GOOD PRACTICE NOTE

on Strategic Environmental Assessment for the Waste Sector

Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

ENVIRONMENTAL PROTECTION AGENCY

The Environmental Protection Agency (EPA) is responsible for protecting and improving the environment as a valuable asset for the people of Ireland. We are committed to protecting people and the environment from the harmful effects of radiation and pollution.

The work of the EPA can be divided into three main areas:

Regulation: *We implement effective regulation and environmental compliance systems to deliver good environmental outcomes and target those who don't comply.*

Knowledge: *We provide high quality, targeted and timely environmental data, information and assessment to inform decision making at all levels.*

Advocacy: *We work with others to advocate for a clean, productive and well protected environment and for sustainable environmental behaviour.*

Our Responsibilities

Licensing

We regulate the following activities so that they do not endanger human health or harm the environment:

- waste facilities (*e.g. landfills, incinerators, waste transfer stations*);
- large scale industrial activities (*e.g. pharmaceutical, cement manufacturing, power plants*);
- intensive agriculture (*e.g. pigs, poultry*);
- the contained use and controlled release of Genetically Modified Organisms (*GMOs*);
- sources of ionising radiation (*e.g. x-ray and radiotherapy equipment, industrial sources*);
- large petrol storage facilities;
- waste water discharges;
- dumping at sea activities.

National Environmental Enforcement

- Conducting an annual programme of audits and inspections of EPA licensed facilities.
- Overseeing local authorities' environmental protection responsibilities.
- Supervising the supply of drinking water by public water suppliers.
- Working with local authorities and other agencies to tackle environmental crime by coordinating a national enforcement network, targeting offenders and overseeing remediation.
- Enforcing Regulations such as Waste Electrical and Electronic Equipment (WEEE), Restriction of Hazardous Substances (RoHS) and substances that deplete the ozone layer.
- Prosecuting those who flout environmental law and damage the environment.

Water Management

- Monitoring and reporting on the quality of rivers, lakes, transitional and coastal waters of Ireland and groundwaters; measuring water levels and river flows.
- National coordination and oversight of the Water Framework Directive.
- Monitoring and reporting on Bathing Water Quality.

Monitoring, Analysing and Reporting on the Environment

- Monitoring air quality and implementing the EU Clean Air for Europe (CAFÉ) Directive.
- Independent reporting to inform decision making by national and local government (*e.g. periodic reporting on the State of Ireland's Environment and Indicator Reports*).

Regulating Ireland's Greenhouse Gas Emissions

- Preparing Ireland's greenhouse gas inventories and projections.
- Implementing the Emissions Trading Directive, for over 100 of the largest producers of carbon dioxide in Ireland.

Environmental Research and Development

- Funding environmental research to identify pressures, inform policy and provide solutions in the areas of climate, water and sustainability.

Strategic Environmental Assessment

- Assessing the impact of proposed plans and programmes on the Irish environment (*e.g. major development plans*).

Radiological Protection

- Monitoring radiation levels, assessing exposure of people in Ireland to ionising radiation.
- Assisting in developing national plans for emergencies arising from nuclear accidents.
- Monitoring developments abroad relating to nuclear installations and radiological safety.
- Providing, or overseeing the provision of, specialist radiation protection services.

Guidance, Accessible Information and Education

- Providing advice and guidance to industry and the public on environmental and radiological protection topics.
- Providing timely and easily accessible environmental information to encourage public participation in environmental decision-making (*e.g. My Local Environment, Radon Maps*).
- Advising Government on matters relating to radiological safety and emergency response.
- Developing a National Hazardous Waste Management Plan to prevent and manage hazardous waste.

Awareness Raising and Behavioural Change

- Generating greater environmental awareness and influencing positive behavioural change by supporting businesses, communities and householders to become more resource efficient.
- Promoting radon testing in homes and workplaces and encouraging remediation where necessary.

Management and Structure of the EPA

The EPA is managed by a full time Board, consisting of a Director General and five Directors. The work is carried out across five Offices:

- Office of Environmental Sustainability
- Office of Environmental Enforcement
- Office of Evidence and Assessment
- Office of Radiation Protection and Environmental Monitoring
- Office of Communications and Corporate Services

The EPA is assisted by an Advisory Committee of twelve members who meet regularly to discuss issues of concern and provide advice to the Board.

Good Practice Note
on Strategic Environmental Assessment
for the Waste Sector

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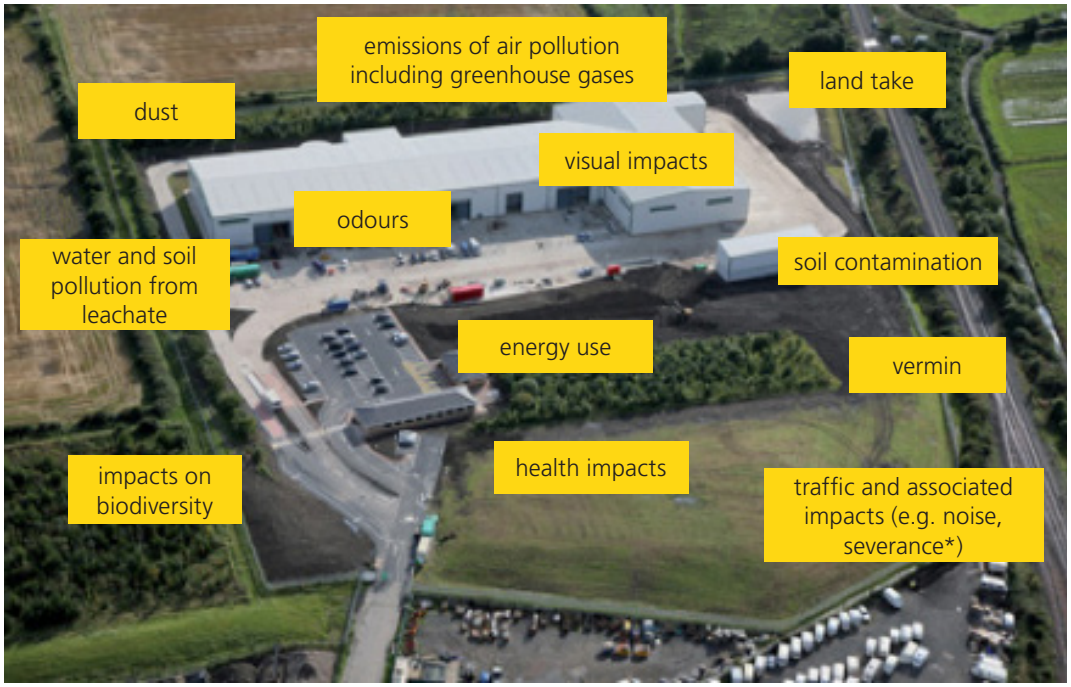
1. Introduction

This note provides guidance on how to carry out strategic environmental assessments (SEAs) of waste management plans, including Regional Waste Management Plans (RWMPs). It does not constitute statutory guidance and is intended to promote a good practice approach to the application of SEA in the waste sector. SEA aims to provide for a high level of protection of the environment and contribute to the integration of environmental consideration into the preparation and adoption of plans.

Waste management can have a range of impacts, including leachate, odours, land contamination, traffic, air pollution and associated health impacts (Figure 1.1). SEA aims to avoid or minimise these negative impacts, and optimise the benefits of good waste management, including risk avoidance and efficient land use. This helps to ensure that waste management plans are adopted smoothly, are implemented effectively, and avoid future problems.

Figure 1.1: Examples of possible environmental impacts from waste management



Note *: Severance refers to separation or partitions between people, between people and places, or between two places

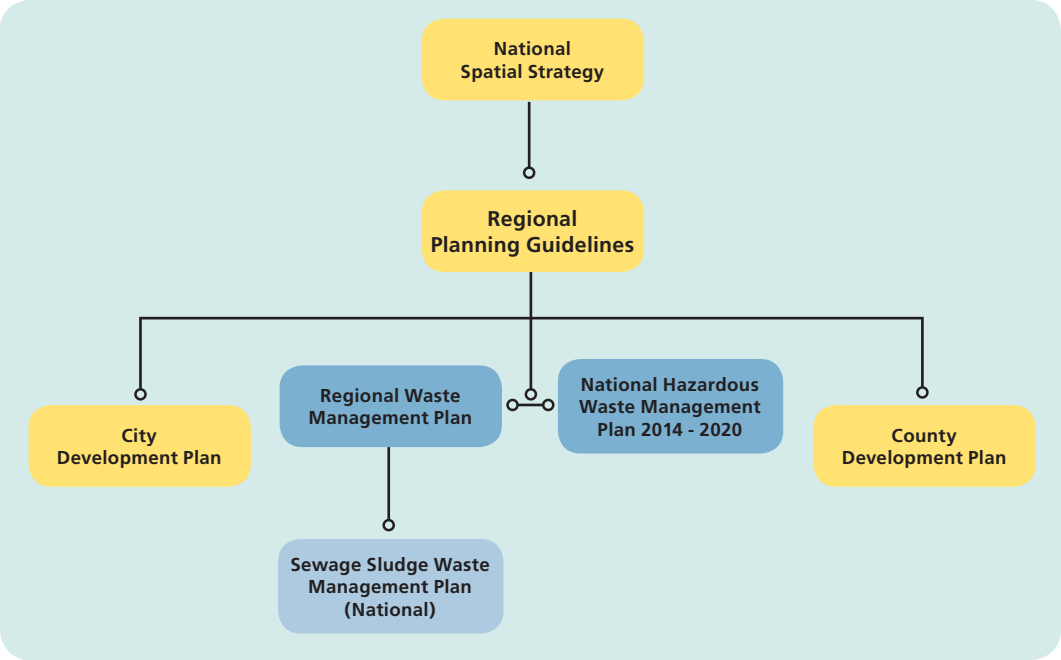
Local authorities within Ireland's three waste regions are required to prepare RWMPs under the Waste Management Act 1996 (as amended). RWMPs set out the framework for sustainable management of non-hazardous waste in a region. They address all aspects of waste management, including collection, transport, recovery including recycling, treatment and disposal.

They aim to

- prevent or minimise the production and harmful nature of waste
- encourage and support the recovery of waste
- ensure that such waste as cannot be prevented or recovered is safely disposed of
- give effect to the 'polluter pays principle' in relation to waste disposal.

RWMPs are developed in a wider context of European, national and other policy and plans (Figure 1.2). Relevant waste management regulations can be found at https://www.dccae.gov.ie/en-ie/environment/legislation/Pages/default.aspx.

Figure 1.2: Context for Regional Waste Management Plans (Eastern-Midlands RWMP)

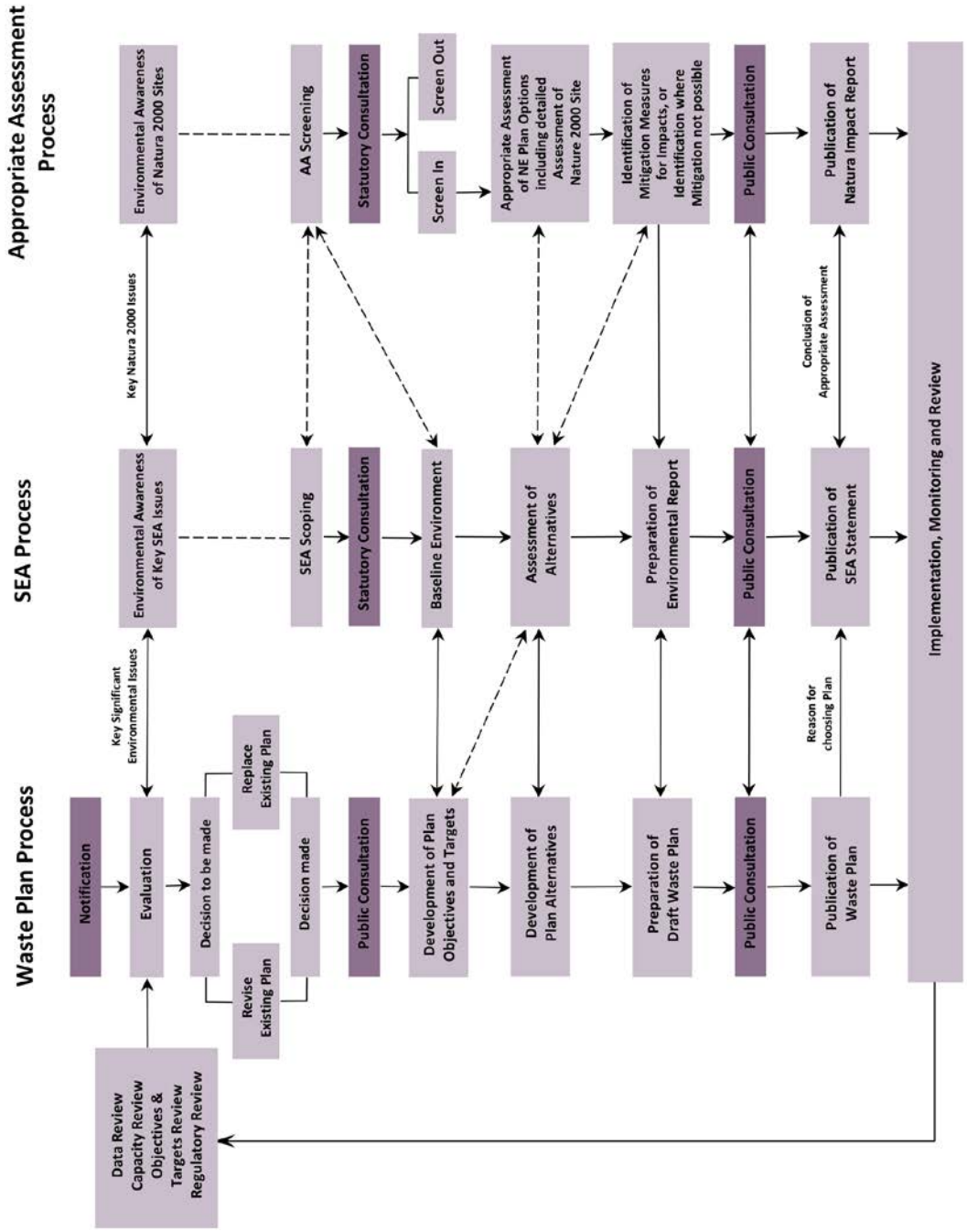


SEA of RWMPs is required under

- S.I. No. 435 European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004
- S.I. No. 200 European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011

SEA is basically good planning: it involves collecting information about the plan/programme and environmental context in which it will operate, consulting statutory bodies and the public, considering alternative ways of achieving the plan's objectives, assessing and comparing the impacts of these alternatives, choosing a preferred alternative and fine-tuning it, and setting up a system for ensuring that the plan is implemented as expected. As such, it should not greatly lengthen the time it takes to prepare the plan or increase the cost of doing so. Its main difference from traditional planning is that SEA clearly sets out the requirements for these stages and formally documents them in an Environmental Report. Figure 1.3 shows how SEA fits with the plan-making process for RWMPs.

Figure 1.3: Flowchart of the plan, SEA and appropriate assessment processes (Adapted from Southern RWMP)



This note explains the legal requirements for SEA and gives suggestions for how SEA can be carried out for waste management plans, including RWMPs. It is based on good practice in Ireland and elsewhere, and updates an earlier draft practice note of 2012.

2. SEA REQUIREMENTS AND GOOD PRACTICE

Key points:

- SEA should lead to changes to the plan that reduce the plan's environmental impacts and make it more sustainable.
- The SEA process should start early in the plan-making process and be integrated throughout the plan-making process.

