HSE Sustainable Waste Management Framework

Develop a HSE sustainable waste management framework and supporting implementation plan to minimise food waste generation, increase recycling and reduce the amount of clinical waste generated.

HSE Climate and Sustainability Programme

An Overview of the United Nations Global Goals

Executive Summary

Climate change presents a fundamental threat to human health. It affects the physical environment as well as all aspects of both natural and human systems; including social and economic conditions and the functioning of health systems. As climatic conditions change, more frequent and intensifying weather and climate events are observed, including storms, extreme heat, floods, droughts and wildfires. These weather and climate hazards affect health both directly and indirectly, increasing the risk of deaths, non-communicable diseases, the emergence and spread of infectious diseases, and health emergencies.

The Health Service Executive (HSE) is committed to reforming and improving the delivery of care to help reduce greenhouse gas (GHG) emissions and is aligned with the Sláintecare Reform Programme, which prioritises digital healthcare, promotes social prescribing and facilitates service users care closer to home. The impact of COVID-19 has led to a large increase in the use of digital services, not just for provision of healthcare services, but also enabling people to work from home as far as is reasonably possible.

Within this framework, the first section outlines the context, scope, best practice examples of sustainable waste management and an overview of the current state of sustainable waste management within the HSE. The approach, outlined in Section 2, identifies the key building blocks to deliver the strategic objective of sustainable waste management outlined in the HSE Climate Action Strategy and the structure and methodology that will be used to underpin effective implementation of the strategic objective. The third and fourth section focuses on implementation and enablers of the framework from a national to local lens.

It is intended that this document will be a live document which will be updated and expanded as required to reflect emerging best practices and mandated requirements outlined in the Climate Action Public Sector Mandate which is updated annually.

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1. Introduction

The climate crisis is a health crisis. The link between climate change and various health challenges, including respiratory illnesses, water-borne diseases, vector-borne diseases, malnutrition, non-communicable diseases, mental health, injury and mortality from climate hazards and extreme weather events will put significant additional pressure on healthcare facilities and have a lasting effect on our health systems. At the same time, current models of care and service delivery can make a significant contribution to damaging the environment.

The healthcare sector is responsible for approximately 4.4% of global emissions. If it was a country, the global health sector would be the fifth biggest emitter on earth and unless the carbon footprint of healthcare sector is cut, its emissions could triple between now and 2050, with the unintended consequence of a drastic impact on people's health[1]. The Irish health service is a high emitter of GHG when compared with similar health systems and it is estimated that it contributes between 5%-8% of Ireland's GHG emissions.

There has been an acceleration of global efforts to 'reverse the tide' on environmental damage, particularly since the signing of the Paris Agreement in 2015[2]. The EU Green Deal provides a package of policy initiatives launched by the Commission in 2019 to set the path to a green transition with the ultimate goal of reaching climate neutrality by 2050. At national level, the Climate Action Plan provides a roadmap for halving Ireland's emissions by 2030 and reaching net zero by 2050, as committed to in the Climate Action and Low Carbon Development Act 2021.[3]

As a result, the HSE has drafted its Climate Action Strategy 2023-2050 which sets out the HSE's commitment to achieve net-zero emissions no later than 2050, delivering healthcare which is environmentally and socially sustainable. The strategy outlines how the HSE will contribute to putting Ireland on a more sustainable path by cutting emissions, creating a healthier, cleaner, and greener society, and helping to protect and prepare the population for the health consequences of climate change and biodiversity loss. It comprises six priority areas, ten strategic objectives and two enabling functions, summarised in Table 1.

The purpose of ***the Strategic Framework Documents*** of which this is one, which are being developed for each Strategic Objective, is to translate the HSE's vision for a net-zero health service that is environmentally and socially sustainable into a practical programme for delivery of the relevant strategic objective.

Develop a HSE sustainable waste management framework and supporting implementation plan to minimise food waste generation, increase recycling and reduce the amount of clinical waste generated.

1 Health Policy Partnership, The nexus between climate change and healthcare, 2022.

2 The Paris Agreement is the first legally binding international Treaty on climate change, adopted by 196 parties at the UN Climate Change Conference of the Parties (COP21) in Paris in 2015. Its overarching goal is to hold *"the increase in the global average temperature to well below 2℃ above pre-industrial levels and to pursue efforts to limit temperature increase to 1.5℃ above pre-industrial levels."* The signing of the Paris Agreement was the trigger for governments around the globe to develop and enhance the strategies and policies needed to reduce global warming.

3 Chapter 10 of the Climate Action Plan and the related Climate Action Mandates and Public Sector Climate Action Strategy are focused on the responsibility of the public sector to lead by example by fast-tracking the changes that are needed.

Table 1. Overview of HSE Climate Action Priority Areas and Corresponding Strategic Objectives

		Strategic Objectives
A.	**Sustainable Buildings and the green environment**	**SO1** Achieve a 50% reduction in energy usage, and a 51% reduction in energy-related GHG emissions by 2030 and a net-zero emission target by 2050 (at latest) under the requirement set out for public sector bodies in the Climate Action Plan 2021.
		SO2 Develop a HSE Green Space Framework and supporting implementation plan to optimise the use of green space for the promotion of the health and wellbeing of service users, staff and the local communities.
B.	**Transport and Mobility**	**SO3** Develop a HSE Transport Framework and supporting implementation plan to eliminate, reduce and substitute transport emission sources associated with delivering and accessing healthcare.
		SO4 Develop a mobility framework and implementation plan to promote travel initiatives to avoid unnecessary service user and staff journeys. Where journeys are required, support and encourage active travel, low carbon or public transport alternatives.
C.	**Sustainable Procurement**	**SO5** Develop procured goods and services waste reduction framework and supporting implementation plan to reduce waste and related emissions, strengthen supply chain resilience and support the transition towards a circular economy.
		SO6 Develop a baseline for all HSE supply chain emissions and work in consultation with key supply chain product partners to include sustainability criteria in all tender procurement processes and establish a credible decarbonisation trajectory (no later than 2025).
D.	**Greener Models of Healthcare**	**SO7** Develop a framework for greener models of healthcare delivery and supporting implementation plan to reduce the environmental impact of the delivery of models of care, pharmaceutical products / services used while continuing to prioritise service user safety, prevention and population health.
E.	**Water and Waste Management**	**SO8** Develop a HSE Sustainable Waste Management Framework and supporting Implementation plan to minimise food waste generation, increase recycling and reduce the amount of clinical waste generated.
		SO9 Develop a data driven water consumption framework and implementation plan to report and manage water consumption and conservation measures to reduce wastage.
F.	**Adaptation and Resilience**	**SO10** Ongoing implementation of the measures set out in the Department of Health Adaptation plan 2019 -24 and all subsequent plans.
	Enabling Function	**Description**
1	**Measurement and Assurance**	The Measurement and Assurance Work stream will coordinate the collection, collation and calculation of the relevant sustainability data across the ten work programmes, including climate (Scope 1, 2 and 3 emissions), water usage, waste disposal and relevant biodiversity data. Identification of metrics and key performance indicators, target setting and tracking implementation of the Strategy will be enabled. The methodologies used will be in line with international standards.
2	**Collaboration, Communication, Awareness and Training**	In recognition of the need to inspire and upskill the workforce to embrace sustainability and adapt dynamically, the HSE recognises the need to educate and upskill a large workforce to act as climate activists and to equip staff with the knowledge to promote an overall culture of sustainability awareness.

1.1 Context

The health sector's role is primarily to improve the health and social care of the population, but it also has a part to play in advocating sustainable waste management. We must address the unsustainable practices that are now embedded in health systems in Ireland and internationally. For example the culture of single use, disposable materials, the use of harmful gases and high emission inhalers.

The HSE is also committed to supporting the 17 UN Sustainable Development Goals (SDGs) to promote prosperity while protecting the planet. Although the HSE contributes to most SDGs in one form or another, as they directly relate to health or contribute to health indirectly, health has a central place in SDG Goal 3: "Ensure healthy lives and promoting wellbeing for all ages". The relevant UN SDGs to this framework are:

Figure 1. An Overview of Sustainable Development Goals relevant to Waste

Goal 3:
Good health and well-being

Goal 6:
Clean Water and Sanitation

Goal 12:
Responsible consumption and production

This section sets out the key policy areas relevant to the design, development and implementation of a sustainable waste management programme focused on reducing the amount of healthcare risk waste generated, minimise food waste generated and increase recycling.

