



**Strategic Environmental Assessment of the
arc21 Waste Management Plan
2013 - 2020**

SEA Statement



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1 INTRODUCTION

1.1 THE SEA STATEMENT

This Strategic Environmental Assessment (SEA) Statement has been prepared as part of the arc21 Waste Management Plan 2013 – 2020, in accordance with national and EU legislation. This document provides information on the decision-making process documenting how environmental considerations, the views of consultees and the recommendations of the Environmental Report and Plan level Habitats Directive – Screening Assessment have been taken into account by, and influenced, the Plan.

The Waste Management Plan has been prepared by arc21, who represent the 11 councils in the eastern region of Northern Ireland and are one of three waste management groups (the other two groups cover the south west and north west regions of Northern Ireland).

This SEA Statement has been carried out in accordance with Regulation 15(4) of the Environmental Assessment of Plans and Programmes Regulations (Northern Ireland) 2004 (S.R. 280/2004). The adopted arc21 Waste Management Plan 2013 – 2020, the SEA Environmental Report, the Habitats Directive – Screening Assessment and the SEA Statement are available for download on the arc21 website: <http://www.arc21.org.uk>

1.2 FINAL ARC21 WASTE MANAGEMENT PLAN 2006 - 2012

The final Waste Management Plan has been altered from the draft Plan released in December 2013 to include more of the recommendations from the SEA Environmental Report and Plan level Habitats Directive – Screening Assessment (HDA). The final arc21 Waste Management Plan 2013 – 2020 was adopted in Autumn 2014, and is available on the arc21 website from October 2014.

2 SUMMARY OF KEY FACTS

Title of Plan	arc21 Waste Management Plan 2013 – 2020.
Purpose of Plan	<p>The arc21 Waste Management Plan 2013-2020 is a review of the previous arc21 Waste Management Plan from 2006. This revised Plan sets to continue the progress of waste management within the arc21 region of Northern Ireland to guide, support and help them meet their legal requirements from European EU Directives, UK wide legislation and National legislation, and to drive forward innovative waste management programmes, with an aim to implement environmentally sound waste management programmes based on the principles of 'Reduce, Re-use and Recycle'.</p>
Subject	Waste Management
Competent Authority	<p>arc21 represents 11 Local Authorities in the eastern region of Northern Ireland - Antrim Borough Council, Ards Borough Council, Ballymena Borough Council, Belfast City Council, Carrickfergus Borough Council, Castlereagh Borough Council, Down District Council, Larne Borough Council, Lisburn Borough Council, Newtownabbey Borough Council and North Down Borough Council.</p>
What prompted the Plan	<p>The arc21 Waste Management Plan 2013-2020 is a review of the previous arc21 Waste Management Plan from 2006, required to reflect updated European EU Directives, UK wide legislation and National legislation.</p>
Area of Plan	<p>The arc21 Region consists of the administrative areas of Antrim Borough Council, Ards Borough Council, Ballymena Borough Council, Belfast City</p>

Council, Carrickfergus Borough Council, Castlereagh Borough Council, Down District Council, Larne Borough Council, Lisburn Borough Council, Newtownabbey Borough Council and North Down Borough Council.

Period covered

2013 - 2020

Frequency of Update

Every 5 years.

Summary of Plan Content

The arc21 Waste Management Plan 2013-2020 sets out the previously existing and new or revised waste management legislation that the arc21 local authorities must adhere to, including any new targets to be met. The Plan describes the various waste streams within the arc21 region, their changing tonnages and characteristics since the previous Plan implementation.

Date Plan Implemented

Autumn 2014

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3 SUMMARY OF THE SEA PROCESS

The arc21 Waste Management Plan 2013 – 2020 has been subject to a process of SEA, as required under the Environmental Assessment of Plans and Programmes Regulations (Northern Ireland) 2004 (S.R. 280/2004).

3.1 SCOPING AND STATUTORY CONSULTATION

The main objective of the scoping process was to identify key issues of concern that should be addressed in the assessment of the draft Plan and the appropriate level of detail to which they should be considered. The scoping process included consultations with the Northern Ireland statutory consultee, the Northern Ireland Environment Agency (NIEA). The list of consultees in the scoping process was expanded to include non-statutory consultees that it was believed could have important inputs into the SEA and preparation of the Plan, such as the North West Region Waste Management Group and SWaMP2008 (south west region waste management group).

3.2 ENVIRONMENTAL ASSESSMENT AND ENVIRONMENTAL REPORT

The preparation of an Environmental Report on the likely significant effects on the environment of the arc21 Waste Management Plan included consideration of:

- Baseline data relating to the current state of the environment;
- Links between the Waste Management Plan and other relevant Strategies, Policies, Plans, Programmes and Environmental Protection Objectives;
- Key environmental issues in the area of the Plan;
- Alternatives available;
- The likely significant positive and negative effects of a number of reasonable alternatives on the environment;
- Measures envisaged for the prevention, reduction and mitigation of any significant adverse effects;
- Monitoring measures to ensure that positive and negative environmental effects will be identified, allowing for appropriate remedial action to be taken if necessary.

3.3 HABITATS DIRECTIVE ASSESSMENT

As the geographical extent of the Waste Management Plan encompasses several Natura 2000 sites and as the SEA highlighted that some of the alternatives available to the Plan may have the potential for impacts on these sites, there was a recommendation from the statutory consultees that arc21 should satisfy itself as to whether a Test of Likely Significance / Habitats Regulation Assessment is

required in order to comply with the Habitats Directive. An assessment of the Waste Management Plan was carried out in March 2014 under Article 6 of the EU Habitats Directive (92/43/EEC) in conjunction with the SEA and Plan making processes. The output of this assessment was a Habitats Directive – Screening Assessment.

3.4 SEA STATEMENT

The main purpose of this SEA Statement is to ensure there is transparency in the decision making process for the Plan. The SEA Statement documents how the recommendations of the Environmental Report and the Habitats Directive – Screening Assessment, as well as the views of the statutory, non-statutory, and public consultees have influenced the preparation of the Final arc21 Waste Management Plan 2013 – 2020. The SEA Statement also provides information on the proposed mitigation and monitoring.

The SEA Statement includes the following information:

- Summary of how environmental considerations have been integrated into the Plan;
- Summary of how submissions received during consultation have been taken into account in the Plan;
- Reasons for choosing the recommended option(s), in light of the other reasonable alternatives considered; and
- Measures that are to be undertaken to monitor and mitigate the potential significant environmental effects of implementing the Plan.