This note does not constitute statutory guidance. It is intended to promote a good practice approach to the application of SEA in the waste sector. This is not a stand-alone note. It supplements other SEA guidance: www.epa.ie/monitoringassessment/assessment/sea/resources/), including the Environmental Protection Agency's

- SEA pack (www.epa.ie/pubs/advice/ea/seapack.html),
- SEA process checklist (http://www.epa.ie/pubs/advice/ea/seaprocesschecklist.html),
- guidance on SEA alternatives (http://www.epa.ie/pubs/advice/ea/developingandassessingalternativesinsea.html),
- guidance on climate change in SEA (http://www.epa.ie/pubs/advice/ea/integratingclimatechangeintoseainireland.html), and
- guidance on biodiversity in SEA (http://www.epa.ie/pubs/reports/research/biodiversity/strive106ibiamanual.html);

and the DHPLG's Guidelines on the SEA Directive (https://www.housing.gov.ie/planning/environmental-assessment/other/eiasea-guidance).

Strategic Environmental Assessment requirements

Figure 2.1 summarises the requirements for SEA. The main requirements are preparation of an Environmental Report, consultation at two stages (scoping and draft plan), taking the Environmental Report and consultation comments into account in decision making, provision of information on the decision, and monitoring of the plan's actual impacts.

Figure 2.1: SEA requirements

Screening: Determining whether a given plan requires full SEA to be carried out (RWMPs do, therefore this stage is not applicable)

Consulting at the 'scoping' stage with authorities with environmental responsibilities, when deciding on the scope and level of detail of the information which must be included in the Environmental Report

Preparing an Environmental Report in which the likely significant effects on the environment of implementing the plan and reasonable alternatives are identified, described and evaluated. The information to be given is:

a) An outline of the contents, main objectives of the plan, and relationship with other relevant plans and programmes;

b) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan;

c) The environmental characteristics of areas likely to be significantly affected;

d) Any existing environmental problems which are relevant to the plan including, in particular, those relating to any areas of a particular environmental importance, such as Special Protection Areas and Special Areas of Conservation;

e) The environmental protection objectives, established at international, community or national level, which are relevant to the plan and the way those objectives and any environmental considerations have been taken into account during its preparation;

f) 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. (These effects should include secondary; cumulative; synergistic; short, medium and long-term; permanent and temporary; positive and negative effects);

g) The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan;

h) 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;

i) a description of measures envisaged concerning monitoring;

j) a non-technical summary of the information provided under the above headings

The report must include the information that may reasonably be required, taking account of current knowledge and methods of assessment, the contents and level of detail in the plan, its stage in the decision-making process and the extent to which certain matters are more appropriately assessed at different levels in that process to avoid duplication of the assessment

Consulting at the draft plan stage with: authorities with environmental responsibilities and the public, to give them an early and effective opportunity within appropriate time frames to express their opinion on the draft plan and the accompanying Environmental Report before the adoption of the plan; and other EU Member States, where the implementation of the plan is likely to have significant effects on the environment in these countries
Taking the Environmental Report and the results of the consultations into account in decision making
Providing information on the decision: When the plan is adopted, the public and any other European countries consulted must be informed and the following made available to those so informed: ◢ the plan as adopted ◢ an SEA statement summarising how environmental considerations have been integrated into the plan and how the Environmental Report and consultation opinions on it have been taken into account, and the reasons for choosing the plan as adopted, in the light of the other reasonable alternatives dealt with; and ◢ the measures decided concerning monitoring
Monitoring the significant environmental effects of the plan's implementation in order, inter alia, to identify at an early stage unforeseen adverse effects and to be able to undertake appropriate remedial action.

The International Association for Impact Assessment (2002) has established a set of SEA performance criteria, shown at Figure 2.2. The figure also includes tips for achieving the criteria, based on studies on SEA effectiveness and efficiency, including the 2012 study of SEA effectiveness in Ireland, http://www.epa.ie/pubs/advice/ea/seaeffectivenessreviewinireland-actionplan2018-2020.html, which is currently being reviewed as part of an ongoing EPA-funded research project.

Figure 2.2: The ultimate test: does your SEA fulfil these criteria?

IAIA (2002) SEA performance criteria	Practical tips for achieving the criteria
SEA is integrated ◢ Ensures an assessment of all strategic decisions relevant for the achievement of sustainable development ◢ Addresses the interrelationships of biophysical, social and economic aspects ◢ Is tiered to policies in relevant sectors and (transboundary) regions and, where appropriate, to project Environmental Impact Assessment (EIA) and decision making	◢ Start the SEA early in the plan-making process ◢ Integrate the SEA process with the plan-making process ◢ Integrate the early, evidence gathering stages of the plan-making and SEA processes
SEA is sustainability led ◢ Facilitates identification of development options and alternative proposals that are more sustainable	◢ Focus on improving the plan, rather than providing a 'snapshot' of the plan's impacts

Figure 2.2: contd.

IAIA (2002) SEA performance criteria	Practical tips for achieving the criteria
SEA is focused ◢ Provides sufficient, reliable and usable information for development planning and decision making ◢ Concentrates on key issues of sustainable development ◢ Is customised to the characteristics of the decision making process ◢ Is cost- and time-effective	◢ Be spatially specific where possible: The level of detail of the SEA should reflect the level of detail of the plan. Where the plan is spatially specific, the SEA should be too ◢ Map key constraints such as designations and areas prone to flooding, to help inform the plan ◢ The scope of the SEA should reflect the alternatives being considered ◢ Do not be afraid to 'scope out' impacts that are not likely to be significant, as long as good reasons are provided for this
SEA is accountable ◢ Is the responsibility of the leading agencies for the strategic decision to be taken ◢ Is carried out with professionalism, rigour, fairness, impartiality and balance ◢ Is subject to independent checks and verification ◢ Documents and justifies how sustainability issues were taken into account in decision making	◢ Those undertaking the SEA should provide plan makers with explicit recommendations to which they can respond ◢ If the SEA is carried out in-house, consider having a 'critical friend' review it ◢ Document changes made to the plan as a result of the SEA process ◢ Document how consultation comments on the SEA were taken into account in plan making
SEA is participative ◢ Informs and involves interested and affected public and government bodies throughout the decision making process ◢ Explicitly addresses their inputs and concerns in documentation and decision making ◢ Has clear, easily understood information requirements and ensures sufficient access to all relevant information	◢ Actively engage the public in SEA, e.g. through the use of stakeholder events focused on options
SEA is iterative ◢ Ensures availability of the assessment results early enough to influence the decision making process and inspire future planning ◢ Provides sufficient information on the actual impacts of implementing a strategic decision, to judge whether this decision should be amended and to provide a basis for future decisions	◢ Focus on improving the plan, rather than providing a 'snapshot' of the plan's impacts ◢ Identify and evaluate impacts with reference to the baseline situation ('how will things be different with than without the plan?') rather than with reference to SEA objectives ('does the plan help to achieve environmental objectives?') ◢ Consider the extent to which options and policies will be effectively delivered on the ground, rather than simply whether they say the right things

This guidance gives ideas about how to carry out:

- Scoping (Section 3)
- Environmental Report preparation (Section 4)
- Consultation on the draft RWMP and Environmental Report (Section 5)
- SEA statement preparation (Section 6)

References to these reports are provided in the reference list, and further examples of good practice SEA are shown in the appendix.

Appropriate Assessment and SEA

Appropriate Assessment is the assessment of a plan or project's impacts on the integrity of Special Protection Areas (SPAs) for birds and Special Areas of Conservation (SACs) for habitats and species (European or Natura sites). It involves an initial analysis of whether the plan or project could have such impacts; if necessary a more detailed assessment of the 'in combination' impacts of the plan/project on the relevant features of the SPA/SAC; and then if necessary consideration of alternatives and compensatory measures. The Department of Culture, Heritage and the Gaeltacht's (2009) guidance 'Appropriate Assessment of Plans and Projects in Ireland', www.npws.ie/sites/default/files/publications/pdf/NPWS_2009_AA_Guidance.pdf, and the Environmental Protection Agency's guidance on integrating SEA, appropriate assessment and project environmental impact assessment, https://www.epa.ie/pubs/reports/research/biodiversity/Integrated%20Biodoversity%20Impact%20Assessment%20-%20Streamlining%20AA,%20SEA%20and%20EIA%20Processes%20-%20Practicioner's%20Manual.pdf give further information.

Clearly there are many similarities and possible links between SEA and Appropriate Assessment, although they are used in different ways in plan decision making. Figure 1.3 summarises these links.

Notes in green boxes such as this one show how Appropriate Assessment and SEA can be integrated.

3. SCOPING

Key points:

- Scoping aims to get agreement on the scope and level of detail of the Environmental Report.
- Scoping aims to focus the SEA on key significant issues relevant to the plan. This makes the SEA process more efficient and the Environmental Report more readable

The scoping stage aims to get agreement on what the SEA should and should not cover:

- potential significant impacts
- timescale and spatial scale
- possible alternatives
- kind of assessment framework.

The SEA legislation requires the Environmental Report to include the information that may reasonably be required taking account of:

… current knowledge and methods of assessment

The Environmental Report should reflect current good practice: just because something was adequate for the last round of plan-making does not mean that it is now adequate.

… the contents and level of detail in the plan

Topics can be 'scoped out' if they are not relevant to the plan, or the plan is unlikely to have significant impacts on that topic. The level of detail of the SEA should correspond to the level of detail of the plan: if the plan includes site-specific policies, then the baseline environmental description, alternatives and impact assessment and proposed mitigation, where necessary, should also be site-specific.

… the stage of the plan in the decision-making process

Earlier rounds of appraisal are likely to be less detailed than later rounds

… the extent to which certain matters are more appropriately assessed at different levels in the decision-making process in order to avoid duplication of environmental assessment.

A topic/impact can be 'scoped out' if information about the impact depends on a specific location and the plan is not location-specific, or (at the alternatives assessment stage) if all alternatives/ sites being compared would have similar impacts.

SEA legislation specifies the topics that an Environmental Report should cover: biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage, landscape and the interrelationship between the above factors. It may also

cover other aspects such as social and economic issues. The assumption is that all of these topics will be covered unless they are clearly 'scoped out' with supporting reasoning. Figure 3.1 shows how 'scoping out' can be documented.

Figure 3.1: Example: Scoping out (National Hazardous Waste Management Plan (NHWMP))

Cultural Heritage including Architectural and Archaeological Heritage	Not considered to be significantly impacted at strategic level, as the Plan will not determine site-specific locations for facilities Would be assessed at the EIA/project stage for individual waste facilities. These environmental aspects have been scoped out.

Scoping *must* be done in consultation with the statutory environmental bodies:

- Environmental Protection Authority
- Minister for Housing, Planning and Local Government
- Minister for Agriculture, Food and the Marine, and Minister for Communications, Climate Action and Environment, where it appears that the plan or programme, or modification of the plan or programme, might have significant effects on fisheries or the marine environment
- where it appears that the plan or programme, or amendment to a plan or programme, might have significant effects in relation to the architectural or archaeological heritage or to nature conservation, the Minister for Culture, Heritage and the Gaeltacht.

Where the plan could have significant effects on adjoining planning authorities or in Northern Ireland, the relevant authorities there should also be consulted.

At a minimum, early in the plan-making process, these bodies should be sent a letter notifying them that the RWMP is being prepared, providing them with information about the plan, and requesting their views on the scope and level of detail of the Environmental Report. The statutory environmental bodies must be given a minimum of four weeks – for regional level plans such as RWMPs, a minimum of eight weeks is recommended – to respond. It is good practice to also have scoping meetings or workshops with the environmental bodies and possibly other groups/individuals.

The views of the statutory environmental bodies do not have to be followed, but it would be wise to consider them carefully, and to provide a good reason in the Environmental Report if they are not followed. If recommendations from these bodies are not taken into account, potential legal challenges may be given further strength. Figure 3.2 shows how the consultation responses can be documented.

Figure 3.2: Example: Documenting SEA consultation responses (Southern RWMP SEA)

Statutory	Issues Raised	How this has been dealt with in the Environmental Report/new Waste Management Plan
EPA	RWMP needs to consider sludge management plans (being prepared by Irish Water) and how they can be promoted and supported by LA.	Considered in Chapter 4, Other Plans and Programmes.
EPA	Matrix or table should be included to show how RWMP measures align with WFD requirements.	Addressed in text of Southern RWMP.
EPA	Include a reference to waste enforcement–related regionalisation.	Referenced in Section 1.1 of this report.
EPA	Include more detail of data sources used to identify key pressures and clarify how the RWMPs will address the key issues.	Included in Chapter 5, Baseline.

4. ENVIRONMENTAL REPORT

Key points:

- The Environmental Report must include all of the information required by the legislation, and should reflect the key results of the scoping stage set out in Section 3.
- Information gathered for the plan-making process should also be fully used.
- The consideration of alternatives is the 'heart' of the SEA process. The Environmental Report should present a clear 'storyline' of why, all the possible ways that the final plan could look, it looks the way that it does. Poor consideration of alternatives has led to successful SEA-related legal challenges.

This section goes through the legal requirements for an Environmental Report (Figure 2.1) step by step, and explains how each step can be carried out and documented. It shows the rough sequence in which the information would be presented in an Environmental Report:

Suggested sequence to present information in an Environmental Report

	Legal requirement - Annex I
1. Contents and main objectives of the plan	a1
2. Relationship with other relevant plans and programmes	a2
3. Assessment methodology and difficulties faced	h1
4. Relevant aspects of the current state of the environment ('baseline')	b1
5. Likely evolution of the baseline without implementation of the plan	b2
6. Characteristics of areas likely to be significantly affected	c
7. Existing environmental problems	d
8. Environmental protection objectives and SEA framework	e
9. Alternatives	h2
10. Likely significant effects on the environment	f
11. Mitigation measures	g
12. Monitoring measures	i
13. Non-technical summary (this typically comes at the beginning of the report or as a separate report)	j

Further ideas and examples are presented in the appendix.

4.1 Contents and main objectives of the plan(requirement Annex I (a1))

This should be a brief section that explains:

- who is preparing the plan and why
- the plan area
- the area over which the plan could have impacts (which may be wider than the plan area)
- the time period over which the plan will apply
- the plan objectives

Figure 4.1 shows a possible structure for this. The SEA should also include a summary of the contents of the plan, for instance an annotated table of contents for the plan.

Figure 4.1: Example Summary of plan (Southern RWMP SEA)

Key Facts	
Name of responsible authority	Limerick City and County councils and Tipperary County Councils are the joint lead authority for the preparation of the Southern Regional Waste Management Plan, on behalf of the city and county councils in the Southern Region.
Title of Plan	Southern Regional Waste Management Plan
What prompted the Plan?	The Waste Framework Directive sets out the approach for the sustainable management of waste in the Member States of the European Community and this has been transposed into Irish law by the Waste Management Act 1996 and the European Communities (Waste Directive) Regulations 2011. This legislation requires the preparation of a regional waste management plan for all regions within the state.
Subject of the Plan	Waste management including prevention, preparing for reuse, collection, recycling, other recovery and disposal (including exports).
Period covered by the Plan and frequency of updates?	The Plan will be in force for 6 years and will cover the period 2015 – 2021.
Area covered by the Plan	Southern Waste Region
Purpose of the Plan	To provide for the sustainable management of waste.
Contact details	Regional Waste Coordinator, Southern Region Waste Management Office, Limerick County Council, Lissanalta House, Dooradoyle, County Limerick

Waste management plans involve the roll-out of technologies that are, in many cases, rapidly evolving, and whose impacts most people do not understand well. Many SEAs of waste management plans therefore provide an explanation of the technologies being considered, and their main environmental impacts. This could be done in the chapter that describes the plan, or a later separate chapter, or an appendix. Tables 4.2 and 4.3 show examples of this.