Minimising waste generation, and improving segregation, reuse and recycling will also lead to less emissions associated with waste transport and treatment. Waste can also contribute to methane emissions. As part of our commitment to the Government Climate Action Plan (CAP), the aim is to reduce methane from waste by sending less than 10% waste to landfill by 2030. Also we must adopt a circular economy approach which ensures products are renewable and reusable or recyclable, where possible, and by ensuring that waste is a last resort. In addition, reduction of food waste has the co-benefit of reducing the costs associated with purchasing the food and ingredients.

Below is a listing of non-exhaustive relevant policies (EU and national) to provide further context:

- **UN SDGs:** Goal 12 of the UN Sustainable Development Goals deals with responsible consumption and production and Goal 12.3 has set a target *'by 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses.'*
- **The European Green Deal:** Writes into law the goal set out in the European Green Deal for Europe's economy and society to become climate-neutral by 2050. The law also sets the intermediate target of reducing net greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels.

The relevant broad targets for waste under CAP25 include:

Table 2: Relevant Broad Waste Targets

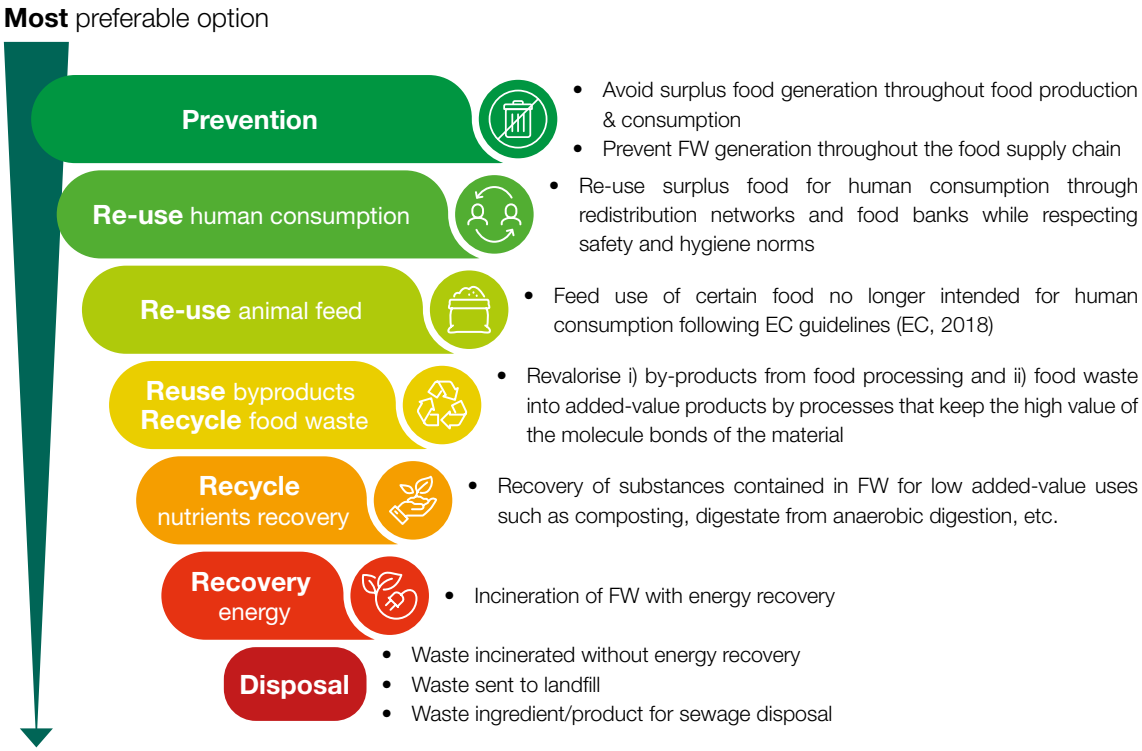
Landfill Reliance	• Limit diversion of biodegradable municipal waste to landfill to maximum limit of 427,000 tonnes. • Reduce the amount of municipal waste landfilled to 10% by 2035.
Recycling	• Recycle 65% of municipal waste by 2035; • Recycle 70% of packaging waste by 2030. • Recycle 55% of plastic packaging waste by 2030. • Separate collection obligations extended to include hazardous household waste (by end 2024), bio-waste (by end 2023), and textiles (by end 2024).
Food	• Reduce food waste by 50% by 2030.
Plastic single-use items	• For plastic bottles, achieve a 77% collection rate by 2025, and 90% by 2029. • Achieve an ambitious and sustained quantitative reduction in consumption of these products by 2026 (compared to a 2022 baseline). • Incorporate 25% of recycled plastic in Polyethylene Terephthalate (PET) beverage bottles from 2025, and 30% in all plastic beverage bottles from 2030. • Ensure all plastic packaging is reusable or recyclable by 2030.

Other CAP requirements that are related to the waste workstream but have wider ownership across the Climate Action Strategy are in Appendix 1.

- **Circular Economy Programme (2021-2027):** The EPA's Circular Economy Programme 2021–2027 which incorporates and builds upon the previous National Waste Prevention Programme to support national level, strategic programmes to prevent waste and drive the Circular Economy in Ireland. Tackling food loss and food waste is one of the key steps the HSE can take to combat climate change and support Ireland's transition to a circular economy. The EPA's National Food Waste Prevention Programme is implemented through the Circular Economy Programme 2021-2027. The programme works across three core areas of: Household, Supply Chain, and Hospitality.
- **National Food Waste Prevention Roadmap (2023-2025):** Sets out the actions that can be taken to set Ireland on course to reduce food waste by 50% by 2025 as per the Climate Action Plan target. The EPA will play a key operational role in driving implementation of key actions in the roadmap for public sector bodies. Particularly in the context of their continued responsibility in delivering Ireland's National Food Waste Prevention Programme and annual reporting on Ireland's national food waste statistics.

The food waste prevention roadmap incorporates the food waste hierarchy principles shown in figure 2 below.

Figure 2. Food Waste Prevention Roadmap



- **National Hazardous Waste Management Plan (NHWMP) (2021–2027):** The NHWMP sets out a set of recommendations to be actioned within its lifetime to strengthen protection of the environment and human health through best-practice management of hazardous wastes. A waste is classified as 'hazardous' when it can harm human health or the environment because it is explosive, oxidising, flammable, irritant, toxic, carcinogenic, corrosive, infectious, mutagenic, sensitising, or eco-toxic. This includes healthcare risk waste, which comprises approximately 11,000 tonnes of hazardous waste per annum. However, the Covid-19 pandemic caused an increase in the quantity of healthcare risk waste generated. Research carried out by the HSE found that only 66% of healthcare risk waste is hazardous. Awareness campaigns are ongoing to improve prevention and segregation of hazardous healthcare risk waste.

- **Green Public Procurement (GPP) Policy:** The Government has approved the Green Public Procurement Strategy and Action Plan, Buying Greener: Green Public Procurement Strategy and Action Plan 2024-2027, will play a key role in driving the implementation of green and circular procurement practices across the public sector. GPP policies will play a vital part in reducing the HSE's carbon impact. It is defined as: a process whereby public bodies seek to procure goods, services and works with a reduced environmental impact throughout their life cycle when compared to goods, services and works with the same primary function that would otherwise be procured.

  GPP can be used to eliminate or reduce waste, for example by specifying processes or packaging which generates less waste, or by encouraging reuse and recycling of materials. GPP is also about influencing the supplier market. By promoting and using GPP more systematically, public bodies can provide industry with real incentives for developing green technologies, and more sustainable products and services.

- **National Planning Framework (NPF):** This framework provides an established means through which to implement and integrate climate change objectives. At present, the NPF integrates the national climate objectives via National Policy Objectives. National Policy Objective 56 is relevant to waste management: Sustainably manage waste generation, investing in different types of waste treatment and support circular economy principles, prioritising prevention, reuse, recycling, and recovery, to support a healthy environment, economy and society.
- **HSE policies:** Waste management has been a priority for the HSE, as addressed within guidance documents, principles, and policies such as the Waste Management Awareness Handbook (2014), the HSE Waste Policy (2016).