3.5 ADOPTION OF THE PLAN

The arc21 Waste Management Plan 2013 – 2020 was adopted by the arc21 Councils in Autumn 2014. Arc21 now proposes to implement this revised Plan and set to continue the progress of waste management within the arc21 region of Northern Ireland in meeting the requirements from European EU Directives, UK wide legislation and National legislation to drive forward innovative waste management programmes, with an aim to implement environmentally sound waste management programmes based on the principles of 'Reduce, Re-use and Recycle'.

4 CONSULTATION

4.1 INTRODUCTION

Under the Environmental Assessment of Plans and Programmes Regulations (Northern Ireland) 2004 (S.R. 280/2004), consultation is specifically required at the scoping stage with the nominated environmental authorities, and then the authorities and the wider public when the draft Plan and Environmental Report are put on public display. The final adopted Plan and SEA Statement are required to go on public display at the end of the Plan-making process. This section describes the statutory and non-statutory consultation that has taken place over the course of the SEA process.

4.2 SCOPING CONSULTATIONS

To begin the process of scoping the SEA for the arc21 Waste Management Plan 2013 – 2020 an initial consultation was held with the Statutory Authorities, as designated by the relevant SEA legislation and listed in **Table 4.1**. Following the statutory consultation, it was considered best practice to include a number of relevant non-statutory consultees in the scoping process, which are also listed in **Table 4.1**. In addition, the Draft Scoping Report was published on the arc21 website to encourage further participation by stakeholders and the public in the consultation process. Although no official transboundary consultations took place with the statutory consultees in Ireland, the scoping comments received from the Environmental Protection Agency in Ireland for the other two Waste Management Plans in Northern Ireland were carried through into the arc21 Plan and SEA where appropriate.

Table 4.1 Consultees in the SEA Scoping Process

Consultee	Statutory / Non-Statutory
Northern Ireland Environment Agency	Statutory
North West Region Waste Management Group	Non-Statutory
SWaMP2008	Non-Statutory

The written comments received on the draft Scoping Report generally consisted of:

- Comments on the proposed SEA objectives;
- Environmental baseline information;
- Sources of baseline information;
- Updates to relevant legislation, and
- Potential impacts that need to be considered and issues to be assessed.

All comments received were included in Appendix A of the Environmental Report, which can be viewed at: <http://www.arc21.org.uk>

4.3 PLAN AND PUBLIC CONSULTATIONS

Statutory consultations on the draft Plan and Environmental Report took place between the 9th January 2014 and the 28th February 2014, as required under Regulation 12 of the Environmental Assessment of Plans and Programmes Regulations (Northern Ireland) 2004 (S.R. 280/2004). Advertisements were posted in regional newspapers detailing the release of the draft Waste Management Plan and SEA Environmental Report of the Plan. The advertisements detailed the availability of the documents, the consultation time period and have asked the public for any comments they may have. The locations and dates of these advertisements were as shown in **Table 4.2**.

Table 4.2 Paper Advertisements

Area	Regional / Local Paper	Date of Advertisement
Northern Ireland	Belfast Telegraph	Thursday 9 th January 2014
Ireland	Irish Times	Thursday 9 th January 2014

Section 5 contains an overview of the key issues raised in the written submissions received during the consultation period. A list of the individuals and organisations that submitted responses is given below in **Table 4.3**.

Table 4.3 Submissions Received

Submission Number	Date Received	Submitted by	Status
1	28 th February 2014	NIEA	Statutory
2	5th February 2014	Waste Management Contractor (submitted as meeting notes)	Waste Contractor
3-9	23rd February 2014	Members of the Public	Public

5 ISSUES RAISED IN SUBMISSIONS

In general there were very few submissions received on the Plan and SEA Environmental Report. The majority of comments received were from the statutory consultee. The lack of responses on the Plan reflects that this is a review of an existing Plan, which is not proposing significant alterations to any existing waste management or waste treatment regimes.

5.1 KEY ISSUES AND RESPONSES

5.1.1 Baseline Environmental Information

Key Issue: Various comments were supplied by the statutory consultees on updated and more detailed baseline environmental information and sources of information.

Response: Within the Final Environmental Report the baseline environmental information has been updated as advised by the statutory consultees. This updated environmental baseline information will be used in the monitoring of the Waste Management Plan and in the next review of the Plan. None of the alterations made to the baseline environmental information would influence the assessment of the alternatives.

5.1.2 Additional Legislation

Key Issue: Comments were supplied by the statutory consultees on legislation, which may have been updated or overlooked, to be incorporated within the SEA Environmental Report.

Response: The recommendations made in the consultation submissions on additional or updated legislation have been researched and incorporated into the SEA Environmental Report where appropriate. This updated legislative information will be used in the monitoring of the Waste Management Plan and in the next review of the Plan. None of the alterations made to the legislation information would influence the assessment of the alternatives.

5.1.3 Habitats Regulation Assessment

Key Issue: The SEA Environmental Report highlighted that “Any development with the potential to impact upon a Natura 2000 designated site (SACs or SPAs) is likely to require a Habitats Regulation Assessment (HRA) under the Habitats Directive 92/43/EEC.” Following this the statutory consultees advised that they were of the opinion that any development with the potential to impact upon a Natura 2000 designated site (SACs or SPAs) will have to consider and comply with requirements of the Habitats Directive 92/43/EEC.

Response: A Habitats Directive – Screening Assessment was undertaken for the draft Plan in March 2014. The Habitats Directive – Screening Assessment concluded – *“This assessment has determined that the arc21 WMP 2013 is not directly connected with or necessary to the management of any Natura 2000 site and thus the current Screening Report was required. The impact assessment undertaken in this report has determined that there are no individual elements of the arc21 WMP 2013 (alone or in-combination with other plans or projects) that would be likely to give rise to significant effects on any Natura 2000 site.*

It is therefore concluded, adopting the precautionary approach, in line with current guidance, that a Habitats Directive Assessment is not required for the arc21 WMP 2013.”

The outcome of the Habitats Directive – Screening Assessment did not influence the assessment of the alternatives in the SEA Environmental Report.

5.2 SPECIFIC COMMENTS

Specific comments were received during the consultation process that did not come under any of the above Key Issue headings. These specific comments are addressed in **Table 5.1** and **Table 5.2**.

