
Date Plan Came into Effect:	Following the EPA board meeting, the Fourth NHWMP was approved on 7 December 2021, and subsequently published on 16 December 2021.
Main Contact:	National Hazardous Waste Management Plan, Environmental Protection Agency, PO Box 3000, Johnstown Castle Estate, Co. Wexford, Y35 W821

3 SUMMARY OF THE SEA PROCESS

3.1 Introduction

The NHWMP has been subject to a process of 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.

3.2 Screening

Screening of the NHWMP for SEA was undertaken by EPA. It was determined that SEA was required for the fourth draft National Hazardous Waste Management Plan for the following reasons:

- The NHWMP is subject to preparation and adoption by an authority;
- It is required by national legislative provision;
- The plan addresses waste management issues;
- It is intended that the plan could set the framework for future development consent of projects listed in the EIA Directive; and
- Furthermore, the draft NHWMP was identified as having potential for likely significant effects on one or more European sites and as such has undergone Appropriate Assessment under Article 6(3) of the EU Habitats Directive [92/43/EEC].

3.3 Scoping and Statutory Consultation

Scoping was carried out to establish the level of detail appropriate for the SEA Environmental Report. An SEA Scoping Report was prepared and sent to the statutory consultees on 6 October 2020, to be used as the basis for statutory consultations. The statutory consultations were undertaken with the environmental authorities for SEA in Ireland. In addition, informal transboundary consultation was undertaken at scoping stage with Northern Ireland, Scotland, Wales, England, Germany, Belgium, France, the Netherlands, and Denmark. The consultees contacted are outlined in **Table 3-1**.¹

Table 3-1: Consultees in SEA Scoping

Scoping Consultee
Ireland
Environmental Protection Agency (EPA)
Department of Housing, Planning and Local Government (DHPLG)
Department of Communications, Climate Action and the Environment (DCCAE)
Department of Culture, Heritage and the Gaeltacht (DCHG)
Department of Agriculture, Food and the Marine (DAFM)
Department of Rural & Community Development (DRCD)
Transboundary
Department of Agriculture, Environment and Rural Affairs (DAERA) [Northern Ireland]
Scottish Environmental Protection Agency, Scottish National Heritage and Historic Environment Scotland [Scotland]
Welsh Government, Natural Resources Wales and Cadw [Wales]
Environment Agency, Natural England, and Historic England [England]

¹ It is noted that the statutory consultees for SEA in Ireland are identified in S.I. 435 of 2004, as amended. However, this legislation predates a number of Government Department changes, in some cases, departments have split/ merged. The most recent change in department names occurred in September 2020.

Scoping Consultee

Vlaamse Milieumaatschappij (VMM)/ Flanders Environment Agency and Service Public de Wallonie, Direction Générale Opérationnelle Agriculture, Ressources naturelles et Environnement / Wallonia Operational Directorate-General for Agriculture, Natural Resources and the Environment (DGARNE) [Belgium]

Planbureau voor de Leefomgeving (PBL), National Institute for Public Health and the Environment (RIVM) and Rijkswaterstaat (RWS) [The Netherlands]

Naturstyrelsen / Danish Nature Agency [Denmark]

Umweltbundesamt (UBA) / German Environment Agency [Germany]

L'Agence de la transition écologique, anciennement Agence de l'environnement et de la maîtrise de l'énergie (ADEME) / Agency of Ecological Transition, formerly Environment Agency and Energy Management [France]

A scoping workshop was subsequently held online on 10 November 2020. Representatives from the statutory environmental authorities were invited to attend this workshop. The following were represented on the day:

- SEA team;
- NHWMP team;
- Environmental protection Agency SEA Unit;
- Department of Environment, Climate and Communications; and
- Department of Housing, Local Government and Heritage (observation only).

Comments made at the workshop (and in subsequent written submissions) from the consultees were taken into account in the preparation of the Environmental Report. All submissions received from 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. Consultation is discussed in detail in **Chapter 5**.

3.4 Environmental Assessment and Environmental Report

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








- The relevant aspects of the current state of the environment and its evolution in the absence of the plan;
- The environmental characteristics of areas likely to be significantly affected and existing environmental problems relevant to the plan
- Links between the NHWMP and other relevant strategies, policies, plans, programmes and environmental protection objectives;
- The likely significant effects of the NHWMP on the environment (both positive and negative);
- Measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment;
- An outline of the reasons for selecting the alternatives chosen; and
- The measures envisaged concerning monitoring.


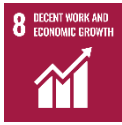




3.4.1 Summary of Assessment

The approach used for the assessment in the SEA was termed an “objectives-led assessment”. In this case, each of the NHWMP policies were tested against defined SEA Strategic Environmental Objectives; refer to **Table 3-2** which covered all SEA environmental topics under the relevant SEA legislation, e.g. population, biodiversity, material assets etc. Draft Strategic Environmental Objectives were included in scoping consultation and updated following that consultation. The environmental objectives were based on the current understanding of the key environmental issues having regard to the environmental protection

objectives outlined in the main Environmental Report. A matrix format was used for the assessment, which permitted a systematic approach and comparison of alternatives.

Table 3-2: Strategic Environmental Objectives

Related to SEA Topic(s)	Strategic Environmental Objective(s)	To what extent will the draft NHWMP...	Relevant UN Sustainable Development Goal(s)
Population and Human Health (PHH)	Objective 1: <i>To protect human health from hazardous waste.</i>	<ul style="list-style-type: none"> Reduce and promote better management of hazardous waste in household settings Promote awareness and knowledge of hazardous waste issues Support the protection of human health from hazardous substances and waste Support and enable appropriate collection platforms 	 GOAL 3: <i>Ensure healthy lives and promote well-being for all at all ages</i>  GOAL 12: <i>Ensure sustainable consumption and production patterns</i>
Biodiversity, Flora and Fauna (BFF)	Objective 2: <i>Preserve, protect, maintain and where appropriate restore the terrestrial, aquatic and soil biodiversity, particularly EU designated sites and protected species (including transboundary considerations) and integrate biodiversity considerations wherever possible into the NHWMP.</i>	<ul style="list-style-type: none"> Support the protection of biodiversity from hazardous waste management activities Support the regulatory processes for licensed facilities 	 GOAL 15: <i>Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss</i>
Land and Soil (LS)	Objective 3(a): <i>Safeguard soil quality and quantity (including geo-heritage sites) from hazardous waste.</i> Objective 3(b): <i>Reduce and eliminate soil contamination.</i>	<ul style="list-style-type: none"> Protect the national soil resource from hazardous waste management activities Remediate legacy sites where hazardous waste is present Support increased remediation of contaminated soil within Ireland 	 GOAL 15: <i>Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss</i>
Water (W)	Objective 4: <i>Protect and restore water quality (surface waters, groundwaters and marine waters) from hazardous waste (including transboundary considerations).</i>	<ul style="list-style-type: none"> Support the protection of water quality from hazardous waste management activities Support the regulatory processes for licensed facilities 	 GOAL 6: <i>Ensure availability and sustainable management of water and sanitation for all</i>  GOAL 14: <i>Conserve and sustainably use the oceans, seas and marine resources for sustainable development</i>
Air Quality (AQ)	Objective 5(a): <i>Protect air quality, including transboundary considerations, from hazardous waste and/ or reduce air pollution or limit to levels that do not damage the natural environment or human health.</i>	<ul style="list-style-type: none"> Support the proximity principle Support reductions in air and noise emissions from hazardous waste management activities 	 GOAL 11: <i>Make cities and human settlements inclusive, safe, resilient and sustainable</i>

Related to SEA Topic(s)	Strategic Environmental Objective(s)	To what extent will the draft NHWMP...	Relevant UN Sustainable Development Goal(s)
	Objective 5(b): Maintain and promote continuing improvement in air quality through the reduction of emissions, including transboundary considerations.	<ul style="list-style-type: none"> Support the regulatory processes for licensed facilities 	
Climatic Factors (CF)	Objective 6: Minimise emissions of greenhouse gases associated with hazardous waste management (including other waste treatment activities, transport, industry, agriculture and energy).	<ul style="list-style-type: none"> Support the proximity principle Support reductions in GHG emissions from hazardous waste management activities 	 GOAL 13: Take urgent action to combat climate change and its impacts
Material Assets (MA)	<p>Objective 7(a): Prevent and minimise the generation of hazardous waste.</p> <p>Objective 7(b): Optimise use of existing infrastructure/ built environment, raw materials and energy.</p> <p>Objective 7(c): Minimise the export of hazardous waste for treatment and/ or disposal and reduce emissions due to transportation.</p> <p>Objective 7(d): Support and promote the use of waste as a resource.</p> <p>Objective 7(e): Support sustainable activities without conflicting with other environmental protection objectives.</p>	<ul style="list-style-type: none"> Promote and contribute to implementing circular economy principles Reduce and ultimately prevent generation of hazardous waste Promote resource efficiency Support self-sufficiency in hazardous waste management Support the regulatory processes for licensed facilities Reduce and promote better management of hazardous waste in business and commercial settings Support and enable appropriate collection platforms 	 GOAL 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all  GOAL 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation  GOAL 11: Make cities and human settlements inclusive, safe, resilient and sustainable  GOAL 12: Ensure sustainable consumption and production patterns
Cultural Heritage (CH)	Objective 8: Protect places, features, buildings and landscapes of cultural, historical archaeological or architectural heritage.	More appropriately dealt with at lower planning tiers.	 GOAL 11: Make cities and human settlements inclusive, safe, resilient and sustainable
Landscape (LandS)	Objective 9: Protect and maintain the national landscape character, including geoheritage.	More appropriately dealt with at lower planning tiers.	

The primary effect of the NHWMP is to improve the management of hazardous waste, with a focus on prevention, coordination activities and increased hazardous waste awareness, and to minimise the environmental, health, social and economic impacts of hazardous waste generation and management into the future. Many of the recommendations and actions under consideration will have direct positive impacts for population and human health and material assets in particular as a result.

However, a number of the actions also have the potential to impact on other environmental receptors directly and indirectly. The assessment of the recommendations and related actions from the draft Plan are summarised in **Table 3-3**.

Table 3-3: Summary of Assessment on the draft NHWMP

Plan Action Area	Summary of Draft NHWMP Recommendations / Actions and Assessment	Mitigation?
Policy & Regulation	<p>Includes Recommendations 1 to 4 and 9 actions. The actions relate to coordinated national approaches on hazardous waste management in the context of circular economy principles, with a particular focus on hazardous waste prevention. The actions also aim to deliver on enforcement approaches, to support all-island approaches to hazardous waste issues, and to strengthen resilience in hazardous waste management in light of the Covid-19 pandemic.</p> <p>The recommendations and associated actions are considered to be broadly positive, and deemed to have a positive effect on environmental objectives, particularly in the long term. A reduction and improvement of the management of hazardous waste through regulatory and legislative reviews, sharing of best practice and keeping emerging issues under review, as well as establishing a working group with Northern Ireland should lead to more holistic and efficient approaches to hazardous waste management.</p>	✓
Prevention	<p>Includes Recommendations 7 to 8 and 10 actions. These comprise awareness raising, knowledge development and sharing, utilising existing regulatory regimes to promote prevention and reduction of hazardous waste in industry processes in particular, provision of research funding and support for green public procurement (GPP).</p> <p>These are generally deemed to have a positive effect on environmental objectives, particularly in the long term. Data gathering and research, as well as behavioural insights can help identify knowledge gaps and indicate where further work or information campaigns are needed. By promoting measures to reduce household hazardous waste consumption, encouraging the use of non-toxic alternatives in production chains, supporting research and innovation and using green public procurement, the resulting benefits of public awareness and promotion of a circular economy would consequently have a positive impact on the environment generally.</p>	✓
Collection & Treatment	<p>Includes Recommendations 9 to 17 and 14 actions. These relate to conducting a review of hazardous waste capacity in the state, looking at the waste licensing/permitting legislation to help facilitate better management of small hazardous waste sources, improving management of commercial sources, developing and implementing collection platforms for particular waste streams (household, farm, asbestos, paint and unused medicine hazardous wastes), continued remediation of historic disposal sites containing hazardous waste, as well as identifying options for the safe storage of orphan radioactive wastes.</p> <p>These have broadly positive impacts on environmental objectives; however some negative impacts have been identified. In the short-term, there is potential for negative impacts on air quality, material assets and population and human health due to indirect impacts associated with transport of waste and noise/ disturbance from segregation activities.</p> <p>Any collection or storage area however has the potential to give rise to contaminated run-off if stored inappropriately, or give rise to e.g. spillage risks if sited inappropriately. This may give rise to risk to soils and water in particular with indirect impacts for biodiversity and human health. However in the medium to long term, facilitating collection options and infrastructure is positive as it will lead to improved and better management of both household and commercial hazardous waste streams through suitable collection facilities, which offers greater environmental benefit along with a reduction in the quantity of hazardous wastes being mismanaged and potentially entering the environment or impacting on human health.</p>	✓
Implementation	<p>Includes Recommendations 18 and 19 and 5 actions. These relate to implementation of the draft Plan, with actions related to reporting protocols, establishing a working group for the Plan and reporting on its progress, as well as conducting data-gathering, such as hazardous waste characterisation surveys.</p> <p>These are generally positive, particularly in the medium to long term, as these actions will assist in informing national waste management and prevention policies, facilitate better knowledge from the survey work, and better monitoring and implementation approaches to the fourth NHWMP. These actions should allow for the Plan to take cognisance of emerging issues and for projecting changes down the line, allowing for more overall effective decision-making.</p>	✓

3.4.2 Statutory Consultation on the Draft Plan

The draft NHWMP was published for consultation on 16 July 2021 alongside the Strategic Environmental Assessment (SEA) Environmental Report and the Appropriate Assessment (AA) Natura Impact Statement (NIS). All documents were available for inspection and download online.² See further details in **Section 5.3**.

3.5 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:

- How environmental considerations have been integrated into the plan or programmes, or modification to a plan or programme;
- 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;
- The reasons for choosing the plan or programme, in light of other reasonable alternatives dealt with, and
- 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 NHWMP 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 Natura Impact Statement, as well as the views of the statutory consultees and other submissions received during 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. The SEA Statement will be available to the public, along with the NIS and the adopted NHWMP.

3.6 Appropriate Assessment

In addition to the SEA, there is a requirement under the EU Habitats Directive (92/43/EEC) to carry out Appropriate Assessment (AA). 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 management of the 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 the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.”

In recognition of this, an AA Screening was undertaken, in parallel with the SEA process. It was determined that AA was required and an NIS was therefore prepared to inform the AA. The EPA has determined that the *National Hazardous Waste Management Plan* will not adversely affect the integrity of any European site, whether alone or in-combination with any other plans and projects.³

3.7 Adoption of the National Hazardous Waste Management Plan

Following the EPA board meeting, the Fourth NHWMP was approved on 7 December 2021, and subsequently published on 16 December 2021.

² EPA Consultations: <https://www.epa.ie/publications/corporate/consultations/-consultations/draft-national-hazardous-waste-management-plan-2021--2027.php>

³ The NIS and AA determination are available under separate cover and are available on the EPA website.

4 INFLUENCE OF THE SEA PROCESS ON THE NHWMP

4.1 Integration of the SEA Process

The SEA and the AA processes have been undertaken in parallel to the preparation of the NHWMP. From the outset, considerations of the environmental consequences of implementing the planning framework (and its reasonable alternatives) have been taken into account. This included:

- Attendance at an SEA Scoping workshop to present the SEA / AA processes and highlight key environmental issues;
- Iterative discussion and development of the alternatives to be considered;
- Advice and guidance on early versions of the proposed action base to highlight environmental risks;
- Evolution of Plan recommendations/ actions;
- Recommendation of mitigation measures to address the potential impacts arising from the draft measures and subsequent detailed discussions on how to integrate this mitigation effectively;
- Attendance at an SEA monitoring workshop to discuss realistic and implementable monitoring actions;
- Discussions on integration of stakeholder observations and issues raised through statutory public consultation on the draft Plan.

Table 4-1 shows how environmental considerations and the input of the SEA and AA have been taken into account in the final NHWMP.

Table 4-1: How Environmental Considerations Have Been Taken into Account in the NHWMP

Environmental Consideration	Integration into the NHWMP Process
Early discussion on policy formation	The SEA / AA teams engaged directly with the NHWMP team at an early stage to raise issues and create awareness on key environmental constraints relating to plan alternatives and the action base.
Identification of environmental constraints	The SEA team prepared baseline information on environmental conditions with the focus on SEA environmental topics, including: population, human health, biodiversity, flora and fauna, water, climate, air, land and soil, landscape, cultural heritage, material assets and water. This information was used to focus the SEA objectives, inform the alternatives discussions and the assessment and assess positive and negative impacts associated with the implementation of the proposed NHWMPF. It also influenced the development of the SEA monitoring programme by flagging data gaps. GIS analysis and an Environmental Sensitivity Mapping (ESM) exercise were also undertaken to inform the baseline at a strategic level.
Assessment of alternatives	The environmental baseline and objectives were used to identify key sensitivities and inform development and assessment of the alternatives. The SEA team and the plan team liaised on possible alternatives during preparation of the SEA scoping document and subsequently through meetings and workshops.
Recommendation of mitigation measures to address impacts on the wider environment	Mitigation measures were proposed to address negative environmental impacts identified during the assessment process. These included amendments to the wording of recommendations/actions in the NHWMP and recommendations for changes/ new actions to reflect protection of the environment (See Section 4.2 which presents the mitigation measures from the SEA and AA processes and clarifies how they have influenced the final NHWMP as adopted). A table of how the measures have been incorporated into the final plan is also included in Appendix D to the plan.
Required environmental monitoring programme	A monitoring programme was presented in the SEA Environmental Report. This has been amended following statutory public consultation and further discussion with the plan team and will help facilitate the ongoing monitoring of the implementation of the NHWMP.
Consultation	Statutory consultation was undertaken with the environmental authorities for SEA in Ireland in relation to scoping of the SEA Environmental Report. Informal transboundary consultation was also undertaken at that time with Northern Ireland, England, Wales, Scotland, Belgium, the Netherlands, Denmark, Germany and France. Issues raised were used to inform the overall scope and context of the environmental assessment.

Environmental Consideration	Integration into the NHWMP Process
	<p>Subsequently, the SEA Environmental Report, the AA Screening and Natura Impact Statement (from the Appropriate Assessment process) and the draft NHWMP were put on statutory public display by the EPA in July 2021. Additional transboundary consultees were included in this round of consultation, the environment agencies of Norway and Portugal, based on revised waste export figures.</p> <p>All stakeholder feedback was reviewed and proposed changes arising from the feedback were then assessed under the SEA and AA processes to determine if they would result in any additional significant environmental effects or result in adverse effects to any European site(s) prior to their inclusion in the Plan and finalisation of the NHWMP (see Chapter 5 and Table 5-7).</p>

4.2 Recommended Mitigation Measures and how they have been addressed in the Final NHWMP

As part of the assessment of the draft NHWMP, both the SEA Environmental Report and the NIS specifically suggested mitigation measures to offset negative impacts identified. These included general measures such as additional text clarifying obligations in relation to protection of European Sites, suggested inclusion of further guidance and studies to inform the evidence base, wording in actions, as well as specific recommendations and suggestions on how to improve the effectiveness of the plan going forward.

Table 4-2 and **Table 4-3** present the mitigation measures from the SEA and AA processes carried out on the draft NHWMP; these clarify how they have influenced the final NHWMP as adopted.