1.1.1 Climate Action Plan & Public Sector Climate Action Mandate requirements

The most recent yearly update to Ireland's Climate Action Plan (CAP) stipulates the necessary measures and actions to meet carbon budgets and sectoral emissions ceilings. This plan outlines a strategic approach for reducing Ireland's emissions by half by 2030 and achieving net zero by 2050, as pledged in the Climate Action and Low Carbon Development (Amendment) Act 2021.

- **Public Sector Bodies Climate Action Roadmaps Guidance 2024:** This document provides guidance for public sector bodies to update their climate action roadmaps in line with the updated public sector climate action mandate. Waste related guidance is listed below:
  - » Support Ireland's producer responsibility initiatives in the collection and recycling of products.
  - » In Ireland there are producer responsibility initiatives for packaging, Waste electrical and electronic equipment (WEEE), Batteries & accumulators.
  - » The deposit return scheme for plastic bottles and aluminium cans.
  - » Take into consideration any relevant obligations for separate collection of those waste streams e.g. WEEE, batteries are not put into commercial waste bins collected at kerbside.
  - » Recyclables must be placed 'clean and dry' in the recyclables bin to reduce contamination and provide the maximum potential for recycling of waste packaging.

The Public Sector Climate Action Mandate applies to all bodies covered by decarbonisation targets. The mandate highlights the main climate action objectives for public bodies and it will be reviewed annually. Progress on the implementation of the mandate will be tracked through the Sustainable Energy Authority of Ireland (SEAI) monitoring and reporting (M&R) system using a 'comply or explain' approach. Each public sector body's Climate and sustainability champion has responsibility for reporting annually on the mandate. Target delivery measures are categorised into four key areas:

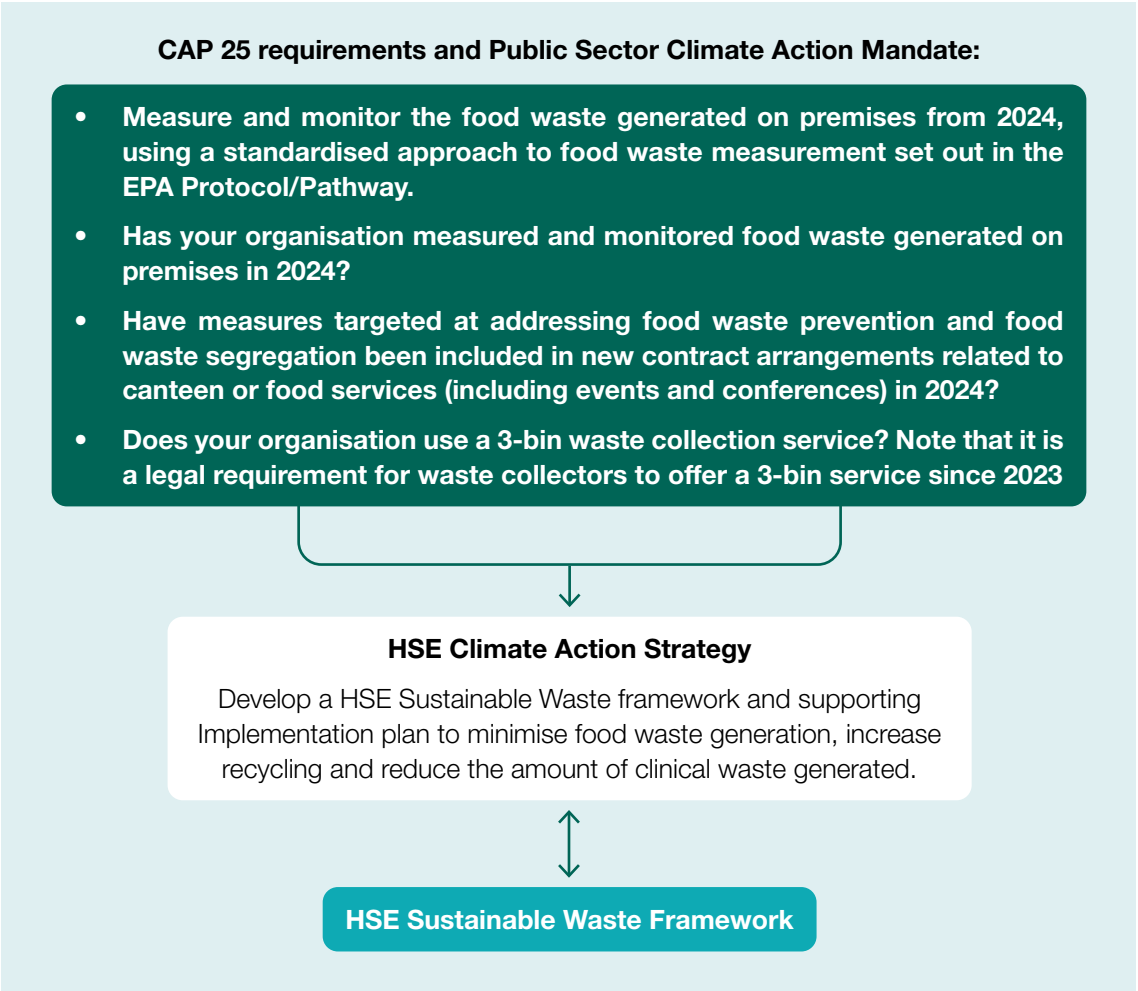
- Targets.
- People.
- Ways of working.
- Buildings and vehicles.

Climate Action Plan (CAP): CAP stipulates the necessary measures and actions to meet carbon budgets and sectoral emissions ceilings. This Plan outlines a strategic approach for reducing Ireland's emissions by half by 2030 and achieving net zero by 2050, as pledged in the Climate Action and Low Carbon Development (Amendment) Act 2021.

Each category includes a range of subtopics that cover various aspects, such as energy consumption, senior leadership roles, staff education via training and awareness programmes, certifications compliance, green procurement activities, waste management, and construction and transportation sectors.

With regards to sustainable waste, there are many that are synergistic with waste but the key objectives are shown below.

Figure 3. An Overview of the CAP 25 requirements specifically related to this framework, Public Sector Climate Action Mandate & HSE Climate Action Strategy



In line with yearly updates to CAP, the framework will in turn be a live document which will be updated and expanded as required to reflect emerging CAP responsibilities in the future, industry best practices and emerging climate related responsibilities.

1.1.2 HSE Climate Action Strategy 2030-2050 and HSE Sustainable Waste Management Framework

Waste is a priority for the HSE. National contracts are in place for collection, treatment and disposal of healthcare risk waste and measures are underway to reduce single-use plastics. Waste management and the progression of waste reduction programmes are led by hospital and healthcare facility management teams. Each hospital and healthcare facility is responsible and accountable for its own waste handling and waste reduction is achieved through a combination of changing of care delivery practices (i.e., doing things differently to reduce waste) and through the use of materials and resources that are designed to be reusable or recyclable. HSE Procurement has established a national contract for the management and disposal of healthcare risk waste. This has resulted in many examples of improvement practices and cost reduction through practice change.

1.2 Structure of the Sustainable Waste Work Programme Group

To accelerate the delivery of sustainable waste objective, a work programme group was established in 2023. The group is focused on establishing a baseline for all waste generated across the HSE and developing a dedicated HSE waste management framework and corresponding implementation plan.

The sustainable waste working group membership list is located in Appendix 2.

1.2.1 Scope

A summary of sustainable waste initiatives in-scope in the current phase of the framework are shown in the table below. It is intended that the scope in future iterations of the framework will expand and develop accordingly.

