Rialtas Áitiúil Éireann
Local Government Ireland

DRAFT NATIONAL WASTE MANAGEMENT PLAN FOR A CIRCULAR ECONOMY

VOLUME V A

SEA ENVIRONMENTAL REPORT – NON TECHNICAL SUMMARY

REGIONAL WASTE MANAGEMENT PLANNING OFFICES

NON-TECHNICAL SUMMARY

INTRODUCTION

This environmental report has been prepared as part of the Strategic Environmental Assessment (SEA) of Ireland's first National Waste Management Plan for a Circular Economy (hereafter referred to as 'the Plan'). This assessment has been undertaken in accordance with the requirements of EU and national legislation on the assessment of the effects of certain plans and programmes on the environment.

The purpose of this environmental report is to undertake the following:

- Inform the development of the Plan;
- Identify describe and evaluate the likely significant effects of the implementation of the Plan and its reasonable alternatives; and
- Provide an early opportunity for the statutory authorities and the public to offer views on any aspect of this environmental report and accompanying Plan documentation, through consultation.

This Environmental Report complies with the requirements of the Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment (the SEA Directive) as implemented in Ireland through the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations (S.I. No. 435 of 2004), as amended, and the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. No. 436 of 2004), as amended.

CONTENTS AND OBJECTIVES OF THE PLAN

The first generation of waste management plans prepared in Ireland covered the period 1998 to 2004 and were based on ten waste management regions. These plans were reviewed and replaced over the period 2005 to 2006 to cover the period up to 2010 and 2011.

In July 2012, the new government waste policy, 'A Resource Opportunity', recommended the consolidation of the previous ten waste regions in the State to a maximum of three waste regions as follows:

- The Connacht-Ulster Region;
- The Eastern-Midlands Region; and
- The Southern Region.

In May 2015, three regions on behalf of Local Authorities published a RWMP to cover the period 2015 to 2021 which included policies and objectives to set the framework for the prevention and management of wastes in a safe and sustainable manner in each of the three regions. These plans are administered by three Regional Waste Management Planning Offices (RWMPO). The implementation of these plans are coordinated on behalf of Local Authorities.

Ireland's National Waste Policy 2020-2025 'A Waste Action Plan for a Circular Economy' (WAPCE) calls for the replacement of the existing three RWMP with a single National Waste Management Plan containing targets for reuse, repair, resource consumption and a reduction in contamination. This Plan is the single national plan and will cover the full geographic scope of the State for the period 2023 to 2029. This Plan continues the evolution from local to regional to a national plan and is Ireland's first National Waste Management Plan for a Circular Economy (NWMP).

The structure of the draft Plan has been modified from the previous RWMP to allow for a more thematic and adaptive model. The draft Plan has been prepared in four volumes as follows:

- **Volume I:** Context describes the waste sector in Ireland and identifies waste generation trends for each waste stream with capacities for collection, treatment and export. This Context volume informs the setting of targets, core policies, targeted policies and priority actions in the Core volume.

- **Volume II:** Core sets out the Aim, Strategy, Policies and Priority Actions that have been designed to deliver on the Plan targets. The Core is presented with specific policies and actions for each of the identified focus areas chosen including individual waste streams, collection systems and treatment infrastructure.
- **Volume III:** Delivery sets out how the Core will be delivered and how the RWMPO plan to achieve the aim and targets through an annual implementation programme with annual or biennial quantifiable actions.
- **Volume IV:** Technical Appendices will include all supporting information, datasets, reports and legislation referenced as essential to the preparation of this Plan.

The SEA and AA documentation comprise Volume V of the Plan.

SEA METHODOLOGY

The SEA Directive requires that certain plans and programmes, which are likely to have a significant impact on the environment, be subject to the SEA process. The SEA process is broadly comprised of the following steps, as outlined in **Table 1.**

Table 1: SEA Stages

SEA Step/ Stage	Purpose	Status
Screening	The purpose of this stage of the process was to reach a decision, on whether or not an SEA of the Plan was required.	As a national scale plan, required by legislation, which will be adopted by Government in the fields of waste management, the Plan meets the requirements of paragraph (a) of Article 9(1) of the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations and this Plan has been screened in for assessment. This has been documented in the Screening Statement appended to the Scoping Report prepared in November 2021.
Scoping and statutory consultation	The purpose of this stage of the process was to clarify the scope and level of detail to be considered in the environmental assessment. This was undertaken in consultation with the defined statutory bodies for SEA in Ireland and other stakeholders. Transboundary consultation was undertaken with the relevant authorities in Northern Ireland.	This stage was completed in November to December 2021 and a Scoping Report was prepared and circulated to the relevant consultees.
Environmental assessment and consultation	The purpose of this stage of the process was to assess the likely significant impacts on the environment as a result of implementation of the draft Plan and consideration of reasonable alternatives. The output from this stage of the process is an SEA Environmental Report which records this assessment. Consultation on the draft Plan and Environmental Report are also part of this stage.	This stage was completed in Q1 2023 and is the subject of this report.
SEA Statement	The purpose of this stage of the process is to identify how environmental considerations and consultations have been integrated into the final plan, as well as consideration of alternatives and inclusion of an SEA monitoring programme, culminating in the production of an SEA Statement.	To be published with final Plan in Q2 2023.

Integration of the SEA and draft Plan was achieved through involvement of relevant team members in discussions across the stages of scoping, including: review of the existing situation, alternatives development, iterative assessment of actions, and suggested mitigations. Consultation as part of SEA Scoping was carried out with the statutory environmental authorities for SEA in Ireland and contact was also initiated with the environmental authority in Northern Ireland (Department of Agriculture, Environment and Rural Affairs). The scoping stage also included the preparation of a Scoping Report and an online SEA Scoping workshop was held November 2021.

The draft Plan is a national plan and as such the assessment has been focussed on the national level. The plan will cover the period up to 2029 and, in line with the SEA Directive, short-, medium-, and long-term impacts have been considered during the assessment. Based on the requirements of the legislation and guidance, the information provided in the Environmental Report is outlined in **Table 2.**

Table 2: Requirements of the SEA Directive and Relevant Section in Environmental Report

Requirement of SEA Directive (Article 5(1) Annex I)	**Chapter of Environmental Report**
An outline of the contents and main objectives of the plan or programme, or modification to a plan or programme, and relationship with other relevant plans or programmes.	**Chapter 2:** Content and Main Objectives of the Plan **Chapter 4:** Review of Relevant Plans and Programmes
The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme, or modification to a plan or programme.	**Chapter 5:** Relevant Aspects of the Current State of the Environment (Baseline)
The environmental characteristics of areas likely to be significantly affected.	**Chapter 5:** Relevant Aspects of the Current State of the Environment (Baseline)
Any existing environmental problems which are relevant to the plan or programme, or modification to a plan or programme, including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to the Birds Directive or the Habitats Directive.	**Chapter 5:** Relevant Aspects of the Current State of the Environment (Baseline)
The environmental protection objectives, established at international, European Union or national level, which are relevant to the plan or programme, or modification to a plan or programme, and the way those objectives and any environmental considerations have been taken into account during its preparation.	**Chapter 4:** Review of Relevant Plans and Programmes
The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors.	**Chapter 8:** Assessment of Preferred Scenario
The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme, or modification to a plan or programme.	**Chapter 9:** Mitigation and Monitoring
An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information	**Chapter 7:** Consideration of Alternatives
A description of the measures envisaged concerning monitoring of the significant environmental effects of implementation of the plan or programme, or modification to a plan or programme	**Chapter 9:** Mitigation and Monitoring
A non-technical summary of the information provided under the above headings	**Non-technical Summary**

In addition to this SEA, there is a requirement under the EU Habitats Directive (92/43/EC) to assess whether the plan has the potential to impact negatively on a European site. These sites include areas designated for the protection and conservation of habitats and of wild flora and fauna, and include Special Protection Areas (SPAs) and Special Areas of Conservation (SACs). In parallel to the SEA, an Appropriate Assessment (AA) is being carried out to inform decisions surrounding this issue.

An NIS has been prepared for the Plan, and an appropriate assessment is being carried out in parallel with the SEA process. An AA determination will be made by the RWMPO prior to the adoption of the Plan. Assessment and analyses in the NIS have been used to guide the development of the alternatives to be considered as part of the SEA. The NIS also feeds directly into the assessment of biodiversity, flora and fauna in this SEA.

REVIEW OF RELEVANT PLANS AND PROGRAMMES

In line with the SEA Directive, this section of the report identifies and considers the environmental protection objectives from other relevant plans, programmes and policies in relation to the draft Plan. As the draft Plan is a national strategic plan, the review of such key plans/ programmes has both focused on the European level and national level. Such plans and programmes have been explored under specific topic headings addressing sectors such as: waste, circular economy and climate change. In order to set a framework for exploring the relationship between the draft Plan and key plans/ programmes the following two questions were borne in mind:

- Does the draft Plan contribute to the fulfilment of environmental protection objectives set in other key plans/ programmes; and
- To what degree are the environmental protection objectives/ measures set in these other key plans/ programmes impacted by the draft Plan?

At international level, striving for sustainability and circularity across waste management is a key consideration. Of particular relevance to the draft Plan are the UN Sustainable Development Goals (SDGs): Goal 8 (Decent Work and Economic Growth), Goal 9 (Industry, Innovation and Infrastructure), Goal 11 (Sustainable Cities and Communities), Goal 12 (Responsible Consumption and Production) and Goal 13 (Climate Action).

At European level, the European Green Deal is the EC strategy to make the EU more sustainable by 2050, recognising the cross-cutting nature of climate change and the need to align policies across key areas such as renewable energy, agriculture, industry, infrastructure, and finance if the required gains are to be realised by 2050. It has an action plan, and operates across nine policy areas; three of the key areas of relevance to the draft Plan include biodiversity, elimination of pollution, and climate change. Other keys plans and programmes relating to waste management include Waste Framework Directive, Single Use Plastic Directive 2019, Packaging Directive (94/62/EC), Landfill Directive (99/31/EC), Extractive Industries Waste Directive (2006/21/EC), Directive (EU) 2018/849 (amendment to [ELV] Directive 2000/53/EC, Batteries Directive (2006/66/EC) and Waste Electrical and Electronic Equipment [WEEE] Directive (2012/19/EU)), EU Ship Recycling Regulation (SRR), OECD Council Decision [OECD/LEGAL/0266], EU Bioeconomy Strategy, Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals), EU regulation on Persistent Organic Pollutants (POPs), Standardizing and Rationalizing Reports on the Implementation of Certain Directives Relating to the Environment (91/692/EEC), European Climate Law and EU Strategy for Sustainable Textiles.

At national level, key influencing plans and programmes include: Waste Management Act 1996 as amended, Waste Directive Regulations 2011 (S.I. No. 126/2011) as amended, Circular Economy and Miscellaneous Provisions Act 2022, A Waste Action Plan for a Circular Economy – Ireland's National Waste Policy 2020-2025, Circular Economy Programme (CEP), The Whole of Government Circular Economy Strategy 2021-2022 (CES), National Hazardous Waste Management Plan (NHWMP), Climate Action Plan 2021 (CAP), National Food Waste Prevention Roadmap, Bioeconomy Strategy, National Policy Statement on the Bioeconomy (NPSB), 2020 Programme for Government, National Marine Planning Framework (NMPF), and Directive (EU) 2019/883.