Table 4-2: SEA Mitigation Measures in the Environmental Report

Draft NHWMP Ref.	Proposed Mitigation	How these have been addressed in the Final Plan
Policy & Regulation	<ul style="list-style-type: none"> • General Mitigation: Clarity should be provided in the NHWMP on how the various waste/circular economy strategy, programmes and plans interface within the newly emerging circular economy/ waste hierarchy. • Action 1.2: Recommend adding the following wording to the action to ensure environmental protection at other planning levels: <i>Incorporation of relevant NHWMP objectives (including reference to environmental protection objectives and the mitigation from the NHWMP) in national waste management planning.</i> 	<p>An additional graphic listing plans relevant to the NHWMP has been added to Chapter 8 of this SEA Statement (Addendum to the Environmental Report).</p> <p>Mitigation accepted and incorporated in the Plan action.</p>
Prevention	<ul style="list-style-type: none"> • Action 5.2: Consider liaising with and encouraging waste collection providers to provide information on household hazardous waste on their websites and in future leaflets to ensure a wider reach of information. 	<p>Included waste operators in dissemination of information as suggested by the SEA mitigation. The revised action now reads as follows: <i>Develop new coherent information on household hazardous waste and guidance on disposal of hazardous waste; and disseminate via targeted & national campaigns; and through the EPA website, & www.mywaste.ie and waste operators.</i></p>
Collection & Treatment	<ul style="list-style-type: none"> • General Mitigation: It is Recommended that the following is added to the plan as a specific recommendation: <i>Ensure that all plans, projects and activities requiring consent arising from the NHWMP are subject to the relevant regulatory environmental assessment requirements including SEA, EIA and AA as appropriate.</i> • General Mitigation: It is recommended that the NHWMP supports the use of the EPA Environmental Sensitivity Mapping (ESM) Webtool and the Appropriate Assessment GeoTool which can be applied at the lower tiers of waste management planning to inform decision-making in terms of infrastructural/siting considerations as well as consideration of environmental sensitivities e.g. as part of environmental risk assessments.⁴ • Actions 9.1 and 9.2: <ul style="list-style-type: none"> – In addition to updating the 2018 capacity report, it is recommended that an economic study/cost-benefit analysis forms part of this review process to examine the economic viability of managing various waste streams in Ireland. 	<p>The final Plan incorporates the general mitigation through the inclusion of new Recommendation 20: <i>Ensure that all plans, projects and activities requiring consent arising from the NHWMP are subject to the relevant regulatory environmental assessment requirements including SEA, EIA and AA as appropriate.</i></p> <p>The text on supporting the use of the mapping tools has been incorporated into the final Plan under Section 2.2 – Plan Recommendations.</p> <p>The action has incorporated the SEA mitigation and the revised action now reads as follows: <i>Update & maintain inventory of national capacity for storage, treatment and disposal of hazardous wastes. An economic study/cost-benefit analysis should be considered as part of this review process to examine the economic viability of managing various waste streams in Ireland. Emerging issues should be included to inform any capacity/infrastructure needs e.g. trends in healthcare risk waste generation and management, the growing uptake in EVs and recycling needs for lithium batteries etc.</i></p>

⁴ EPA ESM Tool: <https://airomaps.geohive.ie/ESM/> and AA GeoTool: <https://gis.epa.ie/EPAMaps/AAGeoTool>

Draft NHWMP Ref.	Proposed Mitigation	How these have been addressed in the Final Plan
	<ul style="list-style-type: none"> – The updated review should consider emerging issues to inform any capacity/infrastructure needs e.g. trends in healthcare risk waste generation and management, the growing uptake in EVs and recycling needs for lithium batteries etc. • Action 10.2: <ul style="list-style-type: none"> – It is recommended that prior to this action being implemented, a feasibility study or site assessment is undertaken at CAS's to determine the suitability and capacity of these facilities and the existing infrastructure to accept hazardous waste streams (related factors such as the population catchment being served could also be considered). This will assist in determining what CAS's may or may not be appropriate for the collection and/or temporary storage of hazardous waste based on existing site conditions, infrastructure, capacity, and surrounding environmental sensitivities. – The site assessment should ensure as a minimum that the site location and drainage is suitable for the protection of the soils and water environment from run-off and human health in order to prevent cumulative negative impacts. • Action 11.1: <ul style="list-style-type: none"> – This action would also benefit from including an action on effective enforcement of the Biocidal Product Regulations to help ensure these are managed correctly. It is also recommended that the EPA work with the HSA and/or other authorities as appropriate to either develop or review the enforcement approach to biocides, including pesticides. – Recommend including an action to increase awareness among farmers with respect to hazardous waste sources which could be included as part of future awareness campaigns. • Actions 10.2, 11.1, 12.1 & 12.2, 13.1 and 15.1: <ul style="list-style-type: none"> – It is recognised there are potential impacts from hazardous waste collection and storage, particularly outside of licensed facilities, e.g. from accidental spillages to nearby watercourses. Prior to the establishment of any nationwide system for collection and transfer of household, farm hazardous waste, surplus/expired medicines, paint and asbestos waste, all collection points (e.g. marts or similar), the transport systems, temporary storage areas and management solutions should be fully established to ensure that these systems pose no adverse risk to the environment or human health. 	<p>Text has been included in the final Plan as follows under Section 2.2 – Plan Recommendations:</p> <p><i>It is recommended that a feasibility study or site assessment is undertaken at CAS's to determine the suitability and capacity of these facilities and the existing infrastructure to accept hazardous waste streams (related factors such as the population catchment being served could also be considered). This will assist in determining what CAS's may or may not be appropriate for the collection and/or temporary storage of hazardous waste based on existing site conditions, infrastructure, capacity, and surrounding environmental sensitivities.</i></p> <p><i>The site assessment should ensure as a minimum that the site location and drainage is suitable for the protection of the soils and water environment from run-off and human health in order to prevent cumulative negative impacts.</i></p> <p>Additional supporting text has been included in the final Plan under Section 5.3 – Farm hazardous waste, as follows:</p> <p><i>Pesticides which include biocides and plant protection products, are regulated by the Department of Agriculture, Food and the Marine from the point of view of placing on the market and use. Pesticide products which are no longer permitted to be used are hazardous waste and must be disposed of in accordance with the national waste legislation.</i></p> <p>The final Plan has included an expanded section on Smart Farming (Section 5.3.1) as a means to increase awareness of hazardous farm waste.</p> <p>On the mitigation for Actions 10, 11, 12, 13 and 15, new text has been added on the need for environmental risk assessments; see above. Chapter 5 of the final Plan also has new supporting text as follows:</p> <p><i>The Environmental Protection Agency in cooperation with the Health and Safety Authority and civic amenity (CA) site operators developed guidance to establish the environmental and operational standards required at CA sites for the acceptance and safe storage of the wide range of hazardous waste streams from households and small business. CA operators should be supported in use of the Guidance.</i></p> <p>Reference to emerging issues has been added to Recommendation 9, specifically:</p> <p><i>... Emerging issues should be included to inform any capacity/infrastructure needs e.g. trends in healthcare risk waste generation and management, the growing uptake in EVs and recycling needs for lithium batteries etc.</i></p> <p>Recommendation 2 also commits to: <i>Deliver strong and collaborative enforcement of hazardous waste legislation to ensure protection of human health and the environment.</i></p>

Draft NHWMP Ref.	Proposed Mitigation	How these have been addressed in the Final Plan
	<ul style="list-style-type: none"> – An environmental risk assessment should be undertaken at all collection/storage sites to determine the suitability and capacity of these sites to accept and store these hazardous waste streams with no adverse risk. It is recommended these checks are reported and recorded in advance of the implementation of any such system. – As part of conducting environmental risk assessments, it would be beneficial to develop or set out siting criteria which considers key environmental sensitivities such as proximity to watercourses, ground conditions, protected sites etc. • Recommendation 14: Would benefit from the inclusion of an action to keep under review the development of future guidance for key emerging issue areas e.g., healthcare risk waste. • Action 16.1: <ul style="list-style-type: none"> – Consider including an action to prepare guidance or a code of practice on the approaches to storing radioactive wastes, which could be based around existing guidance (e.g. IAEA). – It is recommended that an environmental risk assessment and a safety assessment are undertaken as part of the process for developing options/proposals for existing or new storage sites. • Action 17.1: Continued application of the <i>EPA Waste Sites Code of Practice</i> (2007) and <i>Guidance on Contaminated Land and Groundwater at EPA Licensed Sites</i> (2013). Any waste authorisation should also be accompanied by an AA Screening. 	<p>On radioactive waste, it is noted that the IAEA has completed its review mission for Ireland in October 2021 (https://www.iaea.org/newscenter/pressreleases/iaea-mission-says-ireland-committed-to-safe-management-of-radioactive-waste-sees-areas-for-further-enhancement). The final mission report is to be provided to the Irish Government within the coming months. The following text is added to Section 5.7 of the final Plan: <i>The Integrated Review Service for Radioactive Waste and Spent Fuel Management, Decommissioning and Remediation (ARTEMIS) carried out a peer review on the management of radioactive waste in Ireland. While acknowledging Ireland has demonstrated a strong commitment to the safe management of disused radioactive sources and radioactive waste, recommendations were made to Ireland which include:</i></p> <ul style="list-style-type: none"> • <i>Continue to explore options to provide a long-term solution for the management of radioactive waste and disused sealed radioactive sources.</i> • <i>Include all existing and anticipated radioactive waste categories in the national inventory.</i> • <i>Consider strengthening education and training arrangements and maintaining the competence of all persons and organizations with responsibilities relating to the management of radioactive waste and disused sealed radioactive sources.</i> <p>The Plan includes the following text under Section 7.6 in respect of Closed Landfills: <i>Applications for a certificate of authorisation for closed landfills may only be made by local authorities. Risk Assessments are to be carried out in accordance with the 'Code of Practice - Environmental Risk Assessment for Unregulated Waste Disposal Sites' and the site investigation matrices published on the EPA website.</i></p> <p>The final Plan gives consideration to the general mitigation through the inclusion of new Recommendation 20 to reinforce the need for environmental assessments.</p>
Implementation	<ul style="list-style-type: none"> • General Mitigation: To emphasise the consideration of this plan at lower planning tiers, it is recommended that the following is included in the Plan: <i>Local authorities should consider the information provided in this revised Plan and environmental reports, and in accordance with sections 22 (8) and 26 (6) of the Waste Management Act 1996, as amended.</i> • Action 18.1: It is recommended that the use of agreed Key Performance Indicators (KPIs) be considered in reporting of hazardous waste generation and treatment. • Action 18.2: 	<p>Under Recommendation 1, two actions include: <i>Incorporate prevention & management of hazardous waste into the national Circular Economy Programme and Incorporation of relevant NHWMP objectives (including reference to environmental protection objectives and the mitigation from the NHWMP) in national waste management planning.</i></p> <p>Reference to KPIs is included in the final Plan as a new action under Implementation Recommendation 19: <i>Identify key performance indicators to measure and track trends in hazardous waste management.</i></p>

Draft NHWMP Ref.	Proposed Mitigation	How these have been addressed in the Final Plan
	<ul style="list-style-type: none"> – On the issue of 'difficult wastes' in order to address data gaps on arisings, it is recommended to undertake a pilot characterisation study to estimate the quantities of such waste streams nationally. This could include a review to collate current management approaches and data gaps on difficult waste streams, and develop guidance or a code of practice for dealing with such wastes. It would be useful to identify any regulatory gaps and liaise with the appropriate bodies to develop an integrated enforcement approach. – Quantities of unmanaged waste remains poorly understood. It is recommended to develop a pilot study to characterise and quantify the volumes of unmanaged waste (e.g. illegally dumped, fly-tipped etc.) to identify hazardous components, and the most common waste stream(s). This would also help highlight where more prevention programmes, campaigns and awareness-raising could be targeted. • Action 19.3: The following to be added to the action: <i>In accordance with Art. 9(2) of S.I. No. 435 of 2004, as amended, any modifications to the Plan following the interim review will need to determine if the modifications are likely to have significant effects on the environment.</i> 	<p>Difficult wastes are discussed in Section 5.10 of the Plan. A line has been added to reference the management of invasive species as follows: <i>There remains nonetheless a need to carefully monitor and control the movement of these wastes. Invasive Species Ireland provide information on safe handling and disposal.</i></p> <p>No current plans to develop guidance or a code of practice for other difficult waste streams.</p> <p>On unmanaged waste, the final Plan includes reference to quantifying/ characterising unreported hazardous waste under Section 3.6 as follows: <i>Any future pilot study to characterise and quantify the volumes of unmanaged waste should include a characterisation of the hazardous components of unmanaged waste.</i></p> <p>The environmental monitoring programme also includes Monitoring Objective 1 (see Section 7.2 of this SEA Statement and new Appendix E to the final Plan) which aims to monitor trends in the levels of mismanaged hazardous waste. The remedial action is to carry out characterisation surveys should the quantities of mismanaged hazardous waste for certain waste streams be unknown.</p> <p>The action under Recommendation 19 has been updated in the final Plan to incorporate the suggested mitigation wording, with further inclusion of reference to the need for AA consideration also, as follows:</p> <p><i>Conduct a mid-term review of the NHWMP and update actions for the second half of the plan. In accordance with Art. 9(2) of S.I. No. 435 of 2004, as amended, any modifications to the Plan following the interim review will need to determine if the modifications are likely to have significant effects on the environment. AA considerations will also be required at this stage.</i></p>

Table 4-3: AA Mitigation Measures in the Natura Impact Statement

Plan Section	Proposed Mitigation	How these have been addressed in the Final Plan
Policy & Regulation	<ul style="list-style-type: none"> None proposed. 	N/A
Prevention	<ul style="list-style-type: none"> None proposed. 	N/A
Collection & Treatment	<ul style="list-style-type: none"> Recommendation 9: Ensure that the NHWMP secures a requirement that all actions arising with respect to the development of waste infrastructure takes into account the legal protection of European Sites; including the application of AA processes with respect to any subsequent plans or projects which emerge as part of the development of that infrastructure. Include the following general mitigation as follows: <i>Ensure that all plans, projects and activities requiring consent arising from the NHWMP are subject to the relevant regulatory environmental assessment requirements, including SEA, EIA and AA as appropriate.</i> Recommendation 10: Ensure that the NHWMP secures a requirement that all actions arising with respect to the collection and management of waste takes into account the legal protection of European Sites; including the application of AA processes with respect to any subsequent plans or projects which emerge as part of the implementation of this objective. Include the general mitigation as per Recommendation 9. Recommendation 11: Ensure that the NHWMP secures a requirement that all actions arising with respect to the development of a suitable collection scheme takes into account the legal protection of European Sites; including the application of AA processes with respect to any subsequent plans or projects which emerge as part of the implementation of this objective. Include the general mitigation as per Recommendation 9. Recommendation 12: Ensure that the NHWMP secures a requirement that all actions arising with respect to the development of a suitable collection scheme takes into account the legal protection of European Sites; including the application of AA processes with respect to any subsequent plans or projects which emerge as part of the implementation of this objective. Include the general mitigation as per Recommendation 9. Recommendation 13: Ensure that the NHWMP secures a requirement that all actions arising with respect to the development of a nationwide, large-scale collection of waste takes into account the legal protection of European Sites; including the application of AA processes with respect to any subsequent plans or projects which emerge as part of the implementation of this objective. Include the general mitigation as per Recommendation 9. Recommendation 15: Ensure that the NHWMP secures a requirement that all actions arising with respect to the identifying options for the collection of asbestos and asbestos- contaminated wastes takes into account the legal protection of European Sites; including the application of AA processes with respect to any subsequent plans or projects which emerge as part of the implementation of this objective. Include the general mitigation as per Recommendation 9. Recommendation 16: Ensure that the NHWMP secures a requirement that any new temporary storage facilities are subject to Appropriate Assessment with respect to the EU Habitats Directive to ensure no adverse effects prior to being consented. Include the general mitigation as per Recommendation 9. Recommendation 17: Ensure that the NHWMP secures a requirement that all actions arising with respect to remediating legacy waste disposal sites containing hazardous waste takes into account the legal protection of European Sites; including the application of AA processes with respect to any subsequent plans or projects which emerge as part of the implementation of this objective. Include the general mitigation as per Recommendation 9. 	<p>The final Plan incorporates the general mitigation through the inclusion of new Recommendation 20:</p> <p><i>Ensure that all plans, projects and activities requiring consent arising from the NHWMP are subject to the relevant regulatory environmental assessment requirements including SEA, EIA and AA as appropriate.</i></p>
Implementation	<ul style="list-style-type: none"> None proposed. 	N/A

5 HOW CONSULTATION FEEDBACK HAS INFLUENCED THE NHWMP

5.1 Introduction

An important facet of the development of the NHWMP has been comprehensive public consultation. Public consultation processes held in respect of the emerging Plan included:

- Consultation on the SEA Scoping Report – refer to the summary of the process in **Section 3.3** and the details below in **Section 5.2**;
- Public consultation on the draft NHWMP, the SEA Environmental Report and the associated Natura Impact Statement in 2021– see details below in **Section 5.3**.

5.2 SEA Scoping Phase

5.2.1 Submissions from Statutory Consultees

As outlined in **Section 3.3**, an SEA Scoping Report was prepared and sent to the statutory consultees on to be used as the basis for statutory consultations. The issues raised in the submissions from statutory consultees is presented in **Table 5-1** below. The responses received on foot of the informal transboundary scoping consultation are summarised in **Table 5-2**.

Table 5-1: Summary of Issues Raised during Formal SEA Scoping

Consultee	Summary of Points Raised	How this has been addressed
Environmental Protection Agency (EPA)	<ul style="list-style-type: none"> The relevant aspects of the key actions for Ireland (identified by the EPA- 'Ireland's Environment- An Assessment 2016') and SDG's should be taken into account when preparing the plan and the SEA. This will ensure the Plan aligns with SDG's and EPA ambitions. The NPF, RSES and Regional WMP's should also be considered. Key issues and challenges described within the EPA's State of the Environment Report (EPA, 2016) and imminent new report (when published) [Note: this is Ireland's Environment – An Integrated Assessment, 2020] should also be taken into account. Plan should align with climate change adaptation and mitigation such as national commitments, relevant adaptation plans and the Waste Action Plan for a Circular Economy. The Plan should clearly set out the scope, remit and implementation related elements of the Plan as these will guide the level assessment for the SEA. The ER should explain where the proposed Plan will be implemented via other plans, which themselves have been or will be subject to SEA and should be accounted for in the assessment. Further detail should be provided in the ER and Plan on specific mentioned measures on the relevant environmental assessments at the project stage and mitigation measures. Exploring this further with Environmental Authorities may provide merit during plan preparation and SEA processes. The EPA recommend that the plan includes summary tables outlining the key findings of the SEA and linking environmental effects identified to the proposed mitigation measures, monitoring programme and Plan. Schematics in the Plan are recommended to show the link with other plans. Suggest including a separate section on 'Monitoring, Review and Reporting' in the Plan. Suggest including a parallel implementation plan - would facilitate monitoring the implementation of NHWMP actions, its environmental performance, timelines and reviews. As part of this and between review periods the EPA recommends annual/bi-annual implementation reports to provide transparency and allow evaluation of environmental performance. The Plan should identify any significant data/ knowledge gaps and how they can be addressed during plan implementation. This will strengthen future plans. 	<p>SEA and AA mitigation to be included as appendix to final Plan. Also mitigation added as recommendation No.20 in final Plan: <i>Ensure that all plans, projects and activities requiring consent arising from the NHWMP are subject to the relevant regulatory environmental assessment requirements including SEA, EIA and AA as appropriate.</i></p> <p>The Strategic Environmental Objectives were revised as relevant on foot of scoping for inclusion in the SEA ER; see Table 3-2 for the SEOs used in the ER. Reference to the Sustainable Development Goals were referenced as part of the SEOs to demonstrate how the Plan could contribute to the national effort in achieving these goals.</p> <p>Chapter 4 of the SEA ER (Other Plans and Programmes) was updated on foot of the suggestions received. Relevant other plans, programmes and policy statements have also been referenced in the Plan and in Table 5-7 to the SEA ER which contains a list of other relevant plans, programmes and policies considered relevant to the SEA and in support of Chapter 4 of the SEA ER.</p> <p>Graphics were included in the SEA ER in terms of demonstrating linkages with other key relevant plans/ policies. An additional graphic listing relevant plans to the NHWMP has also been added to Chapter 8 of this SEA Statement (Addendum to the Environmental Report).</p> <p>The Plan includes extensive reference to other legislation and roles/ responsibilities. Section 7.4 of the Plan specifically deals with enforcement of hazardous waste legislation.</p> <p>The final Plan includes Appendix D which outlines how the SEA/AA mitigation and recommendations were incorporated into the plan.</p> <p>Refer to the Environmental Monitoring programme which has been incorporated into the final NHWMP as Appendix E.</p> <p>Recommendation 19 and its three associated actions specifically addresses implementation and reporting on the progress of the Plan as follows: <i>Establish a working group to support implementation of plan recommendations; Provide an annual update on progress of plan recommendations; and Conduct a mid-term review of the NHWMP and update actions for the second half of the plan.</i></p> <p>Knowledge gaps have been outlined in the SEA ER. The SEA monitoring programme was compiled with reference to these gaps and with a view to closing the significant ones e.g. the proportion of unmanaged waste at a national scale that is hazardous. Refer to the Monitoring programme which has been incorporated into the final NHWMP As Appendix E.</p>