Table 3. In-Scope Activities for the Waste Work Programme, Categorised into their key focus area

Types of waste	Policy, Actions and Initiatives
1. Healthcare risk waste This is waste from healthcare facilities that poses a risk due to its potentially infectious nature. This can include chemicals, anatomical waste, blood or items contaminated by certain bodily fluids Other hazardous waste i.e. WEEE/ redundant equipment waste, some oils, batteries fluorescent tubes. **2. Health care non-risk waste** Contents are non-infectious, non-radioactive or non-chemical, this includes medical equipment which is assessed as non-infectious, i.e. not contaminated with blood or hazardous body fluids. **3. General waste and recyclable waste** For example mixed recycling, cardboard, glass, confidential shredding, other redundant equipment, cooking oils. General waste constitutes all other waste that does not fit within healthcare risk and non-risk waste. **4. Food waste** Left over food from patient and staff meals and items like cooking oil from industrial fryers.	• Waste-related HSE policies including updates to the 2010 policy for healthcare risk and non-risk waste. • Promotion of reuse of materials and use of reusables. • Working with the Office of Government Procurement (OGP) and suppliers to reduce packaging materials and increase the level of recyclability. • Measurement of the quantity of the in-scope waste types described. • Setting short-term and long-term waste reduction and recycling targets. • Initiatives aimed at reducing the quantity of non-risk waste (food waste, general waste, and recyclable waste), healthcare risk waste and hazardous waste. • Initiatives aimed at increasing the ratio of recyclable waste that is recycled. • Waste management and reduction training, education and behavioural change measures and initiatives. • Selection of Personal Protective Equipment (PPE), as per HSE Antimicrobial Resistance & Infection Control (AMRIC) Point of care risk assessment resources, AMRIC gloves off poster and correct waste segregation training to support best practice and waste reduction strategies.

These initiatives are explored in more detail in this document. While some additional activities are important for waste management in the HSE, they are not covered here by this programme. These out-of-scope activities and reasoning behind their exclusion are listed below.

Table 4. A List of Initiatives Out-of-Scope in the Current Phase

Initiative	Description	Reasoning behind exclusion
Types of waste	• Radioactive waste. • Construction and demolition waste. • Waste water effluents. • Single Use Equipment.	• Outside the scope of the waste work programme as it sits under other elements of the Climate Action Strategy or other HSE Departments.
Policy, Actions and Initiatives	• Operational issues. • Deployment of waste equipment e.g. bins.	• Outside the scope of the waste work programme as it sits under regional/ service governance.

1.3 Best Practice

Summary of sustainable initiatives from some case study locations and their associated co-benefits are contained in the table below.

Table 5. Best Practice Measures Undertaken across the Health Service in the UK and New Zealand

Best Practice Location	Best practice measures undertaken/in progress	Co-benefits		
		Climate	People	Health
NHS England	**Applying circular economy principles** to waste management, such as fixing, rather than replacing, broken equipment including chairs, flooring and office equipment. For example, expansion of existing walking aid refurbishment schemes as opposed to buying new ones, with 40% of all walking aids refurbished.	✓		
	Commitment to the NHS Plastics Reduction Pledge, to which 145 trusts have signed up to date to eliminate all avoidable plastic waste by 2042 by: • Abolishing plastic straws. • Abolishing carrier bags. • Abolishing food packaging. • Removing use of singe use plastic. The Yorkshire Ambulance Service NHS Trust has removed 200,000 single-use plastic items from its waste stream between 2019 and 2020, saving four tonnes of waste per year and over £12,000 a year in packaging, delivery and disposal costs.	✓	✓	✓
	Reducing reliance on office paper by 50% across secondary care through increased digitisation and switching to 100% recycled paper for all office-based functions.	✓	✓	

Best Practice Location	Best practice measures undertaken/in progress	Co-benefits		
		Climate	People	Health
NHS Scotland	**Health Boards have developed waste management reduction plans for the following waste streams and key materials:** Healthcare Risk waste streams; medicines waste, residual waste, recycling streams, both source-segregate and dry mixed recyclables; packaging waste; food waste; estate wastes including furniture and equipment; construction waste; plastics; metal; wood; textiles; and organics.	✓		
	Internal waste management systems and standard operating procedures have been reviewed and updated for segregation, storage and management of products at their end of life to support supplier take-back and refurbishment.	✓		
	Development of Food Waste Action Plans, which outline the steps that Health Boards will take to reduce food waste by a third by 2025 (compared to 2013 values).	✓		
	Review internal systems for unavoidable waste and support segregation and management from point of production to collection for high quality recycling and recovery.	✓		
	Rolling out staff-focused communication campaigns on the waste hierarchy in healthcare settings.	✓	✓	✓
NHS Wales	**Engage with pharmacists and prescribers to build upon and support existing efforts to encourage responsible disposal of inhalers** through: • Discussions with patients • Information leaflets and posters Media and other communication channels.	✓	✓	✓
	Introduce additional inhaler-specific disposal facilities in hospitals in partnership with industry stakeholders.	✓		
	Utilise the existing Respiratory Health Implementation Group (RHIG) digital apps to effectively communicate the importance of responsible disposal to patients.	✓	✓	✓
New Zealand	**Roll out of a syringe recycling scheme** supported by partnering recycling company.	✓		
	Integrating circular economy principles for traditionally single-use medical equipment. For example, collection, cleaning and reprocessing of patient transfer mats instead of linear usage model (i.e. send to landfill).	✓	✓	✓

Best Practice Location	Best practice measures undertaken/in progress	Co-benefits		
		Climate	People	Health
New Zealand	**Replacement of certain single-use items** such as plastic water bottles, pill cups, and drinking cups with reusable bottles or containers.	✓		
	Educating staff about waste separation and providing multiple bins with effective signage in locations of consumption can encourage them to separate waste.	✓		

The Green Healthcare Programme provides regular online training on healthcare waste both in terms of reduction in healthcare risk waste, waste prevention and reuse, increasing recycling, better waste segregation, and overall waste management recommendations; as well as specific training focussing in on food waste reduction. The programme also documents and shares resources on best practice examples and case studies in waste reduction and waste management from sites across the sector, as well as resources that can help a healthcare location improve its waste management practices like guides, factsheets, bin stickers, and so forth. A calendar also acts to link in sustainability days and associated materials for promotional events locally in healthcare sites. The HSE's Green Healthcare Programme carry's out numerous initiative such as audits, benchmarks and case studies. The below are some projects that have been trialled in Irish hospitals that have proven to be successful.

Table 6. Irish Hospital Waste Projects

Waste Stream	Initiatives	Site
Healthcare risk waste	Systematic review and reduction of yellow bin provision for healthcare risk waste in conjunction with Infection Prevention and Control Neptune System.	St. James' Hospital
Healthcare risk waste	Reusable medication trays and customised dressing pack in the haemodialysis unit.	CHI Temple Street
Healthcare risk waste	Aids and Appliances recycling services e.g. crutches.	Various
Healthcare risk waste	Disposal of unused medicines properly (DUMP) in community pharmacy settings.	Various
Healthcare risk waste	Remanufacture of scalpel electrosurgical devices with used ones collected.	Cork University Maternity Hospital
Food	Food waste actions including menu subgroup established to review food choices/eliminate low demand food items and food of audit results in size bulk food containers to some wards reduced/change and installation of an onsite composter.	Sligo University Hospital
Food	Commercial air fryer which eliminates cooking oil waste.	Clonakilty Community Hospital
Food	Food waste reduction groups.	Midland Regional Hospital Portlaoise
Food	Use of technology to reduce food waste including electronic food ordering and automated/AI food waste tracking	Our Lady of Lourdes
Paper	Procure 100% recycled paper.	Various
General	Binless office programme.	St. James's Hospital

1.3 Current State Assessment

The current state assessment was designed to collect data in four categories:

1. Healthcare Risk Waste
2. Healthcare non risk waste
3. Food Waste
4. General Waste and Recyclable waste

1.3.1 Healthcare Risk Waste

Data on the yearly tonnage of healthcare risk waste has been provided by Stericycle, a HSE approved waste treatment contractor.

Bio systems are the systematic approach to the safe use, containment, transportation, and disposal of sharp medical instruments within a biological or clinical environment, aimed at minimising the risk of injury, infection transmission, and environmental contamination. Stericycle Bio system re-usable sharp boxes can be re-used 600 times.