Table 5.1 Specific Plan Comments

Comment	Response
It would be helpful if the Plan could look more closely in the Baseline Review at these objectives and provide and assessment of the current position and future waste management needs for collection, treatment and recycling/recovery/disposal. In other words is the current infrastructure fit for purpose, is there a deficit/surplus of these types of facilities in the region and if waste capacity changes are required, how might these be met?	Chapter 14 "Future Requirements" deals with the infrastructural deficit and details the future needs in terms of tonnages required to meet statutory requirements.
It would be informative to include a review/evaluation of the current WMP – what worked, what didn't, what changes have been made throughout the life of the Plan?	The plan is designed as a forward looking document detailing what is required for the region over the planning period. It is therefore considered out of scope to look back at the previous plan period.
The draft Plan mentions recovery and the future production of refuse derived fuel (RDF). As this waste activity/production is currently taking place, it would be useful to include a short a review in the Plan. For instance how much does this currently contribute towards compliance with targets.	Chapter 14 of the Plan (Future Requirements) deals with the production of RDF from a collective residual waste contract from all of the Councils in the Region.
Objectives of the Plan - Whilst the Environmental Report includes Objective 7 Climatic Factors 'to reduce greenhouse gas emissions and adapt to potential climate change' the draft Plan itself does not have a specific climate change objective. There could be merit, given the specific impacts of waste management on greenhouse gas emissions and the impacts of climate change (outlined in the Climate Change Risk Assessment 2012) on waste management, to include a similar objective within the Plan itself.	An additional objective has been added within the plan to address climate change and greenhouse gas emissions
Objectives of the Plan - We would suggest adding a further objective in respect to waste prevention, resource efficiency and a circular economy.	This is addressed within the objective of taking into consideration the requirements of the Northern Ireland Waste Management Strategy.

Site Selection Criteria – We are of the opinion that the site selection criteria for location of facilities should take into account any potential impacts from the changing climate.	This is taken into consideration in the use of flooding as a key criteria in the assessment
Site Selection Criteria – We are of the opinion that ‘Nature conservation designations’ in Paragraph 11.16 should read ‘Nature conservation interests’. This would more accurately reflect the criteria analysis outlined in paragraph 11.42 and the content of the Planning Policy Statement 2 – Natural Heritage (PPS2). Natural Heritage Interests can occur out-with a designated area as reflected in the policies within PPS2. In particular, PPS2 policy NH2 refers to species protected by law and policy NH5 refers to ‘Habitats, Species or Features of Natural Heritage Importance.’	The intention of this section was to cover nature conservation interests as is documented in the criteria analysis.
Baseline Waste Management Review – The Assessment Summary – Figure 5.5 and Section 5.38 are brief and it would be helpful to have this expanded to provide some explanation.	This is information pertaining from the previous Plan.
Baseline Waste Management Review – Table 5.10 – we would recommend that the source of this data be identified.	A source has been added for this table to the final Plan.
Baseline Waste Management Review – Paragraph 5.138 – we are of the opinion that this text could be misleading for readers. There are some licensed facilities that are ATFs that also accept large tonnages of ferrous and non-ferrous metals, hence the total of 645,000 tonnes. However only a portion of this is ELV generated.	This paragraph in the final Plan has been amended to include metals.
Principles of Waste Management – Paragraph 7.35 – We would suggest that the Waste Hierarchy is included in the text between the 3 rd and 6 th lines.	Reference to the Waste Hierarchy has been added to the final Plan.
Future Requirements – Table 10.4 – we would recommend that the source of this data is identified.	The source of this table has been identified in the final Plan.

Table 5.2 Specific Environmental Assessment Comments

Comment	Response
Alternative 1 – Do Nothing. We are of the opinion that the assessment of this scenario could have considered including potentially negative effects in terms of air & climate and human health. There are ongoing concerns about gas and odour management at major landfills in the arc21 area which has resulted in enforcement action by the NIEA. The Do Nothing scenario will not help address this problem, while the other Alternatives will result in significantly reduced tonnages to landfill, which we consider will have a significant impact on odour.	<p>The assessment in the Environmental Report took the ‘do nothing’ scenario to be maintaining the status quo, and was to set the benchmark for comparison with all other alternatives. As the strategic measures proposed in the Plan are minor improvements, with little detail available at this stage, it was deemed that the most beneficial method of assessment would be comparison of the status quo to the implementation of the measures.</p> <p>As the ‘do nothing’ scenario would not cause an increase in gas and odour emissions this was deemed to be a neutral impact for comparison with the Plan Alternatives. The assessment of the other alternatives reflected the potential positive and negative impacts in comparison to the do nothing scenario.</p>
Alternative 4 – Additional 60% Target. As noted in the Environmental Report, the proposed measures for this scenario are quite generic at this stage with few details on specific actions. We would have concerns that ‘recycling of composting like outputs’ driven by targets could lead to potentially negative impacts e.g. on soil and water quality, for example if inappropriately poor quality ‘compost like’ material is dumped on land just to get rid of it.	<p>It is true that there is the potential for the dumping of inappropriate material to affect soil and water quality, however this is currently governed by stringent requirements for PAS110 compliance. Compost like outputs in this context would be from fully regulated contracts where the above specification is part of the requirements.</p> <p>However an additional mitigation measure has been added to Table 10.1 of the Environmental Report to reinforce the need to police this potential issue.</p>

