

Nottinghamshire and Nottingham

DRAFT WASTE LOCAL PLAN

Final Issues and Options Sustainability Appraisal Report

September 2021

Contents

Non-technical summary	i
1. Introduction	1
The Waste Local Plan	1
Requirement for Strategic Environmental Assessment (SEA).....	1
Requirement for Sustainability Appraisal.....	1
Sustainability Appraisal process.....	2
2. Sustainability appraisal methodology	2
Introduction	2
The Scoping Report	3
The Appraisal	9
3. Appraisal Results	9
Appraisal of the Vision.....	10
Compatibility of the Strategic Objectives with the SA Objectives	14
Appraisal of the Options	18
4. Conclusions	32
5. Next steps	34
Appendix A: Issues and Options Appraisal Matrices	35

Non-technical summary

Introduction

This report explains the process and outcomes of the Sustainability Appraisal (SA) of the Nottinghamshire and Nottingham Waste Local Plan Issues and Options consultation document and subsequent Options Development document.

We are required to carry out this SA process in order to assess the likely social, economic and environmental effects of the Waste Local Plan. The SA process is a way of ensuring that all plans and programmes which relate to spatial planning and land use are compatible with the aims of sustainable development.

Sustainability Appraisal / Strategic Environmental Assessment stages

A SA scoping report has been completed prior to this report to provide the basis for this SA. This comprised:

- review of all relevant plans, policies and programmes; and
- establishing the baseline characteristics of the Plan area, the key issues it faces and the SA objectives against which the Waste Local Plan is to be assessed.

This SA will be followed by an interim SA report on the draft Waste Local Plan before the publication of a final SA report which will assess the publication version of the Waste Local Plan.

Conclusions of SA

Vision

The SA process identified that the Vision set out for the Waste Local Plan did not have a sustainable overall approach to waste development as it did not adequately address the issues covered by a number of the Sustainability Appraisal (SA) objectives. It was therefore recommended that the Vision be revised to fully take into account those issues.

Strategic Objectives

No incompatibility was found between the proposed strategic objectives for the Waste Local Plan and the SA objectives, but it was found that these strategic objectives did not address all the SA objectives. It was therefore recommended that revised strategic objectives be developed.

Options

Issues 1, 2 and 3 looked at scenarios to be used for forecasting the amounts of different types of waste produced. For Issue 1 it was found that the most sustainable option would be 'High decline in household waste generation'. For Issue 2 (commercial and industrial) and Issue 3 (construction, demolition and excavation) it was found that the most sustainable option would be no change in the waste produced.

Issues 4, 5, 6 and 7 looked at the scenarios to be used to forecast future amounts of hazardous, agricultural, mining and low-level radioactive waste.

For all of these it was found that decline in the waste produced would be the most sustainable option.

Issues 8, 9 and 10 looked at the recycling rates to be applied to different types of waste to calculate the recycling capacity needed. For all of these it was found that a high increase in the recycling rate would be the most sustainable option.

For Issue 11, which looked at the level of recovery provision to be planned for, increasing recovery provision was found to be the most sustainable option.

Issue 12 looked at making additional provision for disposal of waste. Neither of the options appeared to be very sustainable but the option of making no additional provision was considered less unsustainable than increasing recovery provision.

For Issue 13 it was found that locating large facilities in Nottingham, Mansfield and Ashfield with smaller/medium facilities also in Newark, Worksop, and Retford. Would be the most sustainable option.

Issue 14 looked at ensuring sufficient waste management provision and capacity and it was found that allocating specific sites would be the most sustainable option.

For Issue 15 it was found that including a general site criteria policy that identifies types of locations likely to be suitable for different types of waste facilities, to help assess the suitability of waste management proposals, was more sustainable than not including a site criteria policy.

For Issue 16 the option of specific development management policies for specific topic areas was more sustainable than that of criteria-based development management policies for broad groupings of topic areas.

Overall there was a large degree of uncertainty involved in terms of the effects of many of the options on a number of SA objectives. This was considered to be inevitable given the lack of detail at this stage.

Next steps

The findings of this SA will inform the preparation of the next stage of the Waste Local Plan, which will be the Draft Plan.

1. Introduction

The Waste Local Plan

- 1.1 The joint Nottinghamshire and Nottingham Waste Local Plan Issues and Options consultation document was published in February 2020. This set out the issues which the County Council and the City Council considered required addressing in the preparation of the new Waste Local Plan (WLP), and the possible options to deal with them. To aid the consultation process a series of questions was posed relating to the issues and options.
- 1.2 Responses to the consultation were taken into consideration in the production of an Options Development working document, which set out in more detail all the reasonable alternative options in relation to each issue. In order to assess which of the options would represent the most sustainable approach to dealing with each issue a sustainability appraisal (SA) was carried out. The SA also appraised the vision and strategic objectives contained in the Issues and Options consultation document. This SA will inform the next stage of the Waste Local Plan – the Draft Plan. Although it is not exclusively the role of the SA to determine which of the options should be chosen as the basis of the Draft Plan, it does serve as a very important factor in the decision-making process by, as far as possible, identifying the most sustainable options overall in terms of the SA objectives and providing useful information on the relative sustainability performance of the range of options considered.

Requirement for Strategic Environmental Assessment (SEA)

- 1.3 The EU Strategic Environmental Assessment (SEA) Directive (2001/42/EC) came into force in the UK on 20 July 2004 through the Environmental Assessment of Plans and Programmes Regulations 2004. This requires the assessment of the effects of certain plans and programmes on the environment, which includes waste local plans, because of the likely significant effects they might have on the environment.
- 1.4 The Regulations state that the SEA must consider biodiversity, population, human health, flora and fauna, soil, water, air, climatic factors, material assets, cultural heritage, landscape and the interrelationship between these factors.