Consultee	Summary of Points Raised	How this has been addressed
	<ul style="list-style-type: none"> Recommend using available EPA resources, e.g. guidance, ESM webtool, EPA WFD Application, EPA AA GeoTool and environmental authorities as per the SEA Regulations. The Plan should clearly address what substances and materials constitute hazardous waste, the legislation to which the plan is aligned and a clear delineation of what substances and materials are excluded. Table 3.1 of the Scoping Report should be updated to reflect the correct names of the relevant government departments, e.g. sections of the DHLGH relating to architectural or archaeological heritage and nature conservation should be consulted. Transboundary consultations are welcomed and the EPA encourage similar to be carried out at the draft Plan stage as feedback garnered from such consultation will be useful. EPA attended the scoping workshop and welcomed the active participation from stakeholders worth considering combining the workshops on alternatives and monitoring. May be merit in including a horizon scanning exercise as part of the preparation of the Plan and incorporating this into the implementation plan. The draft Plan should consider how hazardous wastes, currently shipped either to NI or mainland UK for treatment or disposal, might be treated or disposed. A number of plans, policies and programmes suggested for inclusion into Table 4.1 of the Scoping Report. Consider farm hazardous waste, e.g. lands and soil and the link with human health. Reference in the scoping report to potential increases in contaminated soil due to brownfield redevelopment is welcomed and should be assessed in the SEA. Gap in the information addressed in terms of batteries and electronic waste. Risks posed by active waste management facilities should refer to recovery installations and facilities, as well as disposal sites. The emissions from waste treatment and recovery facilities should also incorporate those installations that treat and recover hazardous waste. Improper storage of hazardous wastes, pesticides and storage and disposal of medicines should also be considered. Consideration should be given to the potential impacts from co-incineration of hazardous wastes at cement kilns. Hazardous residues identified in port sediments should consider the data available from dumping at sea and foreshore authorisations. 	<p>Data and resources relevant to the nature and scale of the Plan, including in particular EPA SEA guidance (on Alternatives, Monitoring, SEA Statements, and SEA of Waste Sector) were referenced and employed. The ESM Webtool was accessed and run as part of the SEA assessment with indications of its usefulness at the lower planning tiers where site-specific information will become available.</p> <p>The final Plan contains a number of sections covering the characteristics of hazardous waste, namely: Section 3.5 – Characterisation of Household & Commercial Hazardous Waste; Chapter 5 – Hazardous Waste Collection; Section 7.4 – Classification of Hazardous Waste; Appendix A: Properties of waste that render it hazardous.</p> <p>Waste exports are considered in the final Plan in Section 3.4, Exports of Hazardous Waste.</p> <p>The SEA monitoring workshop attended by representatives of the statutory environmental authorities was held on 18 February 2021.</p> <p>The current names of the SEA environmental authorities have been noted in this SEA Statement with reference to the S.I. 435 of 2004 Regulations, as amended.</p> <p>Transboundary consultation was carried out at the draft Plan Scoping stage and further to the consultees listed in Table 3-1 of this SEA Statement, additional transboundary consultees were included (environment agencies of Norway and Portugal) based on revised waste export figures; see Section 3.4.2.</p> <p>A section on farm hazardous waste and an associated recommendation/actions have been included in the Plan. The SEA ER also discussed both human, animal and environmental implications of hazardous waste.</p> <p>Contaminated land issues, issues related to farm hazardous waste and emissions from licensed facilities are described in the SEA Environmental Report.</p> <p>The final Plan has included a recommendation to undertake a continual review of waste trends, including streams such as batteries and the growing uptake of electric vehicles.</p> <p>The Plan includes Recommendations and Actions relating to the need for and implementation of appropriate collection infrastructure for: farm hazardous waste, out of date/expired medicines, household hazardous waste, asbestos waste and surplus paints.</p>

SEA STATEMENT

Consultee	Summary of Points Raised	How this has been addressed
	<ul style="list-style-type: none"> Objective no. 3 should refer to reducing and eliminating soil contamination. Objective no. 4 should refer to protect and restore water quality. Objective no. 6 - there may be merit in considering the inclusion of other areas such as industry, waste treatment, agriculture and energy in relation to minimising GHG's. Objective no. 7 - merit reference to preventing and minimising the generation of hazardous waste; would align with strategic objective of the waste action plan to design waste out of systems. The Plan/SEA and alternatives considered should evaluate and consider the different modes by which separate collection of household hazardous waste could be delivered. The alternatives should consider the implications of circular economy legislation being transposed, such as the collection of waste oils legislation. It should be noted that the Department of Environment, Climate and Communications are currently preparing a Circular Economy Strategy which may be useful to consider in the preparation of the plan. The EPA acknowledges that the NHWMP will not specify geographically where hazardous waste infrastructure should be sited but consideration should be given to the impacts on climate, air quality, biodiversity and land and soil. The Plan should also consider island of Ireland alternatives when looking at potential for indigenous treatment and reducing transports for treatment and whether or not this could be possible in the context of Brexit. Potential for eco-design and prevention of hazardous materials being incorporated into products should be given consideration to avoid end of life waste issues. 	<p>The Strategic Environmental Objectives were revised as relevant on foot of the scoping consultation for inclusion in the SEA ER; see Table 3-2 for the SEOs used in the ER.</p> <p>A description of the alternatives considered is included in the SEA Environmental Report and outlined in Chapter 6 of this SEA Statement.</p> <p>The comments on alternatives were noted and taken account of by the SEA and Plan teams in developing the alternatives assessment documented in the SEA ER. See Section 6.4.2 of this SEA Statement (Preferred Scenario and Reasons for Choosing) which sets out consideration of an all-island approach vs a national approach to hazardous waste management.</p> <p>Potential impacts on climate, air quality, biodiversity and land and soil were considered as part of the preparation of the SEA ER and NIS.</p> <p>The Plan has prevention in the first instance as a key objective. A number of Plan Recommendations/Actions were developed including, among others: Recommendation 1 - <i>Ensure a coordinated national approach on hazardous waste in the context of the Circular Economy, with focus on prevention</i>; Recommendation 2 - <i>Deliver strong and collaborative enforcement of hazardous waste legislation to ensure protection of human health and the environment</i>; and Recommendation 8 - <i>Use Green Public Procurement (GPP) to specify products & services that reduce the use of hazardous substances and generation of associated hazardous wastes</i>.</p> <p>The final Plan also includes an action under Recommendation 5 on labelling of consumer products: <i>Examine potential of product & in-store labelling of hazardous substances to inform consumer purchasing and waste management decisions</i>.</p> <p>Recommendation 6 also specifically addresses industrial processes: <i>Prevent hazardous waste in industrial sectors and support a safe circular economy</i>.</p> <p>A consultation report will be prepared after close-out of the Plan.</p>
Department of Environment, Climate and Communications (DECC) – Geological Survey Ireland (GSI)	<ul style="list-style-type: none"> Geo-heritage could also be considered as part of Objective 9, such as inclusion of geological landforms and landscapes within the County Geological Sites. Flood Risk Management: need to identify areas for integrated constructed wetlands. Recommend use of GSI's datasets/ maps. Recommend using the GWFlood tools. Datasets mentioned could also be used as part of Objective 3 and Objective 4. DECC encourages use of bedrock and subsoil data sets for future assessments. The subsoil data set could be used as part of Objective 3. 	<p>The Strategic Environmental Objectives (SEOs) were revised as relevant on foot of the scoping feedback for inclusion in the SEA ER; see Table 3-2 for the SEOs used in the ER assessments.</p> <p>GSI datasets/mapping was included in the Chapter 5 baseline of the SEA ER. Constructed wetlands are not relevant to the strategic scope and nature of the Plan and the associated SEA.</p> <p>Use of mapping and GIS was limited for the assessment given the strategic nature of the Plan however the data was used in compiling the Chapter 5 baseline which directly informed the environmental assessments of the plan in terms of e.g. soil quality and contamination issues at a national level. The</p>

SEA STATEMENT

Consultee	Summary of Points Raised	How this has been addressed
	<ul style="list-style-type: none"> • Geohazard data sets (landslides, groundwater flooding, coastal flooding) could be used as part of Objective 3 and Objective 4. • Welcomes reference to mineral locations/ aggregate potential in Section 3.7 of the Scoping Report. • Natural resource data sets could be used as part of Objectives 7(a) and 7(b). • Marine and coastal data sets could be used in relation to Objective 4. 	<p>baseline also flagged data gaps which then fed into the development of the draft SEA Monitoring Programme.</p> <p>Refer to the Monitoring programme which has been incorporated into the final Plan as Appendix E.</p> <p>Potential for hazardous waste activities to impact on the marine environment were considered as appropriate throughout the SEA ER environmental baseline.</p>
Inland Fisheries Ireland (IFI)	<ul style="list-style-type: none"> • IFI notes the 'overarching' goals in the scoping report. • The proposed plan and SEA, AA reports should fully consider aquatic biological diversity, the fisheries resource and stakeholder interest. • SEA and AA documents should recognise that protection of the aquatic environment requires both water quality protection and the protection/ maintenance of physical habitat, hydrological processes and regimes. • Plans should prioritise maintenance and restoration of ecological status in all surface waters with a particular emphasis on high quality sites. • Plan and decision makers must take account of climate disruption / biodiversity crisis and associated mitigation measures when considering any strategic plans / frameworks or proposals. • The potential negative impacts of any strategic plan framework on aquatic habitats should also be addressed. • Advocates consideration of a number of areas with relevance to fishery resources; Particularly those outlined in Table 5.1 of the Scoping Report. • IFI advocates future development of the fourth NHWMP framework as outlined in 'Outline of Alternatives' 2' (Section 7.3 of the Scoping Report) - to fully take account of and reflect results of the public consultation. • IFI endorses the selection of topics as outlined in Table 5.1. • Advocates application of precautionary principle when considering fisheries resource. 'Blue Dots Catchment Programme' should be supported. 	<p>Aquatic elements have been considered in the preparation of the draft Plan and the environmental documentation as relevant. Refer in particular to Chapter 5 of the SEA ER.</p> <p>The Strategic Environmental Objectives were revised as relevant on foot of scoping for inclusion in the SEA ER; see Table 3-2 for the SEOs used in the ER.</p> <p>The draft Plan recognised the key principles of the circular economy, the proximity principle and the concept of waste as a resource, with an ultimate focus on the prevention and reduction of hazardous waste generation in the first instance.</p> <p>The alternatives considered are outlined under Chapter 6 of this SEA Statement (Preferred Scenario and Reasons for Choosing).</p> <p>Chapter 4 of the SEA ER (Other Plans and Programmes) was updated on foot of the suggestions received. Relevant other plans, programmes and policy statements have also been referenced in the Plan and in Appendix A to the SEA ER which contains a list of other relevant plans, programmes and policies considered relevant to the SEA and in support of Chapter 4 of the SEA ER.</p>

5.2.2 Submissions from Transboundary Consultees

Table 5-2: Summary of Issues Raised during Informal Transboundary SEA Scoping

Consultee	Summary of Points Raised	How this has been addressed
Department of Agriculture, Environment and Rural Affairs Northern Ireland (DAERA)	<ul style="list-style-type: none"> Useful information sources highlight the current state of the environment in Northern Ireland at a regional level and which could be referenced are: Northern Ireland State of the Environment Reports & Northern Ireland Environmental Statistics Reports: Suggested Marine Policy documents relevant to NI are considered in the SEA report in order to take account of transboundary aspects and that they should also be considered to be listed under key plans, policies and programmes. Historic Environment Division recommend the following to mention: Convention for the Protection of the Archaeological Heritage of Europe (Valletta 1992); Convention for the Protection of the Architectural Heritage of Europe (Granada 1985); European Landscape Convention (Florence 2000). When refining targets, the potential disturbance to/impact on NI/RoI migratory/mobile species such as salmon, Hen Harriers, Marsh Fritillary and bats should be considered. Cross border habitats and pathways also require special attention, such as ecological functionality and 'views' of landscape cross political boundaries. Necessary steps are taken to ensure the potential impacts on drinking water supplies in Northern Ireland (public or private) is included in the scope. It is important to consider potential effects on cultural heritage characteristics, their transboundary qualities and relationships. The sub-topics of the SEA topics and the draft SEA Objectives should be revisited to give further consideration to potential impacts on both the marine environment and the transboundary nature of marine effects. This will strengthen the overall assessment e.g. reference could be made to coastal landscapes or seascapes within the Landscape topic and the corresponding draft SEA Objective 9. Marine aspects within the sub-topics of the SEA sub-topics are welcomed e.g. reference to marine waters in SEA Objective 4. Objective 4: Greater assurance could be given to cross border water quality to ensure all Drinking Water Protected Areas and Zones of Contribution protected. 	<p>Chapter 4 of the SEA ER (Other Plans and Programmes) was updated on foot of the suggestions received. Relevant other plans, programmes and policy statements have also been referenced in the Plan and in Appendix A to the SEA ER which contains a list of other relevant plans, programmes and policies considered relevant to the SEA and in support of Chapter 4 of the SEA ER.</p> <p>The Strategic Environmental Objectives were revised as relevant on foot of scoping for inclusion in the SEA ER; see Table 3-2 for the SEOs used in the ER.</p> <p>Transboundary considerations and issues were noted throughout Chapter 5 of the SEA ER as relevant to hazardous waste management and the draft Plan e.g. in terms of protected areas, water quality, marine issues and landscape and heritage.</p> <p>It is considered that the particular issues surrounding landscape/seascape and heritage are more appropriately dealt with at lower planning tiers.</p> <p>Relevant material assets considerations were considered as part of Chapter 5 of the SEA ER.</p> <p>The proposed SEA monitoring programme covers the key issue areas for environmental protection and provides avenues for filling data gaps.</p>

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Consultee	Summary of Points Raised	How this has been addressed
Scottish Environment Protection Agency (SEPA)	<ul style="list-style-type: none"> On the basis of the information provided, it is considered that the plan is unlikely to have significant adverse impacts on Scottish interests (air, soil, water, human health, material assets and climatic factors) in terms of transboundary issues. 	Comments noted.
Nature Scot (Scotland)	<ul style="list-style-type: none"> Confirmed no comments to be made on the Scoping Report. 	Noted.
Historic Environment Scotland (HES)	<ul style="list-style-type: none"> Expressed that the objectives and actions contained in the plan are unlikely to have significant adverse impacts on historic environment interests. Content for transboundary effects on the historic environment in Scotland to be scoped out of the assessment. 	Comments noted.
Cadw / Historic Environment Service / Welsh Government (Wales)	<ul style="list-style-type: none"> Confirmed no comments to be made on the Scoping Report. 	Noted.
Rijkswaterstaat (The Netherlands)	<ul style="list-style-type: none"> Confirmed no comments to be made on the Scoping Report. Expressed interest in the draft plan when published and requested to be notified of same. 	The draft NHWMP and environmental documentation were sent to the Netherlands NWS as part of the statutory public consultation on the draft Plan.

5.3 Issues Raised and Submissions from Statutory Public Consultation

The draft NHWMP was published for consultation on 16 July 2021 alongside the SEA Environmental Report and the AA NIS. All documents were available for inspection and download online.²

The SEA environmental authorities set out in **Table 3-1** that were consulted during the scoping stage, including the transboundary authorities, were also contacted as part of the statutory consultation on the draft Plan and environmental documentation. Two further transboundary consultees were contacted based on revised waste export figures as they receive significant quantities of Ireland's exported waste: Miljødirektoratet / Norwegian Environment Agency [Norway] and Agência Portuguesa do Ambiente (APA) / Portuguese Environment Agency [Portugal].

Submissions and observations on the draft NHWMP and associated environmental documentation were invited prior to finalisation of the NHWMP to inform the final plan to be adopted. The deadline for receipt of submissions was the 17 September 2021. A total of 25 responses were received from a range of stakeholders and interested parties:

- **Section 5.3.1** and **Table 5-3** presents the feedback from the statutory environmental authorities for SEA in Ireland.
- **Section 5.3.2** and **Table 5-4** presents the feedback from transboundary consultation.
- **Section 5.3.3** and **Table 5-5** and **Table 5-6** presents the feedback from the wider statutory public consultation.

Following a review and consideration of all the submissions, the EPA responded with changes to the final NHWMP. Significant changes made since the publication of the draft Plan have been screened for the requirement for further consideration under both the SEA and AA processes; this is recorded in **Table 5-7**.

5.3.1 Submissions from Statutory Consultees

Four submissions were received from the SEA statutory environmental authorities, including:

- Environmental Protection Agency (EPA);
- Department of Agriculture, Food and the Marine (DAFM);
- Department of the Environment, Climate and Communications (DECC); and
- Geological Survey of Ireland (GSI) [*Note: parent department is DECC*].

The key issues raised and how they have been addressed in the final Plan are summarised in **Table 5-3**.

Table 5-3: Summary of Submissions from the Statutory Consultees during Public Consultation

Consultee	Summary of Points Raised	How this has been addressed in the NHWMP
Environmental Protection Agency (EPA)	<p>Comments in Relation to the Draft NHWMP</p> <ul style="list-style-type: none"> Welcome the clear objectives of the plan. Level of integration of the SEA and AA mitigation measures needs to be addressed. Where recommendations are not implemented, reasons as to why should be provided. Additional chapter could be added which collates the relevant recommendations from the SEA and NIS. Plan should align with key relevant higher-level plans and programmes (e.g. Waste Action Plan for a Circular Economy). Plan should be consistent with the relevant objectives and policy commitments of the National Planning Framework – should be clear on how these have been incorporated. Important to have clear coordination and communication between stakeholders for effective implementation of the recommendations. The numbering of the recommendations does not seem to be sequential. Local Authorities should be listed as 'Lead Organisation', responsible for regulating hazardous waste movement. Recognise the Regional Waste Management Planning Offices as a key organisation when recommending infrastructure considerations (Recommendation No. 4). Healthcare waste management during emergencies should be considered. Note that Section 56 of Waste Management Act was not used during the pandemic to manage waste. The National Waste Prevention Programme would be more appropriate avenue to progress the use of less toxic chemicals. Recommendation 10 should include a reference to the Industrial Emission licensing. Consider amending the actions for Recommendation No. 11 to 'Develop, agree and implement a plan...' Incorporate the original recommendation with the new recommendation for asbestos collection points. Recommendation 17: Consider possible policy options to progress the framework for tackling 'Section 26 sites' and set out aspects such as timetable, funding options, regulatory requirements, etc. 	<p>SEA and AA mitigation to be included as appendix to final Plan. Also mitigation added as Recommendation No.20 in final Plan: <i>Ensure that all plans, projects and activities requiring consent arising from the NHWMP are subject to the relevant regulatory environmental assessment requirements including SEA, EIA and AA as appropriate.</i></p> <p>Reasons are provided on how mitigation has been addressed in the final Plan through inclusion of new Appendix D in the Plan. Additional chapter not expected as inclusion of this Appendix is the approach taken.</p> <p>Commentary on National Planning Framework included in final Plan.</p> <p>Communication via annual update on plan and interim and final reports. Also via epa.ie. A new NHWMP implementation group with key stakeholders to be convened early during plan phase.</p> <p>Numbering has been changed/ updated in the final Plan.</p> <p>The Waste Action Plan, Regional Waste Management Plan, Climate Action Plans and other relevant plans were reviewed as part of the final NHWMP process.</p> <p>Local Authorities included as lead organisations. Reference to RWMPO added to the final Plan.</p> <p>Healthcare risk waste during emergencies forms part of Action No. 4: <i>Commission a review of hazardous waste management during the COVID-19 pandemic.</i></p> <p>Recommendation 10 changed in final Plan to include reference to 'relevant waste licensing and permitting'.</p> <p>Recommendation 11 wording has been changed as suggested.</p> <p>New recommendation on asbestos has been added: <i>Promote best practice in the management of asbestos-contaminated waste</i></p>

Consultee	Summary of Points Raised	How this has been addressed in the NHWMP
	<ul style="list-style-type: none"> Acknowledge aspects such as catalytic converters as emerging issue for enforcement. Two figures are labelled as 'Figure 3.2' – update to correct labelling. Figure 3.2 – indicate the new KMK installation at Kilbeggan on the map. Note there is no hazardous waste incinerator in Ireland, but is hazardous waste incineration (Carranstown and various industrial sites) and co-incineration (Breedon Cement) – Section 3.3. Also pharmaceutical companies with on-site incinerators. Support efforts to make the regulation of waste arising from cleaning up invasive plant species more accessible. Policy and Regulation - The exemptions from the scope of the legislation for waste waters and animal carcasses are conditional. Section 7.3 – make the text in the 3rd paragraph clearer. 'The EPA Act 1992 ..., including the issuing for certain industrial and waste activities.' Most EPA-regulated waste facilities now regulated by IE. Enforcement of hazardous waste legislation could also refer to the role and relevance of the new Local Authority Waste Programme Co-ordinator. On closed landfills: Clarify that the regulations only refer to local authority-operated landfills; Could also discuss the situation concerning policy gaps relating to privately operated landfills that may contain hazardous waste. <p>Comments on the SEA relevant for plan consideration:</p> <ul style="list-style-type: none"> Contents and Main Objectives of the Plan: <ul style="list-style-type: none"> Clarifying the second bullet in the ER Chapter 2 whether refers to existing or proposed new infrastructure - does it encompass all collection streams? Expand Section 2.5 in future SEAs. Include a recommendation to review hazardous capacity reports over lifetime of the plan. Current state of environment, Chapter 5 of ER: <ul style="list-style-type: none"> Unclear from the Plan what level of enforcement of the biocidal regulations has been undertaken to date. Include a recommendation that looks for a review of the level and effectiveness of enforcement of these regulations, in association with all relevant stakeholders, to help inform addressing the issue. 	<p>There is a specific action to ensure a coordinated national approach on hazardous waste in the context of the Circular Economy, with focus on prevention. Key players such as EPA, DECC and HSA to be brought together to tackle issue of toxic chemicals.</p> <p>Recommendation 17 goes outside the scope of the NHWMP and is not included.</p> <p>Noted the comments on catalytic converters however not seen as an emerging issue.</p> <p>Figure 3.2 has been updated for the final Plan.</p> <p>The comments on hazardous waste incineration are noted.</p> <p>Invasive species themselves are not hazardous however additional text has been included in the final Plan under Section 5.10, Difficult Wastes.</p> <p>Section 7.3 has been updated to address the clarification.</p> <p>Section 26 sites not included as outside the scope of the NHWMP.</p> <p>Local Authority Waste Co-ordinator has been updated.</p> <p>The comments on closed landfills are noted.</p> <p>Chapter 2 of the ER reflects the objectives of the plan as published in draft for consultation. The final Plan objectives have been updated. The infrastructure refers to management of hazardous waste streams.</p> <p>Table 4-2 and Table 4-2 of this SEA statement show how the SEA and AA mitigation was addressed in the final Plan. A new appendix, Appendix D, has also been added to the final Plan setting out how both the SEA ER and NIS recommendations and mitigation has been addressed in the Plan.</p>