RELEVANT ASPECTS OF THE CURRENT STATE OF ENVIRONMENT (BASELINE)

This section of the Environmental Report examines the relevant significant issues of the current state of the environment in relation to Biodiversity, Flora and Fauna, Population, Human Health, Water, Land and Soil, Air Quality, Climatic Factors, Material Assets, Cultural Heritage, Landscape, and the interrelationship between these factors. The baseline has been compiled using available datasets and indicators developed through scoping and review of relevant supporting documentation. It is noted that the draft Plan is a national plan and as such the assessment is focussed on a national strategic level and this is mirrored in the level of detail presented for the baseline description in the main Environmental Report.

The baseline description is focused in the first instance on the Republic of Ireland however given that Ireland shares waters with Northern Ireland, there is potential for environmental impact on biodiversity, water quality, air quality, and climatic factors which are transboundary.

Ireland's natural environment, although under increasing pressure, generally remains of good quality and represents one of the country's most essential national assets (EPA, 2012, 2016 and 2020). In the 7th and most recent state of the environment review Ireland's Environment – An Assessment 2020, the EPA outlines a summary scorecard for the progress being made across key environmental policy areas as well as the general trend/outlook. These are summarised below in **Table 3.**

Table 3: Summary assessment and future outlook for selected environmental policy areas and relevance to the draft Plan

Policy Area	Summary Assessment & Outlook	Relationship to the Plan
Climate	**Assessment: Very poor / significant environmental and/or compliance challenges to address** **Outlook: Partially on track to achieving full compliance or measures in place or planned that will improve the situation**	The waste sector overall has a relatively small contribution to Ireland's GHG emissions (1.5% in 2019). Nevertheless, society-wider efforts are urgently needed to reduce GHG emissions and circularity is the waste sectors contribution to climate mitigation. The Plan helps support this effort from the waste management sector with the overall aim of preventing and reducing waste generation in the first instance.
	Ireland has made good progress in deploying renewable energy sources and has an ambitious National Energy and Climate Plan, and Climate Action Plan. However, Ireland continues to have a high level of greenhouse gas (GHG) emissions and remains above its EU emission limit, missing the target for 2020. Should all the actions in the Climate Action Plan be fully adopted and implemented, the targets for 2050 could be achieved. However significant challenges remain to reaching these goals.	

Table 3: Summary assessment and future outlook for selected environmental policy areas and relevance to the draft Plan (Cont'd)

Policy Area	Summary Assessment & Outlook	Relationship to the Plan
Air Quality & Emissions	**Assessment: Moderate / on track generally / local or occasional challenges** **Outlook: Partially on track to achieving full compliance or measures in place or planned that will improve the situation** Air quality in Ireland is generally very good and consistently meets its EU limit values. There was however an exceedance in 2019 of nitrogen dioxide at a monitoring station in Dublin, and Ireland at times does not meet the more stringent limit values set by the WHO (namely of fine particulate matter). In terms of transboundary emissions, Ireland is failing to meet EU targets on ammonia emissions under the National Emissions Ceiling (NEC) Directive, of which agriculture is the main source. Progress is mixed progress in terms of reducing emissions from other sectors such as transport and energy. Measures at a national level are required to tackle this and improve the outlook.	Emissions to air from waste management activities are managed primarily through the licensing of facilities granted under the Waste, Integrated Pollution Control (IPC) and Industrial Emissions Directive (IED) authorisations. The Plan supports the work of the EPA Office of Environmental Enforcement which oversees licences authorisations and specific licence conditions, as well as site auditing activities.
Water	**Assessment: Poor / environmental and/or compliance challenges to address** **Outlook: Partially on track to achieving full compliance or measures in place or planned that will improve the situation** In general, trends in water quality are mixed; over the past 20 years, there has been a deterioration in the number of the highest quality water bodies, particularly rivers, and mixed progress in waters achieving the environmental objectives under the water Framework Directive (WFD). Good progress has been made in improving wastewater treatment however issues remain. Nutrient enrichment remains the main significant issue. The outlook is also mixed, and a balance needs to be sought between a growing population and certain sectors in particular, such as intensive agriculture.	Some groundwater bodies are not meeting their WFD objectives due to legacy activities, including historic landfills and licensed waste facilities (e.g. landfills and sites with ground contamination). The Plan supports the work of the Office of Environmental Enforcement which oversees licences authorisations and specific licence conditions.

Table 3: Summary assessment and future outlook for selected environmental policy areas and relevance to the draft Plan (Cont'd)

Policy Area	Summary Assessment & Outlook	Relationship to the Plan
Nature	**Assessment: Very poor / significant environmental and/or compliance challenges to address** **Outlook: Largely not on track to meet policy objectives and targets.**	A key aim of the Plan is the prevention of waste, and managing it appropriately when it does arise, and at suitable locations to reduce environmental impacts to nature.
	The assessment and outlook are overall very poor. Biodiversity losses and habitat changes continue on an international scale. EU conservation status reporting indicates generally declining trends and unfavourable status for many habitats, with 85% having unfavourable status. Many species are faring better, but 15% are in decline at EU level, mostly freshwater species. Agricultural activities remain the key pressure. The outlook is very poor, with climate change adding to challenges and cumulative impacts.	
Waste & Circular Economy	**Assessment: Poor / environmental and/or compliance challenges to address** **Outlook: Partially on track to achieving full compliance or measures in place or planned that will improve the situation**	A key aim of the Plan is reducing the generation of waste in the first instance, with the overall aim of prevention waste generation.
	Ireland has made excellent progress in meeting its current EU targets. The generation of waste volumes however remains tied to economic activity which has been growing in recent years. Initiatives such as producer liability and waste prevention and recycling programs have also led to improvements and landfill needs have decreased while waste-to-energy capacity has increased. Challenges remain to shift from a linear economy to a circular one, with circular principles remaining low in Ireland.	

Summary of the Environmental Baseline

In Ireland, over 14 million tonnes of waste are generated per year, in homes, workplaces and through leisure activities. National waste statistics and waste characterisations provide evidence and highlight areas with potential for change and impact through introducing circular economy policies.
For example, Ireland is now generating more than 1 million tonnes of packaging each year, and the recycling rate of packaging is decreasing with more going for energy recovery. The amount of construction & demolition waste is increasing in line with activity nationally. In commercial residual bins, over 70% of what's presented and goes for landfilling or energy recovery but could be recycled. Single use items, such as coffee cups and single use tissue paper, are an increasing feature in the household and commercial kerbside bins.
It is recognised that health and wellbeing are tied to a good quality environment. At a national level, the main issues for population and human health relates to the treatment of waste streams and the potential emissions to key environmental receptors There are potential indirect impacts on health through illegal waste activities degrading air, soil and water quality. The main drivers and pressures on nature noted by the EPA in their most recent assessment of Ireland's Environment (2020) include the rapid loss of biodiversity and changes to habitats in general at international level, with many habitats and species having less than favourable conservation status at EU level. In Ireland, 46% of habitats are assessed as 'inadequate' and 39% are 'bad'; of the species assessed, 15% are assessed as 'bad' and 13% as 'unknown'. Agricultural activities remain the key pressure. The outlook is very poor, with climate change adding to challenges and cumulative impacts. There is a potential of indirect impacts that may be via air or water emissions from existing or

new waste infrastructure. Historic waste disposal sites across country may also be creating residual negative impacts for biodiversity.

Ireland generally has excellent soil quality and the estimated proportion of contaminated land is relatively small. The principle issues relevant to waste management activities include leachate and other impacts from consented, historic and illegal landfills and from illegal waste activity.

Waste management activities in Ireland can have significant potential to impact on the ecological status of a water body. Pollution by leachate, suspended solids and other pollutants are a potential significant problem where waste activities (authorised and unauthorised) are close to or over watercourses can have severe negative impacts on invertebrate and plant life and on all life stages of fish life cycles. Such risks are posed by active facilities, former disposal sites and illegal waste activities. Other key issues include morphological impact on waster bodies from engineering and other works and inappropriate siting of new waste treatment facilities within or adjacent to WFD protected sites or flood zones.

In general, Ireland has good air quality and generally meets its EU emissions limit values. However monitoring indicates that some pollutants are exceeding the stricter World Health Organization (WHO) guideline values, e.g. fine particulates and ground-level ozone, indicating that air quality problems may be more widespread in Ireland than previously thought. Air quality impacts from waste management activities can be on a local scale or a regional/national scale. The relative contribution and extent of the direct and indirect emissions is largely dependent on the nature of the disposal/recovery process and the distance and mode of transport involved.

Inter-relationships

In accordance with the SEA Directive, the interrelationship between the SEA environmental topics must be considered.

Evolution of the Baseline in the Absence of the Plan

The SEA legislation requires that consideration is given to the likely evolution of the current baseline where implementation of the draft Plan does not take place. In the EPA Good Practice Note on Strategic Environmental Assessment for the Waste Sector (2019), this is further clarified as generally meaning the 'business as usual' scenario where the existing plan, i.e. the three existing Regional Waste Management Plans 2015-2021, continue into the future. In the case of waste management, this would mean a situation where the actions and recommendations of the three Regional Waste Management Plans 2015-2021 would continue to be implemented. **Table 4** summarises the key points.

Table 4: Likely Evolution of the Baseline without Implementation of the draft Plan

Environmental Area	Evolution of the Baseline in the Absence of the draft Plan
Population and Human Health	In the absence of the National Waste Management Plan for a Circular Economy (Plan), waste management activities could not be coordinated as well with other plans. The general recommendations from the preceding Regional Waste Management Plans would continue to apply, however, this would not reflect the developments in waste policy that have occurred in the intervening years, such as the requirements under the EU Green Deal and Circular Economy Package and Ireland's Circular Economy Action Plan which are of direct relevance to this Plan. This would affect the strategic direction of the Plan and could lead to less effective coordination between relevant government bodies and other agencies in line with the Waste Framework Directive and relevant EU documents. This in turn could give rise to deterioration of air, water and soil quality and in turn to impacts on human health which could be avoided through a more coordinated approach on the latest developments in waste management and related technologies. In the absence of the Plan, other plans and initiatives would continue, such as awareness raising, etc. under for instance the National Waste Prevention Programme.