Requirement for Sustainability Appraisal

- 1.5 All local plans, including those for waste, are required to complete a SA under S19 (5) of the Planning and Compulsory Purchase Act 2004. The purpose of the SA is to promote sustainable development through better integration of sustainability considerations into the preparation and adoption of plans. SA helps local planning authorities to ensure that

sustainable development is considered in the preparation of their plans. The National Planning Policy Framework (2021) (NPPF) has at its heart a ‘presumption in favour of sustainable development’ which should apply to plan-making and decision-making.

Sustainability Appraisal process

- 1.6 Although the requirements to complete SEA and SA are distinct, the two processes are similar, with the main difference being that SEA focuses on environmental effects whereas SA involves not only environmental effects, but also social and economic impacts. Provided that a SA fully incorporates the requirements of the Environmental Assessment of Plans and Programmes Regulations 2004 on SEA there is no need to carry out a separate SEA. This report therefore refers to both processes as SA for simplicity.

2. Sustainability appraisal methodology

Introduction

- 2.1 To ensure a robust SA that complies with current legislation and best practice the guidelines set out in the following document were followed:
 - Ministry of Housing, Communities and Local Government (online guidance) ‘Planning Practice Guidance: Strategic Environmental Assessment and Sustainability Appraisal’.

2.2 The SA is based on a five-stage approach as outlined in Table 2.1.

Table 2.1: Stages in the SA process

<p>Stage A Setting the context and the SA objectives. Establishing the baseline and deciding on the scope.</p>
<p>Stage B Developing and refining options. Assessing effects.</p>
<p>Stage C Preparing the Sustainability Appraisal Report.</p>
<p>Stage D Consultation on the Sustainability Appraisal Report (alongside the Draft Plan).</p>
<p>Stage E Post- adoption reporting. Monitoring the implementation of the Plan and responding to adverse effects.</p>

Stage A: The Scoping Report

- 2.3 Stage A of the process was completed with the production of the Sustainability Appraisal Scoping Report. It was widely consulted upon, including with the statutory consultees, which are the Environment Agency, Natural England and Historic England. Internal experts were consulted on issues such as landscape and biodiversity.
- 2.4 All relevant plans, policies and programmes were reviewed to identify the relationships between the Waste Local Plan and publications on environmental, social and economic issues. The baseline characteristics of the Plan area, the key issues it faces and the SA objectives against which the Plan would be assessed were established. The Scoping Report, published in February 2020, provides the framework for carrying out the SA.
- 2.5 The SA objectives and decision-making criteria used to help assess the likely effects of the Plan on sustainability are set out in Table 2.2.

Table 2.2: SA objectives and decision-making criteria

Objective	Decision making criteria
<p>1. Ensure that adequate provision is made for a network of suitable waste management sites for the safe treatment and disposal of waste.</p>	<ul style="list-style-type: none"> • Will the plan/proposal provide waste treatment/disposal sites close to where the waste is produced? • Will it reduce the distance waste is transported? • Will it reduce the cost of municipal waste treatment/disposal? • Will it help to reduce fly-tipping? • Will the plan identify suitable areas of land to serve current/future markets?
<p>2. Protect and enhance biodiversity at all levels, achieve biodiversity net gain and safeguard features of geological interest.</p>	<ul style="list-style-type: none"> • Will the plan/proposal have an adverse effect on internationally, nationally or locally important sites, irreplaceable habitats or legally protected species? • Will it affect habitats or species identified within the Nottinghamshire Local Biodiversity Action Plan (LBAP)? • Will it restore or create new habitat in line with LBAP priorities? • Will it support the retention/enhancement of the Plan Area's green infrastructure?
<p>3. Promote sustainable patterns of movement and the use of more sustainable modes of transport.</p>	<ul style="list-style-type: none"> • Will the plan/proposal reduce overall transport distances for waste? • Will it reduce road haulage of waste? • Will it promote alternative forms of transport? • Will it reduce/increase road congestion? • Will it result in sites that are well related to the main highway network?

Objective	Decision making criteria
	<ul style="list-style-type: none"> • Will it require new transport infrastructure to be developed?
<p>4. Protect the quality of the historic environment, heritage assets and their settings above and below ground.</p>	<ul style="list-style-type: none"> • Will the plan/proposal have an adverse impact upon heritage assets and/or their settings, including archaeological remains and historic buildings? • Will it conserve and/or enhance heritage assets and the historic environment? • Will it respect, maintain and strengthen local character and distinctiveness? • Will it enhance or increase our understanding of the historic environment?
<p>5. Protect and enhance the quality and character of our townscape and landscape.</p>	<ul style="list-style-type: none"> • Will the plan/proposal have an adverse impact on local landscape character or areas of important townscape? • Will it have an adverse effect on the openness and visual amenity of the Green Belt? • Will it affect areas of public open space? • Will it lead to landscape/townscape improvements? • Will it result in development that is sympathetic to its surroundings in terms of design, layout and scale?
<p>6. Reduce the impact and risk of flooding.</p>	<ul style="list-style-type: none"> • Will the plan/proposal increase the risk of flooding? • Will it seek to avoid flood risk? • Will it help to alleviate flood risk or the impact of flooding?
<p>7. Minimise any possible impacts on, and increase</p>	<ul style="list-style-type: none"> • Will the plan/proposal increase emissions of greenhouse gases from waste activities?

Objective	Decision making criteria
adaptability to, climate change.	<ul style="list-style-type: none"> •Will it reduce emissions of greenhouse gases? •Will it encourage the use of renewable energy sources? •Will it help to reduce our vulnerability to the impacts of climate change? •Will it help to increase the resilience of flora and fauna to climate change?
8. Protect high quality agricultural land and soil.	<ul style="list-style-type: none"> •Will the plan/proposal have an adverse impact on soil quality? •Will it result in the sustainable use of soils? •Will it lead to land contamination? •Will it lead to the irreversible loss of best and most versatile agricultural land?
9. Promote more efficient use of land and resources.	<ul style="list-style-type: none"> •Will it promote sustainable waste management and encourage movement of waste up the waste hierarchy? •Will it reduce waste/provide for re-use of waste materials? •Will it make use of previously developed land or buildings? •Will it utilise existing infrastructure or minimise the need for additional infrastructure and land take?
10. Promote energy efficiency and maximise renewable	<ul style="list-style-type: none"> •Will the plan/proposal minimise energy needs?