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Consultee	Summary of Points Raised	How this has been addressed in the NHWMP
	<ul style="list-style-type: none"> Concerns in Section 5.3.6.6 of the ER [Existing Environmental Pressures/ Problems: Material Assets] could be reflected in the Plan and how to address. Mitigation and monitoring, Chapter 9 of ER: <ul style="list-style-type: none"> Proposed additional text wording suggested for certain actions have not been reflected in the draft Plan. Include Table 9.1 and Table 9.2 SEA & AA Mitigation in section where assessment processes are described to demonstrate the integration. Table 9.3: suggest including information on the frequency of the monitoring to be carried out and commitment to reporting on the environmental monitoring proposed. Consider monitoring both positive and negative side effects. Monitoring programme should set out the various data sources, monitoring frequencies and responsibilities. Monitoring summary of objective 6 could include a summary of capacity review. Screen future modifications for likely significant effects. 	<p>Reference to the Biocide Regulations in the SEA ER has been updated to clarify the responsibilities; see Chapter 8 of this SEA Statement (Addendum to the Environmental Report).</p> <p>The preparation of the draft Plan has had regard to the issues discussed in the SEA ER and in finalising the Plan.</p> <p>The SEA monitoring programme has been amended to reflect the suggestion on Monitoring Objective 6; see Chapter 7 of this SEA Statement (measures to Monitor Significant environmental effects of the Implementation of the Adopted NHWMP) and is included as Appendix D to the final Plan.</p> <p>The SEA Monitoring Programme sets out the key data sources and responsibilities and has been incorporated as part of the final Plan as new Appendix E.</p> <p>Future iterations of the NHWMP will be subject to the SEA and AA processes as appropriate.</p> <p>A consultation report will be prepared after close-out of the Plan.</p>
	<p>Comments in Relation to the SEA Process and ER:</p> <ul style="list-style-type: none"> Explain how the comments from the scoping stage have been incorporated in the SEA report. Relevant Plans and Programmes: Consider additional hierarchy graphic for the National Policy Statements and relevant Waste plans at national and regional level. Clarify whether the SEA recommends that these local authority sludge management plans be updated to address this issue. Integration of SEA and plan: Include schematic outlining the linkages between the plan-making process and the environmental assessment process in the report would be beneficial. The SEA is a good example of SEA best practice. However some sentences of the report are generic as if taken from another report i.e. refers to 'trends in the marine area'. Consultation with statutory consultees: <ul style="list-style-type: none"> Not clear what transboundary authorities have been consulted at this stage of the process. 	<p>How the SEA and AA mitigation measures have been addressed in the plan is detailed in Table 4-1 to Table 4-3 of this SEA Statement, and in Appendix D to the final Plan.</p> <p>See Table 5-1 and Table 5-2 of this SEA Statement for how Scoping feedback was integrated into the Plan and SEA.</p> <p>Additional graphic showing relevant plans has been added to Chapter 8 of this SEA Statement (Addendum to the Environmental Report).</p> <p>Noted that the responsibility to update and maintain sludge management plans is with local authorities and S.I. 267/2001, as amended, and that Irish Water has assessed wastewater sludge management and recommendations for local authorities as part of the National Wastewater Sludge Management Plan. The local authority plans cover non-hazardous sludge.</p> <p>An additional graphic showing integration of the SEA, AA and plan preparation processes has been added to Chapter 8 of this SEA Statement (Addendum to the Environmental Report).</p> <p>Marine issues were considered at a high level relevant to the scope and nature of the Plan. Marine trends are considered relevant, in particular shipping, as the main mode of exporting hazardous waste. Issues such as contaminated land,</p>

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Consultee	Summary of Points Raised	How this has been addressed in the NHWMP
	<ul style="list-style-type: none"> – The relevant requirements of the SEA protocol² under the ESPOO Convention should be considered in the transboundary consultation with non-EU Member States. • SEA statement should include: <ul style="list-style-type: none"> – How environmental considerations have been integrated into the Plan; – How the Environmental Report, submissions, observations and consultations have been considered during the preparation of the Plan; – The reasons for choosing the Plan adopted in the light of other reasonable alternatives dealt with; and, – The measures decided upon to monitor the significant environmental effects of implementation of the Plan. • Send a copy of SEA statement to any environmental authority consulted during the SEA process. 	<p>and likewise contaminated sediment in the marine environment, were also relevant to consider as part of the baseline.</p> <p>Transboundary consultation was carried out at the draft Plan Scoping stage with other EU Member States and the UK, and further to the consultees listed in Table 3-1 of this SEA Statement, additional transboundary consultees were included (environment agencies of Norway and Portugal) based on revised waste export figures.</p> <p>This SEA Statement has been prepared providing a summary of the SEA process and how it has influenced the final Plan (see Chapter 3 and Chapter 4); summarising how consultation feedback has influenced the plan (Sections 5.2 and 5.3); the preferred plan scenario and reasons for choosing (Chapter 6); and the updated environmental monitoring Programme (Chapter 7).</p> <p>Notification of the Final NHWMP and SEA Statement publication will be provided in accordance with Article 9 of the SEA Directive (Information on the Decision): The authorities consulted with will be notified of the adoption of the plan and this SEA Statement has been prepared (also taking account of Articles 6, 7 and 8).</p>
Department of the Environment, Climate and Communications (DECC)	<ul style="list-style-type: none"> • Clarifications requested on treatment to hazardous waste status. • Should reference the Zero Pollution Strategy under the Green Deal. • A number of text edits/ rearrangements were suggested to better clarify certain points. • Queried whether there was reference to AA Screening included in the Plan. • Dates proposed for the four key issues areas seem overly optimistic. • Suggestions were provided with regards to wording/timeframes of the Recommendations and Actions. • Queried whether product/in-store labelling is feasible at national level as usually covered at EU level. Suggest and awareness campaign. • Note that the requirement for separate household collection of hazardous waste is mandated at EU level. • Queried whether the Smart Garage guide included non-hazardous paint. • Suggestions for lead authorities provided. • Bottom ash typically recycled e.g. in road projects in other EU countries. • Noted potential for Brexit to impact on exports. • On contaminated soils, exports to Norway could be further clarified • Household hazardous waste can lead to fires at treatment facilities. • Noted there is already updated GPP guidance and that further guidance could be more hazardous waste specific. 	<p>Text edits have been made to the plan to better clarify certain points. Added reference to the Zero Pollution Strategy under Section 4.3.</p> <p>Reference to the AA and SEA processes is included under the Executive Summary. The NSI to accompany the Plan is available under separate cover and details the AA screening process.</p> <p>Timeframes have been reviewed and updated as appropriate as part of the table of Recommendations. The lead authorities have also been reviewed and updated as appropriate in the final Plan.</p> <p>Points on fly ash noted.</p> <p>Recommendation 4 will look at the potential for product/in-store labelling in the first instance. All of the actions under this recommendation are aimed at promoting reduced consumption of hazardous substances in households, including awareness-raising,</p> <p>The separate collection requirement is noted under the Section 5.1 on Household hazardous waste.</p> <p>Recommendation 13 addresses surplus paint from household and commercial sources.</p> <p>Some exports of hazardous waste are noted to go to Northern Ireland.</p> <p>Comments on fires noted; considered to be more of a storage issue.</p> <p>Comments on GPP noted, updated reference in the final Plan.</p> <p>Noted the comments on research and funding; references added as appropriate to the final Plan.</p>

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Consultee	Summary of Points Raised	How this has been addressed in the NHWMP
	<ul style="list-style-type: none"> • Could add mention of the CIRCULIRE Innovation fund under Research and Innovation. There is also funding available for cleaner technology approaches from e.g. H2O2 and the LIFE programme. • Queried exports and level of recovery in Ireland for some waste streams. • Queried the need for a dedicated hazardous waste landfill if more sustainable options can be found. • Suggested the text covering Brexit be amended. • Suggested including reference to POPs National implementation Plan. • Note that the quoted figures on legacy landfill remediation and number of authorisations is current. 	<p>On exports and recovery, the current limitations in Ireland are technologies and economies of scale.</p> <p>Noted the point on landfill – more sustainable options are noted, for instance for managing asbestos waste.</p> <p>The NTFSO provided text to update Section 7.2 covering Brexit.</p> <p>Noted the point on the POPs NIP; not considered necessary to include.</p> <p>Numbers of legacy landfill authorisations/applications are current as of final Plan update.</p>
Geological Survey Ireland (GSI) [DECC]	<ul style="list-style-type: none"> • Recommend use of and referencing the various GSI datasets – list attached with submission. • Use of the data and maps should be attributed correctly to 'Geological Survey Ireland'. • Pleased to see comments in relation to Objective 9 addressed, but Objective 9 is not reflected in the plan itself. • Encourage EPA to review previous submission in response to the public consultation for the SEA scoping document. 	<p>Specific reference to the availability of GSI datasets has been added to Chapter 8 of this SEA Statement (Addendum to the Environmental Report).</p> <p>The maps using GSI data as part of the baseline for the SEA ER included full attribution as follows: <i>Geological Survey Ireland Contains Irish Public Sector Data (Geological Survey Ireland) licensed under a Creative Commons Attribution-Non Commercial-No Derivatives 4.0 (CC BY-NC-ND 4.0) International Licence.</i></p> <p>The Strategic Environmental Objectives are used as part of the objectives-led assessment approach in the SEA as a basis for assessing the environmental impacts of the plan.</p> <p>The Plan recognises soil contamination issues and Recommendation 17 specifically supports the continued remediation of legacy waste sites, of which old industrial sites are the main source of contaminated soils. Surplus medicines (including farm waste) and waste oils are recognised as being particular streams that can contaminate soils with specific recommendations included on these aspects (Recommendations 11 and 14 respectively).</p>
Department of Agriculture, Food and the Marine (DAFM)	<ul style="list-style-type: none"> • Confirmed no observations to be made. 	Noted.

5.3.2 Submissions from Transboundary Consultees

Transboundary consultation, as outlined at the start of **Section 5.3**, was also undertaken with a number of consultees as the potential for transboundary impacts was identified. These consultees included the relevant government bodies responsible for the environment and waste management in other European countries.

Three submissions were received from transboundary consultees, including:

- Department of Agriculture, Environment and Rural Affairs (DAERA), Northern Ireland;
- NatureScot (Scotland's Nature Agency); and
- Historic Environment Scotland.

The key issues raised and how they have been addressed in the final Plan are summarised in **Table 5-4**.

Table 5-4: Summary of Key Environmental Issues from Transboundary Consultees during Public Consultation

Consultee	Summary of Points Raised	How this has been addressed in the NHWMP
Department of Agriculture, Environment & Rural Affairs Northern Ireland (DAERA)	<p>Comments in Relation to the Draft NHWMP</p> <ul style="list-style-type: none"> • Contain a clear statement indicating the opinion whether or not implementation of the strategy is likely to have a significant effect in Northern Ireland, in combination with any identified measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment. • Marine conservation and Reporting: Decisions must be made in accordance with marine policy documents. • UK Marine Policy Statement and Draft Marine Plan for NI should be considered in all decisions; all public authorities are responsible for implementing these. <p>Comments in Relation to the NIS</p> <ul style="list-style-type: none"> • Natural Environment Division: <ul style="list-style-type: none"> – Welcome the recognition of the need to consider transboundary issues, and inclusion of transboundary inclusions within the objectives of the plan and assessed in the SEA. – Cross border designated sites, European sites in Northern Ireland adjacent to or with pathways to/from the Republic of Ireland, priority habitats, river basins, and other landscape types also require special attention as ecological functionality and 'views' of landscape cross political boundaries. 	<p>A new appendix, Appendix D, has also been added to the final Plan setting out how both the SEA ER and NIS recommendations and mitigation has been addressed in the final Plan.</p> <p>The following SEA ER and NIS mitigation has been added to the final Plan as follows: <i>Ensure that all plans, projects and activities requiring consent arising from the NHWMP are subject to the relevant regulatory environmental assessment requirements, including SEA, EIA and AA as appropriate.</i> Refer also to the NIS (under separate cover) which sets out the conclusion statement.</p> <p>The EPA has determined that the National Hazardous Waste Management Plan will not adversely affect the integrity of any European site, whether alone or in combination with any other plans and projects</p> <p>Noted on consideration of UK policy statements.</p> <p>Transboundary considerations, including potential pathways and impacts, are documented under the section on the Receiving Environment and in the relevant appendices of the NIS.</p> <p>Specific mitigation measures related to climate change were not proposed. Climate change issues for the plan relate mainly to transport of hazardous waste, the level of exports, and the degree to which the proximity principle is applied. The SEA monitoring programme includes for monitoring of effects arising from plan implementation, including consideration of air/ climate effects.</p> <p>Future iterations of the NHWMP will be subject to SEA and AA as appropriate. The action under Recommendation 19 on implementation states that: <i>Conduct a mid-term review of the NHWMP and update actions for the second half of the</i></p>

Consultee	Summary of Points Raised	How this has been addressed in the NHWMP
	<ul style="list-style-type: none"> – 'Natura 2000' sites network now known in UK as 'National Site Network' sites. – Further detailed AA required, once specific locations are identified. – Welcome that monitoring will be in place and look to commenting further as it develops. • Climate Change: Mitigation measures should be amended, given that climate change has impacts beyond European designated sites. • Inland fisheries: <ul style="list-style-type: none"> – The following considerations should be incorporated if the plans outcomes have transboundary impacts: Fisheries Act (NI) 1966; North Atlantic Salmon Conservation Organisation (NASCO), Convention for the Conservation of Salmon in the North Atlantic Implementation Plan for the period 2019 –2024. – Potential impacts to biodiversity should include NI Priority species and/or their habitats (incl. habitat fragmentation) within transboundary waterbodies/catchments and not solely impacts to designated sites. – Potential impacts to migratory of fish species both through the Marine and Freshwater environments. <p>Comments in Relation to the SEA Environmental Report</p> <ul style="list-style-type: none"> • Natural Environment Division <ul style="list-style-type: none"> – Further SEA should consider all potential impacts to NI habitats – direct and indirect. • Marine Archaeology: Strategic Environmental Objective 8 & 9 should also include 'transboundary considerations', as per 2, 4 & 5. • Marine Plan: <ul style="list-style-type: none"> – Lack of inclusion and consideration to marine policy documents – UK Marine Policy Statement and the draft Marine Plan for NI. – Marine effects across the SEA topics and SEOs could be drawn out further. • Historic Environment Division: datasets which include recorded designated and non-designated heritage assets are available online [link provided]. 	<p><i>plan. In accordance with Art. 9(2) of S.I. No. 435 of 2004, as amended, any modifications to the Plan following the interim review will need to determine if the modifications are likely to have significant effects on the environment. AA considerations will also be required at this stage.</i></p> <p>The Plan itself does not specify geographic locations for infrastructure or development.</p> <p>All projects are subject to relevant assessments such as SEA, AA, EclA and EIA as appropriate to the nature and scale of the development.</p> <p>The Fourth NHWMP is a strategic level national document and does not specify geographically where infrastructure is to be located or where remediation activity is to take place. It is considered that transboundary impacts are to be considered in more detail at the appropriate planning scale.</p> <p>Chapter 4 of the SEA ER (Other Plans and Programmes) was updated on foot of the suggestions received. Relevant other plans, programmes and policy statements have also been referenced in the Plan and in Appendix A to the SEA ER which contains a list of other relevant plans, programmes and policies considered relevant to the SEA and in support of Chapter 4 of the SEA ER.</p> <p>Noted. The baseline chapter of the SEA ER and the receiving environment and impact prediction sections of the NIS considered potential pathways as appropriate to the nature and strategic scale of the Plan and the considered the potential for transboundary effects.</p> <p>The Strategic Environmental Objectives were revised as relevant on foot of the scoping consultation feedback for inclusion in the SEA ER; see Table 3-2 for the SEOs used in the ER.</p> <p>Transboundary considerations and issues were noted throughout Chapter 5 of the SEA ER as relevant to hazardous waste management and the draft Plan e.g. in terms of protected areas, water quality, marine issues and landscape and heritage.</p> <p>Chapter 4 of the SEA ER (Other Plans and Programmes) was updated on foot of the suggestions received. Relevant other plans, programmes and policy statements have also been referenced in the Plan and in Appendix A to the SEA ER. The plans/ policy mentioned have been added to Chapter 8 of this SEA Statement (Addendum to the Environmental Report).</p> <p>Appendix C to the final Plan (EU & National Hazardous Waste Legislation) contains a list and summary of legislation considered relevant to the NHWMP (including those of a transboundary nature).</p> <p>Reference to historic environment datasets held by DAERA have been added to Chapter 8 of this SEA Statement (Addendum to the Environmental Report).</p>

SEA STATEMENT

Consultee	Summary of Points Raised	How this has been addressed in the NHWMP
NatureScot (Scotland's Nature Agency)	<ul style="list-style-type: none"> Review the potential environmental impacts once further detail is available. 	<p>Future iterations of the NHWMP will be subject to SEA and AA as appropriate. The plan does not specify geographic locations for development.</p> <p>All projects will be subject to relevant planning requirements and assessments such as SEA, AA, EclA and EIA as appropriate to the nature and scale of the development. Mitigation text explicitly covering these requirements has been included as part of the final Plan as part of new Recommendation 20.</p> <p>Transboundary impacts can be considered in more detail at the appropriate planning scale.</p>
Historic Environment Scotland (HES)	<ul style="list-style-type: none"> <i>No comments</i> 	N/A

5.3.3 Other Environmental Submissions on the Draft NHWMP

Public consultation, as outlined at the start of **Section 5.3**, gave rise to 18 responses from a range of stakeholders. All submissions have been reviewed and considered by the plan team prior to amending the NHWMP. This will be recorded in the consultation report on submissions to the draft NHWMP which can be viewed on the EPA website. Throughout the submissions, a number of items and issues were identified related to the SEA process (see **Table 5-5**) as well as other key environmental issues (**Table 5-6**).