As of April 2025 the current data associated with the use of Bio systems is listed below:

- 26 HSE acute hospitals use bio systems
- 4 HSE acute hospitals have partially rolled out bio system
- 24 HSE acute hospitals still use single-use containers

The top healthcare risk waste generators in the 12 months April 2024 to March 2025 are:

	Healthcare site:	Yearly Tonnage	Bio system in place
	Hospital	April 2024 – March 2025	Bio system Implementation Status
1	Mater Misericordiae University Hospital	839	None
2	Cork University Hospital	833	Full Rollout
3	Beaumont Hospital	709	Partial
4	St James's Hospital	652	Full Rollout
5	University College Hospital Galway	640	Partial
6	Tallaght University Hospital	585	None
7	University Hospital Limerick	583	Partial
8	St Vincent's University Hospital	485	Full Rollout
9	University Hospital Waterford	463	Full Rollout

1.3.2 Healthcare Non Risk Waste

Healthcare non-risk waste, or general waste, is any domestic and confidential waste including catering and non-infectious waste. It also includes medical equipment assessed as non-infectious, not contaminated with blood or hazardous body fluid and waste not contaminated with blood or hazardous body fluid.

The below is considered healthcare non risk waste but can be, and are often confused and thought of, as healthcare risk waste:

- Incontinence wear from non-infectious patients
- Oxygen face masks
- Empty urinary drainage and empty stoma drainage bags
- Clear tubing (e.g. oxygen, urinary catheters, ventilator, nasogastric, IV lines with tips removed)
- Enteral feeding equipment
- Non-contaminated PPE (e.g. gloves, aprons and masks)
- Empty continuous ambulatory peritoneal dialysis (CAPD) bags
- All other household non-risk, non-recyclable waste

1.3.3 Food Waste

There is no up-to-date collated data on food waste. Assessing food waste is now part of HSE Nutrition Standards work. The Food, Nutrition & Hydration Policy for adult patients in acute hospitals recommends that each hospital should establish a food waste prevention and improvement programme to measure and monitor waste. The Green Healthcare Programme aims to help facilities in Ireland become more resource efficient, prevent or reduce waste and cut costs. They provide how-to guides, fact sheets, best practice and case studies towards this goal. A proof of concept at Our Lady of Lourdes Drogheda showed 63% cost-efficiencies and 28% reduction in emission from food from introducing an electronic food ordering system food waste management system.

Outside the HSE, the Fixing Food Together position paper from the Climate and Health Alliance highlights food waste as one of six priority action area to create a healthier, more sustainable Irish food system.

In general, Irish hospitals are operating best practice in terms of commercial food waste segregation.

1.3.4 General and Recyclable waste

Services Framework allows any site to get under contract regardless of size (all sites now included, e-tenders option for smaller sites Audits). carried out at some acute hospitals indicate that 30% of waste categorised as general waste is recyclable.There is no general waste baseline collated data for acute hospitals and/or community hospitals. Some acute hospitals are contracted on a pay-per-lift basis and others are doing a pay-by-weight. The OGP 2025 Waste Management Service Framework allows any site to get under contract regardless of size (all sites now included e-tenders options for smaller sites).

1.3.5 Learnings from the Current State Assessment

There is a requirement for improvements across all four categories in terms of sustainable waste management practices. Some of the learnings include the need for a robust governance and accountability framework, improved data and reporting and a large number of opportunities exist for improved waste management across HSE facilities. The follow section will outline these under a number of themes.

2. Approach

This section outlines the terms on which the Work Programme operates – its design principles, structure, and methodology.

2.1 Design Principles

The Work Programme relies on a set of design principles to ensure consistency in its decision-making and remain aligned to the strategic objective of the Work Programme. The following design principles are applied:

Table 7. Sustainable Waste Design Principles

Principle:	Description:
Proportionality:	The principle is to focus the majority of waste reduction efforts on the top waste generators i.e. the 10 acute academic hospitals, 40 acute hospitals, and 100 regional hospitals. These hospitals represent 85% of the volume by bed days within the HSE.
Carbon reduction impact:	The focus of the programme is on the carbon reduction impact first, with cost savings and positive health impacts as co-benefits.
Data-based decision making:	Target setting, performance monitoring and reporting of waste metrics are reliant on the availability of data of waste generated and carbon impact of each category of waste. In the longer term could include getting carbon impact per tonne from providers when reviewing framework contracts for risk waste and non-risk wastes.
Waste Hierarchy:	The focus is on reducing hazardous waste first, then reducing non-hazardous waste i.e. food waste, general waste, etc.
Ensuring all sites have the basics:	Waste segregation equipment, guidance stickers and posters, training.
Compliance to relevant regulations, policies, and standards:	These include the targets and requirements of the Regulations, policies, and standards outlined in Section 1.1.1. Department of Health (2023). NCEC National Clinical Guideline No. 30 Infection Prevention and Control.

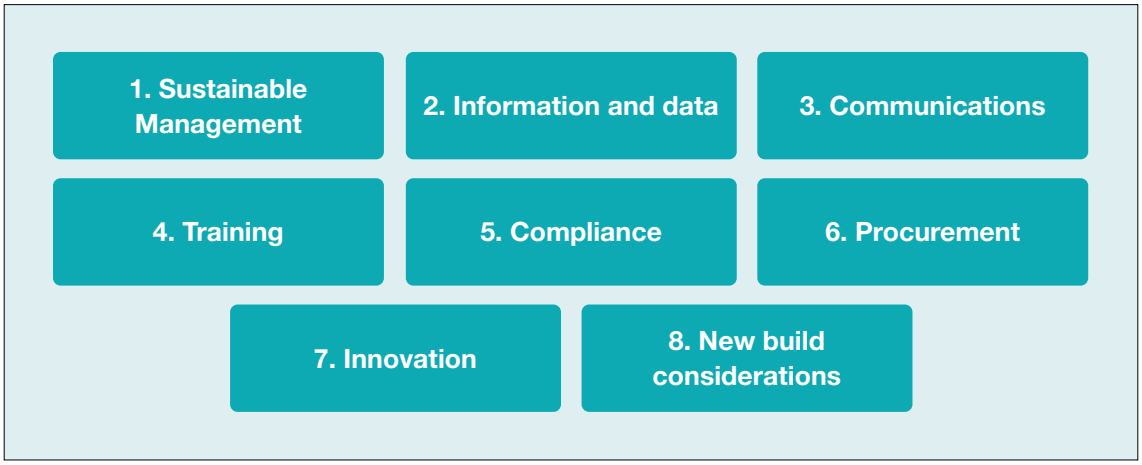
2.2 Process towards Implementation

As previously mentioned, the objective of the work programme is to develop a HSE sustainable waste management framework and supporting implementation plan to minimise food waste generation, increase recycling and reduce the amount of clinical waste generated. To achieve this, the work Programme focuses on four key areas: best practice, current state assessment, framework development and early mobilisation initiatives.

Best practice examples from the NHS in England, Scotland, and Wales and New Zealand (Northland District Health Board) were selected as they are public sector health organisations with comparably large jurisdictions and face similar challenges to the HSE, together with having demonstrated experience with waste management. By reviewing these and sourcing primary data for the current state assessment within the HSE, the work programme working group were able to outline a plan to move forward.

The Work Programme identified the key building blocks necessary to deliver the strategic objective of sustainable waste management. The eight building blocks are presented in the table below. A more detailed list of recommendations associated with these building blocks are in section 3.

Figure 4. Sustainable Waste Building Blocks



2.2.1. Sustainable Management

The HSE Climate Action Strategy outlines our ambitions, actions, and goals to accelerate change. It addresses our mandated priorities in the Government's Climate Action Plan focused on energy efficiency. However, it also looks to move beyond this, by showing leadership and commitment to integrate sustainable management principles across areas such as waste. Sustainability considerations have to be core to our future decisions and embedded into our everyday ways of working with respect to waste management.

Initiative Theme 1	Key Initiative	Staff	Patients/ Service users
Sustainable Management	**Bin systems** - a standardised approach to waste collection across sites to ensure uniformity of access to appropriate bins for all waste (healthcare risk waste, general waste, and recycling). This will include aspects such as size, placement, type and instructions.	✓	✓
	Waste compounds – ensure sites have access to waste compounds. Some examples of factors to consider are placement, provider, standardised tracking, identification and cleaning.	✓	
	Food waste – A standardised approach to food waste inclusive of aspects such as interventions to reduce food waste, real time food ordering systems, sustainable food options and sustainable ways of managing food waste.	✓	✓
	Sharps waste – assessment of Bio systems needs inclusive of functionality, scalability and integration requirements. Implementation of Bio systems in a systematic manner.	✓	
	Infection Prevention and Control (IPC) considerations- Ensure all IPC considerations are factored in to minimise cross contamination risks.	✓	

2.2.2. Information and data

Information and data play a crucial role in advancing sustainable waste management by informing decision-making, optimising waste systems, and empowering patients, service users and staff to make more sustainable waste choices. In addition there is a requirement to ensure information and data are available in accessible ways for government mandated reporting.