Objective	Decision making criteria
energy opportunities from new or existing development.	<ul style="list-style-type: none"> •Will it contribute to renewable/low carbon energy targets? •Will it offset the use of fossil fuels?
11. Protect and improve local air quality.	<ul style="list-style-type: none"> •Will the plan/proposal have an adverse impact on local air quality through the creation of dust or emissions of pollutants from facilities and transport? •Will it adversely affect a designated Air Quality Management Area (AQMA)?
12. Protect and improve water quality and promote efficient use of water.	<ul style="list-style-type: none"> •Will the plan/proposal have an adverse impact upon water quality? •Will it increase demand for water? •Will it help to improve existing water quality? •Will the proposal incorporate sustainable water management and/or drainage?
13. Support wider economic development and promote local job opportunities.	<ul style="list-style-type: none"> •Will the plan/proposal help to increase training and employment opportunities in Nottinghamshire? •Will it help to enable wider economic development?
14. Protect and improve human health and quality of life.	<ul style="list-style-type: none"> •Will the plan/proposal minimise adverse impacts of waste activity on human health and levels of nuisance including dust, particulate emissions, noise (including traffic noise), vibration, odour, vermin, visual amenity and light pollution. •Will it promote best practice in the operation and restoration of sites? •Will it help to enhance health and wellbeing through the provision of new or improved public open space/recreational space and access?

Objective	Decision making criteria
	•Will it lead to a loss of public open space/recreational space or reduction in public access?

The Appraisal

- 2.6 A sustainability appraisal (SA) of the options put forward in the Issues and Options consultation document, together with appraisal of the vision and strategic objectives underpinning the WLP, was undertaken in accordance with Stage B of the SA process. This document is an interim report which sets out the results of the SA at the Issues and Options stage of the WLP.
- 2.7 Assessment involved consideration of the many complex issues and inter-relationships involved in sustainability and relied on professional judgement which inevitably has an element of subjectivity. The effects could only be assessed at a very general level due to the unavoidable lack of detail at this early stage of the Plan.
- 2.8 A qualitative seven point scale, as set out in Table 2.3, was used to evaluate the likely effects of the vision and options on the SA objectives. A four-point scale, as set out in Table 2.4, was used to evaluate the compatibility of the strategic objectives with the SA objectives.

Table 2.3: Scale of Effects (Vision and Options)

Symbol	Likely effect on the SA Objective
++	The vision/option is likely to have a very positive impact
+	The vision/option is likely to have a positive impact
0	No significant effect / no clear link
?	Uncertain or insufficient information on which to determine impact
-	The vision/option is likely to have a negative impact
--	The vision/option is likely to have a very negative impact
	The vision/option could have a positive or a negative impact depending on how it is implemented

Table 2.4: Scale of Effects (Strategic Objectives)

Symbol	Relationship with the Sustainability Appraisal Objective
+	Compatible
0	Not related
?	Unknown or dependent on implementation
-	Incompatible

- 2.9 The findings of the SA were recorded in matrices, which can be found in Chapter 3 and Appendix A of this report.

3. Appraisal Results

Appraisal of the Vision

- 3.1 The Waste Local Plan will be guided by an overall vision setting out how waste should be managed in Nottinghamshire and Nottingham throughout the Plan period. The proposed vision was set out in the Issues and Options consultation document. This vision was appraised against the 14 SA objectives listed in Table 2.2 and the results are shown in Table 2.5.
- 3.2 The appraisal found that the vision had a positive impact on half of the SA objectives, however there was either a negative impact on, or no clear link with, the remainder, indicating that they had not been adequately addressed. In addition, in the case of four of the seven SA objectives which were positively impacted upon, the appraisal identified that there were elements of sustainability which had not been fully taken into account. The vision therefore fails to impart a sustainable overall approach to waste management and it is recommended that the vision is revised to fully take into account the issues which are covered by the following SA objectives:
- 1.(Ensure adequate provision of waste management sites and safe treatment of waste)
 - 2.(protect and enhance biodiversity and geodiversity)
 - 3. (promote sustainable movement patterns and transport)
 - 5. (protect and enhance the quality and character of townscape and landscape)
 - 6. (reduce impact and risk of flooding)
 - 7. (minimise any possible impacts on, and increase adaptability to, climate change)
 - 8. (protect high quality agricultural land and soil)
 - 10. (promote energy efficiency and maximise renewable energy opportunities)
 - 11.(protect and improve local air quality)
 - 12. (protect and improve water quality and promote efficient water usage)
 - 14. (protect and improve human health and quality of life).

Table 2.5: Appraisal of the Vision

VISION:
Our vision is for the Plan area to be sustainable in waste management, by encouraging businesses and communities to see the value of waste as a resource and take responsibility for their own waste by managing waste locally wherever possible.

To promote a modern and effective waste management industry, protect Nottinghamshire’s and Nottingham’s environment, wildlife and heritage and minimise the effects of climate change.

To protect the quality of life of those living, visiting and working in the area and to avoid any risks to human health. Stress the importance of the waste hierarchy and the circular economy to prevent and re-use waste as a resource wherever possible and meet, and preferably exceed recycling rates for Nottinghamshire and Nottingham.