Figure 4.1: Example: How terms in the plan could be explained (Connacht - Ulster RWMP SEA)

Term	Explanation
Waste	Defined as any substance or object which the holder discards, intends to discard or is required to discard, by the Waste Framework Directive (2008/98/EC).
Waste Management	The collection, transport, recovery and disposal of waste, including the supervision of such operations and the after–care of disposal sites, and including actions taken as a dealer or broker.
Waste Hierarchy	The Waste Framework Directive (2008) sets out a waste hierarchy which is a priority order of what constitutes the best overall environmental option in waste legislation and policy. The hierarchy places prevention at the top level followed by preparing for reuse, recycling, energy recovery and disposal.
Waste Prevention	A reduction in the quantity and harmfulness to the environment of waste and the materials and substances contained within waste.
Reuse	Any operation by which products or components that are not waste are used again for the same purpose for which they were conceived.
Prepare for Re-use	Checking, cleaning or repairing recovery operations, by which products or components of products that have become waste are prepared so that they can be reused without any other pre–processing.

Figure 4.3: Example: Summary of impacts of waste management technologies (Scotland)

Activity	Noise	Odour	Dust	Flora/ fauna	Soils	Water quality/ flow	Air quality	Climate	Building damage
Materials recycling facility	x	x	x	x	x	xx	xx	–	–
Composting	xx	xxx	xx	✓	x ✓	xx	xxx	x	–
Mechanical biological treatment	xx	xxx	xx	–	–	xx	xx	x	x
Anaerobic digestion	xx	xx	x	x ✓	x ✓	xx	xx	x	x
Gasification/ pyrolysis	xx	xx	xx	–	–	–	xx	x	x
Incineration with pre-sorting	xx	xx	xxx	xx	xx	xx	xxx	x	x
Incineration	xx	xx	xxx	xxx	xxx	xxx	xxx	x	x
Landfill	xxx	xxx	xx	xxx ✓	xxx	xxx	xxx	xxxx	x
Waste transfer stations	xx	xxx	x	–	–	xx	x	✓	–

Category	Meaning
✓	Direct or indirect benefit
–	No effect
x	Unlikely to be significant
xx	Potentially significant impact in some cases, but can be controlled
xxx	Impact can normally be controlled, but an issue at sites if design, engineering or operation falls below best practice
xxxx	An issue at all sites

4.2 Relationship with other relevant plans and programmes (requirement Annex I (a2))

This section should set the waste management plan in its wider context. It should explain what plans affect the RWMP, and what plans and projects are affected by the RWMP. Figure 1.3 shows how the wider waste management planning context could be schematically illustrated.

4.3 Assessment methodology and difficulties faced (requirement Annex I (h2))

The SEA legislation requires the Environmental Report to describe 'how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information'. Although this is listed as requirement h in the legislation (Figure 2.1), and cannot be fully documented until near the end of the SEA process, in practice it is one of the first sections in an Environmental Report.

This section of the Environmental Report can also document the links between the SEA process and the Appropriate Assessment process.

This stage should document the SEA stages, who carried them out, when, and any difficulties faced at that stage. Figure 4.4 gives an example of difficulties that might be faced in SEA.

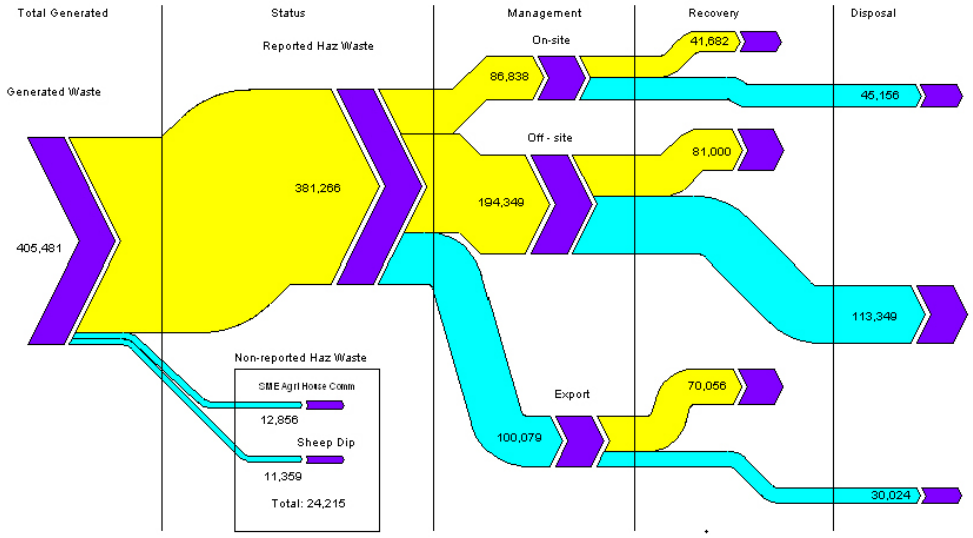
Figure 4.4: Example of difficulties faced in SEA (National Wastewater Sludge Management Plan)

- Limitations in relation to the accuracy of data that is available on sludge quantities generated. It should be noted that there is a data collection and validation process ongoing within Irish Water currently. This process includes sites surveys of all wastewater assets and will take a period of 2-3 years before asset register data is gathered, validated and as such the accuracy of data and details on sludge management infrastructure will be improved in future cycles of the NWSMP;
- Limitations in relation to available GIS datasets on where sludge is currently landspread;
- Limitations in relation to the availability of GIS data of the area of land that is currently under Bord Bia's Quality Assurance Schemes;
- Irish Water is in the process of preparing a number of Tier II plans and several have not yet commenced therefore the implications of these for sludge management cannot be fully assessed e.g. Lead in Drinking Water Mitigation Plan; and
- The first cycle of Water Framework Directive (WFD) River Basin Management Plans for the period 2009 to 2015 outline objectives and measures for water bodies within the River Basin Districts in order to meet the requirements of the WFD. The RBD's are entering their 2nd cycle which relate to the period 2015 to 2021 and as such are in a transition phase. The 2nd

4.4 Relevant aspects of the current state of the environment (requirement Annex I (b1))

The current state of the environment should be described and presented before describing the selection and assessment process of the development scenarios. An obvious starting point for this section is a description of current waste flows. Figure 4.5 gives an indication of how this could be done, with the width of the arrow representing the size of the flow; it also documents the flow of (assumed) non-reported wastes.

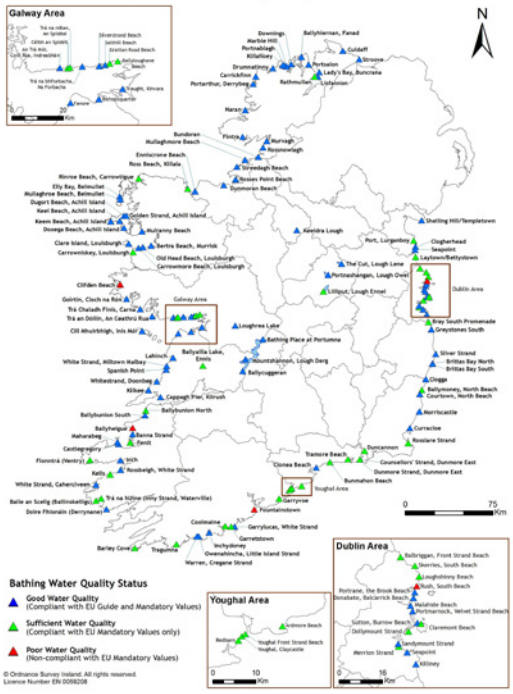
Figure 4.5: Example of waste flows with width of arrow representing flow size (NHWMP)



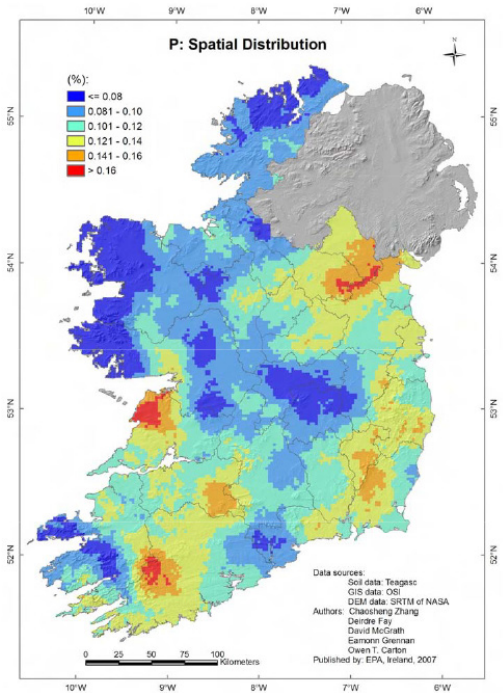
The baseline description should cover the topics identified at the scoping stage. A good starting point for the description of each topic is an explanation of how the topic is relevant to the RWMP. The subsequent description can be in the form of words, maps, graphs, and/or tables. Maps (e.g. Figure 4.6) are particularly effective if the plan is spatially specific. Further examples of baseline description are given at Appendix B.

This part of the Environmental Report should also document the location of any Special Protection Areas and Special Areas of Conservation that might be affected by the plan, why they have been designated, and the kinds of impacts that they are vulnerable to, as a link to the Habitats Directive Assessment process.

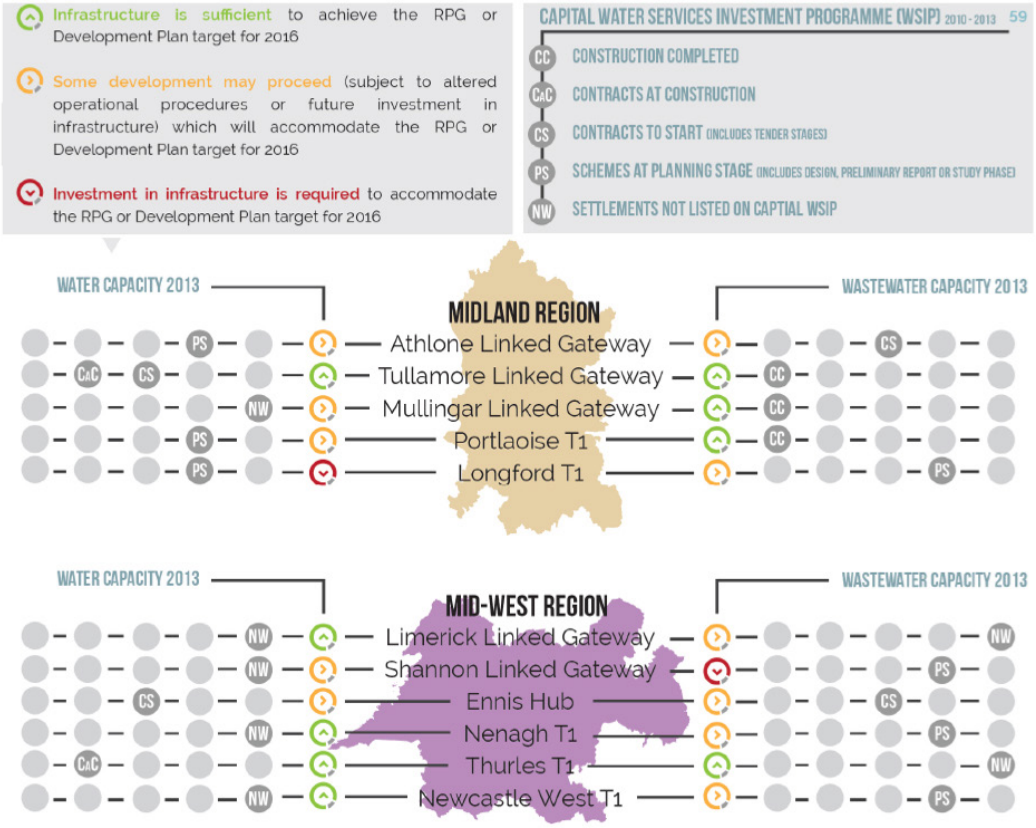
Figure 4.6: Examples of effective presentation of the environmental baseline



(i) Bathing water quality (Water Services Strategic Plan scoping)



(ii) Phosphate distribution (Lead in Drinking Water Mitigation Plan SEA)



(iii) Water and wastewater infrastructure capacity (Water Services Strategic Plan scoping)

4.5 Likely evolution of the baseline without implementation of the plan (requirement Annex I (b2))

The baseline description must also include 'the likely evolution [of the current state of the environment] without implementation of the plan'. Generally, this means a 'business as usual' scenario where the current plan continues into the future, rather than a 'no plan at all' scenario; and typically, it means looking forward for the length of time of the new plan (say 20 years). Under a 'business as usual' scenario, the situation in 20 years may be quite different than the current situation: for instance, air pollution levels may have fallen as a result of tightening European legislation, biodiversity may have worsened, and the population may have increased.

Figure 4.7 shows how the likely evolution without the plan can be described: note that it explicitly assumes that the current plan will continue.