Table 4: Likely Evolution of the Baseline without Implementation of the draft Plan (Cont'd)

Environmental Area	Evolution of the Baseline in the Absence of the draft Plan
Biodiversity, Flora and Fauna	Without the implementation of the Plan, biodiversity, flora and fauna, including protected sites, habitats and species, would continue to exist in much the same pattern, abundance and density as today. However, there would be continued pressure on biodiversity as a result of ongoing legacy issues from historic landfills, e.g. emissions from leachate effecting, soil, groundwater and surface water-dependant ecosystems; illegal dumping; and backyard burning. While the continued implementation of the preceding Regional Waste Management Plans would offer some protection to biodiversity in targeting waste reduction and prevention, however, this would not take on board specific environmental and biodiversity considerations being undertaken as part of the EU Circular Economy Package and EU Green Deal considered as part of the National Waste Management Plan.
Land and Soils	In the absence of the National Waste Management Plan, the programme of remediation of unregulated historic landfills and licenced sites would be implemented through the Regional Waste Management Offices, EPA and Local Authorities. The EPA Code of Practice: Environmental Risk Assessment for Unregulated Waste Disposal Sites (EPA, 2007) and the Guidance on contaminated Land and Groundwater at EPA Licensed Sites (EPA, 2013) would continue to be used when assessing unregulated historic landfills, licensed facilities and contaminated sites. The principal aim in dealing with groundwater related issues is to secure the protection of human health, waterbodies (including groundwater) and the wider environment.
Water	In the absence of the National Waste Management Plan, water quality in Ireland is likely to continue to improve in line with efforts being made by the RBMP and its Programme of Measures throughout Ireland, though trends are mixed. The main challenges would remain, tackling diffuse pollution; eliminating serious pollution associated with point sources; and using the full range of legislative measures in an integrated way to achieve better water quality. Waste management activities in general represent a relatively small proportion of significant pressures on water bodies, which is dominated by agricultural sources, wastewater treatment discharges, and hydromorphological issues. The third cycle of the RBMP and its PoM would be initiated with continued gains expected regardless of the Plan.
Air and Climate	Air quality in Ireland is of a good standard across the country, meeting most EU air quality standards, though some pollutants area above WHO limits. The absence of the Nation Waste Management Plan is not expected to affect this trend. As a result of anthropogenic greenhouse gas emissions generation, climate change is predicted to occur in the future regardless of action. The UN Intergovernmental Panel on Climate Change predicts sea level rise, changes in rainfall patterns and temperatures as well as changes in the frequency of droughts and extreme weather events, such as increased flooding. The potential impacts from sea level increases, increased flooding, summer droughts, etc. may impact on existing and any future waste management activities.

Table 4: Likely Evolution of the Baseline without Implementation of the draft Plan (Cont'd)

Environmental Area	Evolution of the Baseline in the Absence of the draft Plan
Material Assets	The National Waste Management Plan incorporates the requirements of the EU Green Deal and EU Circular Economy Package and existing requirements of European and national directives, regulations and measures to facilitate Ireland's transition to a Circular Economy. It provides for the coordination of these controls to reduce impacts to the environment and examines how waste management activities are impacting the wider environment and the measures needed to address these negative effects. Without the implementation of the Plan, it could reasonably be expected that waste management would continue to be managed in a less coordinated manner thus the cumulative and synergistic impacts on the environment of increasing waste figures nationally would continue. Critically the framework in place would not facilitate the coordinated approach to assessing waste management infrastructure requirements within the State and may result in over capacity of certain types of infrastructure and lack of spatial distribution nationally. Critically, the new plan will allow for a more coordinated approach to assessing and supporting more sustainable waste management approaches within the State.
Cultural Heritage	In the absence of the National Waste Management Plan, cultural heritage concerns would continue to be dealt with as part of the planning processes and related environmental assessments at lower planning tiers and at the project level.
Landscape	In the absence of the National Waste Management Plan, landscape and visual concerns would continue to be dealt with as part of the planning processes and related environmental assessments at lower planning tiers and at the project level.

FRAMEWORK FOR ASSESSMENT

There are essentially three types of objectives considered as part of this SEA. The first relates to the objectives of the plan. The second relates to wider environmental objectives i.e. environmental protection objectives at a national, European, and international level, and finally there are the Strategic Environmental Objectives (SEO), which were devised to test the effects of the draft Plan on the wider environment.

The assessment is an objectives-led assessment which involves comparing the proposed alternatives against defined SEA Environmental Objectives for each of the identified issue areas. The selected SEOs for this SEA are set out in **Table 5.** These environmental objectives are based on the current understanding of the key environmental issues having regard to the environmental protection objectives outlined in **Chapter 6** of the main Environmental Report. A draft set of objectives was included in the SEA Scoping Report prepared for the draft Plan which underwent statutory consultation in 2021. The objectives have been updated prior to the assessment based on feedback from the environmental authorities.

Table 5: Strategic Environmental Objectives

Related to SEA Topic(s)	Strategic Environmental Objective(s)	To what extent will the Plan…	Relevant UN Sustainable Development Goal(s)
Population and Human Health (PHH)	**Objective 1:** To protect human health from waste management activity.	• Reduce the generation of waste. • Promote better segregation of waste in household and non-household settings. • Promote awareness and knowledge of waste issues. • Support the protection of human health from waste treatment. • Support and enable appropriate authorised collection platforms.	**GOAL 3:** Ensure healthy lives and promote well-being for all at all ages **GOAL 12:** Ensure sustainable consumption and production patterns
Biodiversity, Flora and Fauna (BFF)	**Objective 2:** 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 Plan.	• Support the protection of biodiversity from waste management activities. • Support the regulatory processes for licensed facilities. • Ensure that waste infrastructure does not impact on habitats and species.	**GOAL 15:** Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
Land and Soil (LS)	**Objective 3(a):** Safeguard soil quality and quantity (including geo-heritage sites) from waste management. **Objective 3(b):** Reduce and eliminate soil contamination.	• Protect the national soil resource from waste management activities. • Remediate historic landfills and other legacy sites where waste poses a risk to the environment. • Support increased remediation of contaminated soil within Ireland.	**GOAL 15:** Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
Water (W)	**Objective 4:** Protect and restore water quality (surface waters, groundwaters and marine waters) from hazardous waste (including transboundary considerations).	• Support the protection of water quality from waste management activities. • Support the regulatory processes for licensed facilities.	**GOAL 6:** Ensure availability and sustainable management of water and sanitation for all **GOAL 14:** Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Table 5: Strategic Environmental Objectives (Cont'd)

Related to SEA Topic(s)	Strategic Environmental Objective(s)	To what extent will the Plan…	Relevant UN Sustainable Development Goal(s)
Air Quality (AQ)	**Objective 5(a):** Protect air quality, including transboundary considerations, from waste and/ or reduce air pollution or limit to levels that do not damage the natural environment or human health. **Objective 5(b):** Maintain and promote continuing improvement in air quality through the reduction of emissions, including transboundary considerations.	• Support the proximity principle. • Support reductions in air and noise emissions from waste management activities. • Support the regulatory processes for licensed facilities.	**GOAL 11:** Make cities and human settlements inclusive, safe, resilient and sustainable
Climatic Factors (CF)	**Objective 6:** Minimise emissions of greenhouse gases associated with waste management (including other disposal, recovery and transport).	• Support the proximity principle. • Support reductions in GHG emissions from waste management activities.	**GOAL 13:** Take urgent action to combat climate change and its impacts
Material Assets (MA)	**Objective 7(a):** Prevent and minimise the generation of waste. **Objective 7(b):** Optimise use of existing infrastructure/ built environment, raw materials and energy. **Objective 7(c):** Minimise the export of waste for treatment and/ or disposal and reduce emissions due to transportation. **Objective 7(d):** Support and promote the use of waste as a resource. **Objective 7(e):** Support sustainable activities without conflicting with other environmental protection objectives.	• Promote and contribute to implementing circular economy principles. • Reduce and ultimately prevent generation of waste. • Promote resource efficiency. • Support self-sufficiency in waste management. • Support the regulatory processes for licensed facilities. • Promote better management of waste in household 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.	

ALTERNATIVES

The consideration of alternatives is a requirement of the SEA Directive. Given that the draft Plan is a high-level national plan, it has been important that alternatives are reflective of its strategic nature. A series of strategic, spatial and modal alternatives were developed as presented in **Table 6.** The overall preferred scenario brought forward for assessment is a combination of strategic alternatives S2, S3 and S6 with modal alternatives M1/M2 blended, M4 and spatial alternative Sp2.

Table 6: Alternatives Considered

Alternative Type	Description	Alternatives Considered
Strategic	High-level options that achieve a given objective. These types are commonly realistic only at policy level.	• Strategic Alternative 1 (S1): Business as usual scenario whereby the current practices on resource management through a high recovery model are maintained. • Strategic Alternative 2 (S2): A modified approach whereby more circular resource management practices are adopted, support and enhanced to move waste management higher up the waste hierarchy. • Spatial Alternative 3 (S3): Implement specific policies aimed at reducing the level of waste export from the State to other jurisdictions to drive for greater self-sufficiency in waste management. • Spatial Alternative 4 (S4): Maintain the business as usual approach and allow market forces to dictate the economic merits of indigenous treatment versus export. • Strategic Alternative 5 (S5): Employ the suite of EU taste related targets as the principle measure for tracking Plan progress. • Strategic Alternative 6 (S6): Establish a series of Plan specific targets for the specific remit of assessing Plan success and supplementing the EU target regime.
Spatial	Alternative locations for the implementation of planning objectives.	• Spatial Alternative 1 (Sp1): Present policies and actions for the Plan but without any designated spatial distribution of infrastructure or operations. • Spatial Alternative 2 (Sp2): Present policies and actions for the Plan including specific spatial elements for infrastructure or operations
Modal	Different technical/ mode alternatives to achieve the same objective	• Modal Alternative 1 (M1): Achieve the waste prevention and segregation policies of the Plan through enabling and educating consumers (households, commercial operators and all waste generators) to make informed choices and drive the necessary behaviour change. • Modal Alternative 2 (M2): Achieve the waste prevention and segregation policies of the Plan through mandatory regulatory and fiscal measures to drive the necessary behaviour change. • Modal Alternative 3 (M3): Develop thermal treatment infrastructure at a scale to meet the current shortfall in residual MSW treatment capacity and reduce the reliance on exports. • Modal Alternative 4 (M4): Develop thermal treatment infrastructure at a reduced scale to account for future prevention mechanisms.

ASSESSMENT OF THE PREFERRED SCENARIO

This section evaluates as far as possible the likely significant effects on the environment and to set out measures envisaged to prevent, reduce and, as far as possible, offset any significant adverse effects of implementing the Plan. **Table 7 and Table 8** summarises the Plan policies and actions and presents an overview of the environmental assessment of these policies and actions. The measures proposed have been assessed in detail in **Chapter 8** of the main Environmental Report.