Sustainability Appraisal Objectives	Effect	Commentary
1. Ensure that adequate provision is made for a network of suitable waste management sites for the safe treatment and disposal of waste.	+	The Vision is for the Plan area to be sustainable in waste management and it refers to businesses and communities taking responsibility by managing waste locally wherever possible. It also seeks to promote a modern and effective waste management industry. However, it does not make any reference to the provision of sites for waste management or ensuring that such provision is adequate within the Plan area.
2. Protect and enhance biodiversity at all levels, achieve biodiversity net gain and safeguard features of geological interest.	+	The Vision seeks to protect Nottinghamshire’s and Nottingham’s environment and wildlife but does not address enhancement of biodiversity or achieving biodiversity net gain.
3. Promote sustainable	0	Although the Vision refers to businesses and communities managing waste locally

patterns of movement and the use of more sustainable modes of transport.		wherever possible, it does not include any reference to the location of waste management facilities, transportation distances for waste or modes of transport.
4. Protect the quality of the historic environment, heritage assets and their settings above and below ground.	+	The Vision seeks to protect Nottinghamshire's and Nottingham's heritage.
5. Protect and enhance the quality and character of our townscape and landscape.	0	This matter is not explicitly addressed within the Vision though it does state that the environment would be protected, which could include landscape and townscape. It does not refer to any enhancement of environmental assets.
6. Reduce the impact and risk of flooding.	0	This matter is not explicitly addressed though the Vision does refer to minimising the effects of climate change, which could include flooding.
7. Minimise any possible impacts on, and increase adaptability to, climate change.	+	Although the Vision does seek to minimise the effects of climate change it does not address impacts of waste management activities on climate change, for example, through greenhouse gas emissions. The Vision does not refer to increasing the adaptability of waste management facilities to climate change.
8. Protect high quality agricultural land and soil.	-	Although the Vision states that the environment will be protected which could possibly include soil, it would not give any protection to high quality agricultural land.
9. Promote more efficient use of land and resources.	+	The Vision is for the Plan area to be sustainable in waste management with the value of waste as a resource being recognised. The Vision also seeks to ensure prevention and re-use of waste and that recycling rates are met.
10. Promote energy efficiency and maximise renewable energy opportunities from new or existing development.	0	This matter is not addressed within the Vision.
11. Protect and improve local air quality.	0	This matter is not addressed explicitly within the Vision though there is a link with protecting the environment and avoiding risk to human health which are stated within the Vision.
12. Protect and improve	0	This matter is not addressed explicitly within the Vision though there is a link with

water quality and promote efficient use of water.		protecting the environment and avoiding risk to human health which are stated within the Vision.
13. Support wider economic development and promote local job opportunities.	+	Using waste as a resource and moving towards a circular economy are referred to in the Vision which could contribute to supporting the wider economy and providing local job opportunities.
14. Protect and improve human health and quality of life.	+	The Vision seeks to protect quality of life and avoid any risks to human health, but it does not encompass improvements.

Summary

It is recommended that the Vision is revised to fully take into account the issues which are covered by SA objectives 1, 2, 3, 5, 6, 7, 8, 10, 11, 12 and 14.

Compatibility of the Waste Local Plan's Strategic Objectives with the SA Objectives

- 3.3 The Issues and Options consultation document set out seven strategic objectives for the Waste Local Plan which will need to be met in order to deliver the vision over the Plan period. These strategic objectives were evaluated against the 14 SA objectives listed in Table 2.2 to allow for the identification of any tensions or conflicts between them, as shown in Table 2.6.
- 3.4 No incompatibility was found between the proposed Waste Local Plan's (WLP) strategic objectives and the SA objectives. There were a number of instances where there was no relationship between the WLP's strategic objectives and some of the SA objectives, but this was to be expected given the broad range of issues covered.
- 3.5 There were 3 strategic objectives where the relationship with one or more of the SA objectives was unknown or dependent on implementation:
- Strategic objective 1 (climate change) with SA objectives 4 (protect the historic environment) and 10 (promote energy efficiency and maximise renewable energy opportunities);
 - Strategic objective 3 (the environment) with SA objectives 1 (ensure adequate provision of waste management sites and safe treatment of waste), 5 (protect and enhance the quality and character of our townscape and landscape) and 13 (support wider economic development and promote job opportunities);
 - Strategic objective 4 (community, health and wellbeing) with SA objective 1 (ensure adequate provision of waste management sites and safe treatment of waste).
- 3.6 Every strategic objective was compatible with a number of SA objectives. The strategic objectives seek to support the economy (2 and 5) whilst encouraging sustainable use of resources (1) and patterns of development (7), protecting the environment (3 and 6) and minimising the impact on communities (4). These 7 strategic objectives therefore make a positive contribution towards sustainability.
- 3.7 However, there are significant gaps in the coverage of these strategic objectives in terms of addressing all the SA objectives. It is therefore recommended that revised strategic objectives are developed, which address the issues outlined in the appraisal matrix's notes (Table 2.6) in respect of the following SA objectives:
- 3. (promote sustainable patterns of movement and the use of more sustainable modes of transport)
 - 4. (protect the quality of the historic environment, heritage assets and their settings above and below ground)
 - 5. (protect and enhance the quality and character of our townscape and landscape)

- 6. (reduce impact and risk of flooding).

Table 2.6: Compatibility of the Waste Local Plan’s Strategic Objectives with the Sustainability Appraisal Objectives

Plan’s Strategic Objectives	Sustainability Appraisal Objectives													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Climate change.	+	+	+	?	0	+	+	+	+	?	+	+	+	+
2. Strengthen our economy.	+	0	0	0	0	0	+	0	+	+	0	0	+	+
3. The environment.	?	+	0	+	?	0	+	+	0	0	+	+	?	+
4. Community, health and wellbeing.	?	+	0	+	+	0	+	0	0	0	+	+	0	+
5. Meet our future needs.	+	0	+	0	0	0	+	0	+	0	+	0	+	+
6. High quality design and operation.	+	+	0	+	+	0	+	0	+	+	+	+	+	+
7. Sustainable transport.	+	+	+	0	0	0	+	0	+	0	+	0	+	+

Notes

Strategic Objective 3 is not clear:

- Can ‘*new waste facilities protect*’ or should the Objective say something along the lines of ‘*ensure new waste facilities avoid adverse impacts on*’?
- What is meant by ‘*protect the countryside*’? e.g. is it open/ rural character? Or landscape?
- What is meant by ‘*to care for the built and natural heritage*’? Does it mean avoid harm?

- Should this Objective include a reference to biodiversity net gain?
- Protection of landscape/townscape is not addressed in any of the Objectives and could be included within this Objective.

Strategic Objective 4

- The impacts listed could include flooding.