Table 5-5: Summary of Key Issues raised on the SEA and AA of the draft NHWMP during Public Consultation

Summary of Points Raised	How this has been addressed in the NHWMP
Specific Issues raised in relation to the SEA of the NHWMP	
<ul style="list-style-type: none"> Science Foundation Ireland (SFI) as a lead organisation is not appropriate to be included against recommendation 7.1; ER should be updated to reflect. Process of forming the draft plan and carrying out the SEA have been done separately, so there is no strong link. Opportunity to integrate them more comprehensively now they are both completed. On the drinking water chemical contaminants, it is considered that the risk to human health might be overstated in the SEA. Draft plan should include more content from the SEA to support the implementation process. 	<p>Changes and updates to be made to the SEA Environmental Report on foot of submissions (on baseline and water contaminants, as well as lead organisations mentioned in the assessment tables) are documented in Chapter 8 of this SEA Statement - <i>Addendum to the Environmental Report</i>.</p> <p>The SEA was conducted in parallel with the plan-making process and included iterative discussions, feedback and workshops. How the SEA process has influenced the plan-making is documented in this SEA Statement; see Chapter 4 of this SEA Statement (Influence of the SEA Process on the NHWMP).</p>
Specific Issues raised in relation to the AA of the NHWMP	
<i>No particular issues raised on the AA process</i>	N/A

Table 5-6: Summary of Other Key Environmental Issues raised on the draft NHWMP during Public Consultation

Summary of Points Raised	How this has been addressed in the NHWMP
<ul style="list-style-type: none"> • There should be a strong link between the SEA and project specific planning and development for the infrastructure that is required so project specific development does not have to reconsider issues assessed in the SEA. • Active pharmaceutical ingredients released into water streams cause negative impacts on freshwater ecosystems. Focus needed on preventative options early in a pharmaceutical's life cycle. • PFAs, lead leaching from pipes, naturally occurring levels of arsenic in water, antimicrobial resistance and high nitrate levels (particularly in the south-east) are key environmental issues. • Most paints being sold in Ireland contain high levels of microplastics, when other more natural sustainable alternatives are available. • Toxic discharges in rivers such as spent sheep dip, not regulated and being disposed having huge impact on the ability to meet the requirements of the Water Framework Directive. • The principles of Self Sufficiency and Proximity, as laid out in Article 16 of the Waste Framework Directive, recognise the need for export of certain wastes. • Waste should be treated at one of the nearest appropriate installations, using appropriate methods and technologies. • Competition is important in Irish economy, so export of waste should always be an option, contrary to proximity principle. • Suggest the point on a continuing trend in hazardous waste generation between 2018-2019 is removed unless validated, as the Draft plan lacks sufficient detail, so cannot see if it relates to economic growth or historical issues. • General explanation of the mix of waste generate in Ireland could be expanded. • All should values be reported using the same metric system for comparison. • Use 'energy recovery' instead of 'energetic recovery'. • The planned inventory may be inadequate to address a serious issue, such as the COVID-19 pandemic or other market disruptions to the normal flow of waste. • Additional storage of hazardous waste at hazardous waste transfer stations should be considered. 	<p>The SEA has flagged key emerging issues which has been considered in the preparation of the final Plan. The requirements for environmental assessments are reinforced through the inclusion of new Recommendation 20.</p> <p>The point on the pharmaceutical ingredients is noted; the OECD report referenced has been noted in the final Plan.</p> <p>Noted the points on key environmental issues.</p> <p>Commentary has been added in final Plan on the issues of spent sheep dip disposal. A specific action under Recommendation 11 has been added: <i>Establish a national cross-agency forum to focus on the appropriate management of spent sheep dip to prevent environmental pollution.</i></p> <p>Noted the point on plastics in paint. Recommendation 13 also specifically address waste paints: <i>By 2023, establish collection platforms for surplus paint from household and commercial sources.</i></p> <p>The principles of self-sufficiency have been amended to align with Article 16 of the Waste Framework Directive.</p> <p>On the point regarding car repair facilities – Smart Garage Guide is to be published in the coming months.</p> <p>Education and awareness and hazardous waste prevention forms key parts of the NHWMP, in particular through Recommendations 5 and 6 which address household and commercial/industrial sectors respectively.</p> <p>Agree with comments noted on Article 16 of the Waste Framework Directive and the proximity principle - text has been amended, particularly in Section 6.1 of the Plan.</p> <p>A breakdown of hazardous waste statistics, sources, and levels of treatment, as well as data gaps, are discussed throughout the Plan, particularly in Chapter 3 – Hazardous Waste Management.</p> <p>The point is noted on the lack of detail for the 2018-2019 trends; this line has been removed from the final Plan for clarity.</p> <p>Hazardous waste capacity will be considered over the lifetime of the Plan, particularly enabled through Recommendation 9: <i>Strengthen knowledge of national hazardous waste capacity to inform infrastructure development and contingency planning, in accordance with application of the proximity principle.</i> The impacts of COVID and levels of healthcare risk waste have also been considered. Recommendation 4 therefore includes specific actions to review hazardous waste management during the COVID-19 pandemic as well as to conduct a business continuity assessment for Ireland's hazardous waste management system.</p> <p>Mix of wastes generated in Ireland utilises data from the EPA Waste Statistics Team who use NACE codes for description of wastes.</p> <p>On contaminated soil, the nature of this waste stream has been expanded in the supporting text.</p> <p>Metric values have been amended for consistency.</p> <p>The energy recovery typo has been amended.</p>

Summary of Points Raised	How this has been addressed in the NHWMP
<ul style="list-style-type: none"> • Temporary storage is only a partial solution – clear regulatory approvals for end destinations are needed urgently. • Lack of awareness of take-back points for batteries. • Ensure a coordinated national approach on hazardous waste. • Predictions that there will be significant barriers to this development in the Planning and Regulatory processes. • Move to electric cars will increase hazardous waste from the disposing of the existing car fleet – batteries, engine oil, etc. • The criteria for the enforcement programme should include small car repairs facilities and how hazardous waste is disposed at them. • Strong support for reviewing the Waste Permitting regime in the context of hazardous waste, particularly Local Authority issued permits. • Assess accessibility to all the community around a specified criterion within the Draft Plan. • There is poor understanding of what is hazardous waste in a household context. • Welcomes the Plan's recommendation to identify options for radioactive storage but recommend guidance is issued to persons with knowledge of such sources on the applicable arrangements/actions to take – urgent need for update to the Temporary Operational Protocol. • Ireland's framework for the management of radioactive waste will be subject to a review led by the IAEA in 2021. Suggests adding confirmation on whether this review has been completed and whether disposal solution for orphan sources was also reviewed. • Proposed NHWMP is welcomed but must ensure it dovetails/complements with the Regional Waste Management Plans and forthcoming National Waste Management Plan. • Continued improvement of civic amenity sites (CAS)/ drop-offs very important. Training on the EPA's 'Guidance for the Management of Household Hazardous Waste at Civic Amenity Sites' has been poorly rolled out and should be done within 18 months of the adopted Plan e.g. through the LA National Training Group. • A national policy for take-back of human and veterinary medicines would be beneficial, as people can sometimes dispose of these wastes inappropriately. • Would like to see chemical recycling into chemicals and fuels (energy recovery) in the Irish context. 	<p>Compliance Scheme and Waste Regions at noted to be putting in significant resources to improving awareness of take-back for batteries.</p> <p>An implementation group will assist in co-ordinated national approach to hazardous waste; see Recommendation 19.</p> <p>More content added to final Plan particularly e.g. environmental monitoring and mitigation measures carried over to final plan.</p> <p>The Plan recognises the importance of monitoring emerging issues for hazardous waste management. The Plan contains Recommendation 14 - <i>Promote best practice in the management of commercial hazardous wastes streams</i>, which includes an action for publishing a Smart Garage Guide (and considers waste oils). Emerging issues may also be considered under recommendation 9: ... <i>Emerging issues should be included to inform any capacity/infrastructure needs e.g. trends in healthcare risk waste generation and management, the growing uptake in EVs and recycling needs for lithium batteries etc.</i> and under Recommendation 14: <i>Prepare and publish guidelines for the safe storage of Lithium-ion batteries at waste handling facilities.</i></p> <p>Noted the support for reviewing waste permitting, which is included as a specific action under Recommendation 10.</p> <p>Community access to appropriate infrastructure can be best facilitated through e.g. civic amenity sites. A specific action under Recommendation 10 states: <i>Establish collection of household and small-scale hazardous waste through civic amenity sites and/or via special collections.</i></p> <p>Education and awareness campaign of household hazardous waste is included as specific actions under Recommendation 5 in the final Plan - <i>Promote reduced consumption of hazardous substances in household settings.</i></p> <p>On radioactive waste, it is noted that the IAEA has completed its review mission for Ireland in October 2021 (https://www.iaea.org/newscenter/pressreleases/iaea-mission-says-ireland-committed-to-safe-management-of-radioactive-waste-sees-areas-for-further-enhancement). The final mission report is to be provided to the Irish Government within the coming months. The following text is added to Section 5.7 of the final Plan: <i>The Integrated Review Service for Radioactive Waste and Spent Fuel Management, Decommissioning and Remediation (ARTEMIS) carried out a peer review on the management of radioactive waste in Ireland. While acknowledging Ireland has demonstrated a strong commitment to the safe management of disused radioactive sources and radioactive waste, recommendations were made to Ireland which include:</i></p> <ul style="list-style-type: none"> • <i>Continue to explore options to provide a long-term solution for the management of radioactive waste and disused sealed radioactive sources.</i> • <i>Include all existing and anticipated radioactive waste categories in the national inventory.</i> • <i>Consider strengthening education and training arrangements and maintaining the competence of all persons and organizations with responsibilities relating to the management of radioactive waste and disused sealed radioactive sources.</i> <p>In recognition of the inter-relationships with other plans in the waste management hierarchy, the Plan has two sub-actions under Recommendation 1: <i>Incorporate prevention & management of hazardous</i></p>

Summary of Points Raised	How this has been addressed in the NHWMP
<ul style="list-style-type: none"> Barriers to end of waste and waste reuse needs to be addressed and that the agency/unit responsible is appropriately resourced, as this will assist in the circular economy transition. Support for self-sufficiency and Ireland should have its own hazardous waste landfill. Consideration of a joint North-South approach would be beneficial. Household and small business hazardous waste could end up at higher than anticipated quantities. A key source is e.g. home renovations. Access to facilities and awareness is key. Suggest further collaboration with e.g. customs, HSE and Health Products Regulatory Authority on the issue of hazardous products/component ending up on the market from online retail. Legacy and historic hazardous waste remain an issue e.g. from farms. EU zero-pollution ambition means the possibility of solid wastes being captured (e.g. sludges) while trying to eliminate other wastes e.g. emissions to air. Consider scoping exercises to take place to assess this possibility of the other wastes needing treatment from IE/IPC sites. Suggestions that the plan places an even greater focus on certain areas for prevention: water-based paints/reuse schemes, coordination and awareness raising, sustainable product policy at EU level, reuse of WEEE, incinerator ash and link to municipal solid waste generation, treatment capacity etc. Suggest distinction between hazardous and water-based paints should be made clearer. Development process and contingency planning for hazardous waste treatment capacity must include prevention methods e.g. reduce municipal waste generation, product life extension of WEEE, removal/reuse of non-hazardous fraction of paints, varnish, inks etc. from waste streams. Obstacles to safe disposal of legacy farm hazardous waste should be considered in the development of a collection option. Those who produce hazardous products should bear more responsibility for management. IFA developing guidance as part of the next iteration of the Smart Farming Programme. Existing planning and licensing process for waste treatment infrastructure (incl. hazardous waste treatment infrastructure) requires reform. 	<p>waste into the national Circular Economy Programme and Incorporation of relevant NHWMP objectives (including reference to environmental protection objectives and the mitigation from the NHWMP) in national waste management planning.</p> <p>On the CAS's, Chapter 5 of the final Plan also has new supporting text as follows:</p> <p><i>The Environmental Protection Agency in cooperation with the Health and Safety Authority and civic amenity (CA) site operators developed guidance to establish the environmental and operational standards required at CA sites for the acceptance and safe storage of the wide range of hazardous waste streams from households and small business. CA operators should be supported in use of the Guidance.</i></p> <p>The Plan contains Recommendations 11 and 12 which aim to facilitate collection and transfer of farm/veterinary medicine and out of date/unused human medicines respectively with actions to develop collection infrastructure.</p> <p>Recommendation 19 in the Plan addresses implementation and tracking progress: <i>Provide leadership on achievement of NHWMP objectives; with regular progress reports on implementation of the plan recommendations.</i></p> <p>The Plan recognises the potential risks from relying on waste exports. Recommendation 9 specify will continue to examine capacities and the types of waste streams. It's key action has also been updated to include consideration of a cost/benefit analysis and to review emerging trends in hazardous waste.</p> <p>Recommendation 3 specifically provides for an all-island approach to hazardous waste management.</p> <p>The Plan recognises the importance of household and commercial sector awareness and the need for a better understanding e.g. in behavioural attitudes. Recommendations 5, 6 and 7 in particular respectively address households, commercial sectors and the support for research.</p> <p>Noted. The Plan supports the implementation of the EU Chemicals Strategy, in particular under the action in Recommendation 1. Recommendation 2 also looks to enforcement priorities, initiating a regulatory forum, and determining market surveillance priorities to prevent unauthorised use of hazardous chemicals in mixtures and products.</p> <p>Noted on legacy wastes. Legacy landfills continue to be remediated (Recommendation 17); farm hazardous waste for instance is being addressed through Recommendation 11.</p> <p>Noted. Sludges from industrial processes is a category of waste captured by the hazardous waste statistics. Recommendation 6 also specifically looks to the industrial sector: <i>Prevent hazardous waste in industrial sectors and support a safe circular economy.</i></p> <p>The Plan places considerable focus on prevention activities. A number of recommendations/actions covers awareness-raising, gathering data/behavioural insights, and keeping treatment capacity and waste streams under review, as well as reviewing emerging issues.</p> <p>Broader waste management issues are addressed through the current Regional Waste Management Plans 2015-2021 and the forthcoming National Waste Management Plan for a Circular Economy.</p> <p>On water-based paints – some can contain pigments that can still render it hazardous. Currently, the default position is to consider it a hazardous waste until classified differently.</p>

Summary of Points Raised	How this has been addressed in the NHWMP
<ul style="list-style-type: none"> • Certain hazardous chemicals should be banned e.g. glyphosate. Regulations also needed for the sale of certain chemicals. • Section 3.5: Would be useful to detail what hazardous waste streams were found in the commercial/household bins characterisation studies. • Clarification provided on asbestos exports. • Would be useful to include a link to the EC notice on technical guidance on the classification of waste. 	<p>A review of treatment capacity, types of waste and emerging issues is considered specifically as part of Recommendation 9. Recommendations 5 through 8 tackle prevention activities. It is noted that a significant proportion of incinerator bottom ash was reclassified as non-hazardous in 2019 which will impact on the 2020 waste statistics.</p> <p>Noted on the farm hazardous waste collection; Recommendation 11 has a specific action to agree and develop a plan then implement a suitable collection scheme.</p> <p>Noted there are currently take-back schemes operated by producer responsibility initiatives, including collection of WEEE, batteries/accumulators and end-of-life vehicles.</p> <p>Noted and welcome Smart Farming Guidance. Additional text has also been added to the final Plan on the Smart Farm Programme.</p> <p>The issues around exports, self-sufficiency, and critical infrastructure are noted.</p> <p>On household chemicals, a number of Plan actions aims to raise consumer awareness and disseminating information (including developing new coherent information on household hazardous waste and guidance on disposal of hazardous waste), to examine the potential of in-store labelling, support use of less-toxic substance alternatives in industrial production processes.</p> <p>On the household/commercial bin characterisation - graphic is included which gives a breakdown of the waste streams.</p> <p>Noted – text amended to include other asbestos waste export destinations.</p> <p>Link to the EC guidance included under Section 7.4 – Classification of Hazardous Waste.</p>

5.4 Screening of Final Changes to the Plan

Table 5-7 below contains the screening of changes made to the final Plan. Further detail on how the submissions received on the draft NHWMP have been considered and addressed by the plan team will be recorded in a consultation report on submissions to the Draft NHWMP which can be viewed on the EPA Website.

Table 5-7: SEA and AA Assessment of Changes made to the Final NHWMP

NHWMP Action Area	Draft NHWMP Recommendation / Action Wording <i>[Note: numbering was applied for the purposes of the SEA Assessment]</i>	Final NHWMP Recommendation / Action Wording <i>[Blue text / strikethrough denotes significant changes]</i>	SEA / AA Assessment
Policy & Regulation	Action 1.2: Incorporation of relevant NHWMP objectives in national waste management planning.	Incorporation of relevant NHWMP objectives in national waste management planning, including reference to relevant environmental protection objectives and Recommendation 20 from the NHWMP .	Inclusion of suggested SEA mitigation text. The reference to environmental protection objectives and mitigation are considered positive as it ensures that the mitigation follows through the planning system. No additional likely significant effects. No additional effects on site integrity (AEOSI) as a result of the changes.
Policy & Regulation	Action 3.1: Establish a working group with Northern Ireland waste authorities to maximise opportunities for co-ordinated management and enforcement of hazardous waste activities.	Establish a working group with Northern Ireland waste authorities to maximise opportunities for co-ordinated management and enforcement of hazardous waste activities.	Minor word deletion to remove reference to 'waste' authorities specifically, which broadens the remit and acknowledges that there can be other relevant authorities that can play a role waste management. No additional likely significant effects. No AEOSI as a result of the changes.
Prevention	Action 5.2: Develop new coherent information on household hazardous waste and guidance on disposal of hazardous waste; and disseminate via targeted & national campaigns; and through the EPA website & www.mywaste.ie .	Develop new coherent information on household hazardous waste and guidance on disposal of hazardous waste; and disseminate via targeted & national campaigns; and through the EPA website, & www.mywaste.ie and waste operators .	Inclusion of reference to waste operators in response to SEA mitigation. No additional likely significant effects. No AEOSI as a result of the changes.

SEA STATEMENT

NHWMP Action Area	Draft NHWMP Recommendation / Action Wording <i>[Note: numbering was applied for the purposes of the SEA Assessment]</i>	Final NHWMP Recommendation / Action Wording <i>[Blue text / strikethrough denotes significant changes]</i>	SEA / AA Assessment
Prevention	Action 6.1: Utilise the regulatory regime to encourage usage of non-toxic alternatives in production and processing steps.	Utilise the regulatory regime to encourage usage of 'non-/less-toxic' alternatives in production and processing steps.	Minor wording update from 'non-toxic' to utilising both 'non-/less-toxic'. The revision implies that it may not always be feasible to fully replace or achieve 'non-toxic' alternatives. The assessment from the SEA ER and NIS applies. No additional likely significant effects. No AEOSI as a result of the changes.
Prevention	Recommendation 8: Use Green Public Procurement (GPP) to specify products and services that reduce the use of hazardous substances.	Recommendation 8: Use Green Public Procurement (GPP) to specify products and services that reduce the use of hazardous substances and generation of associated hazardous wastes.	Minor wording addition to the recommendation text but meaning remains unchanged. The assessment from the SEA ER and NIS applies. No additional likely significant effects. No AEOSI as a result of the changes.
Collection & Treatment	Action 9.1: Update & maintain inventory of national capacity for storage, treatment and disposal of hazardous wastes.	Update & maintain inventory of national capacity for storage, treatment and disposal of hazardous wastes. <i>An economic study/cost-benefit analysis should be considered as part of this review process to examine the economic viability of managing various waste streams in Ireland. Emerging issues should be included to inform any capacity/infrastructure needs e.g. trends in healthcare risk waste generation and management, the growing uptake in EVs and recycling needs for lithium batteries etc.</i>	Additional wording on the economic study/cost-benefit analysis incorporated into the action as a result of suggested SEA mitigation. Infrastructure needs must consider the potential for impacts to the environment when siting infrastructure. The requirement for environmental assessments associated with any plans and projects arising from the NHWMP as identified in new Recommendation 20 is acknowledged. No additional likely significant effects. No AEOSI as a result of the changes.
Collection & Treatment		<i>Examine legislation and procedures for development of waste management infrastructure, as stated in the Waste Action Plan for a Circular Economy.</i>	New sub-action added to Recommendation 9. The new sub-action aims to examine the ways in which the state can support indigenous capacity for certain waste management where possible through facilitating the right regulatory framework. As such, this is a positive addition to the final Plan in terms of PHH and MA in particular, as well as indirectly for CF/AQ should some waste exports be minimised. The requirement for environmental assessments is reinforced by the addition of new Recommendation 20 to the final Plan.