Table 7: Summary of Assessment- Core Policies

Core Policies	Summary of Draft Plan Actions and Assessment	Mitigation Proposed
CP1	Enhanced supervision of waste activities and improved litter control will help prevent the direct and indirect negative impacts on human health, air and water quality and cultural heritage (unregulated disposal of waste in the vicinity of archaeological and architectural sites.	**N**
CP2	This core policy that support the delivery of measures/actions proposed in Ireland's Climate Action Plan is broadly positive across all SEOs as it will help achieve carbon neutrality by 2050 and place Ireland in a better position against the impacts of climate change.	**N**
CP3	This policy aims to implement EU and National waste policies and plans that enable the transition to a circular economy and the achievement of national recycling targets. This policy is broadly positive across all SEOs as it is directed towards strengthening enforcement of relevant policies in relation to waste management within Ireland.	**N**
CP4	This core policy relates to collaboration with key partners and stakeholders on the delivery of core and targeted policies and priority actions which is overall positive. This will have positive implications across all SEOs as availability of appropriate resources will help to work effectively towards improved waste management at all levels.	**N**
CP5	This core policy primarily focuses on increased education and awareness to influence and encourage behavioural improvements in households and business. Coordinated multi-agency awareness campaigns, including mywaste.ie will have positive educational impact on individuals and business to promote the concept of resource efficiency, waste prevention and preparing for reuse as best environmental practice.	**N**
CP6	This policy will have positive implications across all SEOs as increased coordination with the Local Authority Waste Programme Coordinator will warrant the accelerated achievement of waste prevention and resource efficiency targets in a viable manner.	**N**
CP7	This core policy is directed towards promoting further research and innovation in the transition to a circular economy across the waste sector with a particular focus on the management of non-kerbside waste streams. Since the policy aims to support research and innovation, and in the long term will have positive impacts on the environmental objectives.	**N**
CP8	This policy focuses on the monitoring waste infrastructure to ensure that there is adequate appropriate infrastructure in place. The underlying action of monitoring the provision of waste infrastructure solutions is broadly positive as it would help prioritise prevention over recovery. Both positive and negative impacts are anticipated as a result of reduction in national and international transport of waste streams which will consequently help decrease the emission levels.	**N**

Table 7: Summary of Assessment- Core Policies

Core Policies	Summary of Draft Plan Actions and Assessment	Mitigation Proposed
CP9	This core policy aims to align with the National Strategic Objectives as set out in the National Development Plan 2021-2030. The NSOs relevant to the Plan is NSO9: Sustainable Management of Water and Other Environmental Resources. Supporting this strategic investment priority is an overall positive policy as it is evident that significant infrastructure capacity development will be required to separate and process various waste streams at municipal and national levels to achieve new EU legally-binding targets.	**N**
CP10	This policy is focused on reinforcing the consistent application of Green Public Procurement criteria in local authority contracts to ensure that public spending is aligned with the policies of this Plan Reinforcement of GPP will improve the process whereby public and semi-public authorities utilise goods, services, works along with solutions towards reduced impact on the environment throughout their-lifecycle which will have positive benefits over long term.	**N**
CP11	This policy aims to provide assistance all stakeholders to ensure the availability of timely quality data and projections to inform policy development and to enable the monitoring of progress against policies and targets. The policy is positive across all the SEOs as this coordinated approach will provide for quality data and projections in relation to waste management.	**N**
CP12	This core policy lays emphasis on supporting the need for nationally important waste infrastructure including infrastructure of the type and scale essential to maintain a functioning waste market and infrastructure that contributes to the Ambition and Policies of the Plan. As discussed for Core Policy 7 expanding on existing infrastructure will also have negative implications for BFF, LS, AQ and W in the form of land use changes, air and water emissions and disturbance to biodiversity. Any such development would likely be subject to EIA and AA to attain the necessary consents at project level.	**N**
CP13	This core policy is focussed on attracting funding and support for initiatives and projects that underpin business continuity, core and targeted policies and priority actions. This will impact the SEOs positively as it will help ensure that responsible party is held accountable for inappropriate practices.	**Y**

Table 8: Summary of Assessment- Focus Area Target Policies and Priority Actions

Summary of Draft Plan Actions and Assessment	Mitigation Proposed
Target Policy 1.1 and Priority Action 1.1: The focus towards behavioural change is a priority for waste management. Education and awareness is possibly the most important policy area of all in terms of environmental protection as it offers the greatest scope to reduce negative behaviours at the individual, community, regional and national levels. Priority Actions promoting prevention, reuse and repair can have significant short, medium and long term positive indirect and cumulative impacts for the environment. In addition, resource efficiency which sees materials reused and recycled rather than being discarded as waste in the first place. This too has indirect positive effects for the environment through reduced resource consumption and reduced need for transport and processing of materials for the consumer market. This may result in short to medium term negative impacts for some aspects of MA as markets shift away from resource consumption to reuse. The Priority Action supports the Waste Framework Directive waste hierarchy. Target Policy 1.2 and Priority Action 1.2: This Priority Action is directed at data gathering and while these provide the tools, methodologies and data required to inform key actions arising from the Plan, the action will have limited direct impact on environmental receptors. It will ensure consistency and follow up in reporting and monitoring of actions. By ensuring appropriate reporting and follow up, this Priority Action will have broadly positive indirect impacts on all environmental receptors by ensuring that the effectiveness can be tracked, and improvements made if necessary. Target Policy 1.3: This focus area aims to strengthen the monitoring and measurement of commercial waste data. As it focuses on monitoring and measuring data it will have neutral impacts on the environment. Target Policy 1.4: The data deficits identified as part of the monitoring and measurement of commercial waste data will result in the implementation of engagement and /or enforcement measures, this will lead to improvements in the management of commercial waste which will have indirect positive impacts on the environment. Priority Action 1.3: An investigation focusing on management for business will have overall positive impacts on the environment as it would lead to better management of this waste which has potential to give rise to significant negative impacts on the environment if not managed correctly. The results of the investigation will give the necessary evidence base to allow similar schemes to be rolled out for other industries. This would result in positive environmental impacts. Priority Action 1.4: MyWaste.ie is an online waste management guide to waste in Ireland. The site displays local waste services, recycling facilities, information on preventing, reusing and disposing of waste. The promotion of this online resource will encourage companies to manage waste in accordance with the Waste Framework Directive waste hierarchy, utilising waste prevention, waste segregation and recycling. The guide will promote behavioural change and awareness resulting in potential positive indirect and cumulative impacts for the environment. Priority Action 1.5: The RMCEI (Recommended Minimum Criteria for Environmental Inspections) is an EPA led process where the overall framework of how plans are to be prepared is set. There is an annual assessment of those plans with results issued to each Chief Executive and summary data published. The results (data returns) from inspection activities carried out under each plan are also submitted annually and again that assessment is issued to each Chief Executive, with summary data published. The Regional Minimum Criteria for Environmental Inspections (RMCEI) plan prioritising enforcement is an important instrument. It will ensure implementation of enforcement priorities. The application will be beneficial to the environment.	**Yes** **PA1.2** **PA1.5**

Table 8: Summary of Assessment- Focus Area Target Policies and Priority Actions (Cont'd)

Summary of Draft Plan Actions and Assessment	Mitigation Proposed
Target Policy 2.1 and Priority Action 2.1: The focus towards behavioural change is a priority for waste management. Education and awareness is possibly the most important policy area of all in terms of environmental protection as it offers the greatest scope to reduce negative behaviours at the individual, community, regional and national levels in regard to packaging waste. Priority Actions promoting prevention, reuse and repair can have significant short, medium and long term positive indirect and cumulative impacts for the environment. Target Policy 2.2 and Priority Action 2.2 and 2.3: The EPA reported that 1.85 million tonnes of household waste was managed in Ireland in 2020. This is an 18% increase since 2019 where 65% of the household waste collected in 2020 was collected at kerbside, an increase in this would directly benefit the environment directly. The number of households with brown bins increased by approximately 64,000 in 2020 to 882,249. However only 64% of Irish households who had a kerbside bin collection service in 2020 had a brown bin. Therefore, a large proportion of Ireland's organic waste, including food waste, is not yet being recycled. There is a requirement for behavioural change to improve recycling, this can be enhanced through education and providing visual representation of what can and cannot be recycled. The Priority Actions listed in 1.2 will have both direct and indirect benefits to the overall environment. Target Policy 2.3: This focus area aims to strengthen the monitoring and measurement of household waste data. As it focuses on monitoring and measuring data it will have neutral impacts on the environment. Focus Area 2.4: The implementation of enhanced collection and segregation systems will maximise the quantity and quality of materials collected. This will have positive impacts on the environment as the collected waste will require less sorting and treatment. Target Policy 2.4: This Priority Action is directed at data gathering and while they provide the tools, methodologies and data required to inform key actions arising from the Plan, it will have limited direct impact on environmental receptors. It will ensure consistency and follow up in reporting and monitoring of actions. By ensuring appropriate reporting and follow up, this Priority Action will have broadly positive indirect impacts on all environmental receptors by ensuring that the effectiveness can be tracked, and improvements made if necessary. Priority Action 2.5: The investigation and closure of unauthorised facilities will have direct positive impacts on all environmental receptors as it will direct municipal household waste to licenced facilities. The EPA licences certain activities in the waste sector. These include landfills, transfer stations, hazardous waste disposal and other significant waste disposal and recovery activities. The EPA must be satisfied that the activity will not cause environmental pollution when carried out in accordance with the licence conditions. Priority Action 2.6: This priority action supports segregated waste management solutions within apartments and mixed use developments. It focuses on segregating waste at its source, this will make future sorting at designated facilities simpler and more efficient. This will have positive impacts on the environment as the collected waste will require less sorting and treatment.	**No**

Table 8: Summary of Assessment- Focus Area Target Policies and Priority Actions (Cont'd)

Summary of Draft Plan Actions and Assessment	Mitigation Proposed
Target Policy 3.1 and Priority Action 3.1: The proposed action to support the Compliance Schemes to develop and deliver awareness campaigns and projects is a proactive approach towards education and awareness. It focuses on the start of the supply chain where change in behaviour and attitude can have the strongest effect in achieving circularity of mandated waste streams. Therefore, this action will have positive implications across all the SEOs over long term. Target Policy 3.2: This target policy will aim to reduce waste at the early stages i.e., design (prevention in the waste hierarchy) to limit waste generation during the different phases of the project. this promotion of eco-designing will have largely positive environmental impact in the short, medium and long term. Target Policy 3.3 and Priority Action 3.5: The proposed action of ensuring that there is an adequate enforcement regime to support Compliance schemes is overall positive. Along with increased awareness, effective enforcement measures will help consolidate compliance schemes and therefore enhance circularity over long term. Target Policy 13.4: The promotion of the Commission's a 'right to repair' initiative will provide consumers with information on product durability and reparability, availability of repair services, spare parts and repair manuals, and software updates and upgrades. This will have positive environmental impacts in the short, medium and long term through the promotion of behaviour changes within the consumer market. Priority Action 3.2: It was recommended in the Civic Amenity Site Review from 2020 to develop a framework agreement to consolidate the approach to compliance schemes and service providers. This action aligns with this recommendation and aims to implement it. This will help increase material reuse and prevent waste generation on a long-term basis which is positive across all SEOs. Priority Action 3.3: EPR Schemes have helped Ireland to achieve the domestic and EU recycling targets till date. Ireland currently uses the EPR model for dealing with a number of waste streams; WEEE, batteries, packaging, ELVs, tyres and farm plastics. Establishing on the feasibility of Extended Producer Responsibility arrangements with DECC for other waste streams is a step in the right direction which will help expedite the transition to a circular economy. The action therefore relates to collaboration and subsequent research and will have positive implications for all the SEOs by upscaling the amount of recycled waste. The proposed action further complements Ireland's Waste Action Plan for a Circular Economy. Priority Action 3.4: Fee modulation can help in facilitation of waste recycling and increased circularity by encouraging the producers to implement processes favouring waste prevention. The action in itself focused on data collection in relation to the impact of fee modulation on the overall waste management. This will therefore affect all the SEOs positively.	**No**