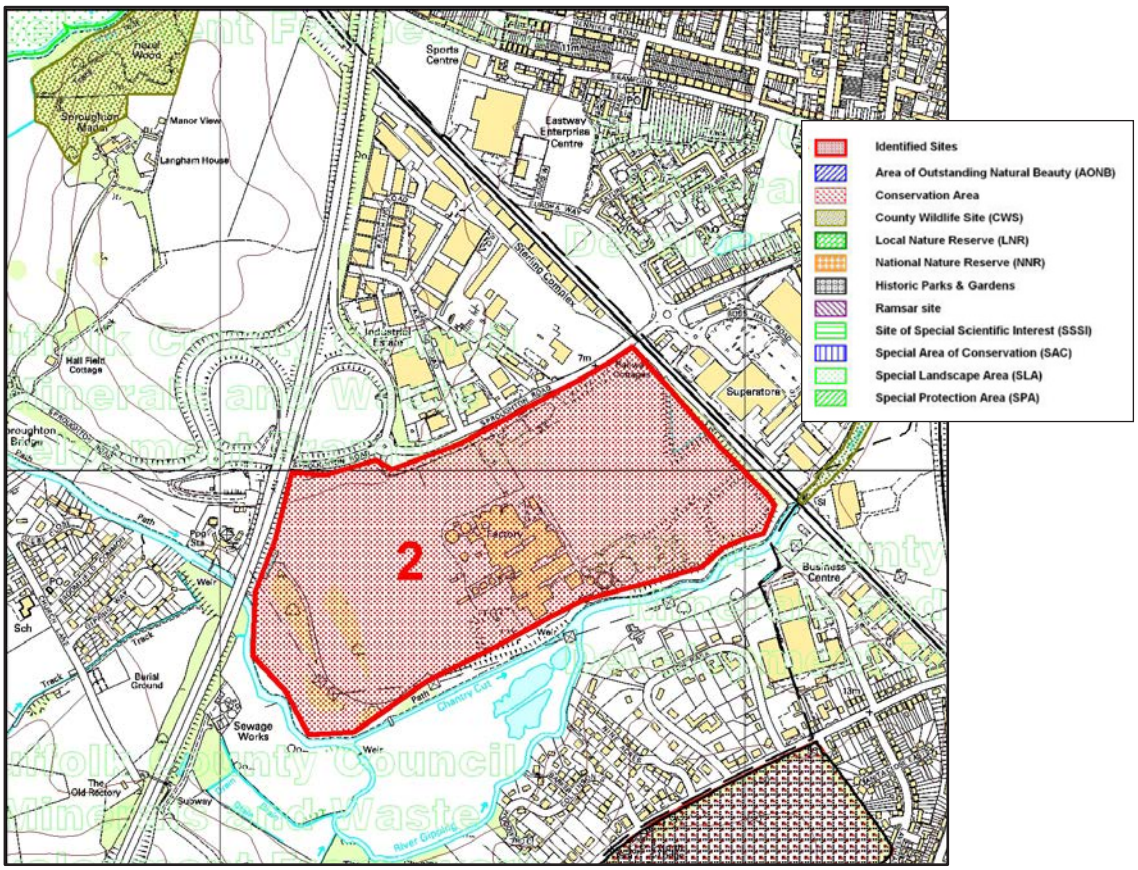
Figure 4.7: Example of likely evolution without the plan (Connacht-Ulster RWMP SEA)

Key Issue	Likely evolution without the Connacht-Ulster RWMP
Biodiversity, flora and fauna	Without the implementation of the Connacht-Ulster RWMP the biodiversity, flora and fauna of the region, 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. Whilst the continuation of the 10 waste regions set up and their associated waste management plans would offer some protection to biodiversity, the fragmented and un-coordinated response to these issues under the previous planning model is likely to result in continued negative pressures on the Natura 2000 network and also national and local biodiversity sites. The new set up should provide for greater co-ordination between local authorities in assessing the waste treatment capacity deficits and avoid construction of unnecessary infrastructure and the associated impacts to biodiversity.
Population and human health	In the absence of the Connacht-Ulster RWMP, waste management activities could not be coordinated to allow for greater resource efficiencies and to better reflect the movement of waste within and to / from the region. Previous plans have struggled to resource actions and reach defined targets, partially due to the fragmented viewpoint delivered by a 10 region model. The lack of coordinated resources would continue to deliver uncoordinated infrastructure and programmes in different parts of the country. This could contribute to increases in unmanaged waste material, backyard burning and illegal dumping. These practices in turn will give rise to deterioration of air quality, water and soils quality and in turn to human health which could be avoided through a more co-ordinated approach under waste plans under the new 3 region configuration. In the absence of the plan it is likely that tighter controls would still be put in place on unsustainable residential development, including one off housing thereby curbing difficulties in servicing a dispersed population.

4.6 Environmental characteristics of areas likely to be significantly affected (requirement Annex I (c))

Areas likely to be significantly affected are those where waste management facilities are proposed, historical sites where rehabilitation is proposed, or other areas that might be affected by traffic or other impacts (e.g. downstream water pollution) from waste management activities proposed in the plan. Overlay maps are particularly useful for this kind of 'zoom down' description. Figure 4.8 shows an example of an overlay map of constraints at a possible waste management site.

Figure 4.8: Example of constraints map to show site-specific environmental conditions (Suffolk)



4.7 Existing environmental problems (requirement Annex I (d))

SEA legislation requires a description of 'existing environmental problems which are relevant to the plan including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC'. The last part refers to Special Protection Areas for birds and Special Areas of Conservation for habitats and species. Figure 4.9 shows an example of environmental problems, with clear links to the environmental baseline.

A good starting point for this section is to consider how the last round of waste management plans has dealt with waste management problems:

- Have there been problems in implementing the previous plan?
- What problems remain despite the plan?

- Existing environmental problems can be identified from the policy analysis (requirement a2 at Figure 2.1) and baseline environmental description (requirements b1 and b2).
- Are any standards being exceeded?
- Targets not being met?
- Trends going in the wrong direction?

This chapter of the Environmental Report should also document any problems associated with Special Protection Areas and Special Areas of Conservation that could be affected by the plan, for instance SPAs/SACs whose integrity is already negatively affected by existing waste management facilities.

Figure 4.9: Example: Identification and documentation of environmental problems (Lead in Drinking Water Mitigation Plan SEA)

Under the existing scenario, the baseline estimates are that up to 180,000 properties or circa 486,000 persons (equivalent to circa 10% of the population) may currently be subjected to elevated levels of lead in drinking water as a result of existing lead pipes and connections in the drinking water distribution system (both public and private). The health implications for chronic exposure to lead in drinking water are well established by the WHO.

Lead exposure can be particularly harmful to the developing brains of foetuses and young children and hence the young (aged 6 and under) and expectant mothers are the sector of the population most at risk from lead exposure. Nationally, this equates to 12.1% of the population or 58,806 children and expectant mothers in the 486,000 population potentially affected (data based on 2011 Census but relevant to the current population).

Clearly, this historic level of lead exposure to the most vulnerable sectors of the population is unsustainable and cannot continue. The extent of the health implications of this historic long term exposure to lead has not been quantified by any study in Ireland but the dose-effect relationships are well established by the WHO.

4.8 Environmental protection objectives (requirement Annex I (e))

This section should explain what environmental objectives, standards and thresholds influence the RWMP, and set out how they are being taken into account in the SEA. This stage is sometimes merged with the discussion of links between the RWMP and other plans (*requirement a2*). Figure 4.10 shows how the analysis of environmental protection objectives can be documented. This stage could go on indefinitely, so the focus should be on key environmental objectives rather than on being comprehensive.

Figure 4.10: Example: Environmental objectives and their links to the plan (IOSEA5)

Plan	Intent	Implications for Draft Plan
Eastern River Basin District: River Basin Management Plan (2009 – 2015): South East River Basin Management Plan (2009 – 2015) South Western River Basin Management Plan (2009-2015) Parts of the Neagh Bann International River Basin Management Plan area (2009 – 2015).	These plans forms part of a suite of plans to ensure delivery of Ireland's commitments under the EU Water Framework Directive 2000/60/EC.	Includes transitional waters and the coastal zone and specifically identifies a number of coastal habitats as under threat and requiring protection through the RBMPs, - including coastal floodplain, coastal saltmarsh and coastal sand dunes. Many of these habitats within or adjacent to IOSEA5 area are also covered by Natura 2000 designations.
Pollution Reduction Programmes (PRPs) for Shellfish Waters. Specifically (but not limited to): Adrigole Harbour; Baltimore Harbour/Sherkin Island; Ballymacoda; Cork Great Island North Channel; Kinsale; Oyster Haven; Roaringwater Bay; Rostellan (North, South and West)	These programmes cover various shellfish growing waters around the IOSEA5. Established by the Minister for the Environment, Heritage and Local Government in order to protect and improve water quality in the designated shellfish growing areas, to ensure compliance with Article 5 of Directive 2006/113/EC of the European parliament and of the Council on the quality required for shellfish waters.	These PRPs all relate to sites within the IOSEA5 area and should be given due consideration within the context of possible pollution incidents associated with the proposed exploration activities within the IOSEA5 area.
Regional Planning Guidelines for the South-East Region (2010-2022) (South East Regional Authority)	These guidelines implement the requirements of the National Spatial Strategy (NSS) (2002) for the South- East Region covering Waterford City, and counties of Carlow, Kilkenny, South Tipperary, Waterford and Wexford.	Identifies the importance of the coastline to the economy of the region and sets out a requirement for a common approach across local authorities to the protection of *inter alia* coastal and estuaries water bodies through Integrated Coastal Zone Management.

This stage typically results in the development of an 'SEA framework' of topics, objectives, targets and/or indicators that sets a structure for assessing the impacts of a plan:

Topic: an issue, e.g. air quality

Objective: a desired direction of change, e.g. to improve air quality

Target: an objective with a specific end-point and level, e.g. to reduce NOx levels by 20% by 2020, compared with 2010 levels

Indicator: a way of measuring the achievement of an objective or target, e.g. NOx levels at monitoring point X

Figure 4.11 shows some possible SEA objectives for use in the environmental assessment of a RWMP. A typical SEA framework would have between eight and fifteen SEA objectives, focused around the key environmental characteristics/resources of the region in question. Figure 4.12 shows examples of SEA objectives linked to each SEA Directive topic: When using SEA objectives as a basis, the assessor asks, for each plan policy or component, 'will this policy help to achieve the SEA objective?'. When using SEA indicators as a basis, the assessor asks 'how will this policy affect the SEA indicator?'.

Figure 4.11: Example: Possible SEA objectives for waste management plans

Topic	Possible SEA objectives
Biodiversity, flora, fauna	◢ To conserve and enhance biodiversity, including flora and fauna, and integrate biodiversity considerations in the plan ◢ To respect and/or create buffer zones between designated and undesignated conservation sites and activities arising from operation/construction/ maintenance activities to minimise disturbance
Population Human health	◢ To protect human health from the potential adverse impacts of waste management activities ◢ To contribute to the improved health and amenities of local communities ◢ To protect the living conditions, quality of life and amenities of local residents from adverse effects of waste management activities, including noise, vibration, dust, odour and traffic impacts
Soil	◢ To safeguard soil quality and quantity from waste management activities, and reduce soil contamination ◢ To protect geodiversity ◢ To protect agricultural resources from waste management activities
Water	◢ To protect water quality from waste ◢ To guard against increased risk of flooding as a result of waste management activities ◢ To protect water resources
Air	◢ To protect air quality from waste management activities and/or reduce air pollution to levels that do not damage the natural environment or human health
Climatic factors	◢ To minimise greenhouse gas emissions associated with waste management activities (including transport) ◢ To reduce the waste sector's contribution to climate change ◢ To promote use of efficient and sustainable energy sources and encourage use of renewable energy ◢ To promote resilience to the impacts of climate change ◢ To adapt to the potential effects of climate change (flood risk, rising temperatures, stronger winds, greater risk of subsidence)

Figure 4.11: contd.

Topic	Possible SEA objectives
Material assets	◢ To secure the sustainable management of waste, minimize its production, and increase re-use, recycling and recovery rates ◢ To minimise the transport impacts of waste management activity; to reduce high carbon travel ◢ To promote safe and secure licensed sites which provide for an adequate number of civic amenity centres, bring centres and bottle banks locally to minimise private transport journeys ◢ To encourage waste management facilities to keep charges to the public at a minimum to discourage fly tipping/illegal dumping ◢ To achieve efficient use of land and water resources ◢ To achieve efficient use and reuse of materials ◢ To reuse previously developed land and buildings (over greenfield sites) ◢ To minimise the consumption of natural resources ◢ To support a move up the waste hierarchy (reduce, reuse, recycle)
Cultural heritage	◢ To minimise the impacts of waste management on places, features and buildings of historic, cultural and archaeological importance
Landscape	◢ To protect and enhance the landscape, townscape and countryside, including historic landscapes of cultural significance
Social*	◢ To maximise community participation in decision making about waste management ◢ To promote access to services and facilities ◢ To promote learning and behavioural change ◢ To promote social inclusion in waste management activities ◢ To protect community safety and wellbeing ◢ To protect future as well as current generations from the impacts of waste management ◢ To be equitable/fair in its impacts on different communities/locations ◢ To compensate communities that are affected by the impacts of waste management activities
Economic*	◢ To contribute to employment opportunities for all ◢ To minimise the costs of waste management
Technical / operational*	◢ To be resilient with respect to natural phenomena (e.g. floods), non-natural phenomena (e.g. elections), changes in the economy, changes in technology ◢ To provide reliability, deliverability and operational flexibility in waste management solutions ◢ To enforce waste legislation according to the conditions of the licence/ certificate of registration/permit ◢ To incorporate best practice and guidelines in consultation with the licensing authorities

* These are not specifically mentioned in the SEA Directive or Irish regulations. They could be included if the SEA is widened out into a sustainability assessment

Figure 4.12: Example: SEA objectives linked to indicators and targets (National Wastewater Sludge Management Plan SEA)

Environmental Component	Strategic Environmental Objectives (SEOs)	SEA Indicators	SEO Targets	Data Source for Indicators
Biodiversity and flora and fauna (BFF)	Prevent damage to terrestrial, aquatic and soil biodiversity, particularly EU designated sites and protected species resulting from Irish Water's activities.	The Status of EU Protected Habitats and Species (Article 17 Conservation Status Assessment Reports due every 6 years, current reports published in 2013) (Ire and NI).	Maintenance / achievement of favourable conservation status for all habitats and species protected under national and international legislation to be unaffected by implementation of the NWSMP[2].	NPWS/ NIEA (6 yearly reporting)
		Provision of appropriate and effective wastewater treatment	Achievement of WSSP indicators in relation to "operating water services infrastructure in a manner that facilities the achievement of the water body objectives under the Birds and Habitats Directives" *(pg. 48 of the final WSSP).*	Irish Water (yearly reporting)
Population and Human Health (PHH)	Protect and reduce risk to human health in undertaking water services.	Indicators as listed in Chapter 4 and Chapter 5 of the WSSP* *Strategic Objective to Ensure a Safe and Reliable Water Supply (pg. 39-40 of the final WSSP); and* *Strategic Objective to Provide Effective Wastewater Management (pg. 42-43 of the final WSSP).*	In line with WSSP, contribute to the achievement of: ▪ All drinking water areas (including groundwater), as identified on the register of protected areas, to achieve good status, or maintain high status. ▪ All bathing waters, as identified on the register of	Irish Water and EPA

4.9 Alternatives (requirement Annex I (h))

The SEA legislation requires the Environmental Report to identify, describe and evaluate 'the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and geographical scope of the plan or programme'; and to provide 'an outline of the reasons for selecting the alternatives dealt with'. The EPA has published guidance on Developing and Assessing Alternatives in SEA at http://www.epa.ie/pubs/advice/ea/developingandassessingalternativesinsea.html. This note is consistent with that guidance.

The identification of 'reasonable alternatives' - also called options or scenarios - is the requirement of SEA that has been subject to the most SEA-related legal challenges to date. Simply comparing the proposed plan with a 'no plan' or 'business as usual' alternative is unlikely to be Directive compliant: a clear 'storyline' is needed of how the plan has been developed and how choices have been made.

Identifying reasonable alternatives

The SEA alternatives stage should inform the key decisions that need to be made for the waste plan. These could include, for instance:

- different approaches to supporting reuse and recycling
- different uses for specific types of waste (e.g. wastewater sludge disposal on agricultural land, energy crops, forestry, etc.)
- what types of waste to process locally, regionally v. nationally (e.g. through a system of satellites and hubs)
- different scales and types of new waste treatment facilities in the region
- whether to prioritise some waste management technologies over others
- what types of activities to permit at authorised inactive landfills

Alternatives should also be considered for how to deal with existing problems identified at the scoping stage, for instance:

- different approaches to reducing backyard burning, illegal dumping and unregulated waste activities
- different approaches to reducing nutrient enrichment in water systems from waste management sites

Generally plan-wide alternatives only (e.g. 'a more economic plan', 'a more social plan') are unlikely to be legally compliant, as they do not reflect the decisions that are actually made as part of the plan-making process.

In line with the 'waste hierarchy', waste management should consider a 'hierarchy of alternatives' (Figure 4.13). The higher up the hierarchy, the more sustainable the alternative generally is. The appendix shows examples at different levels of the hierarchy of alternatives.

Alternatives do not need to be considered for every plan issue. A 'policy versus no policy' comparison of alternatives is necessary only where 'no policy' is under active consideration by the planning team. Going against national government policy is also generally not 'reasonable'.