Strategic Objective 5

- This Strategic Objective is important in terms of SA Objective 1. However, it does not flow from the Vision - as noted in the SA of the Vision under SA Objectives 1 and 3, this issue is not included in the Vision which does not make any reference to the provision of sites for waste management or ensuring that such provision is adequate within the Plan area nor does it make any reference to the location of waste management facilities.

Strategic Objective 6

- This Objective could include specific reference to energy efficiency/ renewable energy which is not directly addressed by any of the Strategic Objectives currently.

Appraisal of the Options

- 3.8 The Issues and Options consultation document considered the issues and options involved in providing the planning policy framework for waste development over the Plan period to 2038. Subsequently an Options Development working document was produced setting out 16 issues and the possible options which represented reasonable alternatives to address each of those issues. These options were set out within matrices for the purposes of undertaking the SA. The options for each issue were assessed against the 14 SA objectives listed in Table 2.2 and the predicted significant effects were recorded in accordance with the Scale of Effects shown in Table 2.3. The decision-making criteria set out in Table 2.2 were taken into account and a commentary was provided to explain the reasoning behind each predicted effect. In each case the effect attributed against each SA objective in the appraisal matrices reflects a judgement as to what is considered to be the most significant effect overall. The issues and options appraisal matrices are reproduced in full in Appendix A, but an example of the matrix used can be found in Table 2.7.
- 3.9 A summary of the findings for each issue is presented in Table 2.8. and the option which was considered most sustainable for each issue is highlighted. However, it should be noted that the individual sustainability appraisal matrix for each issue needs to be referred to for full details, particularly as in some cases the favoured option scored only marginally better than others and /or the conclusion was based on differences between only a few of the SA objectives because many impacts were uncertain due to the inevitable lack of detail at this stage.

Table 2.7 Issues and Options Appraisal Matrix

ISSUE:								
Sustainability Appraisal Objectives	Option A:		Option B:		Option C:		Option D:	
1. Ensure that adequate provision is made for a network of suitable waste management sites for the safe treatment and disposal of waste.								
2. Protect and enhance biodiversity at all levels, achieve biodiversity net gain and safeguard features of geological interest.								
3. Promote sustainable patterns of movement and the use of more sustainable modes of transport.								
4. Protect the quality of the historic environment, heritage assets and their settings above and below ground.								
5. Protect and enhance								

the quality and character of our townscape and landscape.								
6. Reduce the impact and risk of flooding.								
7. Minimise any possible impacts on, and increase adaptability to, climate change.								
8. Protect high quality agricultural land and soil.								
9. Promote more efficient use of land and resources.								
10. Promote energy efficiency and maximise renewable energy opportunities from new or existing development.								
11. Protect and improve local air quality.								
12. Protect and improve water quality and promote efficient use of water.								
13. Support wider economic development and promote local job opportunities.								

14. Protect and improve human health and quality of life.								
---	--	--	--	--	--	--	--	--

Table 2.8 Summary of Issues and Options Appraisal Findings

ISSUE	SUSTAINABILITY APPRAISAL FINDINGS
<p>1. What scenario should be used for estimating future household waste generation which will be used to forecast future LACW arisings?</p>	<ul style="list-style-type: none"> • The likely impact of Options A, B, D and E was uncertain in terms of several of the SA objectives which covered specific environmental and social issues, such as air quality and human health and quality of life. This was due to the lack of detail at this stage. Option C had no significant effect on the same SA objectives. • Option A had a negative effect and Option E had a positive effect on SA objective 13, with the remaining options having no significant effect on this objective. • There were significant differences between the options in relation to SA objectives 1, 2, 3, 4, 5, 7, 8, 9. Option A scored very positively against seven of these objectives, although it scored very negatively against SA objective 1, whilst Option E scored very negatively against seven of these objectives, although it scored very positively against SA objective 1. • Option A is therefore considered to be the most sustainable, although it should be noted that it scored negatively against SA objective 13 and very negatively against SA objective 1. <p>Option A: ‘High decline in household waste generation’ was considered to be the most sustainable.</p>
<p>2. What scenario should be used to forecast future Commercial and Industrial (C&I) waste arisings?</p>	<ul style="list-style-type: none"> • Option A had a negative impact on SA objective 1, but had no significant effect on any of the other SA objectives. • The impacts of Options B, C and D on SA objectives 6, 10, 11, 12 and 14 were uncertain due to the lack of detail at this stage. • Both Options B and C had a positive impact on SA objectives 1 and 13, but had a negative impact on SA objectives 2, 3, 4, 5, 7, 8 and 9.

	<ul style="list-style-type: none"> • Option D had a very positive impact on SA objectives 1 and 13, but had a very negative impact on SA objectives 2, 3, 4, 5, 7, 8 and 9. • None of these options appears to be very sustainable but Option A can be considered to be the least unsustainable, due to its lack of significant effects on most of the SA objectives, compared to the large number of SA objectives which are negatively impacted upon, in the case of Options B and C, and very negatively impacted upon, in the case of Option D. It should, nevertheless, be noted that Option A had a negative impact on SA objective 1 and did not have positive impacts on any of the SA objectives. <p>Option A: ‘No change in C&I waste produced’ was considered to be the least unsustainable.</p>
<p>3. What scenario should be used to forecast future Construction, Demolition and Excavation (C, D & E) waste arisings?</p>	<ul style="list-style-type: none"> • Option A had a negative impact on SA objective 1, but had no significant effect on any of the other SA objectives. • The impacts of Options B, C and D on SA objectives 6, 10, 11, 12 and 14 were uncertain due to the lack of detail at this stage. • Both Options B and C had a positive impact on SA objectives 1 and 13, but had a negative impact on SA objectives 2, 3, 4, 5, 7, 8 and 9. • Option D had a very positive impact on SA objectives 1 and 13, but had a very negative impact on SA objectives 2, 3, 4, 5, 7, 8 and 9. • None of these options appears to be very sustainable but Option A can be considered to be the least unsustainable, due to its lack of significant effects on most of the SA objectives, compared to the large number of SA objectives which are negatively impacted upon, in the case of Options B and C, and very negatively impacted upon, in the case of Option D. It should, nevertheless, be noted that Option A had a negative impact on SA objective 1 and did not have positive impacts on any of the SA objectives.