SEA STATEMENT

NHWMP Action Area	Draft NHWMP Recommendation / Action Wording <i>[Note: numbering was applied for the purposes of the SEA Assessment]</i>	Final NHWMP Recommendation / Action Wording <i>[Blue text / strikethrough denotes significant changes]</i>	SEA / AA Assessment
			No additional likely significant effects. No AEOSI as a result of the new action.
Collection & Treatment	Recommendation 10: Prepare for separate collection for hazardous waste fractions produced by households by 2025, as required under Waste Framework Directive.	Recommendation 10: Prepare for separate collection for hazardous waste fractions produced by households by 2025, as required under Waste Framework Directive.	Deletion of reference to 2025 and the Waste Framework Directive. The need to establish such collection from households by 2025 is already a requirement for Member States under amending directive (EU) 2018/851 to the Waste Framework Directive. The assessment from the SEA ER and NIS applies. No additional likely significant effects. No AEOSI as a result of the changes.
Collection & Treatment	Action 10.1: Carry out a review of waste licensing and permitting legislation to facilitate take-back, transport and temporary storage of certain hazardous wastes from small sources.	Action 10.1: Carry out a review of relevant waste licensing and permitting legislation to facilitate take-back, transport and temporary storage of certain hazardous wastes from small sources.	Minor wording addition to refer to 'relevant'. This is a positive inclusion, as it broadens the review process to cover the key mechanisms for controlling and regulating emissions to the environment. The assessment from the SEA ER and NIS applies. No additional likely significant effects. No AEOSI as a result of the changes.
Collection & Treatment	Recommendation 11: By 2022, establish nationwide collection and transfer of farm hazardous wastes, including unused veterinary products.	Recommendation 11: By 2022, Establish nationwide collection and transfer of farm hazardous wastes, including unused veterinary products.	Minor revision to delete reference to 2022. This was done on foot of the draft sub-action being split out to include the establishing of a collection system as its own specific sub-action (see revision to Action 11.1 below) which have different time-bound delivery dates. Separate delivery dates for this revised action (Q2-2022) and new action on establishing the collection system (Q1-2024) are outlined in the final Plan. The assessment from the SEA ER and NIS applies. No additional likely significant effects. No AEOSI as a result of the changes.
Collection & Treatment	Action 11.1: Develop and launch suitable national collection scheme, having regard to findings from the 2014-2017 pilot scheme.	Action 11.1: Develop and launch agree a plan for a suitable national collection scheme, having regard to findings from the 2014 2013 -2017 pilot scheme.	Action has been revised to split out the development of a plan and the launch of a collection scheme [for farm hazardous waste], date of pilot project also updated from 2014 to 2013. Infrastructure needs must consider the potential for impacts to the environment when siting infrastructure. The requirement for environmental assessments

SEA STATEMENT

NHWMP Action Area	Draft NHWMP Recommendation / Action Wording <i>[Note: numbering was applied for the purposes of the SEA Assessment]</i>	Final NHWMP Recommendation / Action Wording <i>[Blue text / strikethrough denotes significant changes]</i>	SEA / AA Assessment
			associated with any plans and projects arising from the NHWMP as identified in Recommendation 20 is acknowledged. No additional likely significant effects. No AEOSI as a result of the changes.
Collection & Treatment		Implement suitable national collection scheme.	Previous Action 11.1 has been revised to split out the development of a plan and the launch of a collection scheme [for farm hazardous waste] into this new sub-action. Infrastructure needs must consider the potential for impacts to the environment when siting infrastructure. The requirement for environmental assessments associated with any plans and projects arising from the NHWMP as identified in Recommendation 20 is acknowledged. No additional likely significant effects. No AEOSI as a result of the new action.
Collection & Treatment		Establish a national cross-agency forum to focus on the appropriate management of spent sheep dip to prevent environmental pollution.	New sub-action added to Recommendation 11 to establish a forum to specifically examine the issue of sheep dip. This is a positive inclusion, particularly for BFF, W and LS as this is a key issue for a number of catchments which are impacted by this type of chemical pollution. No additional likely significant effects. No AEOSI as a result of the changes.
Collection & Treatment	Action 13.1: Initiate large-scale collection(s), building on current initiatives by local authorities and industry.	Build on current initiatives to initiate nationwide, large-scale collection(s), building on current initiatives in collaboration with local authorities and industry.	Action wording has been rearranged slightly but meaning remains unchanged. The assessment from the SEA ER and NIS applies. No additional likely significant effects. No AEOSI as a result of the changes.
Collection & Treatment		Develop a network of asbestos collection points.	New sub-action added to Recommendation 13 to more specifically outline that a collection network will be developed. The assessment from the SEA ER and NIS applies. Requirement for environmental

SEA STATEMENT

NHWMP Action Area	Draft NHWMP Recommendation / Action Wording <i>[Note: numbering was applied for the purposes of the SEA Assessment]</i>	Final NHWMP Recommendation / Action Wording <i>[Blue text / strikethrough denotes significant changes]</i>	SEA / AA Assessment
			assessments reinforced by the addition of new Recommendation 20 to the final Plan. No additional likely significant effects. No AEOSI as a result of the changes.
Implementation	Action 19.2: Report annually on progress of plan recommendations.	Report annually Provide an annual update on progress of plan recommendations.	Minor wording update to the action but meaning remains unchanged. The assessment from the SEA ER and NIS applies. No additional likely significant effects. No AEOSI as a result of the changes.
Implementation	Action 19.3: Conduct a mid-term review of the NHWMP and update actions for the second half of the plan.	Conduct a mid-term review of the NHWMP and update actions for the second half of the plan. <i>In accordance with Art. 9(2) of S.I. No. 435 of 2004, as amended, any modifications to the Plan following the interim review will need to determine if the modifications are likely to have significant effects on the environment. AA considerations will also be required at this stage.</i>	Action has been updated with the suggested SEA mitigation text to ensue any future changes to plan actions during the lifetime of the Plan are screened for likely significant effects. No additional likely significant effects. No AEOSI as a result of the changes.
Implementation		<i>Identify key performance indicators to measure and track trends in hazardous waste management</i>	Positive inclusion of new sub-action added to the final Plan as a result of incorporating suggested SEA mitigation. No additional likely significant effects. No AEOSI as a result of the new action.
Implementation		Recommendation 20: Ensure that all plans, projects and activities requiring consent arising from the NHWMP are subject to the relevant regulatory environmental assessment requirements including SEA, EIA and AA as appropriate.	Positive inclusion of a new Recommendation added to the final plan, taking on board the mitigation of the SEA ER and NIS. No additional likely significant effects. No AEOSI as a result of the new action.

6 PREFERRED SCENARIO AND REASONS FOR CHOOSING THE FINAL PLAN

6.1 Introduction

The consideration of alternatives is a requirement of the SEA Directive (2001/42/EC). Article 5(1)⁵ states 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 Directive does not prescribe at what stage consideration of alternatives should be undertaken, however, to present a useful input into the plan making process, all guidance points to considering alternatives as early as possible. Guidance also recognises that multiple layers of alternatives may exist, particularly for plans of this nature.

Two principal guidance documents have been referenced in the development of alternatives:

- Implementation of SEA Directive (2001/42/EC): Assessment of the Effects of Certain Plans and Programmes on the Environment, DEHLG 2004; and
- Developing and Assessing Alternatives in Strategic Environmental Assessment, EPA 2015.

Early discussion of possible alternatives was undertaken during the scoping stage for the draft Plan. This chapter of the Environmental Report considers the reasonable alternatives which have been developed through the evolution of the draft Plan. Given the nature of the draft Plan, alternatives have been focused at a strategic level.

6.2 Approach to Alternatives for the Draft NHWMP

Given that the NHWMP is a high-level national plan, it was important that the alternatives were reflective of its strategic nature.

Both the Plan team and the SEA team have also been conscious of the need for iteration in this regard and consideration of alternatives therefore started early in the process. Alternatives were first discussed in relation to SEA scoping. The basis for alternatives discussions was the EPA Guidance: *Developing & Assessing Alternatives in SEA*.⁶ This guidance points to four key criteria for identification of alternatives and broad categories of alternatives that might be considered as outlined in **Figure 6-1**. In the context of the NHWMP the criteria considered were:

- **Realistic:** Do the alternatives have the capacity to achieve NHWMP objectives, and those of other national plans;
- **Reasonable:** Do the alternatives consider baselines and trends in the marine area, and also reflect the legal requirement, such as those of the Habitats Directive;
- **Viable:** Are the alternatives technically possible and feasible; and
- **Implementable:** Are the alternatives capable of being put into action, within realistic timeframes, and for which there are adequate resources.

The SEA Scoping Report included a series of high-level considerations on alternatives for discussion and these are reproduced in **Table 6-1**.

⁵ Directive 2001/42/EC on the assessment of effects of certain plans and programmes on the environment, EC 2001.

⁶ Developing and Assessing Alternatives in SEA, EPA 2015.

Table 6-1: Alternatives proposed for consideration in the SEA Scoping Report

Alternative Type	Description	Example Considerations with respect to the Fourth NHWMP
Strategic	<i>High-level options that achieve a given objective. These types are commonly realistic only at policy level.</i>	<p>National policy outlines a commitment to managing hazardous waste in Ireland, as dictated by EU directives and the Waste Management Act, as amended. The NHWMP is Ireland's key policy and guidance document in this regard.</p> <ul style="list-style-type: none"> At the strategic level, given the statutory requirement [under both EU and national waste management legislation] for the plan to be reviewed and updated, it is not proposed to assess a <i>do nothing</i> scenario as this is not considered reasonable. It is further noted that a <i>business as usual</i> scenario is not considered realistic as there have been a number of changes in the area of hazardous waste management since the second and third NHWMP's were published. A <i>modified business as usual</i> may be considered more relevant wherein some of the policies and recommendations remain unchanged from the Third NHWMP. Consideration of the implications of any key developments in legislation relating to waste.
Value and Effects Oriented	<p><i>Alternatives that address policy priorities, cultural values or safety issues Such alternatives are most appropriate for addressing public perceptions, concerns and values.</i></p> <p><i>Alternatives that address issues identified during scoping. Such alternatives are effective at mitigating potential significant effects.</i></p>	<ul style="list-style-type: none"> Continued implementation of the Waste Prevention Programme is a key action aimed at reducing volumes of hazardous waste in the first instance. Assessment of the concept of greater self-sufficiency and critical mass of throughput in Ireland versus the export scenarios for a number of waste streams. The fourth NHWMP can consider new issues that have arisen since the third plan e.g. appropriate management of expired healthcare products such as medicines. Recommendations and actions that are reflective of the evolving public perception and understanding of hazardous waste management/ waste as a resource, and how the public can contribute, e.g. by encouraging appropriate household hazardous waste prevention and disposal/ recovery practices. A plan that is supportive of knowledge transfer to stakeholders at all levels.
Spatial	<i>Alternative locations for the implementation of planning objectives.</i>	<p>The scope of the NHWMP will not specify geographically where hazardous waste infrastructure should be sited, nor locations where actions concerning historic unregulated waste disposal sites should be undertaken.</p> <p>However, policies/ recommendations arising from the plan may support the development or continued implementation of siting guidelines at the lower planning tier, e.g. under the Regional Waste Management Plans.</p>
Modal	<i>Different technical/ mode alternatives to achieve the same objective</i>	<p>Different technical/ mode alternatives to achieve the same objective may include consideration of various waste management technologies to deliver on NHWMP objectives, for example:</p> <ul style="list-style-type: none"> Can Ireland deliver the capacity to manage all hazardous waste solvents (46,813 tonnes generated in 2019) or is export still a reasonable alternative? The Third NHWMP included provision for an asbestos landfill but should export or other chemical treatment be considered as a reasonable alternative? The plan can consider options such as prevention, recovery and co-incineration of certain waste streams as alternatives to the lower tier disposal option.
Sectoral and/ or Temporal Prioritisation	<i>Alternatives that look at sectoral feasibility and needs at the strategic level, policies can be formulated to promote one sector versus another.</i>	Alternatives that look at sectoral and temporal feasibility could include:

Alternative Type	Description	Example Considerations with respect to the Fourth NHWMP
	<p><i>Alternatives for the timing of implementation of plan/programme measures.</i></p> <p><i>These are most suitable at the local level for addressing infrastructure development.</i></p>	<ul style="list-style-type: none"> Consideration of alternatives which are not currently feasible in this fourth iteration of the plan but may become feasible/economically viable in the future. Support for increasing indigenous capacity to treat certain waste streams versus continued or expanded export of waste.



Figure 6-1: Criteria for Alternatives and Categories Considered [Source: EPA Guidance, 2015]

Following the initial consideration of the above at scoping stage, a dedicated workshop was held on the 10 February 2021 with the Plan team to establish reasonable alternatives. The types of alternatives considered are summarised in **Table 6-2** and these largely reflect the issues raised as part of the scoping process.

Table 6-2: Alternatives discussed during Workshop in February 2021

Alternative Type	Considerations with respect to the draft NHWMP
Strategic	<ul style="list-style-type: none"> The evolving policy and legislative regime not only in relation to hazardous waste but also more generally such as the Chemicals Strategy, Green New Deal, industrial emissions BAT compliance, etc. These combined policies seek to both promote the reduction of the content of hazardous substances in materials and also to prevent the generation of hazardous wastes once these materials are used. The prioritisation of hazardous waste prevention in the NHWMP versus the objectives set in the third NHWMP which had a broader focus including maximising the collection of hazardous waste, increased self-sufficiency in the management of these waste streams, reduced environmental impact as well as prevention. The alternatives analysis needs to consider island of Ireland alternatives when looking at potential for indigenous treatment and reducing transports for treatment and whether or not this could be possible in the context of Brexit. This is particularly relevant in relation to the proximity and self-sufficiency principles.
Modal	<ul style="list-style-type: none"> Consideration of alternatives on the approach to hazardous waste infrastructure within the NHWMP and how prescriptive or otherwise the plan needs to present in this area. The consideration of producer responsibility schemes versus more traditional management measures for key waste streams (e.g. waste medicines and farm waste) need to be considered. The analysis needs to consider the relative environmental impacts and economic drivers that dictate the proportion of hazardous waste export versus indigenous treatment and any recommendations for same.

6.3 Assessment Parameters

The approach used for assessing alternatives for the draft Plan was an objectives-led assessment. Each alternative has been assessed against a set of strategic environmental assessment objectives (See **Table 3-2** for details of the objectives). The assessment compares the likely impacts in terms of the Strategic Environmental Objectives (refer to **Table 3-2**) to see how alternatives perform in relation to the stated environmental objectives.

For the purposes of the assessment of alternatives:

- 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:

Symbol	Meaning
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
Zero (0)	Indicates neutral or no significant impact

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.

6.4 Strategic Alternatives

Early discussions with the plan team identified three issues of a strategic nature which could drive the direction of the plan. These issues and their reasonable alternatives were considered by the SEA team and outcomes fed back to the plan team for consideration. The issues and alternatives considered are presented in the following sections of this report.

6.4.1 Business as Usual versus Modified Business as Usual

Description of Alternative
Strategic Alternative 1 (S1): Business as usual scenario whereby the policies and objectives of the previous plan are continued.
Strategic Alternative 2 (S2): A modified business as usual scenario whereby the policies and objectives of the previous plan are updated to reflect evolving policy and legislation and with a particular emphasis on hazardous waste prevention.

Reference	PHH	BFF	LS	W	AQ	CF	MA	CH	LandS
S1	+	+	+	+	+	+	+/-	+	+
S2	+/-	+	+	+	+	+	+	+	+

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

Background: The National Hazardous Waste Management Plan 2014-2020 was the third such plan and built on the objectives of the previous second plan. The stated objectives of the third plan were set out as the following:

- To prevent and reduce the generation of hazardous waste by industry and society generally;
- To maximise the collection of hazardous waste with a view to reducing the environmental and health impacts of any unregulated waste;
- To strive for increased self-sufficiency in the management of hazardous waste and to minimise hazardous waste export;
- To minimise the environmental, health, social and economic impacts of hazardous waste generation and management.

These objectives remain valid in the current hazardous waste planning hierarchy and, in this regard, the continued application of these business as usual objectives is considered reasonable. However, it is noted that since the third NHWMP was published, there have been a number of significant policy and legislative changes that should be considered within the revised Plan. In particular the Green New Deal for Europe and the Circular Economy Action Plan have shifted waste policy higher up the waste hierarchy with a far greater emphasis on waste prevention. In addition, the EU Waste Framework Directive was amended in 2018 by Directive (EU) 2018/851, which was an action of the EU Circular Economy Action Plan. The revised directive places responsibility on EU member states to improve their waste management systems, to improve the efficiency of resource use, and to ensure that waste is valued as a resource. As a result, one of the key developments with respect to hazardous waste relates to the requirement for member states to establish separate collection of hazardous waste generated by households by 2025.

Also operating at EU level is the Chemicals Strategy for Sustainability Towards a Toxic-Free Environment, which also ties into the Green Deal and the Circular Economy Action Plan. It aims for zero pollution, including reducing hazardous waste streams, and to protect human and environmental health. It aims to streamline the coherence between waste, chemicals and products legislation, aiming to close gaps in how hazardous substances may be handled differently under different legislation.

At national level, the *Waste Action Plan for a Circular Economy – A Waste Policy for Ireland*, puts the focus on waste management further up the waste hierarchy, shifting away from disposal and treatment of waste towards circular product design, including reducing hazardous materials, and references the NHWMP as being at the top of the waste planning hierarchy.

The modified business as usual alternative therefore constitutes the broad continuation of the objectives of the third and current plan but with these policies modified to account for the evolving policy and in particular the focus on prevention, use of non-toxic/hazardous materials and product design. It is noted there are no prevention targets imposed or pending by the EPA or in the NWPP so it is difficult to impose within the SEA analysis.

Discussion: Both Alternatives S1 and S2 are assessed as having overall positive impacts for most environmental topics as each will contribute to achieving the stated SEA objectives. Both contribute to the improved management of hazardous wastes in a sustainable fashion with both direct and indirect positive environmental impacts.

However, the greater emphasis on the prevention of hazardous waste generation offered by S2 (modified business as usual) offers greater comparative benefits for material assets (MA). These benefits relate to a shift in current design and manufacturing practices to utilising less hazardous materials, or implementing non-toxic material substitutions, and the reduced pressure on the hazardous waste management infrastructure to treat hazardous wastes.

Alternative Brought Forward in the draft NHWMP: The preferred alternative brought forward is S2, the modified business as usual alternative, which also takes into account value and effects-oriented issues for plan implementation. This alternative has built on the work of the third plan, implements circular economy principles and continues to identify and target priority sectors. Key actions included in the fourth NHWMP include supporting the implementation of the EU Chemicals Strategy, as well as examining options for establishing separate collections for various hazardous wastes. An action is also included to determine market surveillance priorities on the use of hazardous chemicals in mixtures and products.

6.4.2 All-Island Approach versus National Approach

Description of Alternative
Strategic Alternative 3 (S3): Implement the NHWMP and track treatment need and capacity in partnership with Northern Ireland to develop an all-island capacity database and market for collection and treatment of hazardous wastes.
Strategic Alternative 4 (S4): Establish the NHWMP on a purely national basis where volumes of hazardous waste generation and treatment capacity are reported for the Republic of Ireland only.

Reference	PHH	BFF	LS	W	AQ	CF	MA	CH	LandS
S3	+	+	+	+	+	+	+	+	0
S4	+-	+	+	+	+	+/-	+/-	+	0

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

Background: The Good Friday Agreement specified that the environment comprising the policy areas ‘environmental protection, pollution, water quality, and waste management’ were to be areas for consideration of ‘North-South co-operation and implementation’. Under the terms of the Northern Ireland Protocol, Northern Ireland will continue to apply (EC) Regulation 1013/2006 on shipments of waste from the Republic of Ireland. It is not anticipated that there will be any significant changes for waste shipments between the countries, but it is noted that Article 34 of the Regulation will prohibit Ireland (as a Member State) from exporting hazardous waste for disposal to Northern Ireland (as a third country).

The UK *Plan for Shipments of Waste* (2012) allows shipments of hazardous waste between Northern Ireland and Ireland, in either direction, provided that such waste is both generated and disposed of within Northern Ireland or Ireland (only in relation to D5 *engineered landfill*, D9 *physico chemical treatment* and D10 *incineration*). The Department for Environment, Food & Rural Affairs is currently updating the Plan to account for policy and regulation change and the January 2021 draft for consultation indicates no change to the arrangement for shipments between Ireland and Northern Ireland as per the 2012 Plan.

Ireland does not have the infrastructure required to treat the full range of hazardous wastes produced in the State. In 2019, 65% of Ireland’s hazardous waste was exported for treatment in other European countries including 27,467 tonnes to Northern Ireland equating to 7% of all exports. This continues an increasing trend whereby hazardous waste from the Republic is being exported to Northern Ireland (refer to **Figure 6-2**). In the other direction, Northern Ireland exports waste oils for treatment within the Republic; these quantities are not readily reported in national statistics but are deemed to be small volumes, in the order of 10’s of tonnes.

The economies of scale for some waste streams within the Republic of Ireland may be insufficient to make investment in treatment infrastructure viable. However, if combined with Northern Ireland the economies of scale may exist. An Enva facility which currently treats waste oil is an example of where one island facility can cover both jurisdictions.

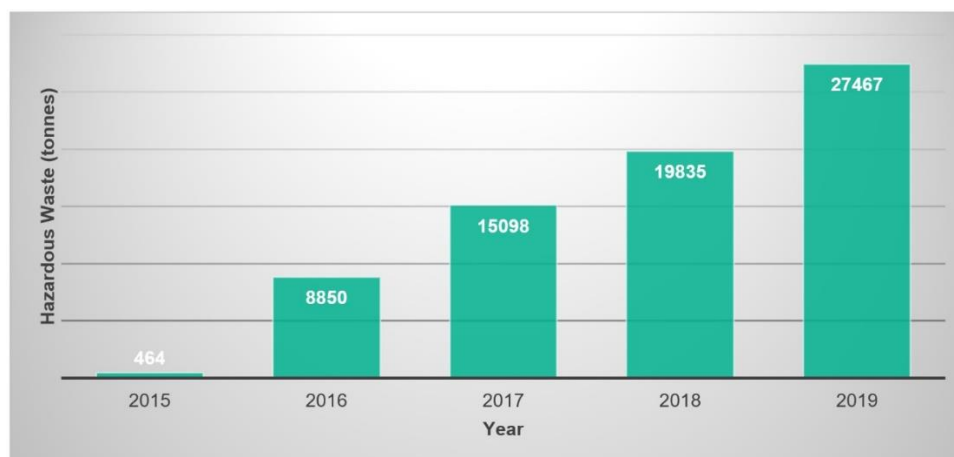


Figure 6-2: Annual Hazardous Waste exports to Northern Ireland [Source: EPA 2020]

Discussion: Broadly speaking both Alternative S3 and S4 are assessed as having positive impacts for all environmental topics as they will contribute to achieving the stated SEA objectives. Both contribute towards the tracking of hazardous waste generation volumes and capacity management to ensure these wastes are sustainably managed.