Good analyses of alternatives often start by considering higher-level options, choose one of these, then move to the relevant lower-level options, choose one, and so on. For instance, various forms of user charges can be considered and compared to minimize the production of waste, then different types of technical/locational options can be considered for dealing with the remaining waste. Before deciding on the precise locations, it may be worth considering whether to have a few large or more smaller facilities.

The SEA should clearly document where significant alternatives are rejected early on as being unreasonable, e.g. where a waste management technology is unlikely to be feasible over the lifetime of the plan. (See EPA guidance on Alternatives for further information at: http://www.epa.ie/pubs/advice/ea/developingandassessingalternativesinsea.html.)

Figure 4.13: 'Hierarchy of alternatives' for waste management plans

	Examples
Need or demand: Reducing the need for waste management facilities through waste prevention/minimisation, reuse and recycling of waste is at the top of the waste management hierarchy and therefore is the ultimate best environmental option. Long-term national policy is towards zero waste for disposal.	◢ public awareness campaigns ◢ reduction of bin sizes ◢ volume-based user fees ◢ producer responsibility ◢ life-cycle analysis and innovative design for products ◢ taxes, charges, incentives
Mode or process: This involves consideration of different strategic options for managing waste streams using different mixes of technologies. Most alternatives considered in previous waste management plans relate to mode or process.	◢ Focus on proven v. new technologies ◢ Disposal: Different ratios of energy from waste, pyrolysis, anaerobic digestion, landfill, composting, etc. ◢ Collection: Single stream, dual stream, separate composting, etc.
Location: The location of larger waste management facilities (e.g. energy from waste, material recovery facilities, landfill) will affect the plan's impacts. Plans can specify locations for waste management facilities, or provide guidance or criteria for how such locations can be chosen.	◢ Self-sufficiency v. proximity principle v. export ◢ One large v. several small facilities ◢ Choice of site A, B or C for a particular waste management facility; choice of waste management technology X, Y or Z for a particular site
Timing and implementation: These alternatives can include different timetables (including phasing), and different requirements for implementation such as further studies or mitigation requirements	◢ Different phasing ◢ Timetable for implementation of milestones ◢ Criteria for choosing future sites or required mitigation ◢ Requirements for future impact assessments etc.

Assessing and comparing the alternatives

The reasonable alternatives are then assessed and compared using a range of quantitative and qualitative environmental criteria, notably the framework of SEA objectives and indicators developed earlier (e.g. Figure 4.12). Figure 4.14 shows a summary table of such comparisons. The assessment process is discussed further in the next section.

	BFF	PHH	FPS	SG	W	AQ	CF	MA	CH	L
Reuse on Agricultural Land	+/-	-/0	-/0	+/-	+/-	0	0	+	0	0
Reuse on Energy Crops	+/-	-/0	+	+/-	+/-	+	+	+	0	0
Reuse in Forestry	+/-	-/0	+	+/-	+/-	+	+	+	0	0
Land Reclamation	+/-	-/0	+	+/-	+/-	0	0	+	-/0	+

BFF = biodiversity, flora, fauna; PHH = population / human health; FPS = food production & safety; SG = soil/geology; W = water; AQ = air quality; CF = climatic factors; MA = material assets; CH = cultural heritage; L = landscape.

Explaining the choice of the preferred alternatives

The waste management authority/planning authority must take the SEA findings into account when choosing its preferred alternatives. However, there is no explicit requirement for the plan to comprise the most environmentally beneficial alternatives. The waste management authority/planning authority can choose any final alternatives, even if the SEA shows them to be problematic, as long as they have taken account of the SEA findings and can explain the reasons for its choices. Figure 4.15 shows an example of how the choice of alternatives can be documented.

Figure 4.15: Example: Explanation of reason for choosing the preferred alternative (National Wastewater Sludge Management Plan SEA)

Preferred Alternative and Reasons for Choosing the Preferred Alternative: Following review and assessment of the various reuse and thermal recovery options, no one specific alternative is considered to be superior to the others. All reuse options are considered feasible, subject to a review of site suitability on a case by case basis and specifically consideration of impacts to human health, water and soil quality and biodiversity, flora and fauna relevant to the quality of the wastewater sludge product being reused. Thermal recovery also offers a feasible alternative in the medium to long-term.

Of note is the lack of resilience in terms of alternatives in the short-term, with little or no alternative to land spreading on agricultural land. Until such time as thermal recovery options and other reuse outlets are more fully developed, reuse on agricultural lands is the only viable alternative available to Irish Water.

4.10 Likely significant effects on the environment (requirement Annex 1(f))

This is the stage where the impacts of a draft plan and its alternatives are predicted, using the structure of topics, objectives, targets and/or indicators developed (Annex I). Impact prediction should be intrinsically linked with the next stage – mitigation. Mitigation should be considered for any significant negative impacts identified at this stage. Several rounds of impact assessment and mitigation are likely to be needed for a given waste management plan: for the plan objectives, broad strategic options (e.g. need/demand, broad rules for waste management), more detailed options (e.g. technology, location), and the draft plan for consultation.

Quantifiable impacts

The SEA Directive does not require any particular form of analysis, but given the relatively technical nature of waste management plans, quantification of many of their impacts is

Total	2004 Baseline	2016 with Plan	Difference
Hazardous waste generation (tonnes)	354,418	405,481	+51,063
Unreported hazardous waste (tonnes)	47,011	24,215	-22,796
Unreported hazardous waste (% of total arisings)	13%	6%	-7%
Hazardous waste export (tonnes)	165,128	100,079	-65,049
Hazardous waste export (% of total arisings)	47%	25%	-22%
Greenhouse gas emissions from solvent export (tonnes)	3,768	467	-3,302
Distance travelled from solvent Export (Km)	1,235,489	588,315	-647,174
Carbon Dioxide emissions (CO_2) from the thermal treatment of Irish hazardous wastes (tonnes)	150,672	171,636	20,965
Dioxins release to air from the incineration of Irish hazardous waste (grams per annum)	0.101	0.115	0.014
Dioxin release to air (uncontrolled and controlled) in Ireland (grams per annum)	34.03	28.06	-5.97
Fossil fuel displacement by co-incineration (tonnes of oil equivalent)	0	37,062	37,062
Energy recovery from hazardous waste in Ireland	0	3.6 to 4.5 MW_e 9 to 11 MW_{th}	+3.6 to 4.5 MW_e + 9 to 11 MW_{th}
Land area consumed (ha)	-	84	+84
Land area remediated (ha)	N/a	-700	-700
Hazardous ash from WTE (tonnes)	0	1,250	+1,250

Other impacts that have been quantified in other waste management SEAs include:

- proportion/amount of waste recycled, reused, etc.
- emissions of SO2, N2O, ozone and methane from waste management facilities
- energy use by waste management facilities
- contaminated land that can be remediated
- number of residential properties within 500 m of proposed waste management project
- cost of waste management activities.

Impacts that cannot be quantified

Where impacts cannot be quantified, an expert judgement can still often be made about whether the impact will be positive or negative, large or small, or broadly within certain bands. Figure 4.17 shows an example of how criteria can be used to consistently determine whether impacts are very positive (++), positive (+), down to very negative (--). Assessment criteria, such as the significance criteria shown at Figure 4.18, can provide greater consistency, particularly between specific waste management sites. Figure 4.19 shows how these assessments can be brought together into a summary table that could also be included in the non-technical summary of the SEA.

Figure 4.17: Example of plan policy assessment (Lincolnshire)

SEA Theme		Climatic Factors		Air Quality	Noise	Biodiversity, Flora and Fauna	Geology and Sols	Water	Population and Human Health		Material Assets				Cultural Heritage	Landscape
SEA Objective		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Proposed JWWMS Objective																
Objective 3: Food Waste Collections	To consider the introduction of separate food waste collections.	+/-	+	-	-	?	0	0	+	0	?	0	0	+	?	?
		This objective aims to introduce the separate collection of food waste. 1, 3, 4. Where existing vehicles, collection routes and processing facilities could not be adapted to incorporate the collection of this new waste stream, additional collection vehicles and routes would probably be required to achieve this objective. The introduction of separate food waste collections could therefore increase the amount of vehicle movements related to waste collection and the distance they have to travel to reach a facility capable of processing the new waste stream, thus having a negative effect on climatic factors and a likely negative effect on air quality and noise. Where collection vehicles are replaced, consideration to the procurement of low or zero emission vehicles should be considered. However, by collecting food waste, there would be an associated decrease in the volume and frequency of other types of waste collections. 2, 13. The separate collection of food waste could contribute to the circular economy by enabling the recovery and use of an additional waste resource as a product, thereby realising value from this aspect of the waste stream. It would therefore also encourage greater sustainability in use of resources. For example, the potential for the re-use of food (and other green) waste as a bio-fertiliser could have particular benefits in a county such as Lincolnshire, in which agriculture is a key part of the economy. 8, 9, 10, 12. Investment and engagement with commercial sector would be required to facilitate the separate collection of food waste, but as the value from the waste stream is realised, this would generate further economic benefits. Similar to Objective 2 above, Local Authorities may need to distribute new bins, educate residents on what the new collections are for, adapt their existing vehicles/collection routes and waste treatment sites to accommodate the new waste stream.														

N.B Colours are commonly used to summarise impacts in SEA. The colours work like traffic lights: red for bad, green for good, amber for in between.

Figure 4.18: Examples of significance criteria (Norfolk)

Questions	Indicator	Positive (+)	Very Positive (++)	Negative (-)	Very Negative (--)
SA1: To mitigate the effects of climate change by reducing greenhouse gas emissions					
Will the plan reduce CO_2 emissions from minerals and waste facilities?	CO_2 emissions - tonnes: ▪ at waste sites ▪ at minerals sites	Reduction of 1-10% per annum	Reduction of >10% per annum	Increase of 1-10% per annum	Increase of >10% per annum
Will the plan reduce or use methane emissions in a more sustainable manner?	Methane emissions from landfill sites - tonnes	Reduction of 1-10% per annum	Reduction of >10% per annum	Increase of 1-10% per annum	Increase of >10% per annum
	Methane Emissions from landfill sites: ▪ % used in power generation ▪ % escaping into the atmosphere				
		88%-90%	91-100%	73-86%	0-73%
		5-9%	0-4%	11-27%	27-100%
SA5: To maintain and enhance the character of the townscape and cultural heritage					
Will the plan reduce the number of listed buildings or SAMs at risk?	# of listed buildings or scheduled ancient monuments at risk or extreme risk	A BAR removed from register as a result of M&W development.	Several BARS are removed from register as a result of M&W development.	Any listed building or SAM is put at risk from M&W development.	Several listed buildings or SAM are put at risk from M&W development
Will the plan protect historic parks and gardens?	Number of historic parks and gardens	N/A	N/A	Any historic park or garden at risk from M&W development.	Several historic parks or gardens are put from M&W development.
Will the plan affect conservation areas?	Number of Conservation Areas	N/A	N/A	Development in a Conservation Area	Development in more than one Conservation Area

Figure 4.19: Table summarizing the impacts of plan policies (rows) on various SEA indicators (columns) (Essex)

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Policy 1	0	0	0	0	0	0	0	0	++	0	0	0	0
Policy 2	/	/	/	+	/	/	/	+	++	+	+	+	++
Policy 4	0	/	0	+	0	0	/	0	++	+	0	0	/
Policy 5	0	0	0	++	0	0	/	++	++	++	0	+	+
Policy 6	0	0	0	++	0	0	/	0	++	++	0	+	+
Policy 7	0	0	0	++	0	0	0	0	++	++	0	0	+
Policy 8	0	0	0	++	0	0	0	0	++	0	0	0	+

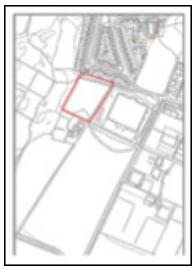
Many SEAs assess as '+' anything that includes some reference to the relevant environmental topic: for instance they would mark as positive the policy 'We will build waste treatment facility X at location Y whilst protecting the biodiversity of the nearby stream', even though it is unlikely that this policy will actually have positive impacts on biodiversity. This has caused local residents to challenge SEAs as not representing reality. Instead, the impacts of the plan should be assessed against the 'likely future without the plan', which is probably no development at Y: in such a case the impact of the policy would probably be negative or neutral.

Site-specific impacts

If the plan proposes specific sites or alternatives for waste management facilities, the impact prediction should also be site specific. Figure 4.20 shows an example of such a site-specific assessment. This would still be a more strategic level of assessment than project environmental impact assessment, which applies when planning permission is sought for the site/project put forward in the plan.

Figure 4.20: Example of site assessment (Wyre Forest)

LI-10 LAND R/O ZORTECH AVENUE



Nearest settlement: Kidderminster	**Site ref:** LI/10	**Easting**	381173	**Site area (hectares):** 1.93
		Northing	273780	

Site address: Land r/o Zortech Avenue **Ward:** Lickhill	**Within built area**
	Adjoining built area ✓
	Other (See site description)
Current or previous use: area of wasteland – large amounts of spoil tipped over wide area including reinforced concrete	**Greenfield (undeveloped)** ✓
	Brownfield (prev. developed)

Site description: area of wasteland adjoining former golf club house with residential uses to north, nature reserve to west and vacant factory site (Ceramaspeed) to east, accessed off long drive

Ownership:		Private			Public	✓	Unknown		
Topography:	Flat	✓	Gently Sloping			Steeply Sloping			

Planning History: None of relevance

SUSTAINABILITY APPRAISAL INFO	**+/-**	**Notes**
Local services and facilities	0	Adjoining built area. Reasonable access to local facilities.
Housing needs of all	0	1.93ha
Need to travel, sustainable travel modes	+	Good vehicular access: access drive from Zortech Avenue. Good public transport access: frequent bus service runs within easy walking distance of site. Access track to local nature reserve runs along N boundary of site.
Soil & land	-	Greenfield. Contamination unknown. Possible industrial tipping on site.
Water resources and quality, flood risk	?	No flooding issues. Identified by the water cycle study as being of concern.
Landscape and townscape	0	Currently wasteland with large amounts of spoil tipped over a wide area.
Biodiversity and geodiversity	-	Adjacent to Burlish Camp local wildlife site (acid grassland) and Burlish Top local nature reserve.
Economy & employment	0	
Historic environment	0	Birchen Coppice Farm 50m to SW of site. Site of Burlish Camp 100m to W of site. Neither likely to be affected due to distance from site.
Green Belt	-	In Green Belt
Community & settlement identities	0	Adjoining built area.

Access track to local nature reserve runs along northern boundary of site. This will need to be retained

REASON FOR INCLUSION:

Call for Sites submission		Allocated without planning permission		Sites with planning permission	
Local Authority owned land	✓	Refused / Withdrawn/ Pending applications (2006 to date)		Underused / Vacant sites	
Officer suggested - rural sites		Officer suggested – potential urban extension		Other	

PROPOSED USE:	Housing		Retail		Employment		Leisure		Gypsy/ Travelling Showpeople	✓	Other	

WFDC OFFICER VIEWS:

Character / visual impact:

Vehicular access	Good	✓	Reasonable		Poor			
	Access drive from Zortech Avenue							
Access to local facilities	Good		Reasonable	✓	Poor			
Public transport accessibility	Good	✓	Reasonable		Poor			
	Frequent bus service runs within easy walking distance of site							

Suitability	Site is considered to be a suitable location for travelling showpeople and their fairground equipment as it has good access to the road network
Availability	Owned by local authority – looking to dispose of site
Achievability	Development is achievable
Potential Timescale for Delivery and Proposed Capacity	Within 5 years.