	<p>Option A: ‘No change in C, D & E waste produced’ was considered to be the least unsustainable.</p>
<p>4. What scenario should be used to forecast future Hazardous waste arisings?</p>	<ul style="list-style-type: none"> • Option A had a negative impact on SA objective 1, but had no significant effect on any of the other SA objectives. • The impacts of Options B and C on SA objectives 6, 10, 11, 12 and 14 were uncertain due to the lack of detail at this stage. • Option B had positive impacts on SA objectives 2, 3, 4, 5, 7, 8 and 9, whereas Option C had negative impacts on these objectives. • However, Option B had a very negative impact on SA objective 1, whereas Option C had a positive impact on this objective. • Option C also had a positive impact on SA objective 13, whereas Option B had no significant effect on this objective. • Option B, given the number of positive impacts it had, can be considered to be the most sustainable option, however it should be noted that Option B had a very negative impact on SA objective 1. <p>Option B: ‘Decline in Hazardous waste produced’ was considered to be the most sustainable.</p>
<p>5. What scenario should be used to forecast future Agricultural waste arisings?</p>	<ul style="list-style-type: none"> • Option A had a negative impact on SA objective 1, but had no significant effect on any of the other SA objectives. • The impacts of Options B and C on SA objectives 6, 10, 11, 12 and 14 were uncertain due to the lack of detail at this stage. • Option B had positive impacts on SA objectives 2, 3, 4, 5, 7, 8 and 9, whereas Option C had negative impacts on these objectives. • However, Option B had a very negative impact on SA objective 1, whereas Option C had a positive impact on this objective. • Option C also had a positive impact on SA objective 13, whereas Option B had

	<p>no significant effect on this objective.</p> <ul style="list-style-type: none"> Option B, given the number of positive impacts it had, can be considered the most sustainable option, however it should be noted that Option B had a very negative impact on SA objective 1. <p>Option B: 'Decline in Agricultural waste produced' was considered to be the most sustainable.</p>
<p>6. What scenario should be used to forecast future Mining waste arisings?</p>	<ul style="list-style-type: none"> Option A had a negative impact on SA objective 1, but had no significant effect on any of the other SA objectives. The impacts of Options B and C on SA objectives 6, 10, 11, 12 and 14 were uncertain due to the lack of detail at this stage. Option B had positive impacts on SA objectives 2, 3, 4, 5, 7, 8 and 9, whereas Option C had negative impacts on these objectives. However, Option B had a very negative impact on SA objective 1, whereas Option C had a positive impact on this objective. Option C also had a positive impact on SA objective 13, whereas Option B had no significant effect on this objective. Option B, given the number of positive impacts it had, can be considered the most sustainable option, however it should be noted that Option B had a very negative impact on SA objective 1. <p>Option B: 'Decline in Mining waste produced' was considered to be the most sustainable.</p>
<p>7. What scenario should be used to forecast future Low-level radioactive waste arisings?</p>	<ul style="list-style-type: none"> Option A had a negative impact on SA objective 1, but had no significant effect on any of the other SA objectives. The impacts of Options B and C on SA objectives 6, 10, 11, 12 and 14 were

	<p>uncertain due to the lack of detail at this stage.</p> <ul style="list-style-type: none"> • Option B had positive impacts on SA objectives 2, 3, 4, 5, 7, 8 and 9, whereas Option C had negative impacts on these objectives. • However, Option B had a very negative impact on SA objective 1, whereas Option C had a positive impact on this objective. • Option C also had a positive impact on SA objective 13, whereas Option B had no significant effect on this objective. • Option B, given the number of positive impacts it had, can be considered the most sustainable option, however it should be noted that Option B had a very negative impact on SA objective 1. <p>Option B: 'Decline in Low-level Radioactive waste produced' was considered to be the most sustainable.</p>
<p>8. What recycling rate should be applied to LACW future arisings to calculate what recycling capacity is required throughout the plan period?</p>	<ul style="list-style-type: none"> • Option A had a negative impact on SA objective 1, but had no significant effect on any of the other SA objectives. • The impacts of Options B and C on SA objectives 2, 3, 4, 5, 6, 7, 8, 10, 11, 12 and 14 were uncertain due to the lack of detail at this stage, however their impacts on objectives 1, 9 and 13 were positive. • Similarly, the impacts of Option D on SA objectives 2, 3, 4, 5, 6, 7, 8, 10, 11, 12 and 14 were uncertain due to the lack of detail at this stage, but its impact on objectives 1, 9 and 13 was very positive. • Option A was the only option which had a negative impact, whilst Option D was the only option which had very positive impacts, therefore Option D can be considered to be the most sustainable option. <p>Option D: 'High increase (65% recycling rate)' was considered to be the most sustainable.</p>

<p>9. What recycling rate should be applied to C&I future arisings to calculate what recycling capacity is required throughout the plan period?</p>	<ul style="list-style-type: none"> • Option A had a negative impact on SA objective 1, but had no significant effect on any of the other SA objectives. • The impacts of Options B and C on SA objectives 2, 3, 4, 5, 6, 7, 8, 10, 11, 12 and 14 were uncertain due to the lack of detail at this stage. • Option B had positive impacts, and Option C had very positive impacts, on SA objectives 1, 9 and 13. • Option A was the only option which had a negative impact, whilst Option C was the only option which had very positive impacts, therefore Option C can be considered to be the most sustainable option. <p>Option C: ‘High increase (70% recycling rate)’ was considered to be the most sustainable.</p>
<p>10. What recycling rate should be applied to C, D & E future arisings to calculate what recycling capacity is required throughout the plan period?</p>	<ul style="list-style-type: none"> • Option A had a negative impact on SA objective 1, but had no significant effect on any of the other SA objectives. • The impacts of Options B and C on SA objectives 2, 3, 4, 5, 6, 7, 8, 10, 11, 12 and 14 were uncertain due to the lack of detail at this stage. • Option B had positive impacts, and Option C had very positive impacts, on SA objectives 1, 9 and 13. • Option A was the only option which had a negative impact, whilst Option C was the only option which had very positive impacts, therefore Option C can be considered to be the most sustainable option. <p>Option C: ‘High increase (95% recycling rate)’ was considered to be the most sustainable.</p>
<p>11. What level of recovery provision should be planned for throughout the plan period?</p>	<ul style="list-style-type: none"> • Option A had a negative impact on SA objective 1, but had no significant effect on any of the other SA objectives. • The impacts of Option B on SA objectives 2, 3,4,5,6,7,8, 9,10, 11,12,14 were