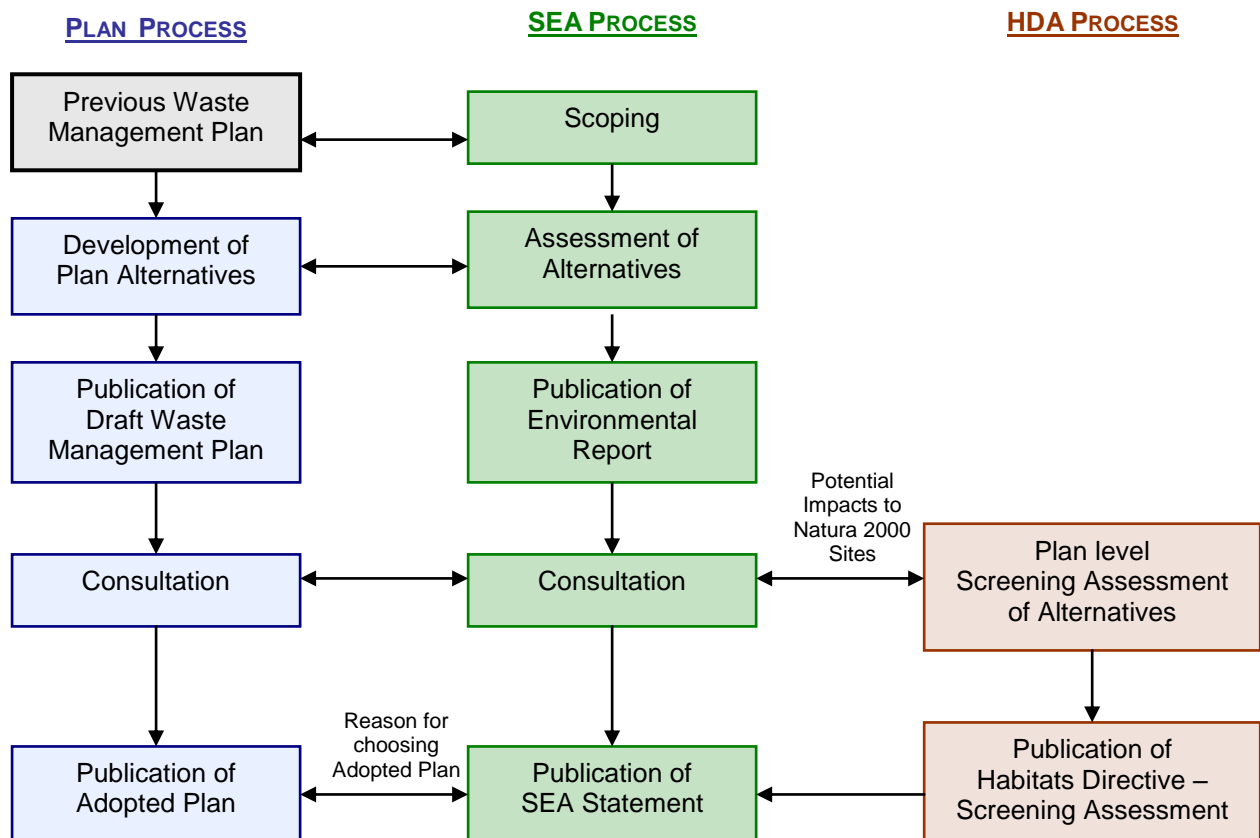
<p>There is a disconnect between the alternatives considered in the Environmental Report and those considered in the WMP, e.g. a 'do nothing' was considered in the environmental report and not the WMP.</p>	<p>As arc21 have a requirement to adhere to new EU, UK and NI legislation the 'do nothing' scenario was not considered in the draft and final Waste Management Plan. The 'do nothing' scenario was deemed not to be an Option early in the Plan and SEA processes as would cause arc21 to fail to meet their legal requirements.</p> <p>Section 14 of the Final Plan, from 14.11 onwards, details the actual Future Management of LACMW that are proposed to be utilised by the arc21 Councils in management of the Local Authority Collected Municipal Waste.</p>
<p>Mitigation and Monitoring – We note that the SEA targets associated with Climatic Factors refer to waste management facilities that are adapted to climate change, but do not include reference to the site selection of their locations taking account of climate change impacts.</p>	<p>Within this Plan period there are no new permanent facilities proposed, only bring banks. The site selection process for any permanent facilities should however take climate change impacts into consideration. This may be relevant in future versions of the Plan.</p> <p>Within Table 10.2 of the final Environmental Report the following SEA monitoring indicator has been added: <i>“Facilities designed with potential climatic change taken into consideration.”</i></p>
<p>We are of the opinion that there is scope to include a need to consider climate change impacts into the decision making processing terms of location and design of waste management facilities. The associated monitoring indicator could read <i>“facilities located and designed with climate change taken into consideration.”</i></p>	<p>Within this Plan period there are no new permanent facilities proposed, only bring banks. The site selection process for any permanent facilities should however take climate change impacts into consideration. This may be relevant in future versions of the Plan.</p> <p>Within Table 10.2 of the final Environmental Report the following SEA monitoring indicator has been added: <i>“Facilities designed with potential climatic change taken into consideration.”</i></p>
<p>The Environmental Report does not consider the environmental impact on areas wider than the boundary of the arc21 plan. We would recommend that the Post Adoption Statement should indicate how these potential impacts have been considered.</p>	<p>In scoping of the assessment it was decided that the assessment would mirror the scope of the Plan, with a geographical limitation to the arc21 council areas. As this Plan is a review of an existing Plan, the alternatives are mostly minor improvements of existing measures. There were no wider environmental impacts anticipated beyond the boundaries of the arc21 council areas from implementation of these minor improvements to existing measures.</p> <p>Section 3.5 of the Environmental Report details the position on transboundary impacts – <i>“Under the Environmental Assessment of Plans and Programmes Regulations (Northern Ireland) (S.R. 280 of 2004), transboundary consultations are required where the Plan is likely to have significant environmental effects on other Member States. It was not anticipated that the arc21 Waste Management Plan would have any significant transboundary environmental impacts, therefore no transboundary consultations were undertaken at this stage. Transboundary consultation responses for other waste management regions in Northern Ireland were however taken into consideration in this assessment.”</i></p>
<p>A cumulative impact assessment of the alternatives could have been considered within the environmental report with particular focus on the implementation of options 2, 3 & 4 together. We would recommend that the post-adoption statement should indicate how these potential cumulative impacts have been considered.</p>	<p>Additional text has been added to Section 9.5 to clarify the cumulative benefits of implementing certain options.</p>
<p>The Environmental Report did not indicate how scoping consultation responses had been taken account of. Please note that the Post Adoption Statement must indicate how opinions expressed during consultations</p>	<p>Section 3.4 of the Environmental Report details the consultations undertaken at the scoping stage of the SEA. All responses received were included in Appendix A of the Environmental Report. Comments</p>

have been taken into account.	on the Scoping Report were incorporated into the Environmental Report and draft Plan where possible and appropriate.
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6 INCORPORATION OF ENVIRONMENTAL AND CONSULTATION ISSUES INTO THE PLAN

6.1 ENVIRONMENTAL CONSIDERATIONS

The SEA process took place in parallel to the preparation of the Waste Management Plan, therefore from the beginning of the Plan process the environmental consequences of implementing the Plan via the alternatives available have been taken into account. Aside from the day to day interactions there were also formal meetings and workshops for the Plan, SEA and HDA teams, and also statutory and non-statutory consultations with other stakeholders, authorities and organisations. This iterative approach ensured that the SEA, HDA Screening and the preparation of the Plan were well integrated in order to best meet the environmental objectives and the Waste Management of the Plan. The interaction of the teams and processes is shown in the below diagram:



6.2 SUMMARY OF THE SEA ASSESSMENT

A baseline led assessment approach was used for this SEA, using the existing baseline environmental conditions as a starting point from which the potential impacts of the Plan Alternatives could be assessed. The SEA environmental objectives proposed for the Plan were incorporated into the assessment process by becoming the guideline for the grading of potential impacts and their severity. These environmental objectives for the Final Waste Management Plan are given in **Table 6.1**. Each of the alternatives considered was assessed against each of the SEA environmental objectives.