However Alternative S3 offers some environmental benefits over and above Alternative S4 including the following: In terms of self-sufficiency, Article 16 of the Waste Framework Directive (WFD) requires Member States, *in cooperation with other Member States*, to establish an integrated and adequate network of waste disposal installations. While Northern Ireland is no longer a Member State the principle of the two States cooperating to achieve self-sufficiency is clear. To this end, Alternative S3 provides a greater self-sufficiency outcome in line with the WFD relative to Alternative S4.

Similarly, the Directive also requires that any network set up under Art. 16 of the WFD shall enable waste to be disposed of or recovered in one of the nearest appropriate installations in order to ensure a high level of protection for the environment and public health, i.e. the proximity principle. Again, Alternative S3 offers a greater potential to maximise the proximity principle relative to Alternative S4.

Establishment of agreements and cooperation with Northern Ireland may potentially reduce the volumes of waste exported to mainland Europe thereby potentially reducing the climate impacts for transport of this waste and the potential for accidental spillages; both alternatives are positive for CF, but there are considered to be slightly more positive effects for S3.

Similarly, through a greater cooperation, the feedstock from Northern Ireland for existing or new hazardous waste infrastructure within the Republic of Ireland may be more secure, offering benefits for MA for Alternative S3.

Preferred Environmental Alternative and Reason for Choosing: The preferred environmental alternative in this instance is Alternative S3. Broadly speaking, both S3 and S4 options are anticipated to give rise to similar positive effects as they are aimed at sustainably managing hazardous wastes. However, the analysis indicates that cooperation with Northern Ireland offers a number of significant benefits both in terms of waste policy, climate and material assets that results in this alternative been proposed over Alternative S4.

Alternative Brought Forward in the draft NHWMP: Recommendation No. 3 in the draft NHWMP sets out the requirement to: *Provide for all-island approaches on hazardous waste issues.*

This is designed to improve and address all-island issues with regard management of hazardous waste. The DECC will establish a working group with Northern Ireland authorities during 2021. The development of an agreed protocol with Northern Ireland would likely be mutually beneficial and providing overall positive environmental impact for the NHWMP.

6.5 Modal Alternatives

6.5.1 Indigenous Capacity versus Export

Description of Alternative									
Modal Alternative 1 (M1): Implement specific policies aimed at reducing the level of hazardous waste export from the State to other jurisdictions to drive for greater self-sufficiency in hazardous waste management.									
Modal Alternative 2 (M2): Maintain the business as usual approach and allow market forces to dictate the economic merits of indigenous treatment versus export.									

Reference	PHH	BFF	LS	W	AQ	CF	MA	CH	LandS
M1	+/-	+/-	+/-	+/-	+/-	+	+/-	+/-	+/-
M2	+/-	+/-	+/-	+/-	+/-	-	+/-	+/-	+/-

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

Background: The latest hazardous waste statistics report that 65% of all hazardous waste managed in Ireland was exported. The Netherlands, Norway, Great Britain, Belgium, Germany, Northern Ireland, France and Portugal together accepted 98% of hazardous waste exports in 2019. This export is required as Ireland

does not have the required infrastructure to treat the full range of hazardous wastes it produces. It is noted that Irish Cement Limited (Platin, Co, Meath, Licence Reg. P0030-05) has received planning consent (ABP Case Reference PL17 .PA0050) to co-incinerate 50,000 tonnes per annum of hazardous; Ireland would therefore continue to rely on exports.

It is fair to question if the draft NHWMP should include a greater emphasis on indigenous capacity to reduce the need for exports in line with the self-sufficiency and proximity principles. However, a counter argument would be that the approach should simply facilitate the improved management of hazardous wastes, and let market forces dictate the appropriate treatment destination without any market intervention by the State. Export costs remain low, and the cost to develop and operate a hazardous waste facility in Ireland are high and, in some cases, the necessary waste throughput is simply not available.

As an illustrative example, in 2009 the EPA commissioned a study to explore the economic aspects of solvent treatment in Ireland⁷ and determined that while the use of blended solvent in cement kilns in Ireland is a low-cost option with a potential cost of €36 per tonne, exporting material for recovery and reuse would be €24 per tonne. Note that these are 2009 costs and used here as illustration but the overall trend is not expected to have varied significantly.

Discussion: As all hazardous waste treatment operations across the EU are subject to the same development (EIA Directive and Habitats Directive) and operational (Industrial Emissions Directive and associated BAT Conclusions), the operation of a hazardous waste landfill or incinerator would be the same in Ireland as in other Member States. Significant environmental protection is built into these requirements and hence the overall environmental impact of treatment in Ireland or treatment in other Member States is not significantly varied.

The export Alternative M2 will have a greater climate (CF) impact through the greater carbon emissions generated during transport of this waste. **Table 6-3** sets out a simple illustrative example of transporting a tonne of hazardous waste from a facility in Dublin to a hazardous waste facility in Cork. The same calculation is compared to transporting the same tonne to a waste facility in Rotterdam. The results show the export option is circa 50% higher in emissions relative to the indigenous treatment option.

Table 6-3: Example of CO₂ Emissions Generated within the State vs. Export

Alternative	Journey	Approx. Distance (km)	Emission Factor ⁸ (kgCO ₂ e per tonne.km)	Emissions (kgCO ₂ e) per tonne of waste
M1	Dublin to Cork by Road	260	0.07524 (100% laden all HGV)	19.56
	Dublin to Dublin Port	50	0.07524 (100% laden all HGV)	
M2	Dublin to Rotterdam by ship	1163 [628 nautical miles]	0.01614 (average container ship)	30.06
	Rotterdam Port to Waste Facility	100	0.07524 (100% laden all HGV)	

The other parameters that vary between the alternatives are Material Assets in terms of resources and infrastructure which would be more positive under the M1 alternative given the need to develop and maintain national assets to treat the waste as well as the retained value in using the wastes for recovery within the Irish energy system (through thermal recovery). However, for Material Assets in terms of economics, the impact is more varied between the two alternatives. The current economic drivers would suggest that the M2 alternative facilitating export is more beneficial for waste generators with little incentive for the indigenous capacity (M1). These impacts will likely remain in flux with external market forces dictating the pace of a change.

Preferred Environmental Alternative and Reason for Choosing: Given the level of market uncertainty in the export market and the generally lower cost for export of hazardous wastes it is not feasible at this point to include policies to limit the export opportunities in favour of indigenous capacity. As such, Alternative M2 is

⁷ EPA (2012) Economic Study of Solvent Recycling and Treatment. Available at: <https://www.epa.ie/publications/monitoring--assessment/waste/hazardous-waste/economic-study-of-solvent-recycling-and-treatment.php>

⁸ UK Greenhouse gas reporting: conversion factors 2020.

the preferred environmental alternative in economic grounds despite that relatively poor climate impact and loss of resources for the State.

Alternative Brought Forward in the draft NHWMP: Recommendation 9 has been included in the draft NHWMP to set out a commitment to: *Strengthen knowledge of national hazardous waste capacity to inform infrastructure development and contingency planning, in accordance with application of the proximity principle.* As a result, there is an action to update and maintain an inventory of national capacity for storage, treatment and disposal of hazardous wastes. This alternative acknowledges the current limitations in terms of economic factors and viability, while actively keeping under review indigenous hazardous waste treatment capacity.

6.5.2 Infrastructure Specific versus Infrastructure Supportive

Description of Alternative									
Infrastructure Alternative 1 (I1): Present specific policies and objectives on the nature and extent of required hazardous waste infrastructure within the NHWMP to provide policy support for the current infrastructure gaps.									
Infrastructural Alternative 2 (I2): Provide a general support for required hazardous waste infrastructure but do not specify policies and any individual hazardous waste stream or infrastructure within the NHWMP.									

Reference	PHH	BFF	LS	W	AQ	CF	MA	CH	LandS
I1	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-
I2	+/-	+/-	+/-	+/-	+/-	+/-	+	+/-	+/-

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

Background: In 2019, the majority (65%) of Ireland's hazardous waste was exported for treatment in other European countries for treatment in 2019. This figure would suggest that there is a significant infrastructure deficit within the State to manage hazardous wastes. For example, there is currently no commercial hazardous waste landfill or hazardous waste incinerator in Ireland. The question arises as to whether the NHWMP should be specific in defining the infrastructure needs for the State and thereby provide the necessary planning support for development of same within the plan period.

As an example, the Third NHWMP specifies the need for a hazardous waste landfill to accept asbestos waste with a capacity for up to 20,000 tonnes of asbestos waste per annum for planning purposes. A measure such as this may be cited by waste developers in planning to demonstrate policy support for such a development. The absence of such policies may prove a barrier for developers whereby the policy is silent on new infrastructure.

In 2018, the EPA published a report to investigate hazardous waste capacity in Ireland to identify the various hazardous waste streams and sources with a view to understanding current and future capacity needs. This report identified that, in reality, only solvents, waste oils and thermal treatment residues represent waste streams with a potential requirement for indigenous infrastructure. Note that solvent waste generation has reduced from 161,162 tonnes in 2004 to 46,813 tonnes in 2019 showing a clear declining trend in this waste stream. This would suggest that a shift from solvent-based chemistry methods to water-based chemistry in industry. This illustrates the difficulty in trying to establish infrastructure requirements in this dynamic waste market.

Discussion: Modal Alternative I1 presents a scenario where the EPA, as the plan maker, sets out more precise requirements on the hazardous waste infrastructure needs within the NHWMP. This would include an analysis of the existing and predicted waste stream generation coupled with an analysis of the increased capacity for waste treatment within the State. The Alternative I2 scenario avoids the need for the EPA to make policy for any infrastructure specifics but includes a broader provision to support the development of necessary and sustainable infrastructure.

For both scenarios, the development of hazardous waste infrastructure for the incineration, chemical treatment or landfill of hazardous waste would be subject to Environmental Impact Assessment⁹ and by extension Appropriate Assessment. As such, the development of any new infrastructure would have to be designed and operated without any significant effects on the environment providing the relevant protection for all SEA objectives. Hence, the majority of the environmental parameters are assessed as having both positive and negative environmental impacts.

The only variance between the two alternatives relates to Material Assets (MA) which is positive for both alternatives given the overall improved infrastructure and greater self-sufficiency in waste treatment. Alternative I2 offers a slight Material Asset advantage in that this approach is more dynamic with support provided where a need is demonstrated. In comparison I1 would require the EPA to make recommendations in 2021 for a six-year period. Given the solvent example provided above, there is a need for a more dynamic consideration of infrastructure to ensure that policies are not rendered out of date within the plan period.

Preferred Environmental Alternative and Reason for Choosing: The preferred environmental alternative in this instance is Alternative I2, while there is little to separate the two approaches, the less specific alternative has a likely better outcome for Material Assets given the need for ongoing review and analysis of capacity and to support new infrastructure on the evolving data which can be considered during future plan iterations.

Alternative Brought Forward in the draft NHWMP: Alternative I2 is incorporated within the draft NHWMP specifically through Recommendation 9 outlined above. This measure is designed to improve knowledge of hazardous waste capacity to inform infrastructure development priorities and contingency planning. The draft Plan specifies that a review and update of hazardous waste capacity in the State should be undertaken, and this may be used to more clearly inform the relevant infrastructure requirements.

6.6 Overall Preferred Scenario

The overall preferred scenario brought forward for assessment is therefore a combination of strategic alternatives S1 and S3, with modal alternatives M2 and I2.

⁹ Paragraph 9, Part 1 of Schedule 5 of the Planning and Development Regulations 2011, as amended.

7 MEASURES TO MONITOR SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE IMPLEMENTATION OF THE ADOPTED NHWMP

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, 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 indicators of relevance to the plan were identified from the SEA process. These will be used to identify unforeseen adverse effects from implementation of the plan.

7.2 Responsibility for Monitoring

Monitoring will focus on aspects of the environment that are likely to be significantly impacted by the Plan. Where possible, indicators have been chosen based on the availability of the necessary information and to show changes that would be attributable to implementation of the plan.

It is the responsibility of EPA to coordinate the monitoring of their plan however it is acknowledged that EPA will, to a large extent, rely on existing monitoring programmes managed, for instance, by other relevant sections within the agency itself. It remains the responsibility of EPA to liaise with data holders to get the data and to report on the monitoring of the NHWMP.

It is acknowledged that remediation of any unforeseen effects is likely to require a more integrated response across agencies, departments and other authorities and to fully establish the correct response/actions should such effects be identified. **Table 7-1** presents the proposed Environmental Monitoring Programme, which is also included as Appendix E to the final Plan. The sources of information for monitoring are included in the table. Note, the term 'hazardous waste' is abbreviated to 'HW'.

Table 7-1: SEA Environmental Monitoring Programme

Aim for Monitoring & Environmental Issue Area	What is being monitored?	Target	Indicator	Data Source/ Responsibility	Remedial Action
Monitoring Objective 1: To protect human and environmental health from inappropriately managed HW. Cross-cutting Areas: <i>Population & Human Health</i> <i>Biodiversity, Flora & Fauna</i> <i>Air Quality</i> <i>Water</i> <i>Land & Soil</i> <i>Material Assets</i>	<ul style="list-style-type: none"> Levels of mismanaged hazardous waste. Increasing trends in small HW streams. Need improvements in awareness and compliance in households and key sectors e.g. unused medicines, healthcare, farms. 	<ul style="list-style-type: none"> Decrease in the current known levels of mismanaged hazardous waste in tonnes/annum 	<ul style="list-style-type: none"> Continued downward trends in levels of mismanaged HW. % of EPA budget allocation for the National Waste Prevention Programme (NWPP)/ Circular Economy Programme which is allocated to HW education and awareness. Number of hits to HW website and mywaste.ie. Quantitative progress towards the 2025 target on establishing separate collection of HW generated by households under Art. 20 of the revised Waste Framework Directive. 	<ul style="list-style-type: none"> Hazardous waste statistics Environmental Protection Agency (EPA). National Waste Summary, published annually (EPA). National Waste Prevention Programme/ Circular Economy Programme (EPA). 	<ul style="list-style-type: none"> Carry out specific compliance tests on key waste streams e.g. medicines, farm hazardous waste etc. Should the quantities of mismanaged hazardous waste for certain waste streams be unknown, carry out characterisation surveys. Track the level of engagement with the websites and review areas for improvement e.g. work with waste collection providers to disseminate HW information.
Monitoring Objective 2: Reduce and eliminate legacy hazardous waste issues. Cross-cutting Areas: <i>Biodiversity, Flora & Fauna</i> <i>Land & Soil</i> <i>Water</i>	<ul style="list-style-type: none"> The degree to which closed/ illegal landfills and dumping sites with HW that are being remediated. 	<ul style="list-style-type: none"> Reduce the level of mismanaged HW (<i>See targets under Objective 1</i>). Remediation of all known illegal sites with HW that pose a risk to the achievement of the objectives of the Habitats Directive, Birds Directive, and Water Framework Directive. 	<ul style="list-style-type: none"> % of known illegal sites with HW where remediation has commenced. 	<ul style="list-style-type: none"> EPA. Regional Waste Management Planning Offices (RWMPO's). Local Authorities (LA's). 	<ul style="list-style-type: none"> EPA should engage with the RWMPO's and LA's to identify any bottlenecks in the process and develop a tailored response.
Monitoring Objective 3: Safeguard soil quality and quantity from hazardous waste, reduce	<ul style="list-style-type: none"> Trends in the volumes of contaminated soil being generated. 	<ul style="list-style-type: none"> Aim for an overall % decrease in contaminated soil 	<ul style="list-style-type: none"> Volume of hazardous soil accepted and managed at authorised facilities. 	<ul style="list-style-type: none"> RWMPO's. LA's. 	<ul style="list-style-type: none"> Where increasing trends in contaminated soil generation has been identified, the EPA should

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Aim for Monitoring & Environmental Issue Area	What is being monitored?	Target	Indicator	Data Source/ Responsibility	Remedial Action
and eliminate soil contamination, and reduce exports/ loss of the soil resource. Cross-cutting Areas: <i>Land & Soil</i> <i>Biodiversity, Flora & Fauna</i> <i>Water</i> <i>Material Assets</i>	<ul style="list-style-type: none"> Trends in the volumes of contaminated soil being exported for treatment. 	<ul style="list-style-type: none"> being generated per annum. Retain the national soil resource as much as possible. 	<ul style="list-style-type: none"> % decrease in contaminated soil being exported per annum. % increase in volumes being treated to non-hazardous status within Ireland to preserve the soil resource. 		implement the recommendations of the Revised Capacity Review.
Monitoring Objective 4: Improve air quality and reduce emissions to air from the key issues: backyard/ illegal burning and from transport emissions from moving HW.	<ul style="list-style-type: none"> Trends in the level of illegal/ backyard burning. Trends in the levels of transport of HW as a proxy for emissions to air. 	<ul style="list-style-type: none"> Aim for an overall decrease in levels of illegal/ backyard burning. Minimise the distance travelled for HW (see also Objective 5). 	<ul style="list-style-type: none"> Number of complaints/ enquiries made on illegal and backyard burning. Quantify the kilometres travelled by hazardous waste both within the State and through exports (see also Objective 5). 	<ul style="list-style-type: none"> Enforcement Unit statistics (EPA). Annual hazardous waste statistics (EPA). 	<ul style="list-style-type: none"> Review awareness campaigns/ initiatives in relation to air quality issues to improve knowledge and awareness. Transport statistics requires additional quantification of this distance travelled in the annual EPA hazardous waste statistics. (see also Objective 5).
Cross-cutting Areas: <i>Air Quality</i> <i>Climatic Factors</i> <i>Human Health</i>					
Monitoring Objective 5: Minimise emissions of greenhouse gases associated with hazardous waste management.	<ul style="list-style-type: none"> Overall reduction in hazardous waste generation (see Objective 6). 	<ul style="list-style-type: none"> In line with the proximity principle, minimise the distance for the transport of hazardous waste for treatment. 	<ul style="list-style-type: none"> Quantify the kilometres travelled by hazardous waste both within the State and through exports. Quantify the type of transport used where possible to reflect any shifts to low-carbon/ carbon-neutral fuels. 	<ul style="list-style-type: none"> Annual hazardous waste statistics (EPA). 	<ul style="list-style-type: none"> Requires additional quantification of this distance travelled and the transport types in the annual EPA hazardous waste statistics.
Cross-cutting Areas: <i>Climatic Factors</i> <i>Air Quality</i> <i>Material Assets</i>					

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Aim for Monitoring & Environmental Issue Area	What is being monitored?	Target	Indicator	Data Source/ Responsibility	Remedial Action
Monitoring Objective 6: Prevent and minimise the generation of HW, minimise exports and promote circular economy principles. Cross-cutting Areas: Material Assets Climatic Factors Population and Human Health	<ul style="list-style-type: none"> Trends towards waste prevention and reduction in various sectors, particularly in the key identified priority sectors: medicines, healthcare, farms. (Links closely to Objective 1 on mismanagement). 	<ul style="list-style-type: none"> % decrease in HW generated per sector. 	<ul style="list-style-type: none"> Continued downward trends in levels of sectoral HW. 	<ul style="list-style-type: none"> Hazardous waste statistics (EPA). National Waste Summary, published annually (EPA). National Waste Prevention Programme/ Circular Economy Programme (EPA). Reporting on healthcare risk waste (HSE). 	<ul style="list-style-type: none"> Should the quantities of sectoral HW waste streams be unknown/ uncertain, characterisation surveys should be carried out. For specific issues which show a rising trend, (e.g. increased HW generation arising from the COVID response in the healthcare sector), work with the relevant stakeholders to develop a tailored response (e.g. target awareness and guidance aimed at prevention and management). The EPA should include a summary of the Revised Capacity Review and implement the recommendations of the Revised Capacity Review.