Initiative applicable to			
Initiative Theme 2	**Key Initiative**	**Staff**	**Patients/ Service users**
Information and data	**Regional Waste performance officer (WPO)** – prioritise a designated waste performance officer at Regional level to ensure sustainable waste practices are implemented within the region.	✓	
	Designated person for management of waste at healthcare facility level that will provide direction for waste management and link with Regional WPO.	✓	
	Waste data: Agree SMART targets for each waste category and national KPIs on different criteria/sets of waste data for regional and local reporting. Sites should utilise available Stericycle waste portal. This will allow benchmarking across sites.	✓	

2.2.3. Communications

Communication strategies play a crucial role in promoting sustainable waste management by raising awareness, fostering behaviour change, facilitating informed decision-making among staff, patients and service users and to be accessible for all potential users. Effective communication campaigns can educate staff, patients and service users about the environmental, social, and economic benefits of sustainable waste management options. By highlighting the advantages of these alternatives, communication initiatives can encourage staff, patients and service users to reconsider their habits, use the right bins and embrace more eco-friendly and sustainable modes of waste management. There is also an opportunity to engage with clinicians on the root cause of waste e.g. prescribing practices and procedural waste. This could include practice reviews or behavioural change programmes.

Initiative applicable to			
Initiative Theme 3	**Key Initiative**	**Staff**	**Patients/ Service users**
Communications	**Communication strategy** to inform staff, patients, service users and visitors of sustainable waste options within healthcare facilities.	✓	✓

2.2.4. Training

The HSE has training programmes on waste and food waste for all staff who wish to avail of these. These must be continually updated and promoted to staff for completion.

Initiative applicable to			
Initiative Theme 4	**Key Initiative**	**Staff**	**Patients/ Service users**
Training	**Training** on waste reduction and appropriate waste segregation to be provided for all staff. Promotion of stickers and posters to properly signpost everyone on placement of waste in healthcare facilities.	✓	✓

2.2.5. Compliance

Ireland's CAP stipulates the necessary measures and actions to meet carbon budgets and sectoral emissions ceilings. This is updated annually and requirements change. This plan outlines a strategic approach for reducing Ireland's emissions by half by 2030 and achieving net-zero by 2050, as pledged in the Climate Act.

Initiative applicable to			
Initiative Theme 5	**Key Initiative**	**Staff**	**Patients/ Service users**
Compliance	**Report annually** on the climate action mandate.	✓	✓

2.2.6. Procurement

By procuring the right vendors, equipment, and processes, healthcare facilities can reduce risks, protect the environment, and improve overall efficiency in handling all types of waste. Circular economy and lifecycle assessment principles should be central to all procurements e.g. product stewardship and cradle to cradle.

Initiative applicable to			
Initiative Theme 6	**Key Initiative**	**Staff**	**Patients/ Service users**
Procurement	**Review of new and old waste collection contracts** ensuring transparency, efficiency and compliance with sustainable waste.	✓	✓
	Ensure all health services facilities avail of the national contracts where possible.New OGP framework for waste services now open to all.	✓	
	Review of requirements of food providers to influence sustainability factors such as move to plant-based diets and removal of plastic packaging.	✓	
	Engagement with all HSE suppliers on sustainability considerations in products such as life cycle analysis, packaging, and energy efficient products and processes used in its development.	✓	

2.2.7. Innovation

New technologies will help improve efficiency and reduce the carbon footprint of healthcare waste disposal. Such as advances in AI-driven waste tracking which will help facilities track and measure waste in HSE facilities.

Initiative applicable to			
Initiative Theme 7	**Key Initiative**	**Staff**	**Patients/ Service users**
Innovation	**Support innovation** in sustainable waste management and procurement practices, including researching and adopting new technologies or materials that can improve sustainability outcomes, e.g. Bio systems.	✓	✓

2.2.8 New build considerations

Ensure that sustainability and waste management considerations are incorporated into the design phase of construction and renovation projects.

Initiative applicable to			
Initiative Theme 8	**Key Initiative**	**Staff**	**Patients/ Service users**
New build considerations	Ensure that sustainability and waste management are incorporated into the design phase of construction and renovation projects.	✓	✓

The next section lists in detail the recommendations of the working group across the 8 building blocks that need to be considered to make our waste management practices more sustainable. As the Work Programme's ambition expands, it will incorporate additional considerations for further sustainable waste management practices.

3. Implementation

In order to satisfy the objectives laid out in the HSE Climate Action Strategy and the mandated requirements as laid out in the Government's CAP, the Sustainability Waste Management working group has recommended the below for implementation at Regional Green Committees and individual healthcare facility level. These recommendations should be prioritised as part of regional and healthcare facility green plans. The Climate and Sustainability Programme and the Sustainable Infrastructure office will assist across a number of these recommendations some of which are highlighted in green which are solely driven by these central teams.

Sustainable Management	**Standardise waste management for all types of waste to ensure uniformity, sustainable practices and simplification of waste management across all locations.**
	1. Bin systems:
	Map out each bin system to ensure uniformity across sites (consider different types, sizes, bin liners, and placement of bins). Include strategic bin placement in visible, high traffic easily accessible areas, with clear instructions.
	Incorporate clear segregation instructions to ensure that different types of waste are separated properly. Provide posters with clear instructions on waste segregation and disposal practices. Each bin must be labelled appropriately (e.g. color-coded, waste type labels) for easy identification by staff, patients and service users on waste segregation and disposal practices.
	Ensure that offices, or non-clinical areas, have no bins with centralised waste disposal points to encourage proper waste segregation.
	Remove yellow bins from non-clinical areas and ensure compliance with waste segregation protocols.
	Consider advanced practice settings (e.g. specialised clinics, research areas) and their unique waste management needs.
	Develop and implement deposit return schemes with incentives for staff, patients and service users to return recyclable items (e.g. bottles, cans). Waste segregation guidance needs to be updated e.g. bottle and can refund system.
	Measure and monitor paper usage and waste.
	2. Waste Compounds:
	Consider site-specific factors such as compliance with IPC Protocols, waste volume, space availability, ease of access, and transport logistics when deciding on the number and placement of waste compounds.
	Ensure that waste compounds and storage areas are conveniently located for users, particularly high-traffic areas such as kitchens, porter stations, and waste-generating departments.
	Evaluate the advantages and disadvantages of having small waste compounds spread across the site versus one large centralised compound.
	Ensure use of standardised tags for tracking and identification.
	Plan for centralised access for waste trucks, ensuring there is adequate space for vehicles to safely and efficiently pick up waste.
	Ensure clinical waste has a dedicated roofed compound for proper containment and safety.

Sustainable Management	Work with contractors to plan for easy access for their trucks, compactors, and skips ensuring that collection logistics are streamlined and efficient.
	Implement regular decontamination and wash-down schedules for bins, waste trolleys, and other waste-related equipment to maintain cleanliness and hygiene.
	Address resource shortages in Estates and work on eliminating delays in the Design and Build of HSE Waste Compounds under HSE Capital and Estates Register of Opportunities funding.
	3. Food waste considerations:
	Protected time for catering managers for food ordering, use of digital system where available, ensuring clear accountability and efficiency in meal preparation, ordering, and waste management.
	Collaborate with clinical teams, operations, and healthcare assistants to ensure the food services meet patient and service user needs and to identify areas for improvement in meal delivery and food waste reduction.
	Rather than providing all food goods (butter, jam, etc.) to all patients and service users, these items should be available upon request to reduce waste.
	Review and potentially reduce portion sizes in staff restaurants, ensuring they align with sustainable practices and encourage responsible consumption. Portion sizes should be standardised, with options for children, parents, patients, and service users with specific dietary needs (e.g., diabetic or cardiac diets)
	Increase the availability of plant-based meal options to cater to growing demand for vegetarian and vegan diets, contributing to sustainable food choices.
	Reinforce protected mealtimes, ensuring patients and service users have uninterrupted time to eat and food waste is minimised during meal delivery and collection. Ensure mealtimes align with patient and service user schedules, clinical needs, and minimise food waste due to late or untimely orders.
	Implement centralised systems to predict food usage more accurately and minimise overproduction, thus reducing waste.
	Standardise tray layouts to ensure consistent portion sizes and appropriate meal offerings based on patient needs and minimise food waste.
	Ensure specific dietary needs (e.g. for diabetic, stroke, or cardiac patients) are factored into meal planning and portion control to reduce waste and ensure the health of patients and service users.
	Cease use of disposable cups, plates and cutlery in any canteen or closed facility excluding clinical areas. A restrict on styrofoam utensils and all single use items where feasible.
	4. Sharps waste:
	Conduct a detailed assessment of Bio systems needs, including functionality, scalability, and integration requirements.
	Identify key stakeholders or experts to consult about Bio systems implementation.