Table 6.1 SEA Environmental Objectives

SEA Topic	SEA Objective
Biodiversity, Flora & Fauna	Objective 1 To minimise/avoid the environmental impacts.
Population	Objective 2 To provide opportunities for participation through recycling and composting schemes
Human Health	Objective 3 To reduce risks to health
Soils	Objective 4 To reduce the environmental impacts – soils
Water	Objective 5 To reduce the environmental impacts – groundwater and surface water
Air	Objective 6 To reduce the environmental impacts – air pollution and noise
Climatic Factors	Objective 7 To reduce greenhouse gas emissions and adapt to potential climatic change
Material Assets	Objective 8 Provide sustainable waste management solutions for the arc21 region
Cultural Heritage (inc. Architectural and Archaeological)	Objective 9 To reduce the environmental impacts on the historic environment and cultural heritage
Landscape	Objective 10 To reduce the environmental impacts on landscape

The Plan Alternatives were made up of many smaller alternatives set out under the broad headings of Waste Prevention, Recycling and Composting, and Residual Waste Management and Energy Recovery. The residual waste treatment discussed within the Waste Management Plan was implemented by the previous Plan of 2006 - 2012, with facility planning currently being carried out at the project level. **Section 15** of the current Waste Management Plan provide explanations of the multi

staged process for the purposes of selecting suitable sites for residual waste infrastructure. As this measure is implemented beyond strategic planning there was no environmental assessment to be done for this SEA. Arc21 have considered mechanisms by which a 60% LACMW target, as set out in the draft Northern Ireland Waste Management Strategy - Delivering Resource Efficiency, could be met, which it is anticipated will require the inclusion of alternative sources of recycling.

Each of these measures were relatively benign and unobtrusive, serving to enable the continuation of or implementation of measures from the previous Waste Management Plan, rather than introduce new waste management or treatment alternatives. Most of these measures as a stand alone alternative cannot be assessed either quantitatively or qualitatively for impacts upon the environment and therefore had to be grouped under the one heading for the purposes of assessment. The Alternatives considered for assessment within the SEA were as follows:

Alternative 1 – This is the “Do Nothing” alternative, whereby this review of the Waste Management Plan is not implemented and the current Waste Management Plan (2006) remains as the Plan guiding the waste management activities of the constituent councils.

Alternative 2 – This alternative is to implement **Waste Prevention** measures. This will be assessed as one overall measure, that implements waste prevention initiatives, including awareness raising and stakeholder engagement.

Alternative 3 – This alternative is to implement the **Recycling and Composting** measures. This will be assessed as one overall measure, that continues the three stream collection of organics, dry recyclables and residual wastes, implements the increase in materials collected at the kerbside (including the collection of glass), maintains education and awareness campaigns, introduces Action Plans, provides new bring banks, increases the recycling of segregated materials at household waste recycling centres, introduces kerbside collections of organic wastes from commercial premises serviced by the Councils, and introduces the recycling of plastic film.

Alternative 4 – This alternative is to implement the **Additional 60% Target** measures, as detailed previously. This will be assessed as one overall additional measure that implements increased waste reduction from waste prevention initiatives, composting from home composters issued by Councils to householders, recycling of bottom ash and fly ash from Energy from Waste facilities, recycling of compost like outputs, and inclusion of C&D recycling from Household Recycling Centres. These are quite generic measures as few details on specific actions are available at this stage. Each of these potential actions, if implemented, would be in the long term of the Plan period.

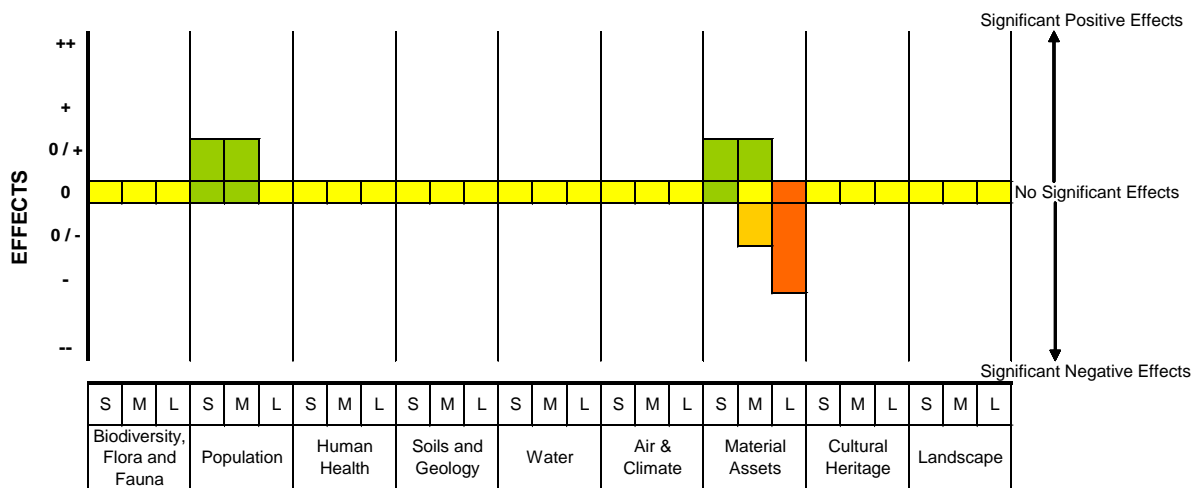
The draft and final Waste Management Plans adopt a slightly different nomenclature for the Plan Alternatives, as the Plan would not include a Do Nothing Option, as this would be contrary to the arc21 remit.

For each alternative the assessment output was a graphic bar chart showing the relative potential positive and negative impacts, in the short, medium and long term, against each of the SEA Topics. These assessment outputs are given in **Figure 6.1 to Figure 6.4**.

Alternative 1 – Do Nothing Option

By not implementing the arc21 Waste Management Plan 2013 it is only likely that there will be significant negative environmental impacts on material assets in the long term, whereas the current Plan may not provide sufficient material recovery and recycling to meet the new targets. It should also be noted that not implementing the Waste Management Plan will also mean not implementing a Plan that has been assessed by an SEA and the environmental objectives, mitigation measures and monitoring proposals from the SEA will not be incorporated into the future tracking of the environmental impacts and progress of the Plan. Any future assessment of Plan progress will therefore still be relying solely on data on waste prevention and material reuse, recovery, recycling and disposal, and not any impacts on the wider environment. A summary figure of the impacts, and their significance, of not implementing the Plan is given below in **Figure 6.1**.