Table 8: Summary of Assessment- Focus Area Target Policies and Priority Actions (Cont'd)

Summary of Draft Plan Actions and Assessment	Mitigation Proposed
Target Policy 4.1, Target Policy 4.2 and Priority Action 4.1: It is noted that 66% of the total household waste was collected at kerbside in Ireland in 2019. The action of identifying areas of low participation/coverage or settings where kerbside services are not feasible by WERLA and NWCPO and engaging with service providers to determine responses is overall positive for all the SEOs. This will involve data collection to help identify the relevant sites and working jointly with the service providers to develop a solution to provide effective collection and subsequent disposal of waste to relevant sites. This will also aid in prevention of illegal waste dumping over time. This action will potentially lead to infrastructure development to ensure improvement in waste collection in areas of low coverage. Priority Action 4.2: The action involves development of a strategy for the provision of fully segregated collection infrastructure at apartments and mixed-use developments and produce guidance for the inclusion of infrastructure at all new apartment and mixed use developments. Segregated collections systems like these will ensure that the waste is discarded appropriately at such sites to aid the waste management process at all types of households. Target Policy 4.3: The identification of existing collection and segregation systems and options for additional waste streams will have largely neutral environmental impacts. The implementation of the findings will have environmental benefits. Target Policy 4.4: The development of an integrated, consolidated and coordinated public waste collection infrastructure network will have largely positive environmental impacts through the coordinated implementation of collection systems across Ireland. Target Policy 4.5: Like TP4.3, the evaluation of existing waste collection systems for the offshore islands will have largely neutral direct environmental impacts but the implementation of the findings may have potential environmental benefits through improved collection, segregation and potentially more circular systems once the adherence to the waste hierarchy is central to the evaluation. Priority Action 4.3: The action emphasises on the development of templates for standardised bulky goods and textile collection schemes. The EPA Waste Characterisation Surveys of 2018 identified that 10% of the household recycling bin and 3% of the residual bins consisted of textiles. Similarly, for commercial bins 1% of the recycling bin and 6% of the residual bin consisted of textiles. Any measure related to appropriate collection the quantities of bulky goods and textiles are considered to have an overall positive impact on the environment by encouraging their reuse and recycling. Development of dedicated collection service for repairable material under this action will potentially prevent huge amount of waste directed to landfills and is mainly positive for PHH, LA, W, AQ, CF, MA and Lands. Furthermore, examining the potential for the collection of household and small-scale hazardous waste is a research driven action with an overall positive effects across all SEOs. Priority Action 4.4: The national review of Civic Amenity Sites recognised the role of CAS in waste management as well as the issues related with their operations. This action of supporting and implementing the recommendations provided in this review is broadly positive. The recommendations are grouped under 'integration', 'consolidation' and 'coordination' will position the civic amenity site network to the forefront of the delivery of the circular economy in Ireland. Priority Action 4.6: The action discusses about the role of WERLA's in ensuring proper enforcement of waste collection activities, effective implementation of the Waste Presentation Bye-Laws and data validation throughout. This is broadly positive across all SEOs at this stage as it allows effectual waste management.	**Yes** **TP4.4**

Table 8: Summary of Assessment- Focus Area Target Policies and Priority Actions (Cont'd)

Summary of Draft Plan Actions and Assessment	Mitigation Proposed
Target Policy 5.1 and 5.2 and Priority Action 5.1 and 5.2: The Stop Food Waste programme is a national campaign to reduce household food waste in Ireland, managed by the EPA. The programme runs awareness-raising initiatives which aims to change attitudes and behaviours towards food waste and how it can be managed more sustainably. Indirectly, these behaviour changes can help households save money and lessen the impact on the environment. The focus towards behavioural change is a priority for waste management. Education and awareness is possibly the most important policy area of all in terms of environmental protection as it offers the greatest scope to reduce negative behaviours at the individual, community, regional and national levels in regard to packaging waste. Priority Actions promoting prevention, reuse and repair can have significant short, medium and long term positive indirect and cumulative impacts for the environment. The annual National Food Waste Recycling Week programme will further raise awareness regarding food waste and change behaviours and attitudes towards food waste. Target Policy 5.3 and Priority Action 5.3: This Priority Action is directed at data gathering and whilst it provides the tools, methodologies and data required to inform key actions arising Plan, it has limited direct impact on environmental receptors. The Priority Action will ensure consistency and follow up in reporting and monitoring of actions. By ensuring appropriate reporting and follow up, this Priority Action will have broadly positive indirect impacts on all environmental receptors by ensuring that the effectiveness of actions can be tracked and improvements made if necessary. Target Policy 5.4 and Priority Action 5.4: According to best estimates by the EPA, approximately 1 million tonnes of food waste is wasted each year, and this is increasing with population growth. This has negative effects on the environment if the waste is landfilled or incinerated. The Food Waste Hierarchy priorities the following; prevention, feed people, feed livestock, anaerobic digestion, composting and disposal. The Government's Climate Action Plan and Waste Action Plan for a Circular Economy include food waste as a priority waste stream and articulate a 50% reduction. This Priority Action aims to contribute towards this goal by implementing changes across the food life-cycle to prevent food waste and to manage wood waste in line with the Food Waste Hierarchy. This will have both direct and indirect positive impacts on all environmental receptors. Priority Action 5.5: Organic waste collected in the brown bin accounted for 11% of all household waste managed in 2020 (199,823 t), an increase of 25% from 2019. The brown bin roll out to households has increased the composting rate of organic waste. Only 64% of Irish households who had a kerbside bin collection service in 2020 had a brown bin. Therefore, despite improved brown bin services and use, a large proportion of Ireland's organic waste, including food waste, is not yet being recycled. The targeted enforcement of household waste collection permits with regard to the provision of brown bins to household and non-household settings will have both direct and indirect positive impacts to the environment through correct management of food waste and assist in the aim to meet the target for reducing food waste by 50% by 2030.	**No**

Table 8: Summary of Assessment- Focus Area Target Policies and Priority Actions (Cont'd)

Summary of Draft Plan Actions and Assessment	Mitigation Proposed
Target Policy 6.1 and Priority Action 6.1: The focus towards behavioural change is a priority for waste management. Education and awareness is possibly the most important policy area in terms of environmental protection as it offers the greatest scope to reduce negative behaviours at the individual, community, local, regional and national levels in regard to packaging waste. Priority Actions promoting prevention, reuse and repair can have significant short, medium and long term positive indirect and cumulative impacts for the environment. Target Policy 6.2 and 6.3 and Priority Actions 6.2 – 6.4: The EC report on Resource Efficient Europe outlined how 'changing consumption patterns of purchasers, both private and public, will help drive resource efficiency' and 'consumers can save costs by avoiding waste themselves and buying products that last, or that can easily be repaired or recycled'. Comprehensive education and awareness programmes use a variety of established networks, traditional and new media to deliver campaigns which progresses the development of awareness on waste prevention. The promotion of the mentioned schemes will be immediately neutral; however, the short, medium and long term benefits will be indirect and positive through changing behaviours and attitudes towards waste across the life-cycle of the product from, design and manufacturing to consumer reuse. Target Policy 6.4 and Priority Action 6.5: Compliance schemes take a pro-active approach to working with industry to find solutions to reduce the impact of products and services in terms of preventing waste and addressing the type and quantity of waste generated. This Priority Action addresses behaviours and attitudes discussed in the Focus Area and centres on the start of the supply chain.	**No**
Target Policy 7.1 and Priority Action 7.1 and 7.3: This Priority Action is directed at data gathering and whilst it provides the tools, methodologies and data required to inform key actions arising Plan, it has limited direct impact on environmental receptors. The Priority Action will ensure consistency and follow up in reporting and monitoring of actions. By ensuring appropriate reporting and follow up, this Priority Action will have broadly positive indirect impacts on all environmental receptors by ensuring that the effectiveness of actions can be tracked and improvements made if necessary. Target Policy 7.2 and Priority Action 7.2: The Priority Action aims to move towards the elimination of single use plastic. The EC report on Resource Efficient Europe outlined how 'changing consumption patterns of purchasers, both private and public, will help drive resource efficiency' and 'consumers can save costs by avoiding waste themselves and buying products that last, or that can easily be repaired or recycled'. Through working with the hospitality sector where single use plastic is commonly used for items such as cutlery will prevent the generation of single use plastic waste, in line with the waste hierarchy preferences. This will have a direct positive impact on environmental receptors. Target Policy 7.3: The promotion of deposit return systems or schemes for single use plastics will have largely neutral impacts on the environment without strict enforcement. However, this has the potential to cause behaviour changes which would have indirect positive impacts on the environment in the short, medium and long term. Target Policy 7.4 and Priority Action 7.5: Enforcing prohibition of single use plastic would reduce the generation of single use plastic waste, in line with the waste hierarchy preferences. This will have a direct positive impact on environmental receptors. Levies would discourage the generation and use of single use plastics, thus resulting in indirect environmental benefits. Target Policy 7.5: This Target Policy aims to reduce the requirement of single use plastics at local authority offices and at public events through licencing, this is in accordance with the 'Reduce' section of the Waste Hierarchy. The reduction of single use plastics at said offices and events will have a direct positive impact on environmental receptors. Priority Action 7.4: The EPA Non-Household Waste Characterisation Campaign in 2018, found that there was a significant increase in the volume of coffee cups encountered, especially in offices, general retail and restaurants. This was true for both the MRW and MDR streams, indicating this is a waste stream of concern. Preventing plastic waste being created in the first place is the most important way to tackle the plastic pollution problem. The elimination of single use coffee cups trial, if successful, could result in a country wide roll out, preventing this waste stream, subsequently having a direct positive impact on environmental receptors.	**Yes** **PA7.1** **PA7.3** **PA7.4**

Table 8: Summary of Assessment- Focus Area Target Policies and Priority Actions (Cont'd)