8 ADDENDUM TO THE ENVIRONMENTAL REPORT

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

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

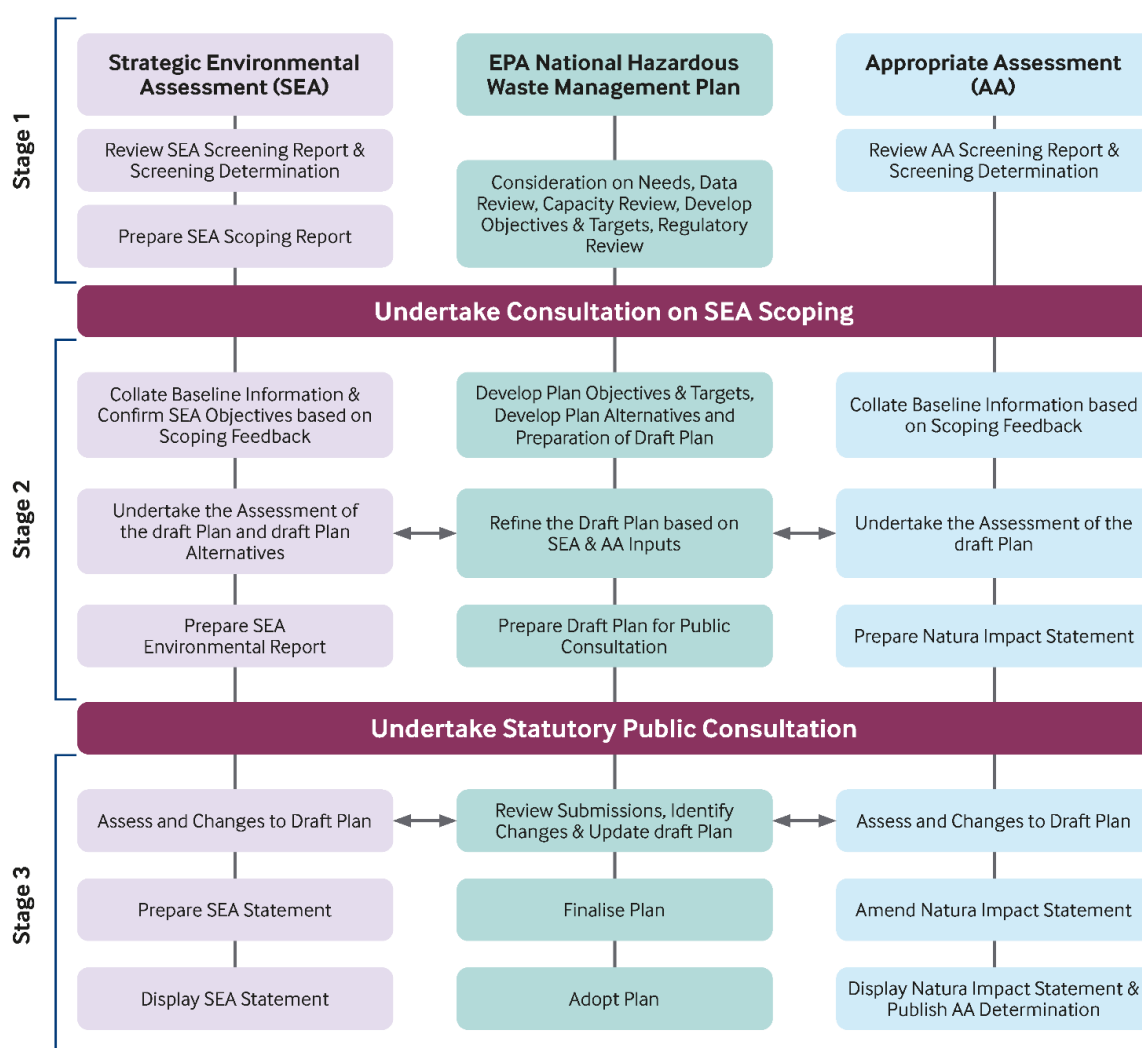
It should be noted that this document supplements and should be read in conjunction with the original Environmental Report. The clarifications and additional information contained herein (shown in *italicised blue text*) have been provided in order to increase the usefulness of the document for the public and decision makers. Significant deletions (such as dates for report publications or incorrect baseline text) are denoted with a strikethrough. The amendments proposed however are not of such an extent that changes to the content or outcome of the assessment contained within the Environmental Report will be required.

8.1 Amendments by Chapter

8.1.1 Chapter 3: Strategic Environmental Assessment Methodology

8.1.1.1 Section 3.1: The SEA Process

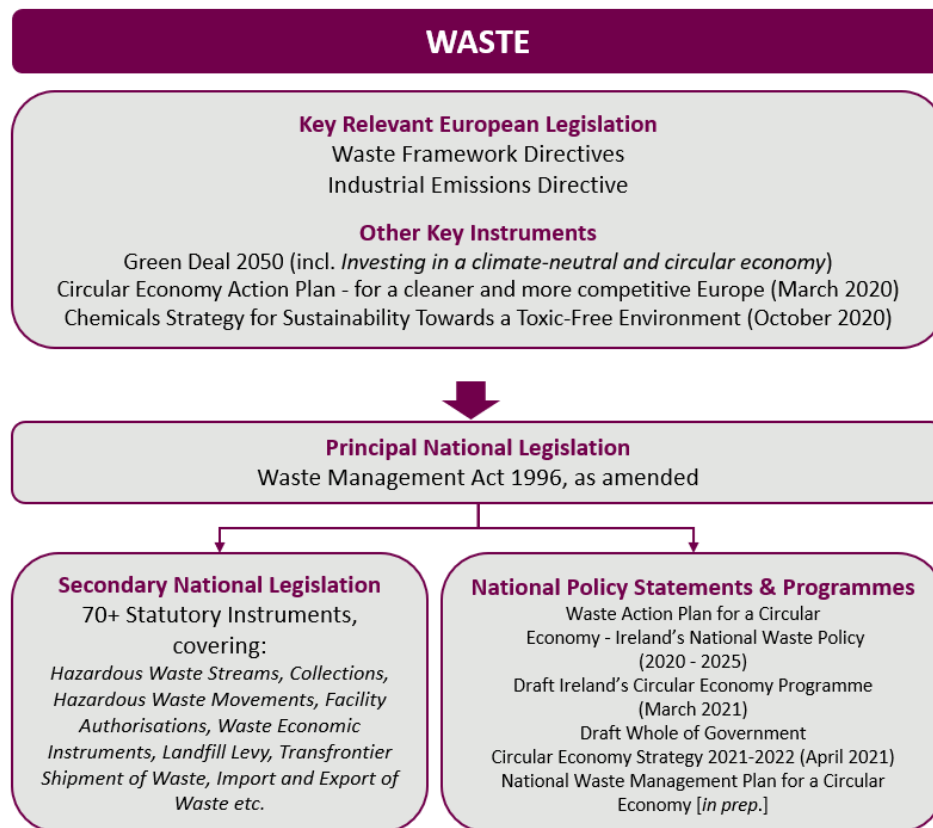
The following graphic has been added to this section on the SEA process to better illustrate the integration of the SEA, AA and plan development processes:



8.1.2 Chapter 4: Review of Relevant Plans and Programmes

8.1.2.1 Section 4.3: Key Existing Mechanisms of Relevance for Hazardous Waste

Figure 4.2 is updated to include reference to the National Waste Management Plan for a Circular Economy which is currently under preparation as of Q4 2021:



8.1.2.2 Section 4.3.4 National and Regional Legislation, Plans and Programmes

The following graphic is added to this section in Chapter 4 to illustrate the multitude of other plans relevant to the NHWMP:



The following update is made to the date of preparation of the National Waste management Plan:

As part of the next review cycle of regional waste management planning, the three RWMPs will be consolidated into one national plan, the **National Waste Management Plan**, which is ~~due for preparation starting in~~ *being prepared from Q3 2021* and will continue to be supported and implemented by the three Regional Waste Management Authorities. Some local authorities have published their own guidance, such as the Dublin Local Authority Siting Guidelines for Waste Facilities.

Appendix A to the Environmental Report is amended as follows to include reference to plans/policies in Northern Ireland:

Review of Regional Level Plans, Programmes and Policies

Topic	Title	Summary of Objectives: Regional
Marine	UK Marine Policy Statement (MPS)	The MPS was published in 2011 and provides a framework for preparing Marine Plans and taking decisions affecting the UK marine environment. This policy statement will contribute to the achievement of sustainable development in the UK marine area.
	Marine Plan for Northern Ireland (DAERA, 2018) [in Draft]	The proposed Marine Plan for Northern Ireland will inform and guide the regulation, management, use and protection of the Northern Ireland marine area. It seeks to develop a new planning approach to support the sustainable management of the marine area, including both inshore and offshore regions.
	Fisheries Act (NI) 1966, as amended	The Act extends the functions of the Ministry of Agriculture in relation to fisheries and to make provision for the development and improvement of fisheries by, or with the assistance of, that Ministry; to establish the Fisheries Conservancy Board for Northern Ireland, and to define their functions; to provide for the transfer to that Board of the property, rights and liabilities of, and to dissolve, the existing boards of conservators; to consolidate with amendments the Fisheries Acts (Northern Ireland) 1842 to 1954 and certain other enactments relating to fisheries; otherwise to amend the law with respect to fisheries; and for purposes connected with those matters.
	North Atlantic Salmon Conservation Organisation (NASCO), Convention for the Conservation of Salmon in the North Atlantic Implementation Plan for the period 2019 – 2024	The North Atlantic Salmon Conservation Organisation (NASCO) was established by the Convention for the Conservation of Salmon in the North Atlantic Ocean in 1984. NASCO's objective is conserve, restore, enhance and rationally manage Atlantic salmon through cooperation of six Governments and the European Union. Implementation plans are prepared by each jurisdiction to demonstrate what actions are being taken by the parties to implement NASCO's resolutions, agreements and guidelines.

8.1.3 Chapter 5: Relevant Aspects of the Current State of the Environment

8.1.3.1 Section 5.3.1.3: Human Health

The following paragraphs are amended with updates to the baseline information following consultation feedback:

Emissions from Waste Management Activities

Household use of chemicals (e.g. ~~bicides~~ *pesticides*) can also lead to pollution through their use and disposal, which can cause pollution via their emissions to surface and groundwaters as well as soils, contributing to general environmental degradation and indirect impacts on health. Households are also sources of hazardous waste such as asbestos, a material historically used for insulation, in decorative plaster and in some spray coatings before it was phased out as the carcinogenic fibres are easily inhaled. As a waste stream it may be generated during refurbishment works and during removal of known asbestos. Other key sources of asbestos waste can arise from industrial, farm, institutional and other commercial buildings. Currently two EPA facilities are licensed to accept asbestos waste. *Asbestos waste is currently exported to Northern Ireland, Germany and Sweden for disposal.*

Emissions to Water

Clean water is important to a population's general health. Ireland has in general good drinking water quality and consequently the health of the population benefits from having it. There are many potential contaminant

sources that pose a risk to Ireland's clean water supply. The main potential risks to human health from water-based contaminants include biological sources (verotoxigenic *E. coli* [VTEC], *Cryptosporidium* etc.) and chemical sources (fertilisers, pesticides [MCPA], herbicides, trihalomethanes [THMs], heavy metals and pharmaceuticals etc.). It should be noted however that the National Office for Environmental Health Services notes that MCPA parametric exceedances have never occurred at levels approaching significance for human health. The biggest issue in relation to heavy metals in the environment mainly arises from leaded pipes in the domestic distribution system and lead leaching, as well as naturally occurring arsenic in groundwater in certain areas.

Perfluoro- and polyfluoro-alkyl substances (PFAs) are an emerging issue of concern. These are a very large group of man-made chemicals which have been in widespread consumer and industrial use since the 1950's due to their wide range of applicability, from oil/water resistance to non-stick coatings (such as Teflon). PFAs are considered 'forever chemicals' and are persistent in the environment as they do not break down and are a risk to health (both human and the environment).

An OECD report, *Pharmaceutical Residues in Freshwater: Hazards and Policy Responses* (November 2019) notes that over 2,000 active pharmaceutical ingredients are being administered globally, both for people and in veterinary practice. The report outlines that the main sources of release to the environment comprise the untreated household wastewater as well as effluent from municipal wastewater treatment plants. Locally important 'hotspot' emissions can arise from manufacturing plants and intensive agriculture/aquaculture.

8.1.3.2 Section 5.3.3.2: Land

The following paragraphs are amended with updates to the baseline information following consultation feedback and to clarify the references to biocides/pesticides:

Hazardous Waste from Agricultural Activity

Some highly toxic pollutants were presented for disposal at the centres, including chemicals such as DDT (Dichlorodiphenyltrichloroethane) and lindane (organochlorine insecticides), mercury, cyanide and strychnine. Veterinary medicines are also a particular concern. The volumes of waste packaging related to pesticides, veterinary medicines and engine oil was also significant. It is estimated that each farmer per year could dispose of six tonnes of hazardous farm waste, seven tonnes of WEEE/ batteries, and 10 tonnes of waste oils. The scheme also highlighted that some farms may be illegally storing significant quantities of pesticides. ~~Under European legislation, biocides are substances, chemical or biological substances, which are designed to destroy or render harmless a harmful organism(s). They can take the form of pesticides or antimicrobials. These products have a high degree of regulation owing to the potential effects on human health and the environment.~~

Pesticides is a general term that comprises two distinct sub-groups, namely Plant Protection Products (PPPs) and Biocides. DAFM regulates all pesticides and as part of the EPA's routine enforcement programme within the legislation, the EPA may identify pesticides that are no longer permitted to be used, which are considered hazardous waste, in which case the owner of the waste will be advised to dispose of it through licensed hazardous waste disposal contractors or collection sites.

~~The plan states that~~ Effective enforcement of the Biocidal Product Regulations would also help ensure these products and any subsequent wastes are managed correctly and reduce environmental risks. In particular, Article 17 prohibits the use, including illegal storage, of unauthorised biocides. This would help ensure such pesticides are managed appropriately, thus reducing the risks they pose to human health and the environment, including the illegal poisoning of wildlife e.g. poisoning of wild birds by carbofuran, a highly toxic pesticide. However, it is unclear what level of enforcement of these regulations has been undertaken to date.

Pesticides (which include biocides and plant protection products) are regulated by the Department of Agriculture, Food and the Marine from the point of view of placing on the market and use. Pesticide products which are no longer permitted to be used are hazardous waste and must be disposed of in accordance with the national waste legislation.

8.1.3.3 Section 5.3.3.3: Geology and Hydrogeology

The following line has been added at the end of the section to acknowledge the wide range of datasets provided by the geological Survey of Ireland (GSI) which will be of use at lower planning tiers:

The Geological Survey of Ireland provides a wide range of datasets covering the broad topic areas of: geology; soil/subsoils; geohazards; groundwater (including groundwater flooding); minerals and extraction; geotechnical data; and geochemistry. The data can be found at: <https://www.gsi.ie/en-ie/data-and-maps/Pages/default.aspx>

8.1.3.4 Section 5.3.5.2: Climatic Factors

The following updates are made to the baseline on emissions on foot of the more recent EPA publication on Ireland's Greenhouse Gas Emissions:

Ireland's Greenhouse Gas Emissions Overview

... At a national level, according to the latest EPA ~~Final~~ **Provisional** Greenhouse Gas ~~Inventory~~ **Emissions Report**¹⁰ for the period 1990-2020~~19~~, emissions of GHGs in Ireland are estimated to be ~~59.778~~ **57.70** million tonnes (Mt) carbon dioxide equivalents (CO₂eq). This is ~~4.43~~ **6.70**% lower than emissions in ~~2018~~ **2019**, following a ~~0.74~~ **0.0**% ~~increase~~ **decrease** reported for that year. The estimates also indicate that Ireland will exceed its ~~2019~~ **2020** annual limit set under the EU's Effort Sharing Decision (ESD) by ~~6.85~~ **6.73** Mt CO₂eq, for the ~~fourth~~ **fifth** year in a row.

In ~~2019~~ **2020**, emissions from the EU Emissions Trading System [ETS] (which covers power stations, large industrial plants and airlines) decreased by ~~8.76~~ **6.2**% (~~1.34~~ **0.89** Mt CO₂eq), while emissions from the non-ETS sector, covered by the ESD, decreased by ~~2.83~~ **1.26**% (~~1.44~~ **1.26** Mt CO₂eq). The longer-term trend however indicates that since ~~2013~~ **2005**, emissions under the ESD ~~increased~~ **only decreased** by ~~6.87~~ **0.0**% (~~2.90~~ **3.33** Mt CO₂eq), **considerably short of Ireland's 20% reduction commitment**.

8.1.3.5 Section 5.3.7.1: Overview of Cultural Heritage Protection in Ireland

The following line is added to the end of the section to acknowledge the transboundary aspects of cultural heritage and relevant data held by the Northern Ireland Department of Agriculture, Environmental and Rural Affairs (DAERA), Historic Environment Division:

At lower planning levels, it may be relevant to examine the potential for transboundary cultural heritage effects. The Northern Ireland Historic Environment Division maintains datasets which include recorded designated and non-designated heritage assets are available at:
<https://www.communitiesni.gov.uk/publications/historic-environment-digital-datasets>.

8.1.4 Chapter 8: Assessment of Preferred Scenario

8.1.4.1 Section 8.3.1: Policy & Regulation

The following update is made to the assessment tables specifically in terms of updated references to other organisations and timeframes. Changes to the Recommendation/Action(s) wording is tracked under **Section 5.4** of this SEA Statement.

Recommendation	Action	Lead Org(s)	Timeframe
Recommendation 1: Ensure a coordinated national approach on hazardous waste in the context of the Circular Economy, with focus on prevention.	Action 1.1	DECC/EPA	By Q3-2024 Q1-2022
	Action 1.2		By Q4-2024 Q1-2022
	Action 1.3		Ongoing

¹⁰ EPA (April ~~October~~ 2021) Ireland's ~~Final~~ **Provisional** Greenhouse Gas Emissions 1990-2020~~19~~. Available at: <https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/irelands-provisional-greenhouse-gas-emissions-1990-2020.php> ~~https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/greenhouse-gas-emissions-final-2019.php~~

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Recommendation	Action	Lead Org(s)	Timeframe
Recommendation 2: <i>Deliver strong and collaborative enforcement of hazardous waste legislation to ensure protection of human health and the environment.</i>	Action 2.1	EPA/National Waste Enforcement Committee, Local Authorities	Annual
	Action 2.2		By Q4-2021 Q1-2022
	Action 2.3		Annual
Recommendation 3: <i>Provide for all-island approaches on hazardous waste issues.</i>	Action 3.1	DECC	By Q4-2021 Q2-2022
Recommendation 4: <i>Strengthen systemic resilience for management of hazardous waste.</i>	Action 4.1	EPA, RWMPO , NTFSO	By Q1-2022
	Action 4.2		By Q3-2022

8.1.4.2 Section 8.3.2: Prevention

The following update is made to the assessment table specifically in terms of updated references to other organisations and timeframes. Changes to the Recommendation/Action(s) wording is tracked under **Section 5.4** of this SEA Statement.

Recommendation	Action	Lead Org(s)	Timeframe
Recommendation 5: <i>Promote reduced consumption of hazardous substances in household settings.</i>	Action 5.1	RWMPOs	Ongoing
	Action 5.2		By Q4-2021 Q3-2022
	Action 5.3		By Q2-2022
	Action 5.4		By Q4-2022
Recommendation 7: <i>Support applied research to inform policy & industry on hazardous waste prevention.</i>	Action 7.1	EPA/ SFI	Ongoing
	Action 7.2		Ongoing

8.1.4.3 Section 8.3.3: Collection & Treatment

The following update is made to the assessment table specifically in terms of updated references to other organisations and timeframes. Changes to the Recommendation/Action(s) wording is tracked under **Section 5.4** of this SEA Statement.

Recommendation	Action	Lead Org(s)	Timeframe
Recommendation 11: <i>By 2022, establish nationwide collection and transfer of farm hazardous wastes, including unused veterinary products.</i>	Action 11.1	DECC/ DAFM	By Q2-2022
	Action 11.2		By Q1 - 2024
	Action 11.3		Q1 - 2022
Recommendation 14: <i>Promote best practice in the management of commercial hazardous wastes streams.</i>	Action 14.1	EPA	By Q3-2021 Q1-2022
	Action 14.2		By Q4-2021 Q4-2022
	Action 14.3		By Q4-2021 Q4-2022

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Recommendation	Action	Lead Org(s)	Timeframe
Recommendation 15: <i>Promote best practice in the management of asbestos-contaminated waste</i>	Action 15.1	EPA, DECC, RWMPOs and local authorities	By Q2-2022
	Action 15.2		Q2 2023
Recommendation 16: <i>Put in place arrangements for temporary storage of orphan radioactive sources.</i>	Action 16.1	EPA DECC	By Q2-2022

8.1.4.4 Section 8.3.4: Implementation

The following update is made to the assessment table specifically in terms of updated references to other organisations and timeframes. Changes to the Recommendation/Action(s) wording is tracked under **Section 5.4** of this SEA Statement.

Recommendation	Action	Lead Org(s)	Timeframe
Recommendation 19: <i>Provide leadership on achievement of NHWMP objectives; with regular progress reports on implementation of the plan recommendations.</i>	Action 19.1	EPA	By Q3-2024 Q1-2022
	Action 19.2		Annually
	Action 19.3		By Q4-2024
	Action 19.4		By Q4 2023

8.1.5 Chapter 9: Mitigation and Monitoring

The final environmental programme is presented in **Section 7.2** of this SEA Statement.