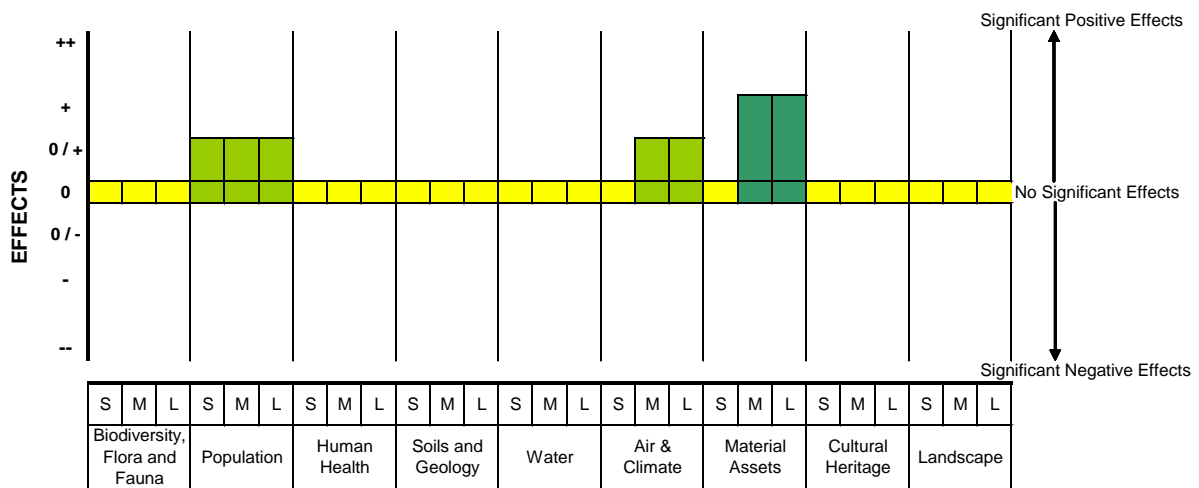
Figure 6.1: Assessment Alternative 1 – Do Nothing



Alternative 2 – Waste Prevention

The implementation of the Waste Prevention measures may provide slight positive impacts on a local or regional scale on population, air and climate, and moderate positive impacts on material assets. A summary of the assessment for Alternative 2 is given in **Figure 6.2**.

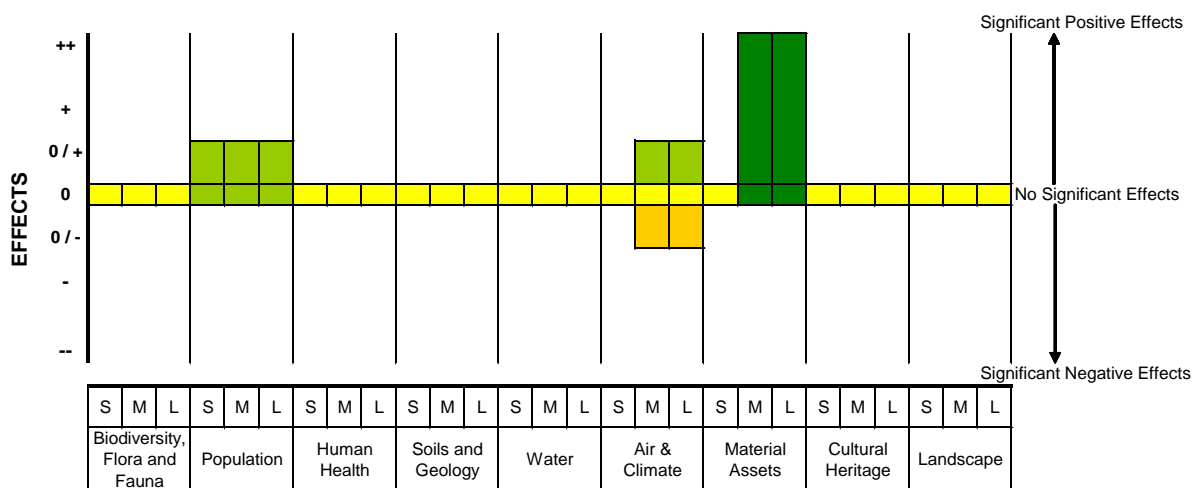
Figure 6.2: Assessment Alternative 2 – Waste Prevention



Alternative 3 – Recycling and Composting

The implementation of the Recycling and Composting measures may provide slight positive impacts on a local or regional scale on population, air and climate, and significant positive impacts on material assets. The implementation of the measure however also has the potential for slight negative impacts on air from emissions **Figure 6.3**.

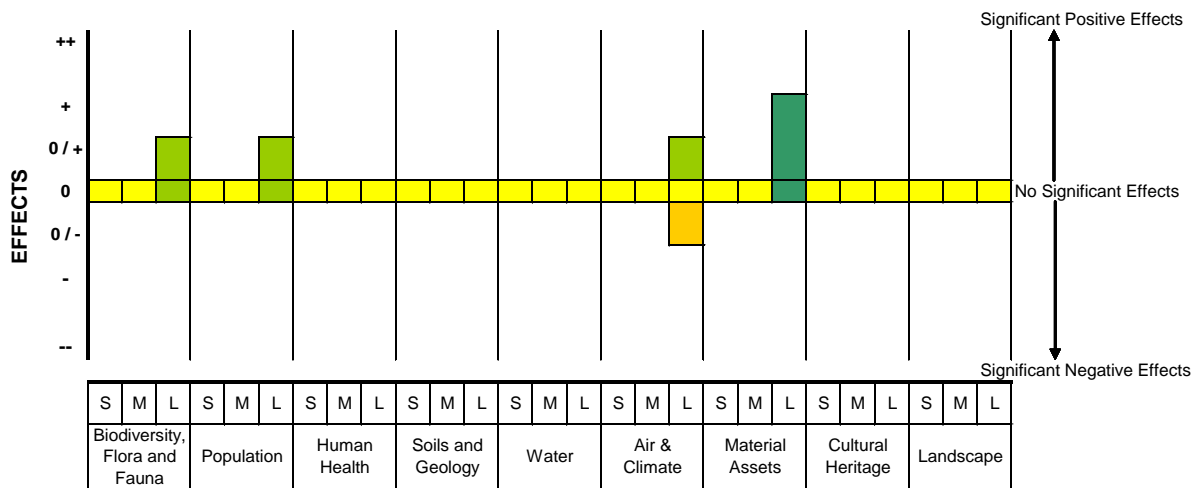
Figure 6.3: Assessment Alternative 3 – Recycling and Composting



Alternative 4 – Additional 60% Target

The implementation of the Additional 60% Target measures may provide slight positive impacts on a local or regional scale on biodiversity, flora and fauna, population, air and climate, and moderate positive impacts on material assets. The implementation of the measure however also has the potential for slight negative impacts on air from emissions. A summary of the assessment for Alternative 4 is given in **Figure 6.4**.