Summary of Draft Plan Actions and Assessment	Mitigation Proposed
Target Policy 8.1: C&D waste is made up of many different materials such as soil and stones, concrete, bricks, tiles and gypsum waste. The treatment route for most C&D waste is backfilling. About 8.8 million tonnes of C&D waste was generated in Ireland in 2019 correlating with increased construction activity nationally. The target policy to prioritise waste prevention and circularity in the construction and demolition sector to ensure the minimisation of resources that need to be captured as a waste stream is therefore extremely positive across all SEOs as it is directed towards prioritization of waste prevention over recovery or treatment in the C&D sector. Priority Action 8.1: The proposed action is related to implementation of Green Public Procurement criteria on all local authority construction and demolition projects and promote its wider use within the sector. This is overall positive across all SEOs as it can help encourage the use of all types of environmentally friendly products – energy efficient, water conserving, recyclable, non-toxic, and low in emissions of volatile organic compounds across the C&D sector. Target Policy 8.2 and Priority Action 8.2: The action aims to collaborate with EPA on the provision of training to personnel within the C&D sector on Article 27 (By-products) and Article 28 (End of Waste), and the implementation of national decisions on these articles. Training opportunities will have positive implications mainly for PHH SEOs but additionally will also have positive impact on SEOs for LS, W, AQ, CF, and MA by ensuring reduction of waste and reuse of materials. Target Policy 8.3: Incorporation of the EPA Best Practice Guidelines for the preparation of Resource & Waste Management Plans published in 2021 for Construction & Demolition Projects, and monitoring by local authorities of the application of this requirement is an overall positive policy for all the SEOs. The preliminary purpose of the guidance is to provide a practical approach which is informed by best practice in the prevention and management of C&D wastes and resources from design through to construction and deconstruction. With the upcoming delivery of housing and infrastructure projects aligning with Project Ireland 2040 and correlating to the current growth trend, proper implementation of this guidance in such projects can prove beneficial in curbing the amount of waste generated during construction and demolition phases to a great extent. Therefore, the guidance will help assist proper management of waste during the construction and demolition phases of a development and ensure that the monitoring is effective for projects generating construction and demolition waste. Priority Action 8.2: The action of piloting the compilation of Resource & Waste Management Plans for construction and demolition projects at selected local authority developments is focused on data collection to provide a robust evidence base for proper management and monitoring of waste generated from the construction and demolition sector. Therefore, this action will have positive implications across all the SEOs. Priority Action 8.3: Incorporation of a C&D Resource & Waste Management Plans in County/City Development Plans is broadly positive to aid the prevention and better management of waste and resources in the C&D sector throughout the development of a plan/project. Provision of training on the application and enforcement of these plans has the potential for indirect positive effects on the environment via knowledge transfer and potential behavioural change within C&D sector. Target Policy 8.4 and Priority Action 8.4: This action aims to explore the potential compatible waste streams in mixed waste skip to ensure minimised contamination and maximised reuse and recycling within C&D sector, thereby promoting circularity over long term. Additionally, provision of a guidance in relation to this will have positive implications and assist with effective management of C&D waste at all construction sites. Target Policy 8.5: The support of a targeted levy on virgin materials will encourage the use of secondary raw material. This Focus Area will have positive environmental benefits as it will significantly reduce the extraction of raw materials and the subsequent impacts (e.g. negative impact on landscape if quarrying is involved) and it will reduce waste through the encouragement of reuse and recycling. Priority Action 8.5: The proposed action is directed towards compliance assurance by allocating required resources for continuous monitoring of C&D sites and application of appropriate enforcement measures. As discussed for PA8.3, a project/plan specific Resource & Waste Management Plan can aid with proper compliance assurance. Therefore, this action of ensuring compliance within C&D sector with appropriate monitoring is overall positive. However, more details are required on the process of resource allocation to support this action.	**Yes** **PA8.1** **TP8.3** **PA8.2** **PA8.3**

Table 8: Summary of Assessment- Focus Area Target Policies and Priority Actions (Cont'd)

Summary of Draft Plan Actions and Assessment	Mitigation Proposed
Target Policy 9.1 and Priority Action 9.1: Targeted awareness campaigns that focus on behavioural change is a priority for waste management. Education and awareness towards sustainable consumption of textiles offers great scope at reducing negative behaviours at all levels from individual to national. Actions promoting prevention can have significant short-, medium- and long-term positive impacts for the SEOs as they target both waste reduction, and consequently lesser need of waste management (through collection, transport, pre-treatment and final treatment). In addition, resource efficiency which sees materials reused and recycled rather than being discarded as waste in the first place will have positive impacts through decreased resource consumption and reduced need for transport and processing of materials for the consumer market. Target Policy 9.2: The engagement with designers, producers, collectors and processors will aim to reduce waste through design (prevention in the waste hierarchy), this will have largely positive environmental impact in the short, medium and long term. Target Policy 9.3 and Priority Action 9.3: As indicated in the discussion for PA9.2, the information obtained through data collection process will be utilised under this action to form recommendations in relation to improvements required in textile collection including enhancements of existing options and possible alternatives. At this stage, the details about the potential recommendations are unclear and therefore a complete assessment cannot be made. Target Policy 9.4 and Priority Action 9.4: Increased collaboration between retail, re-use and post-consumer textiles sector is broadly positive and will lead to reduced waste generation and improved circularity in this sector. The action is mainly related to encouraging and facilitating this collaboration and is positive for all the SEOs. Priority Action 9.2: The proposed action is related to data collection and identification of the existing network for collection of textile waste. This will help inform decisions in relation to further enhancement of this network to ensure improved collection of textile waste and its management over long term. With the primary focus of data collection, this action will have positive implications across all SEOs. Priority Action 9.5: The action related to review of regulatory and enforcement regime for textile collection and processing is overall positive. Establishing recommendations based on the outcome of the proposed review as required will help strengthen the overall management of textile waste. The details of the recommendations are ambiguous at this point, however the action in discussion is overall positive across all SEOs.	**No**

Table 8: Summary of Assessment- Focus Area Target Policies and Priority Actions (Cont'd)

Summary of Draft Plan Actions and Assessment	Mitigation Proposed
Target Policy 10.1: The promotion of decision making will be used as a mechanism to influence appropriate consumption to prevent the generation of hazardous waste. As this aims to change behaviours it will have largely neutral impacts on the environment. Target Policy 10.2: The EPA has prepared a 'National Hazardous Waste Management Plan' for the period 2021 to 2027, published in late 2021. The key priorities for this plan are the prevention of hazardous waste, improved collection, endorsement of the proximity principle, effective regulation and the promotion of the circular economy. The implementation of the NHWMP will have a potential positive indirect impact on the environment and SEA Objectives. Priority Actions 10.1 to 10.4 will be led by the Environmental Protection Agency with engagement with the Local Authority Sector and aim to change behaviours towards hazardous waste through raising awareness and updating guidance. As these Priority Actions are related to changing behaviours, there will be no primary significant environmental impact, therefore, the Priority Actions have been scored as neutral. These Priority Actions will encourage a joint approach to hazardous waste management and prevention across a number of initiatives and will strengthen and support the implementation of EU and national waste and related environmental policy, legislation, plans, guidance and codes of practice to ensure implementation is consistent across various sectors, thereby having a potential positive indirect impact on the environment and SEA Objectives. Priority Action 10.5: At the moment there is no approved hazardous waste landfill in the State. Construction materials containing asbestos and other suitable asbestos waste may be landfilled at landfills for non-hazardous waste in accordance with Article 6(c)(iii) of the Landfill Directive without testing providing that they meet listed requirements. The management of asbestos waste will avoid the potential contamination of other wastes but also provide an indirect benefit on population and human health through managing asbestos correctly. Priority Action 10.6: This Priority Action focuses on the enforcement regime to mitigate the impact of hazardous waste on the environment and human health. The enforcement will have direct benefits to human health and the wider environment.	**Yes** **PA10.1** **PA10.3**

Table 8: Summary of Assessment- Focus Area Target Policies and Priority Actions (Cont'd)

Summary of Draft Plan Actions and Assessment	Mitigation Proposed
Target Policy 11.1 and Priority Action 11.1: This action of collaborating with An Bord Pleanála and Planning Authorities to ensure infrastructural developments are in compliance with the waste hierarchy and siting guidance is positive for all the SEOs over the long term. Waste hierarchy compliance at an early stage assisted with siting guidance will significantly help with waste management as it will ensure that the precedence is given to prevention and re-use over recovery and disposal of waste. Target Policies 11.2, 11.4 and 11.5 and Priority Action 11.2: Proactive planning for adequate waste treatment capacity in Ireland is essential to minimise negative environmental impacts. The action is directed towards the development of National Waste Infrastructure Capacity Register. This is broadly positive for PHH, BFF, LS, W, CH and LandS SEOs as it will involve data collection to improve knowledge of waste capacity within Ireland to inform infrastructure development priorities and contingency planning. Engagement of key stakeholders such as EPA and National Waste Collection Permit Office will allow enhanced data accessibility to compile the register. Target Policy 11.3 and Priority Action 11.3: This action is related to ensuring that at least one facility per local authority is authorised for storage of waste from road maintenance and other local authority construction projects. This will allow proper management of the waste generated at road maintenance and construction sites which is positive for BFF, LS, W, A, CF, LandS and MA SEOs. However, preliminary research is required to determine how many local authorities lack such an infrastructure to aid this action. Construction of new facilities would result in additional land take and associated negative environmental impacts. Any area defined for collection and storage of waste (including temporary storage), may have the potential to give rise to contaminated run-off if stored inappropriately. This may give rise to risk to soils and water in particular with indirect impacts for BFF and PHH. Priority Action 11.4: The proposed action of reviewing all waste related SID applications with regard to the waste hierarchy business continuity and contingency is broadly positive for most of the SEOs such as LS, W, MA and LandS over long term once enforced. Prioritising waste prevention over recovery and disposal and refusal of any SID application that is non-compliant with waste hierarchy will ensure circularity over long term.	**Yes** **PA11.3**

Table 8: Summary of Assessment- Focus Area Target Policies and Priority Actions (Cont'd)

Summary of Draft Plan Actions and Assessment	Mitigation Proposed
Target Policy 12.1 and 12.2 and Priority Action 12.1: Even though the reuse and repair sector has progressed significantly in Ireland, there is still a considerable need for establishment of 'preparation for reuse' centres. It is noted that this sector is labour intensive and requires skilled workers. Therefore, the action related to provision of technical support and training is broadly positive and will have direct implications for the PHH, LS and MA SEOs as this would help with consolidation of reuse and repair sector. The action may also have indirect positive effects for AQ, CF, CH and LandS SEOs as repair and reuse of relevant waste would prevent waste accumulation in landfills and subsequent effects on air quality and visual amenity. Priority Action 12.2: This action relating to facilitation of reuse and repair services at designated Civic Amenity Sites is overall positive for LS, AQ and MA as it will decrease the amount of waste to be recycled at these sites. This will consequently help with Ireland's transition to a circular economy if enforced and managed efficiently. Target Policy 12.3 and Priority Action 12.3: Repair and reuse of viable materials will in turn ease the burden of recycling infrastructure and thereby support circular economy. Piloting one dedicated collection service for potential repairable products in each region can prove beneficial. It will have direct positive implications for PHH (employment opportunities for repair practitioners), LS (reduction of waste ending up in landfills) and MA (reduction in amount of waste recycled or exported) SEOs. There is a potential for negative impact for CF SEO due to the emissions generated from the collection service if not managed properly. Target Policy 12.4 and Priority Action 12.4: Construction and Demolition (C&D) waste represents a substantial waste stream in Ireland in terms of both volume and weight and are exported for final treatment outside the State. Identification of potential secondary materials markets in the construction sector in the absence of any significant metal recycling capacity within the State is an overall positive step towards reduction of waste exports. This will have indirect positive implications for LS, W, AQ, CF and MA SEOs over long term by decreasing the emissions during transportation, prevention of accidental release of waste in water bodies, and decrease in waste accumulation in the landfill. Consequently, this action will aid with transition to circular economy by tackling the huge amount of C&D waste. Target Policy 12.5: This Focus Area involves working with stakeholders to remove insurance and liability barriers within the reuse and repair markets. As this is focused on legislation, there are largely neutral impacts on environmental receptors. However, this is likely to provide indirect positive-, short-, medium- and long-term benefits. Priority Action 12.5: The action relates to investigating the appropriate authorisation regime for reuse and repair activities to facilitate the capture of reuse and repair data. This will have indirect positive implications for LS, CF and MA SEOs as the reuse and repair data can be utilized to further enhance opportunities for effective waste management and transition to circular economy.	**Yes** **PA12.2** **TP12.4** **PA12.4** **PA12.5**