Secondary and cumulative impacts

The Environmental Report must describe 'the likely significant effects on the environment. These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects'. Most of these impacts can be assessed using a table like Figure 4.12. However assessment of secondary and cumulative/ synergistic impacts requires different techniques.

Secondary impacts are impacts that occur 'down the line': away from the original effect or as a result of a complex pathway. Examples of secondary impacts are where leachate from landfill affects water quality in nearby streams, in turn affecting the animals and plants in the streams, or where noise from waste transport affects people's wellbeing. Secondary impacts cannot be easily identified through simple indicator lists or tables, but require separate analysis. Figure 4.21 shows the results of an analysis of secondary impacts of the Irish national hazardous waste management plan.

Figure 4.21: Example: Documenting secondary impacts (NHWMP)

Potential Receptors	Secondary Effects
Water Biodiversity Human Health Transport/ Material Assets	The aquatic environment (marine, freshwater and groundwater) has the potential to interact with other environmental receptors principally biodiversity (flora and fauna) and human health. These two receptors can be indirectly impacted by the Plan through changes to water quality. Marine biodiversity in particular is at risk from transport emissions and potential for spillage while exporting hazardous waste for treatment and disposal. A reduction in quantities for export as a result of the various elements of the Plan will contribute to improved marine water quality and indirectly the quality of associated habitats, flora and fauna. Prevention and collection strategies also have the potential to improve surface and ground water quality. These strategies will improve collection of waste material and will also target generation of hazardous waste thereby potentially reducing process emissions to surface water and also emissions to ground water and surface water from unregulated disposal. Such improvements will have indirect impacts on aquatic habitats and associated flora and fauna. Water quality is also an important consideration for human health in terms of drinking and bathing water, aquifers etc. Transport associated with export of material, process emissions associated with production and contamination from unreported hazardous waste all present a risk to human health indirectly through water quality. Reduced export, prevention/education programmes and better collection of hazardous waste material will lead to a decreased risk to water quality and in turn human health. Increased treatment of hazardous waste within Ireland will increase the risk to surface and groundwater resources but not significantly as wastewater emissions would be subject to Emission Limit Values (ELVs), based on standards intended to protect human health and the environment, set out in IPPC and/or Waste licence.
Air Climate Human Health	Air quality has the potential to interact with other environmental receptors principally human health and climate. Increased treatment of hazardous waste within Ireland could potentially increase emissions from treatment and disposal facilities locally e.g. dioxins from incineration. However, air quality emissions would be subject to Emission Limit Values (ELVs) based on standards intended to protect human health and the environment, set out in IPPC and/or Waste licence.

Cumulative impacts are the sum total impacts arising from the plan and in combination with the impacts of other past, current and foreseeable plans, projects and other trends. Climate change, habitat fragmentation and soil erosion are all examples of cumulative impacts. Essentially, whereas the rest of the impact assessment process focuses on the impacts of the plan, cumulative impacts consider the impacts on environmental receptors. Society's overall cumulative impacts must stay within environmental limits, otherwise it is not sustainable in the long term. Cumulative impact assessment is a critical aspect of SEA and plan-level appropriate assessment, as these impacts are typically not well addressed at the project level.

The 'in combination' impacts that must be assessed as part of Appropriate Assessment are cumulative impacts. This chapter of the SEA can document the findings of the appropriate assessment process.

Most SEAs so far have focused their 'cumulative impact' assessments on identifying the total impacts of the plan, rather than its impacts in combination with other plans, projects and other trends. Figure 4.22 is an example of this, and shows the total impacts of waste management sites. Figure 4.23 shows, instead, how the cumulative impacts of a plan together with other plans and programmes can be described.

Figure 4.22: Example: Total impacts of a plan's site allocations (useful information, and visually attractive, but not cumulative impacts) (Essex)

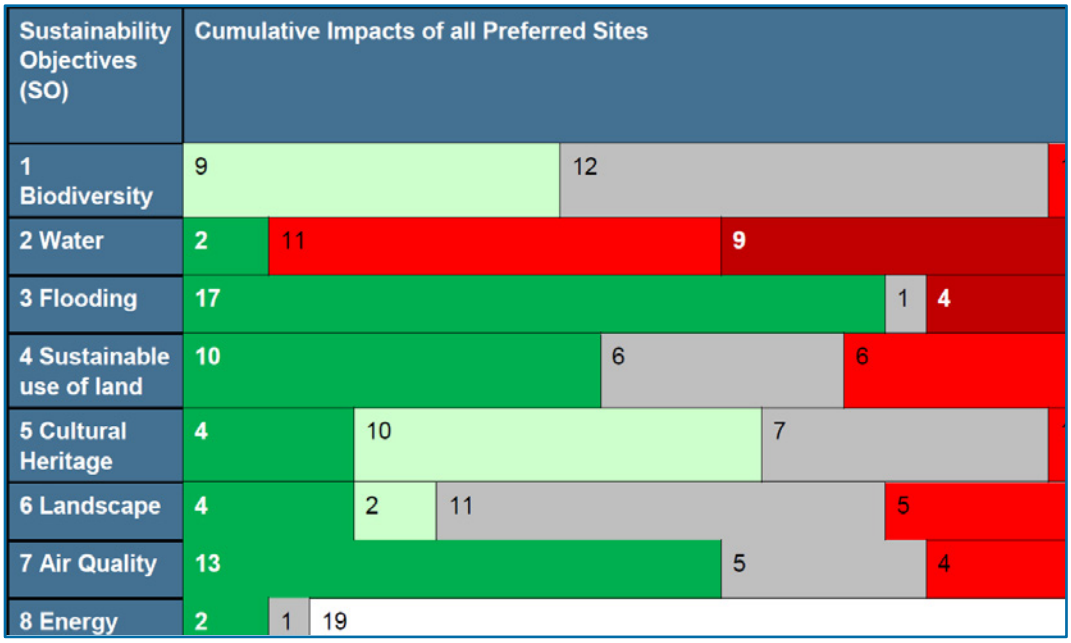


Figure 4.23: Example: Documenting cumulative impacts (Lead in Drinking Water Mitigation Plan SEA)

Cumulative Impacts: Possible cumulative impacts include the potential for additional phosphorus loading to the environment from any corrective water treatment coupled with other sources of additional phosphorus loads. One such source may be the additional loading of nutrients to the environment associated with the intensification of farming practices under Foodwise 2025. The SEA Environmental Report for Foodwise 2025 (November 2015) states that for beef farming:

Increased animal numbers will also increase animal waste, ammonia, phosphorus and nitrates, as well as silage which can cause deterioration of water quality but can also provide nutrients to watercourses. Potential effects on habitats and species (aquatic and terrestrial) where intensification involves higher volumes of manure to be managed and increased use of fertilisers, herbicides and pesticides.

Similar potential nutrient loading impacts are also noted for other farming sectors and mitigation measures are proposed to mitigate these impacts and the report notes that agricultural 'projects' under Foodwise 2025 can only progress when it has been demonstrated that they will not result in a WFD target not being achieved.

In addition, the SEA Environmental Report for Ireland's Forestry Programme 2014-2020 (October 2014) notes the intention to contribute to meeting Ireland's forest cover target of 18% by 2046 as a key objective. The increased forest cover objective will increase the need for fertilisers for the proposed afforestation programme. The report notes that the increased use of fertiliser (which is usually phosphorus based but not exclusively) poses a risk to the environment if not properly controlled. Buffer zones are introduced as mitigation measures to restrict the use of these fertilisers in proximity to water courses.

4.11 Mitigation measures (requirement Annex I (g))

Where a negative impact is identified at the impact assessment stage, mitigation measures for that impact should be considered. Measures to prevent, reduce/minimise and offset impacts are jointly called 'mitigation measures', but within them is an invisible hierarchy: avoidance is better than reduction, which is better than offset (see Figure 4.24). Enhancement should also be considered, for instance re-using land for amenity use upon complete remediation and closure. Figure 4.25 shows examples of mitigation at the strategic and site levels.

The Environmental Report should document what mitigation measures have been recommended, and whether they have been incorporated into the plan.

This chapter of the Environmental Report also documents the avoidance and mitigation measures that resulted from the Appropriate Assessment process.

Figure 4.24: 'Hierarchy of mitigation measures' for waste management plans

	Examples
Avoidance/ prevention: Not causing impacts in the first place	◢ Raising awareness amongst residents of waste management impacts and how they can change their behaviour ◢ Charging for the waste collected, to reduce generation of waste ◢ Capping the percentage of waste that can be disposed of through energy-from-waste, to encourage waste treatment higher up the waste hierarchy ◢ Promoting reuse and repair through the plan as well as recycling
Reduction / minimisation: Causing the least negative impacts possible	◢ Using biofuels to power vehicles that transport waste ◢ Using renewable energy to power waste treatment facilities ◢ Locating waste management facilities near where waste is produced to minimise transport movements ◢ When locating and planning waste management sites, considering wind direction, water courses, nature conservation areas, etc. ◢ Co-locating different waste management facilities (e.g. incineration, mechanical biological treatment and in-vessel composting) to reduce the need to transport materials
Offset/compensation Causing the impact but providing a compensatory benefit.	◢ Combining energy-from-waste with Combined Heat and Power where possible

Figure 4.25: Examples of impact mitigation for plan policies and sites (National Wastewater Sludge Management Plan)

Reference	Proposed Mitigation Measure for Actions	Location in draft NWSMP
Policy Actions 1 - 2	Under Policy Action_1 and 2, reference to wastewater sludge management activities should be clarified to mean all activities from production of wastewater sludge at a treatment plant through to reuse and disposal of same.	Glossary
	The audit of wastewater sludge activities is essential to ensure progress is being made in ensuring compliance with good practice and to ensure an overall quality product is being generated. Therefore it is recommended that the audit process becomes an integral part of the quality assurance system and it addresses all wastewater sludge management activities from the operational WWTP to the disposal / reuse activity. Contractors who break contractual obligations will be penalised.	Section 10.9
	The audits of land spreading should be undertaken during the timescale of application of the biosolids to the lands to fully assess if compliance is being achieved.	Section 10.9
	A Standard Operating Procedure for reuse of wastewater sludge in agriculture and non-agricultural outlets will be developed and become a requirement of Irish Water contractors. This SOP should address inconsistencies in the legislation and COGP and specify clearly the best practice required for Irish Water contractors. The SOP will also promote a risk based approach to determine lands most at risk from land spreading activities. Irish Water will contractually require all Irish Water contractors to fully implement the most stringent requirements of the legislation and guidance.	Section 3.5.2 and Section 9.9

Siting Criteria

The location of new or upgraded wastewater sludge facilities must consider the following:

- Avoid, as far as possible, siting wastewater sludge infrastructure (including expansion to WWTP, sludge hub centre or sludge satellite) or related infrastructure in areas protected for landscape and visual amenity, geological heritage and/or cultural heritage value. Where this is unavoidable, an impact assessment should be carried out by a suitably qualified practitioner and appropriate mitigation and/or alternatives must be provided.
- Avoid siting wastewater sludge infrastructure or related infrastructure in proposed Natural Heritage Areas (pNHAs), Natural Heritage Areas (NHAs), Statutory Nature Reserves, Refuges for Fauna and Annex I Habitats occurring outside European designated sites.
- In order to protect habitats which, by virtue of their linear and continuous structure (e.g. rivers and their banks) or their contribution as stepping stones (e.g. ponds or small woods), are essential for the migration, dispersal and genetic exchange of wild species, these features will be protected as far as possible from loss or disruption through good site layout and design.
- To protect river habitats and water quality, ensure that no wastewater sludge facility, including clearance and storage of materials, takes place within a minimum distance of 25 m measured from each bank of any river, stream or watercourse.
- Ensure Sustainable Drainage System (SuDS) is applied to any wastewater sludge facility and that site-specific solutions to surface water drainage systems are developed, which meet the requirements of the Water Framework Directive and associated River Basin Management Plans.
- Avoid development of wastewater sludge infrastructure in flood risk areas. Reference should be made to the *Planning System and Flood Risk Management for Planning Authorities* (DECLG/OPW 2009) and the National Flood Hazard Mapping (OPW) while referring to the relevant Flood Risk Management Plan (FRMP).
- Ensure riparian buffer zones (minimum of 25 m) are created between all watercourses and any wastewater sludge facilities to mitigate flood risk. The extent of these buffer zones shall

4.12 Monitoring measures (requirement Annex I (i))

SEA legislation requires the actual impacts of implementation of plans to be monitored, in part so that future rounds of impact predictions can be based on better evidence, and in part so that unexpected negative impacts can be identified early and appropriate remedial action can be undertaken. Monitoring frameworks should thus focus on:

- significant negative residual (post mitigation) impacts predicted in the SEA
- 'unforeseen' negative impacts, for instance changes in population or in people's behaviour that were used as assumptions in the SEA but may not actually occur. This could also include the number of complaints made on particular environmental issues (this could be covered in the Annual Environmental Report (AER) to the EPA for each licensed facility)
- ensuring that monitoring is actually undertaken, by specifying who is responsible for monitoring, how frequently monitoring should take place, what monitoring sources (existing or new datasets) will be used and how the monitoring will be reported upon
- ensuring that unforeseen adverse impacts identified through monitoring are dealt with

Figure 4.26 provides a good-practice example of a proposed monitoring programme.

Figure 4.26: Example Monitoring programme (Connacht-Ulster RWMP SEA)

Strategic Objective	Target	Indicator	Sources & Responsibilities
Obj. 1: Biodiversity Flora and Fauna (BFF_1) Preserve, protect, maintain and, where appropriate, restore the terrestrial, aquatic and soil biodiversity, particularly EU and nationally designated sites and protected species.	Majority of habitats or species in, or moving towards, favourable conservation status. [Based on national Target 17 of Ireland's Action Plan for Biodiversity 2011-2016].	The status of protected habitats and species as reported to the EU (report due every six years, first report in 2007).	The Status of EU Protected Habitats and Species in Ireland report. Published every six years, National Parks & Wildlife Service (NPWS).
Obj. 2: Biodiversity Flora and Fauna (BFF_2) Integrate biodiversity considerations into the RWMP.	Ensure mitigation measures from the RWMP SEA and AA are fully implemented within the plan period.	Audit of progress in the implementation of mitigation measures two years post adoption of the plan and at completion of the plan period.	Lead Authority, local authorities SEA mitigation measures proposed in relation to policy actions.
Obj. 3: Population and Human Health (PHH_1) Protect human health from the impacts of waste management by ensuring waste prevention and related activities are promoted at community and individual level.	Increase expenditure on waste prevention activities (including education, awareness, training etc.) to a minimum of 0.15c/ inhabitant.	Total prevention / reuse budget per annum in each local authority as a % of total spend on waste management.	Financial Returns/Annual budget for local authorities to be reported to the Lead Authority.
Obj. 4: Population and Human Health (PHH_2) Promote and encourage access and services for appropriate waste management for all.	Increase the number of households availing of kerbside waste collection services, prioritising areas with existing low uptake.	Number of households in the region on a kerbside collection. Quantity of unmanaged waste in the region.	Waste statistics data from Local authorities, private waste collectors, Lead Authority. National Waste Bulletin, published annually, Environmental Protection Agency (EPA).
Obj. 5: Soils	Rollout the plan for remediating historic closed	Number of authorisations granted	Historic Unregistered Landfill Sites

4.13 Non-technical summary (requirement Annex I (j))

A non-technical summary of the information should be provided and include information under the headings described in Annex I (a) – (j).