Figure 6.4: Assessment Alternative 4 – Additional 60% Target



6.2.1 Summary of Impacts

As can be seen summarised in **Figures 6.2 to 6.4**, the implementation of the Plan is likely to provide slight, moderate and significant positive environmental impacts. There is however the potential for some slight negative impacts in implementation of Alternatives 3 and 4; however these can be mitigated for. Implementation of any of these three sets of alternatives would be beneficial to the environment, over Alternative 1 – Do Nothing, particularly in the medium to long term.

The Interactions of and the interrelationships between Alternatives 2, 3 and 4 is likely to lead to the greatest positive cumulative impacts. Either Alternative 2 or Alternative 3 could be implemented by themselves, as Alternative 4 is almost an extension of the other two groups of measures. It would be most environmentally beneficial to ensure that Alternatives 2 and 3 are fully implemented, with appropriate mitigation measures in place as required, then when appropriate at a later stage of the Plan there is the continuation to implement Alternative 4. This should provide the greatest positive impacts for the individual alternatives and also the greatest positive cumulative benefits to the environment.

6.2.2 Mitigation Required

As part of the Environmental Report a list of mitigation measures have been proposed for each potential impact. arc21 and the constituent councils are aware of these proposed mitigation measures. These potential impact / problems and the mitigation measures are given in **Table 6.5**. The mitigation measures proposed are strategic and quite generic; however this reflects the generic nature of the Plan and the benign nature of the alternatives available.

Table 6.5 Potential Impacts and Mitigation

Topic	Alternative	Impact / Problem	Mitigation
A / C	3 / 4	Increased air emissions from increased waste management activity.	Cleaner fuels to be used. Well maintained waste management fleet and plant. Adoption of renewable energies (for example, solar, wind) in powering waste management activities. Optimising of waste management collections.
L	3	Potential for impacts on local vistas and landscape setting from bring banks.	Good site location selection. Adequate planning at the local level not to site bring banks in sensitive locations. Good screening to minimise residual impacts.
HH	3	Potential for health and safety issues with kerbside collection of glass	Best Practice Guidance and risk assessments to be developed in combination with Health and Safety Authorities.
SW	4	Recycling of composting like outputs' driven by targets could lead to potentially negative impacts on soil and water quality, if inappropriately poor quality 'compost like' material is dumped on land.	PAS110 Compliance will be required before this can be undertaken

A – Air Quality. C – Climate. HH - Human Health. L – Landscape. S – Soils. W – Water.

6.3 INFLUENCE OF THE SEA / HDA IN PLAN PREPARATION

The study team for the SEA and Habitats Directive – Screening Assessment, of the arc21 Waste Management Plan 2013 – 2020 comprises of engineering, environmental and planning team members from arc21, Local Authorities and RPS (Environmental and Engineering Consultancy). Throughout the Plan, SEA and HDA processes, the relevant team members from arc21, Local Authorities and RPS have worked closely together, with constant contact, team workshops and regular meetings to ensure complete integration. The following are a list of the planning and environmental issues workshops / meetings that have taken place throughout the Plan, SEA and HDA processes (excluding consultations):

- 15/10/12 – arc21 & RPS – SEA commencement meeting.
- 11/12/12 – arc21 & RPS – Plan / SEA development workshop.
- 11/02/13 – arc21 & RPS – Scoping comments analysis meeting.
- 10/03/14 – arc21 & RPS – Plan and Environmental Report comments analysis meeting.

The SEA and HDA teams have been involved in:

- Early identification of environmental sensitivities in the Plan area to help highlight potential impacts on the environment and to aid decision making in the draft Plan.
- Recommendation of mitigation measures to address the potential impacts arising from the alternatives considered in the draft Plan.
- Development of a monitoring Plan to help assess the environmental performance of implementing the final Waste Management Plan.
- Dissemination and screening of all proposed alterations to the final Waste Management Plan to determine if any significant environmental effects are likely to arise.

The SEA process has ensured that potential environmental impacts (both positive and negative) associated with the implementation of the arc21 Waste Management Plan 2013 – 2020 have been given due consideration in the preparation of the Plan.

6.4 CHANGES TO THE PLAN DUE TO CONSULTATIONS

The changes made to the Plan and SEA Environmental Report due to statutory consultations are given in **Section 5** of this SEA Statement. During public consultations on the draft Waste Management Plan the following issues were raised and alterations were made:

- All respondents agreed with the principle objectives of the Plan;
- All respondents supported the Waste Hierarchy as a priority for action in the review of the Plan;
- There were no suggestions for further specific actions which could be undertaken by Councils to encourage waste prevention by householders;
- All respondents believed that the actions outlined in the Plan can assist the Councils in meeting the proposed 60% recycling target;
- All respondents supported the principle to further reduce landfill by using waste that cannot be practically recycled as a resource to produce energy; and
- All respondents supported the overall approach in the accompanying Environmental Report.

7 PREFERRED ALTERNATIVES

Section 14 – Future Requirements (14.11 Onwards) Future Management of LACMW of the final Waste Management Plan runs through the Alternatives available to the Plan. It should be noted however that the Waste Management Plan does not propose new alternatives, only extensions of those already in operation through the previous incarnation of the Plan. There is no specific preferred alternative in this Plan, however the local authorities that make up the arc21 region have the option to choose between, or combinations of, the alternatives available in the Plan. With the SEA of the Waste Management Plan, the local authorities are aware of the strategic environmental issues with implementing these alternatives, or combinations of alternatives, and are aware of the proposed mitigation measures they may implement to reduce the potential for negative impacts on the wider environment.

8 MEASURES TO MONITOR SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE IMPLEMENTATION OF ADOPTED PLAN

Article 10 of the SEA Directive requires that monitoring should be carried out in order to identify at an early stage any unforeseen adverse effects due to implementation of the Plan, with the view to taking remedial action where adverse effects are identified through monitoring. A monitoring programme is developed based on the indicators selected to track progress towards achieving strategic environmental objectives and reaching targets, enabling positive and negative impacts on the environment to be measured. The environmental indicators have been developed to show changes that would be attributable to implementation of the Plan. **Table 8.1** shows the Targets and Indicators for monitoring and who would potentially be the responsible body or organisation, from which arc21 may obtain information for collation and comparison. These Targets and Indicators for monitoring have been included within the Final Waste Management Plan as **Table 16.1 Environmental Monitoring** under **Section 16 Implementation, Monitoring and Review**. Within this section of the Plan, arc21 have quoted that “*Table 16.1 sets out the proposed environmental monitoring programme for the Waste Management Plan*”.