Table 8: Summary of Assessment- Focus Area Target Policies and Priority Actions (Cont'd)

Summary of Draft Plan Actions and Assessment	Mitigation Proposed
Target Policy 13.1 and Priority Action 13.1: The proposed action is related to the maintenance of recycling infrastructure register to include all the existing recycling facilities across the country. As this action is primarily about data collection it will have positive implications for majority of the SEOs including PHH, BFF, LS, W, CH and LandS. There is also limited capacity for some other waste/resource streams, in particular for recycling of paper & cardboard, plastics and some metals. The data obtained will eventually assist with decision making process for infrastructural development priorities and waste management over long term. The listed recycling infrastructure supports the development of pre-treatment (for recycling) reprocessing and recycling capacity. Priority Action 13.2: This action is primarily focused on research to help investigate the potential for circularity of Incinerator Bottom Ash (IBA) using the by-product and end-of-waste regulatory mechanisms. The action in itself is positive for all the SEOs. Target Policy 13.2: The proposed action is related to the maintenance of plastic recycling infrastructure. The high functionality and relatively low cost of plastic means that this material has become omnipresent in everyday life. Plastic waste is generated by both households and the commercial sectors with 319,082 tonnes of plastic waste generated in 2019, therefore, there is a need for plastic recycling infrastructure. The implementation of this Focus Area will have largely positive environmental benefits as it will ensure that a clean, reliable feedstock is available to processing and recycling plants, reducing the amount of plastic waste sent for disposal and incineration. Target Policy 13.3 and Priority Action 13.3: The majority of Ireland's used tyres are baled and exported for recycling purposes, with just 1% of tyres prepared for reuse as remoulded or retreaded tyres. The action aiming to set a goal for the circularity of the waste tyres and identifying the required infrastructure will have positive impacts on majority of the SEOs over the long term. Target Policy 13.4: AD is a proven and efficient technology that delivers multiple energy, climate, environmental, social and economic benefits. AD will assist Ireland in meeting many important energy and non-energy EU and national policy commitments and has wide ranging cross-sectoral benefits. Therefore, working with the key stakeholders to maximise the circular potential of anaerobic digestion and composting facilities to deliver high quality outputs with high circular potential is overall positive for all the SEOs. Enhancing circular potential of anaerobic digestion can play a crucial role in aiding Ireland to meet its EU renewable energy and future GHG emissions targets moving forward. Target Policy 13.5: In 2019, Ireland had about 150 bio-digesters devices in Ireland, both in north and south. In Ireland several small-scale AD plants are operating and these primarily process agricultural and/ or industrial sector organic residues. There are no medium or large-scale AD plants in operation dedicated to processing the organic fraction of domestic and commercial waste. SEAI has suggested there is potential for 900 new AD plants in Ireland by 2050. The action of supporting the provision and maintaining an appropriately scaled biological treatment capacity within Ireland is extremely positive across all SEOs and will consequently help achieve the EU targets for Ireland. Priority Action 13.4: Evaluation of the processes and outputs of Material Recovery Facilities, setting a goal for the circularity of waste streams and identifying process enhancements or alternative processes is broadly positive for all the SEOs. Priority Action 13.5: Ensuring that sufficient resources are available to validate annual returns from collectors and facilities and identifying existing deficits will have positive implications across all SEOs. However, the action would benefit from providing more transparency on how the sufficient resources would be made available.	**Yes** **TP13.1** **TP13.2** **TP13.4** **TP13.5**

Table 8: Summary of Assessment- Focus Area Target Policies and Priority Actions (Cont'd)

Summary of Draft Plan Actions and Assessment	Mitigation Proposed
Target Policy 14.1: This Target Policy addresses the pre-treatment capacity in Ireland for recovery. The policy has been developed in accordance with the proximity principle which suggests that waste should generally be processed as near to its place of origin as possible. This will have indirect positive impacts on AQ and CF through reducing emissions associated with transportation. Target Policy 14.2 and 14.5: Ireland currently has inadequate active thermal recovery treatment capacity to recover its residual Municipal waste. As noted in relation to modal alternatives, the projections for residual MSW shown in the Plan indicate that levels will reach circa 1.89 million tonnes over the Plan period (with modest growth in the recycling rate) or 1.74 million tonnes (with optimistic growth in the recycling rate) by 2029. The analysis shows a shortfall in treatment capacity of circa 200,000 to 300,000 tonnes per annum depending on the final recycling rate. The EPA waste statistics for 2019 show that over 450,000 tonnes of MSW were exported for final treatment indicating that the current shortfall in treatment capacity is being managed through exports. Furthermore, the alternatives analysis shows that exporting emissions has a greater climate (CF) impact than indigenous treatment through the greater carbon emissions generated during transport of waste. The results of the example shown show the export option is circa four times higher in emissions relative to the indigenous treatment option. As such, in the short term developing this indigenous treatment option is more favourable than the current export scenario where this waste is also being thermally treated. The key aspect for consideration for Target Policy 14.2 is the scale to treatment to ensure that the policy does not over prescribe the scale required by facilitating a lower tier treatment option at the cost of recycling, reuse and repair. The threshold in the policy has been devised based on the expected and optimistic growth in the recycling rate and all other interventions presented in Volume III of the Plan – it is not scaled on current demand and levels of export, i.e. 450,000 tonnes . In this regard, the development of such infrastructure under Target Policy 14.2 will be positive relative to the export baseline in regard CF (as above) and MA (reduced loss of a national resource). There is a clear potential for adverse AQ, HH, W, BFF and LandS from such a facility but these may be suitably mitigated at consent stage through the EIA and AA processes and the application of the siting guidelines. Target Policy 14.3 and 14.4: Soil recovery facilities are located across Ireland. The positives of soil recovery facilities can be the infill of void spaces which improve landscape, land and soil quality and allow for the infilled area to be used for a new purpose, e.g. farming (positive for material assets). Priority Action 14.1: Ireland has two dedicated thermal treatment facilities within the State, with consents to treat up to 820,000 tonnes per annum of residual Municipal Solid Waste (rMSW) (90,0000 tonnes additional capacity is pending for one of the two facilities, the licence decision of which is with the EPA). Both plants have been operating at full capacity in recent years, illustrating the demand for this treatment option which is levy exempt - but will be subject to a future recovery levy under the Circular Economy Act. Any malfunction or disruption to services at either of these plants would have a significant impact on the State's ability to manage rMSW in the immediate term. The scheduled maintenance will have largely neutral impacts on the environment as it allows the existing facilities to continue to operate in the current manor.	**Yes** **TP14.1** **TP14.2** **TP14.4** **TP14.5**

Table 8: Summary of Assessment- Focus Area Target Policies and Priority Actions (Cont'd)

Summary of Draft Plan Actions and Assessment	Mitigation Proposed
Priority Action 14.2: Setting up a circularity goal for the output from biological treatment facilities and for soil and other construction and demolition waste streams depending on determinations on end-of-waste or by-products is an overall positive action for the majority of SEOs including LS, MA, PHH, BFF and W. It was noted that 528,000 tonnes of waste accepted for treatment at composting & anaerobic digestion facilities in 2019 which was an overall increase of 19% and about 8.8 million tonnes of waste accepted for treatment at composting & anaerobic digestion facilities in 2019. To further enhance the recycling rates and foster Ireland's move to a circular economy, more biowaste and C&D waste including soil from both commercial and household sources needs to be diverted to relevant bins and composted or treated respectively. Priority Action 14.3 and 14.4: Presently much of Ireland's residual municipal wastes are dealt with through a combination of landfill, thermal recovery in the form of waste to energy, co-incineration and exports (to thermal facilities overseas). Ireland currently has inadequate active thermal recovery treatment capacity to recover its residual Municipal waste. Work with the thermal recovery sector and thermal coprocessing sector regarding the implications of calorific values on thermal capacity and the use of SRF consistent with licence conditions will have largely neutral impacts but will make the thermal recovery process more efficient in the medium- and long-term. Priority Action 14.5: As discussed above, Ireland's two licenced facilities are operating at full capacity. The avoidance of disruptions will be largely neutral as it allows the existing facilities to continue to operate in the current manor. This as this Priority Action encourages thermal recovery there will be negative impacts to AQ and CF.	**Yes** **TP14.1** **TP14.2** **TP14.4** **TP14.5**
Target Policy 15.1: The EU have set the target of disposal to landfill of 10% of municipal waste by 2035. Ireland's landfill rate for municipal waste was 15 per cent in 2019, this is a significant decrease from over 80% in 2001. The diversion of waste from landfill will have overall positive impacts on the environment in the short, medium and long term. Target Policy 15.2: The provision of appropriate waste treatment contingency capacity in response to market disruption and/or events which pose a risk to the environment and/or health of humans and livestock will have a positive environmental impact. This includes a positive impact on water and population and human health as waste water will be suitably treated prior to discharge. Target Policy 15.2 and Priority Action 15.1: Preparation of a detailed feasibility report for a national contingency facility is an action that primarily focuses on research and data collection. Therefore, this will have positive implications for all SEOs, as it will help inform subsequent actions/policies over long term. Target Policy 15.3 and Priority Action 15.3: The proposed action suggests investigating and carrying out the process of remediation of unregulated historic landfills. Remediation of such sites should take place in accordance with the necessary statutory approvals and a risk based assessment prior to the initiation of the process. This will ensure that the waste recovered from such sites will not have significant environmental impacts. This is an overall positive action. Target Policy 15.4 and Priority Action 15.4: There are three landfills that accept municipal waste for disposal in Ireland. The proposed action suggests collaboration with landfill operators to utilise municipal solid waste for filling the remaining void space at such sites. These existing facilities are already consented and are operating under EPA waste licences. Target Policy 15.5 and Priority Action 15.5: The remediation of historic landfills will have environmental benefits for PHH, BFF, LS, W, AQ, CF, CH and LandS as it significantly reduces the emissions from the historic landfills including leachate and gas. Utilising this land will provide additional benefits to material assets. The action of examining potential efficiencies around aftercare of landfill sites by Local Authority Sector in a collective manner will assist with proper utilisation of such lands post remediation and will therefore provide an opportunity to also reduce the environmental impact associated with landfills over long term. Target Policy 15.6 relates to a financial strategy for local authority management of aftercare of landfill sites such as through cost efficiency for monitoring and managing these sites. As a financial mechanism, there are no direct impacts on the environment and the improved management of these sites have broader indirect positive impacts.	**Yes** **TP15.1** **TP15.2** **TP15.4** **TP15.5**

Table 8: Summary of Assessment- Focus Area Target Policies and Priority Actions (Cont'd)