The report must include the information that may reasonably be required taking into account of current knowledge and methods of assessment, the contents and level of detail in the plan, its stage in the decision-making process and the extent to which certain matters are more appropriately assessed at different levels in that process to avoid duplication of the assessment.

The important thing about the non-technical summary is that it should be a summary of the information provided in the main report, not just a description of how the main report has been compiled.

Two Northern Irish plans were successfully legally challenged, in part because their non-technical summaries only described the methodology used in the SEA. So the non-technical summary should provide a brief discussion of the policy and environmental context, alternatives considered, main impacts of the plan and alternatives, mitigation measures, etc. It should – as the term implies – be non-technical, and so minimise the use of jargon and abbreviations. Maps (including constraints maps and maps of vulnerability) and tables are particularly useful.

5. CONSULTATION ON DRAFT PLAN AND ENVIRONMENTAL REPORT, AND DECISION MAKING

Key points:

- Statutory environmental bodies, the public, and other European Member States if appropriate must be consulted on the draft plan and Environmental Report, and given at minimum four weeks – preferably 12 weeks in which to comment.
- Their views must be 'taken into account'.

Once the Environmental Report is completed and before proceeding, there is merit in checking it against Figures 2.1 (legal SEA requirements) and 2.2 (good practice SEA process), and the EPA's SEA process checklist: www.epa.ie/pubs/advice/ea/seaprocesschecklist.html. An independent third party could be asked to act as a 'critical friend' and audit the Environmental Report. It may also be worthwhile checking the report against similar reports already in the public domain, to ensure that it follows current good practice.

After plan adoption, an 'SEA statement' will need to be prepared which describes the SEA process and how effective it was. This is discussed further at Section 6. It is good practice to include as much information as possible from the SEA statement in the Environmental Report itself, to show that the SEA process has informed and influenced the development of the plan. Figure 6.3 provides a checklist for the SEA statement: it may be worth also checking the Environmental Report against this checklist.

The SEA legislation requires planning authorities to make available the draft plan and Environmental Report to

- the statutory environmental bodies (see Section 3)
- the public
- any other European Member state likely to be significantly affected by the plan

and to give them at least four weeks in which to comment on the plan and Environmental Report. For regional-level plans a minimum of 12 weeks is recommended at the consultation stage. The legislation gives further details of how the information should be provided and consultation should take place.

The planning authority must then 'take account' of the consultees' comments as well as the Environmental Report in the final plan. Again, a table such as that shown at Figure 3.2 can be used to document this.

6. SEA STATEMENT

Key points:

- After the plan has been adopted, an 'SEA Statement' must be prepared which explains how environmental information was taken into account in the plan-making process and how the plan's impacts will be monitored.
- The SEA Statement is not the same thing as an updated Environmental Report. Instead, it focuses on the changes made to the plan in response to the SEA process: it 'tells the story' of the SEA process, and how effective this process has been.
- Much of this information can be taken from the Environmental Report.

Once a plan is adopted, the SEA Directive requires the following information to be made publicly available:

A) The adopted plan;

B) The proposed monitoring programme; and

C) An 'SEA Statement' which describes

1. how environmental considerations have been integrated into the plan;
2. how the Environmental Report has been taken into account;
3. how the opinions of statutory consultees, the public and any relevant other countries have been taken into account; and
4. the reasons for choosing the plan as adopted, in the light of the other reasonable alternatives dealt with.

Much of this information will already have been documented in the Environmental Report, and can be taken from there.

- Section 4.12 of this report describes how to develop a monitoring programme (B above).
- The description of how consultees' opinions were taken into account typically includes the dates of consultation, form of consultation (e.g. meeting, request for comments on a draft report), summary of the consultation responses, and planners' responses to the consultation responses. Sections 3 and 5, and particularly Figure 3.2, explain how this can be described (C3 above).
- Section 4.9, and particularly Figure 4.14, explains how to document the reasons for choosing the preferred alternatives (C4 above).

This section deals with the remaining points C1 and C2. The distinction between C1 and C2 is not clear in practice, and these two aspects are often considered together.

The starting point for the description of how environmental considerations have been integrated into the plan is typically a description of how the SEA was carried out: who was involved, relevant dates, and a flowchart that shows the links between the stages of plan-making and SEA stages. Figure 1.3, earlier in this report, shows an example of the latter. The main findings and recommendations of the SEA process are then summarised, as well as changes made to the plan in response to the findings/recommendations. Figures 6.1 and 6.2 show, respectively, ways of documenting how SEA findings have been considered in a plan, and how SEA recommendations have been taken into account.

Figure 6.1: Example - Description of how environmental considerations have been integrated into the plan (WAW)

The drafting of the Operational Programme was done in an iterative manner whereby Fáilte Ireland prepared the first draft of the Programme which was provided to CAAS who made suggestions for integration into the Programme. Fáilte Ireland then reviewed the Programme to take account of the SEA/AA suggestions and sent the following revision back to CAAS for comment. Multiple revisions of the Programme were prepared before the Draft Programme was arrived at for public display. The Draft Programme and associated SEA and AA documents were updated to take account of various issues raised in submissions made during public display.

Key aspects of the Operational Programme where environmental input was integrated include:

- Visitor Management
    - With a route extending along the entire western seaboard, the Programme facilitates contributions towards improvements in environmental management and protection by allowing for both: the management of visitors at a macro spatial level (in terms of what sections of the western seaboard could accommodate increases in visitors); and the management of visitors at a micro spatial level (in terms of what areas adjacent to viewing points, lay-bys etc. should be avoided).
    - The Programme also facilitates the management of visitors across the tourist season so that growth can be sought in times outside of the summer peak.

Figure 6.2: Example - Table description of how the recommendations of the Environmental Report have been taken into account (Eastern-Midlands RWMP SEA)

Alternatives	Mitigation Measures Proposed in SEA Environmental Report	Included in the RWMP
Section 7.2 Self-sufficiency	To address the possibility that wastes would continue to be exported despite capacity coming on-stream in Ireland, a strong commitment to self-sufficiency and the proximity principle would need to be factored into the strategic approach.	Policy A.4 deals with the issue of self-sufficiency. Wording has been added to the policy since the draft plan to strengthen the position. In addition, the DECLG is looking at policy and / or economic options to reduce the exporting of residual wastes. The full wording of Policy A.4 is: *Aim to improve regional and national self-sufficiency of waste management infrastructure for the reprocessing and recovery of particular waste streams such as mixed municipal waste, in accordance with the proximity principle. The future application of any national economic or policy instrument to achieve this policy shall be supported.*
Section 7.5.3 Resource efficiency & circular Economy	A Code of Practice shall be prepared for the *Preparation for Reuse* sector and this will be rolled out alongside an education and awareness campaign at the local level to assist operators in delivering a positive sustainable service overall. Registration of activities should also be considered.	Policy Action C.1.1 in the final RWMP includes a commitment to preparing a guidance note .
Section 7.5.5 Infrastructure (Collection)	An awareness campaign to support the rollout of brown bins is required. Ongoing review of the feasibility for indigenous paper, glass and metal recycling capacity is required as part of the overall strategy for self-sufficiency to determine if volumes of waste could reasonably support smaller regional facilities rather than sending them for export.	Policy Actions B.2.1, B.2.3, B.4.3 all address the issue of awareness and prevention campaigns. Although not specifically referring to rollout of brown bins the wording in these policy actions encompasses a range of possible issues such as the brown bin collection service. In addition Policy Action F.1.4 commits to allocate resources to monitor the schedule for the roll-out of brown bins to households.

You may want to check your SEA statement against the good practice checklist of Figure 6.3.

Figure 6.3: SEA Statement good practice checklist (adapted from Chapman, 2010)

Does the SEA Statement summarise how environmental considerations have been integrated into the plan?	
Describes the process of producing the Environmental Report	
Identifies environmental issues identified in the Environmental Report	
Identifies environmental (SEA) objectives used in the SEA	
Summarises how environmental considerations have been integrated in the plan	
Does the SEA Statement summarise how the Environmental Report was taken into account during the preparation of the plan and before its adoption?	
Describes suggestions made in the Environmental Report	
Discusses how the Environmental Report has been taken into account, with examples	
Explains what difference the Environmental Report has made to the plan (e.g. what mitigation measures were added)	
Describes original plan elements before revision and how these changed in response to Environmental Report suggestions	
Identifies suggestions that were raised in the Environmental Report but not taken into account in the plan as adopted, and provides explanations for this	
Does the SEA Statement summarise how the opinions of the statutory consultees and the public were taken into account during the preparation of the plan and before its adoption?	
Describes the methods and timing of public consultation	
Describes the methods and timing of consultation of statutory consultees	
Summarises the opinions of the public and statutory consultees	
Describes how the opinions of the public and statutory consultees were taken into account	
Describes original plan elements before revision and how these changed in response to consultation	
Does the SEA statement provide the reasons for choosing the plan as adopted, in the light of the other reasonable alternatives dealt with?	
Lists all alternatives considered	
Provides an overview of each alternative's performance against the SEA objectives	
Provides an explanation of why each preferred alternative was adopted in light of the other alternatives	
Are the measures decided concerning monitoring available?	
The measures decided concerning monitoring are available, either in the SEA statement or as a separate document	
Reference is made to the monitoring measures decided in the SEA statement	
It is clear that the monitoring described will actually be carried out, rather than merely recommended	
Monitoring is accompanied by specific indicators and targets	
The methods and frequency of monitoring are outlined	
It is clear which monitoring measures have been contributed by the SEA process	

Further reading

Chapman, L. (2010) SEA Statement review criteria developed as part of MSc in Environmental Assessment and Management, Oxford Brookes University, unpublished.

International Association of Impact Assessment (2002) Strategic environmental assessment performance criteria, www.iaia.org/uploads/pdf/sp1.pdf.

Royal Town Planning Institute (2018) Strategic environmental assessment: Improving the effectiveness and efficiency of SEA/SA for land use plans, www.rtpi.org.uk/media/2668152/sea-sapracticeadvicefull2018c.pdf.

Environmental Reports:

Referred to in this report as	Plan for which SEA was prepared	Web-link
Cambridgeshire	Cambridgeshire and Peterborough Minerals and Waste Core Strategy (2009)	No longer publicly available
Connacht-Ulster	Connacht-Ulster Regional Waste Management Plan	http://www.sligococo.ie/media/SligoCountyCouncil2015/Services/Environment/Downloads/ConnachtUlsterWasteMngePlan_2015_2021.pdf
Derbyshire	Derby and Derbshire Joint Municipal Waste Management strategy (2014)	https://www.derbyshire.gov.uk/site-elements/documents/pdf/environment/rubbish-waste/waste-strategy/waste-strategy-options-appraisal-report.pdf
Eastern-Midlands	Eastern-Midlands Regional Waste Management Plan (2015)	Not publicly available
Essex	Essex and Southend-on-Sea Waste Local Plan (2017)	http://www.essex.gov.uk/Environment%20Planning/Minerals-Waste-Planning-Team/Planning-Policy/Documents/CD%204%20-%20Pre_Sub_SA_Feb_2016.pdf
IOSEA5	Irish Offshore Strategic Environmental Assessment 5 (2015)	https://www.dccae.gov.ie/en-ie/natural-resources/publications/Pages/IOSEA-5-Environmental-Report.aspx
Lead in Drinking Water	Draft Lead in Drinking Water Mitigation Plan (2016)	https://www.water.ie/projects-plans/national-projects/lead-mitigation-plan/public-consultation/Draft-Lead-in-Drinking-Water-Mitigation-Plan-July-2016-(1).pdf
Lincolnshire	Lincolnshire County Council Joint Municipal Waste Management Strategy (2018)	https://lincolnshire.moderngov.co.uk/documents/s21941/Appendix%201.pdf
London	Mayor's Draft Municipal Waste Strategy (2010)	https://www.london.gov.uk/sites/default/files/gla_migrate_files_destination/draft-mun-waste-strategy-jan2010.pdf
NHWMP	National Hazardous Waste Management Plan (2007)	http://www.epa.ie/pubs/reports/waste/haz/Environmental%20Report%20EPA%20Edit%20-%20Final%2006.11.07.pdf
Norfolk	Norfolk Minerals and Waste Development Framework: site allocations (2008)	No longer publicly available

Referred to in this report as	Plan for which SEA was prepared	Web-link
NWSMP	National Wastewater Sludge Management Plan (2016)	https://www.water.ie/projects-plans/our-plans/wastewater-sludge-management/NWSMP_SEA_Statement.pdf
Plymouth	Plymouth City Council Municipal Waste Strategy (2007)	No longer publicly available
Scotland	Scottish National Waste Management Plan (2009)	www.scotland.gov.uk/Resource/Doc/282237/0085306.pdf
Southern	Southern Regional Waste Management Plan (2015)	http://www.southernwasteregion.ie/content/southern-region-waste-management-plan-2015-2021-associated-reports
Suffolk	Waste Core Strategy (2009)	https://www.suffolk.gov.uk/assets/planning-waste-and-environment/planning-applications/WCS-Sustainability-Appraisal-Report.pdf
Water Services	Water Services Strategic Plan (2015)	https://www.water.ie/projects-plans/our-plans/water-services-strategic-plan/WSSP-SEA-Environmental-Report-FINAL.pdf
WAW	Wild Atlantic Way Operational Programme 2015-2019	http://www.failteireland.ie/FailteIreland/media/WebsiteStructure/Documents/2_Develop_Your_Business/Key%20Projects/Strategic-Environmental-Assessment-Environmental-Report_1.pdf
Wyre Forest	Wyre Forest Local Plan 2036 (2018)	http://www.wyreforestdc.gov.uk/media/3992025/SA-report-App-B-site-appraisals.pdf

Appendix: Examples of alternatives

Figures A1 – A4 are examples of different levels of the 'hierarchy of alternatives' of Figure 4.12. Figure D5 shows how the impacts of different alternatives can be compared.

Figure A1: Examples of need/demand alternatives (London)

Preferred alternative (policy/proposal)	Alternative considered
Aim towards waste management self-sufficiency for London	Status quo - continue to allow more of London's waste to be managed outside London
Municipal recycling targets set at 45% by 2015 and 50% by 2020, aspiring to achieve 60% by 2031 Include waste reduction target	Set targets in terms of reducing waste going to landfill
	Set overall waste reduction targets
	Set higher or lower recycling targets
Fund regional campaigns such as Recycle for London to raise awareness on the importance of reduction, reuse and recycling	Support borough-specific awareness campaigns only
	Support awareness campaigns focused on equality and deprived groups
Work with boroughs, Third Sector and businesses to promote and deliver waste reduction and reuse, and recycling	Work only with boroughs and Third Sector, not businesses
Encourage boroughs to focus on recycling collection services achieving the greatest greenhouse gas savings and cost saving benefits	Prescribe minimum levels of waste and recycling collection services
Encourage boroughs to provide more 'on the go' recycling services (including 'bring' sites) for separated recyclables	Prescribe source-separated recycling collection services
Promote incentive schemes such as Recyclebank to reward people for recycling	Require boroughs to impose compulsory recycling schemes or alternate weekly refuse collections.