	<p>uncertain due to the lack of detail at this stage.</p> <ul style="list-style-type: none"> • However, Option B had a positive impact on SA objectives 1 and 13 and can therefore be considered to be more sustainable than Option A. <p>Option B: 'Increase recovery provision' was considered to be the most sustainable.</p>
<p>12. Should the Plan make additional provision for disposal of waste throughout the plan period?</p>	<ul style="list-style-type: none"> • Option A had a negative impact on SA objective 1, but had no significant effect on any of the other SA objectives. • The impacts of Option B were more varied, with a positive impact on SA objectives 1 and 3; no significant effect on SA objective 13; uncertainty as to the impacts in respect of SA objectives 6, 11, 12 and 14; a negative impact on SA objectives 2, 4, 5, 7 and 8; and a very negative impact on SA objectives 9 and 10. • Neither of these options appears to be very sustainable but Option A can be considered to be less unsustainable, due to its lack of significant effects on most of the SA objectives, compared to Option B's numerous negative or very negative impacts on over half of the SA objectives. It should, nevertheless, be noted that Option A had a negative impact on SA objective 1 and did not have positive impacts on any of the SA objectives. <p>Option A: 'Make no additional provision for disposal of waste' was considered to be the least unsustainable.</p>
<p>13. Where should future waste management facilities be located within the plan area?</p>	<ul style="list-style-type: none"> • The likely impact of all the options was uncertain in terms of several of the SA objectives which covered specific environmental and social issues, such as air quality and human health and quality of life. This was due to the lack of detail at this stage. • None of the options had any clear link with SA objectives 10 and 13.

	<ul style="list-style-type: none"> • Options A and B were very similar in their impacts on the remaining SA objectives, with both having a positive impact on SA objectives 3, 7 and 9. In respect of SA objective 1, Option A had a positive impact whereas Option B had a very positive impact. • Option C had a positive impact on SA objective 1 but a negative impact on SA objective 9 and could have either a positive or a negative impact on SA objectives 3 and 7. • Option D's impact was uncertain on most of the SA objectives. • Options A and B were more sustainable than the other two options. Option B was marginally more sustainable than Option A given that it had a very positive, rather than just a positive, impact on SA objective 1. <p>Option B: 'Locate large facilities in Nottingham, Mansfield and Ashfield with smaller/medium facilities also in Newark, Worksop, and Retford' was considered to be the most sustainable.</p>
<p>14. How should the plan ensure sufficient waste management provision and capacity throughout the plan period?</p>	<ul style="list-style-type: none"> • The impact of Option E was difficult to appraise and for most of the SA objectives it was considered that its impact could be either positive or negative depending on the details of the combination of options. • The impact of Option D on most of the SA objectives was uncertain as it would depend on the criteria used to assess proposals. However, this option also had a very negative impact on SA objective 1 and a negative impact on SA objective 13 and is therefore unsustainable in terms of the economic aspects of sustainability. • It was considered that the impact of Option C on the majority of SA objectives could be positive or negative. This option also had a negative impact on SA objective 1 but a positive impact on SA objectives 9 and 13. • Similarly, it was considered that the impact of Option B on the majority of SA objectives could be positive or negative, but this option had positive impacts on

	<p>SA objectives 1, 9 and 13.</p> <ul style="list-style-type: none"> Option A had a very positive impact on SA objective 1 and a positive impact on all the other SA objectives except 7 and 10, with which there was no clear link. Option A was therefore the most sustainable option. <p>Option A: 'Allocate specific sites' was considered to be the most sustainable.</p>
<p>15. Should the plan include a general site criteria policy that identifies types of locations likely to be suitable for different types of waste facilities to help assess the suitability of waste management proposals?</p>	<ul style="list-style-type: none"> It was difficult to appraise Option A due to the lack of detail at this stage because the specific criteria which would be in a policy are unknown at this point. Consequently, the impacts of this option on most of the SA objectives was uncertain. However, it was clear that Option A had a negative impact on SA objective 1. Option B had a positive impact on SA objective 1 but had a negative impact on all the other SA objectives, except SA objective 13 with which there was no clear link. Given the numerous negative impacts of Option B, Option A can be considered as more sustainable than Option B, but its negative impact on SA objective 1 and uncertainty in respect of other SA objectives should be taken into account. <p>Option A: 'Include a site criteria policy within the plan' was considered to be the most sustainable.</p>
<p>16. How should development management policies be dealt with in the Plan?</p>	<ul style="list-style-type: none"> There was a clear distinction between the two options, with Option A having a positive impact on most of the SA objectives whereas Option B had a negative impact on most of the SA objectives. Option A was therefore the most sustainable. <p>Option A: 'Develop specific policies for specific topic areas.' was considered to</p>

	be the most sustainable.
--	---------------------------------

4. Conclusions

Vision

- 4.1 Appraisal of the Vision set out for the Plan found that it failed to impart a sustainable overall approach to waste development as it did not adequately address the issues covered by a number of the Sustainability Appraisal (SA) objectives, including those on ensuring that adequate provision is made for a network of suitable waste management sites; protecting and enhancing biodiversity and geodiversity; promoting sustainable patterns of movement and modes of transport; protecting and enhancing townscape and landscape; reducing the impact and risk of flooding; minimising impacts on, and increasing adaptability to, climate change; protecting high quality agricultural land and soil; promoting energy efficiency and maximising renewable energy; protecting and improving local air quality; protecting and improving water quality and promoting efficient use of water; and protecting and improving human health and quality of life. It was therefore recommended that the Vision be revised to fully take into account these issues.