Sustainable Management	**5. IPC considerations:**
	Factor in IPC considerations in the design of waste compounds and holding rooms, including the need for separate storage of clinical waste to minimise cross-contamination risks.
	Capital and EstatesDesign Team Scope of Services Documents
	Ensure that IPC guidelines are clear and communicated to staff regarding risk waste and that staff are aware of criteria for identifying this waste.
	Implement clear IPC alerts for isolation rooms, ensuring waste management protocols are followed in these high-risk areas.
	Ensure that the design and operation of waste areas align with IPC protocols to maintain hygiene.

Information and data	**Waste Performance Officer (WPO):**
	All regions must have designated waste performance officer who will: • Ensure Senior Management Support with defined roles and responsibilities and structure for waste management in their region. • Ensure prioritisation and implementation of these recommendations. • Report on KPIs and waste data from regions and sites within their region to HSE Climate and Sustainability Programme and National Climate Action Steering Group. • Engage with waste collection agents to understand their capabilities and limitations. Foster a collaborative relationship to work on improvements in waste management processes, involve identifying new technologies, improving waste segregation, and finding innovative solutions to reduce waste generation. Ensure mutual goals for sustainability.
	Each site must have a nominated lead for waste management who will link with the regional WPO on implementing guidelines and reporting.
	Waste data:
	Development of an agreed set of SMART targets and KPIs to monitor all categories of waste across HSE.
	Development of a dashboard to show key results such as recycling rates, clinical waste volumes and food waste reduction across HSE facilities
	Benchmarking sites and areas (kgs per bed day) will assist in improvement being implemented and assist with year on year reporting to enable progress tracking
	Each location needs to report on agreed waste data to support REOs' delivery of national KPIs.
	Engage with contractors to supply regular, robust waste reports that detail the amount, type and disposal method of waste generated, to ensure transparency and continuous improvements in waste reduction efforts.
	Ensure that waste management and sustainability are incorporated into the Capital and Estates Sustainability Tool ensuring that waste collection systems align with broader facility planning and sustainability goals.
	Regular audits and scoring of waste practices and contractors based on performance, sustainability, and compliance.

Information and data	**Food data:**
	Regularly survey patients and service users on their meal satisfaction, preferences, and portion sizes, using feedback to tailor menu offerings and reduce waste.
	Use admission and discharge data to better predict patient and service users meal requirements, considering factors such as age demographics, ward types, and typical patient conditions (e.g., post-op patients).
	Conduct regular audits of food waste to identify key areas for reduction. Develop strategies to minimise food waste, focusing on areas with the highest waste volumes.
	Assess and optimise mealtimes and the timing of meal orders. Ensuring they align with patient and service users schedules, clinical needs, and minimise food waste due to late or untimely orders.
Communications	Develop, update and disseminate HSE Internal Staff campaign waste materials to educate staff.
	Notify REOs and Sustainability Officers and Waste Performance Officers about any changes in recommendations and national developments.
	Organise site visits and regional network events to share best practices.
	Participate in “Reuse Month” campaign activities.
	Regularly update and communicate waste classification systems to staff - such as classification of risk waste and the necessary disposal methods.
	Strengthen engagement with clinicians on root cause of waste (e.g prescribing patterns, procedural waste). This could include behavioural programmes or clinical practice reviews to reduce unnecessary single-use items
	Ensure that staff are aware of IPC guidelines regarding risk waste and that staff are aware of the criteria for identifying such waste.
Training	Ensure staff take part in waste training offerings.
	Organise on-site or ward-level training on waste segregation and the importance of placing the correct items in the yellow bin.
	Include manual handling guidance in the planning and operational procedures for waste management and minimise injury risk.
	Address the proper placement of waste bins during monthly training and in the “Right Bin, Right Place” guidance to ensure correct bin usage.
	Utilise HSELand Climate and Sustainability hub.
	Food waste:
	Provide staff education on menu planning, focusing on sustainability, portion sizes, and catering to the diverse needs of both patients and staff.
	Facilitate up skilling of Waste Performance Officers in areas such as cost of waste disposal and behavioural change methods.

Compliance	**Environmental Agencies and Compliance:**
	Clarify and define the roles of different environmental agencies (such as OGP, EPA, An Taisce, Healthy Ireland) to align procurement strategies with national sustainability goals and legal requirements in waste management and sustainability initiatives. Ensure a clear understanding of their responsibilities and support for waste collection contracts.
	Ensure that waste collection contracts comply with government climate action plan requirements, aligning with national sustainability goals and waste reduction policies, through use of the OGP waste management services framework.
	Report to Climate Action and Sustainability Programme on Government CAP on SEAI's Public Sector M&R system.
	Implement Green Public Procurement - using the EPA Green Public Procurement Guidance and criteria/Office of Government Procurement's online Green Public Procurement Criteria.

Procurement	**Review the current procurement process for waste collection contracts, ensuring it is transparent, efficient, and compliant with sustainability requirements. This should include the below.**
	Ensure there is clarity on new versus old contracts, updating older contracts to reflect current sustainability standards and ensuring that new contracts include clear terms regarding waste reduction, packaging, and green procurement requirements.
	Establish clear processes for the purchase of equipment and consumables, ensuring that decisions are not solely led by external representatives or consultants but are instead driven by standard procurement procedures and sustainability criteria.
	Consolidate procurement of waste providers into a standardised approach where possible, simplifying processes, reducing administrative overhead, and ensuring consistent sustainability standards across contracts. Using the OGP waste management services framework, open to all sites regardless of size.
	Develop and implement a procurement framework specifically for purchasing suitable bins and compostable bins to ensure consistent waste management practices and reduce single-use plastic waste.
	Involve clinicians in choosing products and consumables with reduced impact (e.g. remanufactured devices, streamlined packs, etc.)
	Identify and address geographical considerations in areas with limited availability of waste collection contractors, specifically Letterkenny and Sligo. Consider alternative solutions such as regional collaborations or flexible contracts.
	Evaluate the risks and dependencies of having only one provider. Develop a contingency plan in case of provider issues (e.g. disruptions, pricing changes).
	Set up a framework for contractors and catering managers to provide real-time food ordering systems, ensuring efficient and sustainable meal planning, reducing over-ordering and waste.
	New contracts for canteen/food services including events to include measure for targeting food waste, specifically food waste prevention and waste segregation.
	Ensure recycled paper is default for paper consumption

Procurement	Work closely with suppliers to influence key sustainability factors such as: • Weight of packaging waste (e.g., reducing packaging). • Pay by weight contracts encouraging segregation of waste at generation point. • Supply chain distance travelled (e.g., sourcing locally). • Streamlining supplies to reduce waste and inefficiency. • Encouraging energy-efficient products and processes. • Promoting reusable and compostable products over disposables. • Seeking sustainable alternatives for materials and packaging. • Require supply of regular, robust waste reports that detail the amount, type, and disposal method of waste generated, to ensure transparency and continuous improvement in waste reduction efforts.