Figure A2: Example of mode/process alternatives 1 (North Wales)

Option	Description
Option 1. A landfill-led strategy for residual waste	High recycling and composting levels followed by low levels of thermal treatment of residual waste using either ◢ Pyrolysis (Option 1A), or ◢ Gasification (Option 1B), or ◢ Mass burn with energy recovery (Option 1C) All remaining residual waste would then be sent to landfill.
Option 2. An Energy from Waste-led strategy for residual waste	High recycling and composting levels with all residual wastes, where possible, being treated by high levels of Energy from Waste using either: ◢ Pyrolysis (Option 2A), or ◢ Gasification (Option 2B), or ◢ Mass burn with energy recovery (Option 2C), or ◢ Anaerobic digestion (Option 2D) Any remaining residual waste would then be sent to landfill.
Option 3. An Mechanical Biological Treatment (MBT)/ Biological and Mechanical Treatment (BMT)-led strategy for residual waste	High recycling and composting levels, all remaining residual wastes being sent to MBT/BMT with the output recovered/ disposed of using either: ◢ Pyrolysis (Option 3A), or ◢ Gasification (Option 3B), or ◢ Mass burn with energy recovery (Option 3C), or ◢ Fuel to off-site energy use (Option 3D), or ◢ On-site anaerobic digestion (Option 3E), or ◢ Landfill (Option 3F) For Options 3A – 3E, any remaining residual waste would then be sent to landfill.

Figure A3: Example of mode/process alternatives 2 (Plymouth)

The options here are combinations of collection options and disposal options:

			Disposal Options			
			A	B	C	D
			Landfill	MBT - RDF	MBT - AD.	EfW
Collection Options	'As Is'	1	1A			
	Build on Current System	2		2B	2C	2D
	Optimise Recycling	3		3B	3C	3D

Note: MBT (Mechanical Biological Treatment), RDF (Refuse Derived Fuel), AD (Anaerobic Digestion), EfW (Energy from Waste).

The different options would lead to different proportions of treatment:

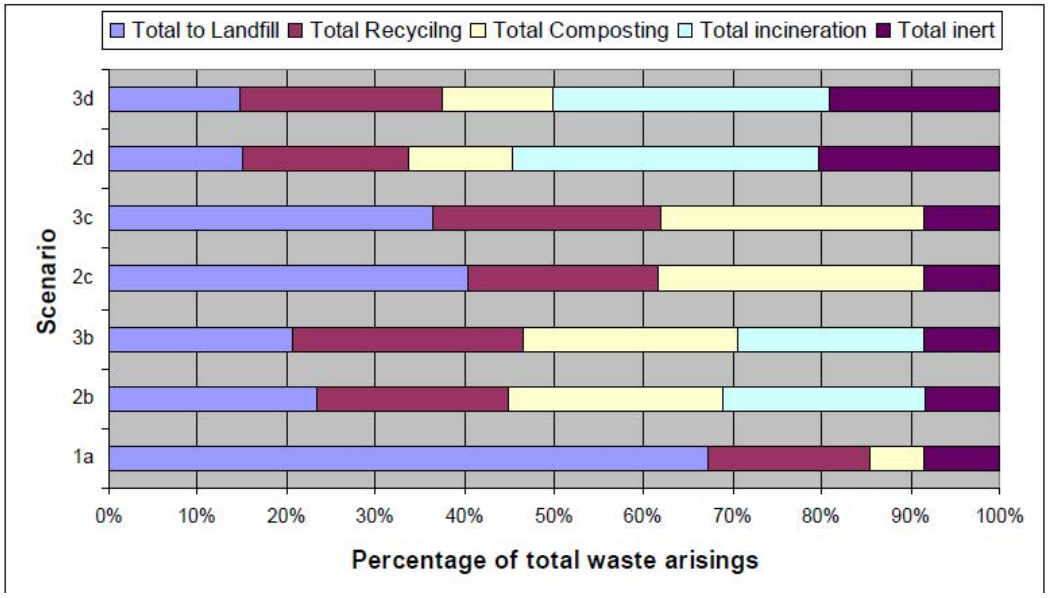


Figure A4: Examples of location alternatives (adapted from Cambridgeshire)

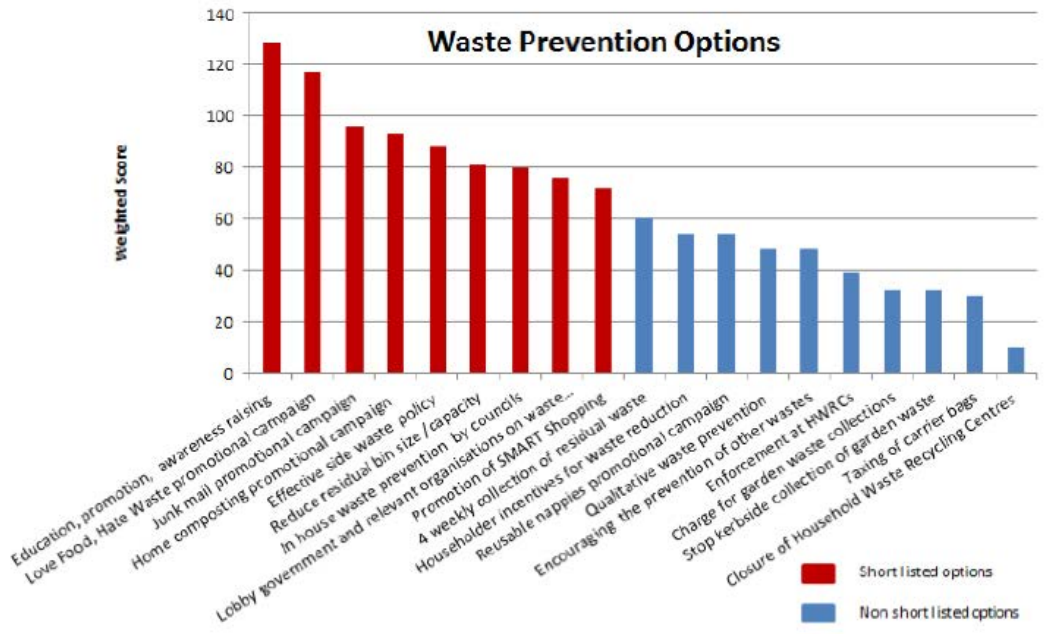
Site	Considered for					
	Energy from waste	Household recycling centre	In-vessel composting	Inert waste recycling facilities	Materials recycling facilities	Inert landfill
Northstow	✔					
Hauxton		✔				
Chesterton Fen		✔				
Melbourne Ave		✔				
Algores Way			✔	✔	✔	
Cow Lane				✔		✔

Figure D5: Comparison of different waste strategy outcomes: a) workshop prioritisations, and b) weighted scores (Derbyshire)

a)

Potential Outcomes	Officer Workshop	Members Workshop	Stakeholder Workshop
Contribute to a more resource efficient Derbyshire	11th	10th	12th
Protect natural resources	12th	9th	4th
Deliver value for money services	3rd	3rd	7th
Deliver effective and efficient services	1st	1st	8th
Reduce the carbon impact of waste management services	4th	6th	2nd
Recover value from residual waste and increase diversion from landfill	10th	8th	3rd
Manage waste in a manner that prevents, reuses, recycles and recovers waste and maximises landfill diversion	5th	11th	1st
Apply self-sufficiency and proximity principles	7th	12th	5th
Facilitate the management of wider wastes	13th	13th	10th
Achieve/maintain high levels of public satisfaction	9th	4th	13th
Achieve/maintain high levels of engagement and accessibility	8th	5th	9th
Deliver a sustainable waste management service	2nd	7th	11th
Maximise public understanding and challenge behaviours to affect behavioural change.	6th	2nd	6th

b)



AN GHNÍOMHAIREACHT UM CHAOMHNÚ COMHSHAOIL

Tá an Ghníomhaireacht um Chaomhnú Comhshaoil (GCC) freagrach as an gcomhshaol a chaomhnú agus a fheabhsú mar shócmhainn luachmhar do mhuintir na hÉireann. Táimid tiomanta do dhaoine agus don chomhshaol a chosaint ar thionchar díobhálach na radaíochta agus an truaillithe.

Is féidir obair na Gníomhaireachta a roinnt ina trí phríomhréimse:

Rialáil: *Déanaimid córais éifeachtacha rialaithe agus comhlíonta comhshaoil a chur i bhfeidhm chun torthaí maithe comhshaoil a sholáthar agus chun déileáil leo siúd nach gcloíonn leis na córais sin.*

Eolas: *Soláthraímid sonraí, faisnéis agus measúnú comhshaoil atá ar ardchaighdeán, spriocdhírithe agus tráthúil chun bonn eolais a chur faoin gcinnteoireacht ar gach leibhéal.*

Abhcóideacht: *Bímid ag saothrú i gcomhar le grúpaí eile chun tacú le comhshaol atá glan, táirgiúil agus cosanta go maith, agus le hiompar a chuirfidh le comhshaol inbhuanaithe.*

Ár bhFreagrachtaí

Ceadúnú

Déanaimid na gníomhaíochtaí seo a leanas a rialú ionas nach ndéanann siad dochar do shláinte an phobail ná don chomhshaol:

- saoráidí dramhaíola (*m.sh. láithreáin líonta talún, loisceoirí, stáisiúin aistrithe dramhaíola*);
- gníomhaíochtaí tionsclaíocha ar scála mór (*m.sh. déantúsaíocht cógaisíochta, déantúsaíocht stroighne, stáisiúin chumhachta*);
- an diantalmhaíocht (*m.sh. muca, éanlaith*);
- úsáid ghlanscartha agus scaoileadh rialaithe Orgánach Géinmhodhnaithe (*OGManna*);
- foinsí radaíochta ianúcháin (*m.sh. trealamh x-gha agus radaiteiripe, foinsí tionsclaíocha*);
- áiseanna móra stórála peitril;
- doirtí fuíolluisce;
- gníomhaíochtaí dumpála ar farraige.

Forfheidhmiú Náisiúnta i leith Cúrsaí Comhshaoil

- Clár náisiúnta iniúchtaí agus cigireachtaí a dhéanamh gach bliain ar shaoráidí a bhfuil ceadúnas ón nGníomhaireacht acu.
- Maoirseacht a dhéanamh ar fhreagrachtaí cosanta comhshaoil na n-údarás áitiúil.
- Caighdeán an uisce óil, arna sholáthar ag soláthraithe uisce phoiblí, a mhaoirsiú.
- Obair le húdaráis áitiúla agus gníomhaireachtaí eile chun dul i ngleic le coireacht chomhshaoil trí chomhordú a dhéanamh ar líonra forfheidhmiúcháin náisiúnta, díriú ar chiontóirí, agus maoirsiú a dhéanamh ar fheabhsúchán.
- Rialacháin maidir le Dramhthrealamh Leictreach agus Leictreonach (WEEE), le Srian ar Shubstaintí Guaiseacha (RoHS) agus ar shubstaintí ídíonn an ciseal ózóin.
- An dlí a chur orthu siúd a bhriseann dlí an chomhshaoil agus a dhéanann dochar don chomhshaol.

Bainistíocht Uisce

- Monatóireacht agus tuairisciú a dhéanamh ar cháilíocht aibhneacha, lochanna, uiscí idirchreasa agus cósta na hÉireann, agus screamhuiscí; leibhéil uisce agus sruthanna aibhneacha a thomhas.
- Comhordú náisiúnta agus maoirsiú a dhéanamh ar an gCreat-Treoir Uisce.
- Monatóireacht agus tuairisciú a dhéanamh ar Cháilíocht an Uisce Snámha.

Monatóireacht, Anailís agus Tuairisciú ar an gComhshaol

- Monatóireacht a dhéanamh ar cháilíocht an aeir agus Treoir an AE maidir le hAer Glan don Eoraip (CAFÉ) a chur chun feidhme.
- Tuairisciú neamhspleách le cabhrú le cinnteoireacht an rialtais náisiúnta agus áitiúil (*m.sh. tuairisciú tréimhsiúil ar Staid Chomhshaol na hÉireann agus Tuarascálacha ar Thascairí*).

Rialú Astaíochtaí na nGás Ceaptha Teasa in Éirinn

- Fardail agus réamh-mheastacháin na hÉireann maidir le gás ceaptha teasa a ullmhú.
- An Treoir maidir le Trádáil Astaíochtaí a chur chun feidhme i gcomhair breis agus 100 de na táirgeoirí dé-ocsaíde carbóin is mó in Éirinn.

Taighde agus Forbairt Comhshaoil

- Taighde comhshaoil a chistiú chun brúnna a shainaithint, bonn eolais a chur faoi bheartais, agus réitigh a sholáthar i réimsí na haeráide, an uisce agus na hinbhuanaitheachta.

Measúntachtaí Straitéisí Comhshaoil

- Measúnacht a dhéanamh ar thionchar pleananna agus clár beartaithe ar an gcomhshaol in Éirinn (*m.sh. mórphleananna forbartha*).

Cosaint Raideolaíoch

- Monatóireacht a dhéanamh ar leibhéil radaíochta, agus measúnacht a dhéanamh ar a oiread is atá muintir na hÉireann gan chosaint ar an radaíocht ianúcháin.
- Cabhrú le pleananna náisiúnta a fhorbairt le haghaidh éigeandálaí ag eascairt as taismí núicléacha.
- Monatóireacht a dhéanamh ar fhorbairtí thar lear a bhaineann le saoráidí núicléacha agus leis an tsábháilteacht raideolaíochta.
- Sainseirbhísí cosanta ar an radaíocht a sholáthar, nó maoirsiú a dhéanamh ar sholáthar na seirbhísí sin.

Treoir, Faisnéis Inrochtana agus Oideachas

- Comhairle agus treoir a chur ar fáil d'earnáil na tionsclaíochta agus don phobal maidir le hábhair a bhaineann le caomhnú an chomhshaoil agus leis an gcosaint raideolaíoch.
- Eolas tráthúil agus inrochtana faoin gcomhshaol a chur ar fáil chun an pobal a spreagadh páirt a ghlacadh i gcinnteoireacht chomhshaoil (*m.sh. Mo Thimpeallacht Áitiúil, Léarscáileanna Radóin*).
- Comhairle a chur ar fáil don Rialtas maidir le hábhair a bhaineann leis an tsábháilteacht raideolaíoch agus le cúrsaí práinnfhreagartha.
- Plean Náisiúnta Bainistíochta Dramhaíola Guaisí a fhorbairt chun dramhaíl ghuaiseach a chosc agus a bhainistiú.

Múscailt Feasachta agus Athrú Iompraíochta

- Feasacht chomhshaoil níos fearr a ghiniúint agus dul i bhfeidhm ar athrú iompraíochta dearfach trí thacú le gnóthais, le pobail agus le teaghlaigh a bheith níos éifeachtúla ar acmhainní.
- Tástáil le haghaidh radóin a chur chun cinn i dtithe agus in ionaid oibre, agus gníomhartha leasúcháin a spreagadh nuair is gá.

Bainistíocht agus Struchtúr GCC

Tá an gníomhaireacht á bainistiú ag Bord lánaimseartha, ar a bhfuil Ard-Stiúrthóir agus cúigear Stiúrthóirí. Déantar an obair ar fud cúig cinn d'Oifigí:

- An Oifig um Inbhuanaitheacht Comhshaoil
- An Oifig Forfheidhmithe i leith Cúrsaí Comhshaoil
- An Oifig um Fhianaise agus Measúnú
- An Oifig um Chosaint Radaíochta agus Monatóireacht Chomhshaoil
- An Oifig Cumarsáide agus Seirbhísí Corparáideacha

Tá Coiste Comhairleach ag an nGníomhaireacht le cabhrú léi. Tá dáréag comhaltaí air agus tagann siad le chéile go rialta le plé a dhéanamh ar ábhair imní agus le comhairle a chur ar an mBord.

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