Table 8.1: Environmental Monitoring

SEA Target	SEA Indicators	Potential Responsible Authority	Possible Data Availability, Source and Frequency
No damage to protected sites in the arc21 region (BFF)	Status of EU Protected Habitats and Species and status of national Priority Species and Habitats.	NIEA	UK Report on Implementation of Habitats Directive (every 6 years). Northern Ireland Environmental Statistics Report (Annual). UK Biodiversity Action Plan (every 3 years). Northern Ireland Biodiversity Strategy (every 3 years). Northern Ireland Environmental Statistics Report (Annual)
No damage to or displacement of protected species in the arc21 region (BFF)	Condition of Selection Features in sites designated for nature conservation (SACs, SPAs and ASSIs).		
Year on year reduction of kerbside collected recyclables contamination levels (P).	Recorded contamination levels of kerbside collected recyclables.	Local Authority / arc21	Local Authority / arc21 contamination studies – As required.
Year on year reduction in waste management costs per head population (P).	Waste management costs per head population.		Local Authority / arc21 economic studies – As required.
Increase in number of recycling facilities per head population (P).	Recycling facilities available per head population.		arc21 Waste Management Plan review (every 6 years)
Increase in recycling participation rates (P).	Recycling scheme participation studies.		Local Authority / arc21 participation studies – As required.
Provide safe waste management sites and working conditions (HH)	Number of accidents associated with waste management activities and facilities	HSENI / Local Authority Environmental Health Department	Data collected as reported. Can be sourced on request.
Prevent nuisance dust and odours emanating from waste facilities and activities (HH)	Health issues and nuisance complaints associated with waste management activities	Local Authority Environmental Health Department / NIEA	Data collected as reported. Can be sourced on request.
No soil contamination due to waste management activities (S)	Area of land contaminated or impacted due to waste activities, and the location of new facilities. Contamination statistics and reports	Local Authority Environmental Health Department / NIEA	Local Authorities collect information of potentially contaminated site within their council areas. Can be sourced on request. Data collected as reported from spills. Can be sourced on request. Northern Ireland Environmental Statistics Report (Annual).
No deterioration of water status up or downstream of arc21 waste management facilities, due to development or operation (W).	WFD water status of surface and groundwaters in the area.	NIEA	WFD Water Status Reports (2015). Revised River Basin Management Plans. WFD Local Management Area Plans.
No negative impacts on water supplies (W)		NIEA / NI Water	

SEA Target	SEA Indicators	Potential Responsible Authority	Possible Data Availability, Source and Frequency
No negative impacts on flood defences, floodplains or local flooding characteristics (W).		NIEA / DARD Rivers Agency	DARD Rivers Agency Flood Risk Management Plans (2015). WFD Water Status Reports (2015). Revised River Basin Management Plans.
Reduce air emissions from waste management activities (A)	Periodic dust, gas and noise monitoring in the vicinity of waste management facilities.	Local Authority Environmental Health Department / NIEA	Data collected as reported. Can be sourced on request. PPC reporting
Reduce noise emissions from waste management activities (A)			
Reduce greenhouse gas emissions from arc21 waste management activities (C)	Estimated GHG emissions CO ₂ emissions from energy recovery, eg. landfill flares.	NIEA / arc21	GHG Emissions Data Reporting and National (GHG) Inventory Reports
Provide waste management facilities that are adapted to potential climatic change (C)	Facilities designed with potential climatic change taken into consideration.	arc21	Planning applications and As-built drawings.
Reduce the quantity of waste produced (MA)	Waste production statistics Material recovery and recycling statistics	Local Authority / arc21	WasteDataFlow Reporting
Increase recycling and composting rates (MA)			
Recovery of residual waste (percentage recovered) (MA)			
Reduce the quantity of materials Landfilled (MA)	Landfill statistics		
Avoid damage to any cultural heritage features in development and/or operation of arc21 waste management facilities (CH)	Number of heritage features restored due to arc21 activities. Number of new heritage features discovered due to arc21 activities. Number of heritage features lost or destroyed due to arc21 activities.	NIEA	NIEA Heritage Datasets and Reporting – Updated on ongoing basis.
No damage to local vistas and landscape in the area of arc21 waste management facilities (L)	Significant negative changes in landscape quality and land cover types.	NIEA / Local Authorities/ GSNI	Landscape Character Areas. Northern Ireland Countryside Surveys (every 10 years). Landcover Mapping. Local Area Plans.

SEA Target	SEA Indicators	Potential Responsible Authority	Possible Data Availability, Source and Frequency
Enhance the local vistas and landscape where possible, with sensitive and sustainable development practices (L)	Percentage changes in land cover types in areas with a high sensitivity to change. Changes in landscape character definitions.		

BFF- Biodiversity, Flora, Fauna. P – Population. HH - Human Health. S – Soils. W – Water. A – Air Quality. C – Climate. MA – Material Assets. CH – Cultural Heritage. L – Landscape.

9 CONCLUSIONS AND NEXT STEPS

The SEA and the HDA Screening processes carried out during the preparation of the arc21 Waste Management Plan 2013 – 2020 have attempted to ensure that the potential significant environmental impacts associated with implementation of the Plan have been identified and that they have been given appropriate consideration. Consultation on the draft Plan and Environmental Report has further contributed to the development and finalisation of the adopted Waste Management Plan.

With the implementation of the arc21 Waste Management Plan 2013 – 2020 the constituent Councils will be able to continue the progress of waste management within the arc21 region of Northern Ireland in meeting the requirements from European EU Directives, UK wide legislation and National legislation to drive forward innovative waste management programmes, with an aim to implement environmentally sound waste management programmes based on the principles of 'Reduce, Re-use and Recycle'.

It is envisaged that monitoring of the potential environmental impacts, both positive and negative, will continue throughout the Plan period of 2013 - 2020.

It has been recommended by the Statutory Consultees that where amendments to the Plan are proposed in the future, these should be screened for likely significant effects in accordance with the criteria as set out in Annex I of the SEA Directive and should be subject to the same method of assessment applied in the “environmental assessment” of the Draft Plan.