Innovation	**Actively support innovation in sustainable waste management and procurement processes, including researching and adopting new technologies or materials that can improve sustainability outcomes.**
	Pilot and implement automated waste management systems, such as lift mechanisms and compactors, to reduce manual handling and increase efficiency.
	Investigate the use of innovative waste management technologies such as compactors and balers for plastics and cardboard to reduce waste volume and improve recycling rates.
	Support the HSE's development of a reuse platform (Sligo University Hospital pilot) and provide interim solutions like resource efficiency schemes for asset reuse.
	Global Health programme for overseas donation of certain equipment.
	Implement Real Time Ordering Systems to reduce food waste.
	Investigate and implement emerging technologies such as Artificial Intelligence cameras in waste areas to scan waste types. This will enable accurate sorting, monitoring and reporting of waste streams, which can lead to reduced waste, improved recycling rates and reduce contamination.
	Establish and test options in supply chain to reuse and repurpose – encouraging the circular economy. e.g. remanufacturing of surgical instruments, the national reuse scheme for community aids and appliances.
	Harness and utilise partnerships with Health Innovation Hub Ireland and Spark Innovation Programme to bring forward innovation work with industry partners.
	Support move to Electronic Medical Records.

New Build and Renovations Considerations	**Ensure that sustainability and waste management considerations are incorporated into the design phase of construction and renovation projects.**
	Collaborate waste collection contractors early in the design process to ensure that the design of waste compounds is compatible with their vehicles and operational needs.
	Ensure that all relevant stakeholders (e.g., department heads, waste management, facilities management, and IPC teams) are in agreement with the waste management plan before signing off on the design process and infection control.
	Engage construction/design teams specifically for sustainability and waste management projects (e.g. waste compound builds) through the OGP (Office of Government Procurement) framework.
	Future-proof waste management infrastructure ensuring scalability and adaptability for future waste needs.
	Assess the need for additional waste segregation facilities and adjust waste handling protocols to account for increased service demand.
	Ensure that dedicated waste compounds are included in the design of all new builds, with appropriate segregation areas for different types of waste e.g. cardboard compacting.
	Plan waste holding rooms to be appropriately sized for their purpose, ensuring they can handle waste volume and provide safe segregation for healthcare risk waste to minimise cross contamination at the source.

4. Support for Implementation and Next steps:

The Climate Action and Sustainability Programme will continue to support HSE regional and local green teams, Regional Climate and Sustainability Leads and local green teams in whatever way required to ensure that the region and local area make real tangible progress on this critical issue and continue on our path to sustainability as a whole.

This will include guidelines, training, tools, and templates to assist with the implementation of the Climate Action Strategy. The internal staff campaign will be continually refreshed and will provide materials for regions to use with staff to assist building action in this space. A key next focus is to institute a robust measurement and assurance plan to monitor implementation. This will complement the Government Climate Action plan reporting requirements. This will be done in partnership with Regional Green Committees.

4.1. Support for Implementation and Next Steps:

In the immediate term, each region should focus on the below implementation enablers to build and sustain momentum.

Implementation Enabler 1

Governance: Sustainable Waste Working Group

- As part of your regional green committee establish a sustainable waste sub-committee as per Regional Climate Action Implementation Structures guidance issued by the Climate and Sustainability Programme.
- Assign a Waste Performance Officer (WPO) at Regional level
- Members of the committee should include, but not limited to:
  - » Person with designated authority for waste (WPO)
  - » Facilities Management
  - » Capital and Estates staff
  - » Health and wellbeing staff
  - » Health Promotion
  - » Healthcare assistants
  - » Ward staff
  - » Waste management staff
  - » Procurement staff
  - » Catering staff
  - » Infection prevention staff
- As per regional implementation plan mentioned, regional green teams should develop a regional waste management plan.

Implementation Enabler 2

Measurement and Assurance

- The Climate and Sustainability Programme will:
  - » Develop a measurement plan to focus on 2030 target's as minimum targets and all other CAP requirements. The programme will assist regions and healthcare facilities with guidance and materials on this shortly.
  - » Develop a suite of KPIs for regional reporting.

Implementation Enabler 3

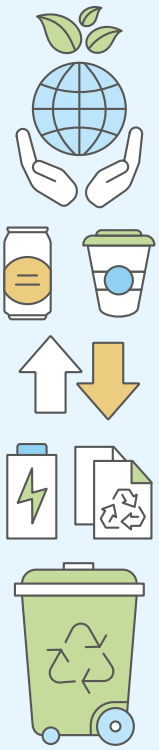
Communication and Training

- The Climate and Sustainability Programme will be supporting regions and services with:
  - » Ongoing communications materials to support action, enable shared learning and awareness in this space.
  - » Various training opportunities such as health sector specific training provided via HSELanD and other e-learning platforms, Senior Leadership Sustainability training and Green Team training.

» See below a tile developed as part of an internal staff campaign providing staff simple actions that they can take.

We're taking climate action

Waste



- Reuse - Choose reusable cups, glasses and dishes. If you must use disposables, ensure they are biodegradable or compostable.
- Use Bio-systems - Acute hospitals should use bio-system reusable sharps containers.
- Bin it right, separate your waste into the appropriate labelled bins – recycle (green), general (black), food (brown), healthcare (yellow) and energy recovery (white).
- Food waste - aim to reduce or avoid at home and at work.
- Compost - Use biodegradable (brown) bins to compost food waste.
- Recycle - Glass, mixed dry recyclables - paper and plastic packaging.
- Screen Time - Keep it on the Screen. Limit the use of paper. Print only when necessary. If you must print, use recycled FSC paper, print double sided on two sides and in grey scale.

Advocate for change -
Talk to your colleagues and manager.
Get involved with your local green teams.

#ClimateAction

Visit **hse.ie/climateandhealth** for more information

Appendix 1:

Other Waste Related Climate Action Plan Requirements

- All new contract arrangements related to canteen or food services, including events and conferences, to include measures that are targeted at addressing food waste, with a specific focus on food waste prevention and food waste segregation.
- Establish and resource Green Teams, reporting to senior management, to become integrated drivers of sustainability in every public sector body.
- Incorporate appropriate climate action and sustainability training (technical and behavioural, including green procurement training) into learning and development strategies for staff.
- Organise staff workshops (at least annually) to engage on climate issues, including a focus on decreasing the organisation's carbon footprint.
- Ensure all senior management (General Manager Level, or equivalent, and above) and members of State Boards, complete a climate action leadership training course.
- Implement Green Public Procurement - using the EPA Green Public Procurement Guidance and/ Office of Government Procurement's online Green Public Procurement Criteria.

Paper

- Review any paper-based processes and evaluate the possibilities for digitisation so it becomes the default approach. Eliminate paper-based processes as far as is practicable. Where paper must be procured, ensure that recycled paper is the default.
- Electronic Medical Records.
- Measure and monitor paper consumption and implement initiatives to reduce usage.

Single Use

- Cease using disposable cups, plates and cutlery in any public sector canteen or closed facility, excluding clinical (i.e. non-canteen healthcare) environments, and in publicly funded advertising or broadcasting, where feasible and appropriate. A ban on Styrofoam utensils. Progressively eliminate all single use items within the organisation and from events organised, funded, or sponsored.

Appendix 2:

Waste Management Work Programme Membership list

Name	Role	Title
Aidan Turley	Co-Chair	Director, Facilities Management, St James's Hospital
Kyle Wylie	Co-Chair	Engineering and Climate Manager, St James's Hospital
Aoife O'Neill	Project Manager	Project Manager, HSE Climate & Sustainability Programme
Helen Maher	Team member	Estates Manager, Environmental Services, Capital and Estates
Stephen Murphy	Team member	HSE Capital and Estates, Project Manager
Orla O'Shea	Team member	HSE Acute Operations representative
Sean Browne	Team member	HSE Hospital Group representative, CHI
Peter McGowan	Team member	HSE Procurement representative
Josephine Galway	Team member	Director of Nursing, HSE AMRIC team
Aidan O'Sullivan	Team member	HSE Health and Well-being representative
Nigel Hayes	Team member	EPA Representative (Circular Economy Programme)
Leo Donavan	Team member	Irish Waste Managers Association
Eileen O'Leary	Team member	Clean Technology Centre/Green Healthcare representative
Helen Murphy	Team member	Nurse Lead, HSE Health Protection Surveillance
Barbara Slevin	Team Member	HSE AMRIC
Conor Leonard	Team Member	WEEE Ireland
Dr. Aoife Lane	Team Member	HSE NCLC Leadership Advisor
Rachael McCann	Team Member	Irish Doctors for the Environment representative
Elizabeth O Reilly	Team Member	Irish Waste Managers Association