Summary of Draft Plan Actions and Assessment	Mitigation Proposed
Priority Action 15.2: The delivery of the recommendations of the detailed waste contingency feasibility report will overall have positive environmental benefits. The waste contingency plan ensures the provision of appropriate waste treatment contingency capacity. Contingency is required for unforeseen events whereby there is a sudden and unplanned loss of existing treatment options (recovery, disposal or export). The risk of such an event is linked to capacity – for waste streams where there is excess treatment capacity within the market, any unplanned loss of an individual operation poses a low contingency risk as the market has capacity to respond. Conversely, for waste streams where there is a shortfall in capacity, any unplanned loss of treatment option poses a higher contingency risk where the market cannot respond. This contingency will mean waste will not go unmanaged in unforeseen events, reducing the risk to the environmental from poor management (e.g. exposed storage which could result in leachate reaching waterways). Priority Action 15.6: The existing controls under the Waste Recovery licensing regime help ensure that the potential risks associated with increased disposal of different types of waste within the country is reduced effectively. Therefore, the proposed action of liaising with EPA on the enforcement of Waste Recovery Licences to avoid disruptions to waste treatment is overall positive as the licensing regime will help mitigate/control any significant impacts on the environment.	**Yes** **TP15.1** **TP15.2** **TP15.4** **TP15.5**
Target Policy 16.1: The development of additional capacity for the treatment of hazardous waste in accordance with the National Hazardous Waste Management Plan will ensure there is adequate active treatment in the market. This will have an overall positive impact on the environment as in the past a significant volume of hazardous waste has been exported. Target Policy 16.2: The policy focuses on maintaining an annual capacity for the treatment of asbestos waste, which is generated during refurbishment works and during removal of known asbestos. Ensuring the asbestos waste stream is properly managed and monitoring the requirement of additional capacity is a step in a positive direction. There are concerns that relatively low quantities of this waste stream is currently managed, however it is likely that there are significant volumes of this waste in the built environment as this waste was widely used in products up to 1999. There are currently two EPA facilities licensed to accept asbestos waste, with the waste then exported to Germany for disposal. The action will have long term positive benefits as the quantities of this hazardous waste captured will improve, thereby reducing the volume of waste currently unreported or disposed of incorrectly. This would have consequent positive impacts on human health as asbestos contains carcinogenic fibres which are easily inhaled. Establishment of required network will result in improved collection and transfer infrastructure for this hazardous waste in the short term. This may lead to some increased waste related transport, with potential transport-related emissions both nationally and internationally. There would be positive impacts to soils as appropriate collection and management of this waste would by reducing the risk of soil contamination from inappropriate disposal such as burial. Target Policy 16.3, Target Policy 16.4 and Priority Action 16.3: Conducting a review of hazardous waste management capacity and the performance during the Covid-19 with the help of EPA is essential to evaluate the current capacity and recognise the gaps and the scale of required infrastructure. Similarly, as Priority Action 16.1, the Priority Action 16.4 primarily involves data collection as it relates to the development of a register of hazardous waste storage / processing/ treatment facilities with a particular focus on business continuity and contingency. This will strengthen knowledge of national hazardous waste capacity to inform infrastructure development over both short and long term. Additionally, conducting a business continuity assessment for hazardous waste management capacity with the help of EPA is positive particularly for PHH and MA SEOs.	**Yes** **TP16.1** **PA16.2**

Table 8: Summary of Assessment- Focus Area Target Policies and Priority Actions (Cont'd)

Summary of Draft Plan Actions and Assessment	Mitigation Proposed
Priority Action 16.1: The action aims to identify hazardous waste streams where there is an associated treatment capacity risk. This is primarily a research- driven action with the focus on data collection and is therefore overall positive for all the SEOs. This will inform decisions related to infrastructure development to manage at-risk waste streams appropriately over long term. Priority Action 16.2: This action aims to enable the capture of more hazardous waste at civic amenity sites (CAS's) which might otherwise go unmanaged and as such, has a long term positive environmental impact. However, there is also potential for short term negative impacts on AQ, MA and PHH due to indirect impacts associated with transport of waste and noise/ disturbance from segregation activities. The development of additional CAS or expanded infrastructure at existing sites would improve collection infrastructure for hazardous waste and contribute to a decrease in unmanaged hazardous wastes. This will have positive impacts on BFF, LS, AQ and PHH by ensuing that these hazardous materials are collected and treated appropriately, which will reduce the risks to soils, water and air quality associated with unregulated disposal activities like backyard burning and illegal dumping. Indirect impacts to AQ and CF include the potential for increased emissions from the transport of waste to and from CAS. Construction of additional CAS would however result in additional land take and associated negative environmental impacts. Priority Action 16.4: The controls that are in place under the IE/IPC/waste licensing regime help ensure that the potential risks associated with increased treatment of hazardous waste within the country is appropriately reduced. Therefore, the proposed action of liaising with EPA on the enforcement of Hazardous Waste Licences to avoid disruptions to waste treatment is overall positive as the licensing regime will help mitigate/control any significant impacts on the environment.	**Yes** **TP16.1** **PA16.2**

MITIGATION AND MONITORING

The Environmental Report has highlighted the significant potential positive and negative environmental impacts from the implementation of the draft Plan. **Chapter 9** of this environmental report presents mitigation measures from both the SEA and AA which are envisaged to prevent, reduce and as fully as possible offset significant adverse effects on the environment of implementing the draft plan. A general summary of the mitigation measures from the SEA include the following:

- Recommendations for additional; monitoring and tracking;
- Ensure project level adherence to the EIA and AA statutory process;
- Training in the circular economy; and
- Surveying and engagement;

Similarly to the SEA recommendations, the AA recommends that the draft Plan ensures that the actions undertaken do not have an adverse effects on European Sites, such that plans or projects arising from the draft Plan which require consent are subject to requirements of the EU Habitats Directive. Monitoring will focus on aspects of the environment that are likely to be significantly impacted by the implementation of the draft Plan, and are summarised in **Table 9**. It is the responsibility of the Local Authority Sector to coordinate the monitoring of the Plan but this monitoring regime will rely on existing monitoring programmes managed.

Table 9: Proposed SEA 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 waste management. Cross-cutting Areas: Population & Human Health Biodiversity, Flora & Fauna Air Quality Water Land & Soil Material Assets	• Extent of three bin coverage. • Levels of unmanaged waste. • Contamination rates in recycling and organic bins.	• Roll out of three bin system nationally; • Reduction in total unmanaged waste.	• Kerbside collection coverage. • Total unmanaged waste.	• National waste statistics Environmental Protection Agency (EPA). • National Waste Bulletin, published annually (EPA). • NWCPO Waste Statistics.	• Identify waste streams with an increasing trend and establish further interventions to curb future growth;. • Maintain ongoing targeted waste characterisation surveys from identified high risk sources.
Monitoring Objective 2: To accelerate the transition to the circular economy Cross-cutting Areas: Population & Human Health Material Assets	• Total waste generation. • The national recycling rate. • The national rates or reuse and repair.	• 0% total waste growth; • 1% reduction per annum in the quantity of residual waste generated per capita • Increase in national MSW Recycling Rate; • 2% reduction per annum in the quantity of construction and demolition waste;	• Total waste per capita. • Quantity of residual waste generated per capita; • Quantity of construction and demolition waste generated; • National MSW Recycling Rate.	• National waste statistics Environmental Protection Agency (EPA). • National Waste Bulletin, published annually (EPA). • National Waste Prevention Programme/ Circular Economy Programme (EPA). • NWCPO Waste Statistics.	• Revise and adapt the roadmap to establishing national baselines and performance rates for reuse and repair. • Track the national recycling rate and reuse targets for upper tier (reuse, repair) and lower tier (recovery) operations accordingly.

Table 9: Proposed SEA Monitoring Programme (Cont'd)

Aim for Monitoring & Environmental Issue Area	What is being monitored?	Target	Indicator	Data Source/ Responsibility	Remedial Action
Monitoring Objective 3: Safeguard the natural environment from development or expansion of collection and treatment infrastructure. Cross-cutting Areas: Land & Soil Biodiversity, Flora & Fauna Water Material Assets	• National collection capacity and infrastructure. • National treatment capacity	• Development of indigenous sustainable and viable treatment infrastructure that meets national demands with no adverse environmental impact.	• Fraction of indigenous treatment capacity available versus demand. • Total waste exports.	• National Capacity Register (EPA and NWCPO). • National waste statistics Environmental Protection Agency (EPA).	• Revise consenting and enforcement regimes to mitigate any potential adverse impact from existing or new development.
Monitoring Objective 4: Improve air quality and reduce emissions to air from the key issues: thermal treatment, landfill and from transport emissions. Cross-cutting Areas: Air Quality Climatic Factors Human Health	• Trends in the level of thermal treatment of waste. • Trends in the levels of transport of waste as a proxy for emissions to air.	• Aim for an overall decrease in levels of illegal/ backyard burning. • Minimise the distance travelled for waste .	• 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).	• Enforcement Unit statistics (EPA). • Annual hazardous waste statistics (EPA).	• 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).

Table 9: Proposed SEA Monitoring Programme (Cont'd)

Aim for Monitoring & Environmental Issue Area	What is being monitored?	Target	Indicator	Data Source/ Responsibility	Remedial Action
Monitoring Objective 5: Minimise emissions of greenhouse gases associated with waste management. Cross-cutting Areas: Climatic Factors Air Quality Material Assets	• 0% waste growth in waste generation. • Increase in recycling rates. • Increase in circularity.	• Achieve all circular economy targets in the Climate Action Plan.	• Quantify the total waste recovered thermally and disposed of to landfill. • Quantify the volumes of waste of exported and distances travelled to final treatment.	• Annual waste statistics (EPA).	• Requires additional quantification of this distance travelled and the transport types in the annual EPA waste statistics.
Monitoring Objective 6: Prevent and minimise the generation of waste, minimise exports and promote circular economy principles. Cross-cutting Areas: Material Assets Climatic Factors Population and Human Health	• Waste prevention; • The transition to a circular economy; • The capture of all wastes; • Compliance with targets, policy and legislation.	• 0% total waste growth; • Increase in national MSW Recycling Rate; • Increase in the national Circular Material Use (CMU) Rate.	• Continued downward trends in levels of sectoral waste generation; • Optimised circularity and recycling of collected material streams.	• Waste statistics (EPA). • National Waste Bulletin, published annually (EPA). • National Waste Prevention Programme/ Circular economy Programme (EPA). • Circular Material Use (CMU) Rate.	• Identify waste streams with an increasing trend and establish further interventions to curb future growth;.

NEXT STEPS

There is still some important work to be done before the National Waste Management Plan for a Circular Economy can be adopted. The next step in the SEA and Plan process will be a public consultation period. During this time, comment on the findings of the Environmental Report, the Natura Impact Statement and the content of the draft Plan may be submitted for consideration.

Written submission or observation on the draft National Waste Management Plan for a Circular Economy or associated environmental reports can be made by **4pm on the 5th of July 2023** via:
Email to the following email address:
submissions@nationalwasteplan.ie

These submissions/observations will be taken into consideration before finalisation of the Plan. Early responses would be appreciated to allow more time to clarify and resolve issues that may arise.

It should be noted that in the interests of transparency, written submissions received may be made publicly available on the project website. Receipt of submissions will be acknowledged but it will not be possible to issue individual responses.

Rialtas Áitiúil Éireann
Local Government Ireland

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