Strategic Objectives

- 4.2 No incompatibility was found between the proposed strategic objectives for the Waste Local Plan (WLP) and the SA objectives. There were several instances where there was no relationship between the WLP's strategic objectives and some of the SA objectives, but this was to be expected given the broad range of issues covered. There were a small number of strategic objectives where the relationship with one or more of the SA objectives was unknown or dependent on implementation. Every strategic objective was compatible with a number of SA objectives. However, it was found that there were significant gaps in the coverage of these strategic objectives in terms of addressing all the SA objectives. It was therefore recommended that revised strategic objectives be developed which address the issues outlined in the SA objectives on promoting sustainable patterns of movement and the use of more sustainable modes of transport; protecting the quality of the historic environment, heritage assets and their settings above and below ground; protecting and enhancing the quality and character of townscape and landscape; and reducing the impact and risk of flooding.

Options

- 4.3 In terms of Issue 1 (the scenario to be used for estimating future household waste generation and forecasting future Local Authority Collected Waste arisings) it was found that the most sustainable option would be 'High decline in household waste generation'. However, it was noted that this option did not score well on the economic aspects of sustainability.
- 4.4 For both Issue 2 (the scenario to be used to forecast future Commercial and Industrial waste arisings) and Issue 3 (the scenario to be used to forecast

future Construction, Demolition and Excavation waste arisings) the most sustainable option would be no change in the waste produced.

- 4.5 For Issues 4 (the scenario to be used to forecast future Hazardous waste arisings), 5 (the scenario to be used to forecast future Agricultural waste arisings), 6 (the scenario to be used to forecast future Mining waste arisings) and 7 (the scenario to be used to forecast future Low-level radioactive waste arisings), decline in the waste produced would be the most sustainable option. It was noted, however, for all four of these issues, that this option had a very negative impact on SA objective 1 (ensuring adequate provision of a network of suitable waste management sites for the safe treatment and disposal of waste).
- 4.6 In the case of Issues 8 (the recycling rate to be applied to LACW future arisings to calculate what recycling capacity is required throughout the plan period), 9 (the recycling rate to be applied to C&I future arisings to calculate what recycling capacity is required throughout the plan period) and 10 (the recycling rate to be applied to C, D & E future arisings to calculate what recycling capacity is required throughout the plan period), a high increase in the recycling rate would be the most sustainable option.
- 4.7 In respect of Issue 13 (the location of future waste management facilities within the plan area) Options A and B were more sustainable than the other two options. The most sustainable option would be Option B, to locate large facilities in Nottingham, Mansfield and Ashfield with smaller/medium facilities also in Newark, Worksop, and Retford. However, it was noted that this option was only marginally more sustainable than Option A, which was to locate all facilities in main urban areas.
- 4.8 There were 5 options for Issue 14 (ensuring sufficient waste management provision and capacity throughout the plan period) with allocating specific sites being the most sustainable.
- 4.9 The four remaining issues each had only 2 options. For Issue 11 (the level of recovery provision to be planned for throughout the plan period) the options were either to have no change to current recovery provision or to increase recovery provision and the latter was found to be the most sustainable option.
- 4.10 Neither of the options for Issue 12 (should the Plan make additional provision for disposal of waste throughout the plan period) appeared to be very sustainable but the option of making no additional provision could be considered as less unsustainable, due to its lack of significant effects on most of the SA objectives, compared to the option of making additional provision which had numerous negative or very negative impacts on over half of the SA objectives. It should, nevertheless, be noted that the option of making no additional provision had a negative impact on SA objective 1 (ensuring adequate provision of a network of

suitable waste management sites for the safe treatment and disposal of waste) and did not have positive impacts on any of the SA objectives.

4.11 Issue 15 (should the plan include a general site criteria policy that identifies types of locations likely to be suitable for different types of waste facilities to help assess the suitability of waste management proposals) had the option of either not including a site criteria policy which had numerous negative impacts on SA objectives, or including a site criteria policy, which would be more sustainable, but its negative impact on SA objective 1 (ensuring adequate provision of a network of suitable waste management sites for the safe treatment and disposal of waste) and uncertainty in respect of most other SA objectives should be taken into account.

4.12 For Issue 16 (how development management policies should be dealt with in the Plan) there was a clear distinction between the two options, with the option of developing criteria-based policies for broad groupings of topic areas having a negative impact on most of the SA objectives, whereas the option of developing specific policies for specific topic areas had a positive impact on most of the SA objectives. The latter option would therefore be the most sustainable.

4.13 Overall there was a large degree of uncertainty involved in terms of the effects of many of the options on a number of SA objectives, however this was considered to be inevitable at this stage given the lack of detail at this strategic level.

5. Next steps

5.1 The findings of this SA will inform the preparation of the next stage of the Waste Local Plan (WLP). This will be the Draft Plan which will involve the refinement of the options into policies. Sustainability Appraisal (SA) is an iterative process which is closely tied in to the development of the WLP. Further SA will therefore be undertaken as the WLP progresses in order to aid the decision-making process in the formulation of policies.

Appendix A: Issues and Options Appraisal Matrices

ISSUE: 1. What scenario should be used for estimating future household waste generation which will be used to forecast future Local Authority Collected Waste (LACW) arisings?

Sustainability Appraisal Objectives	Option A: High decline in household waste generation		Option B: Low decline in household waste generation		Option C: No change in household waste generation		Option D: Low growth in household waste generation		Option E: High growth in household waste generation	
1. Ensure that adequate provision is made for a network of suitable waste management sites for the safe treatment and disposal of waste.	--	Forecasting steep decline risks inadequate provision	-	Forecasting low decline risks inadequate provision but not to the same degree as Option A	-	Forecasting no change risks inadequate provision but not to the same degree as Options A and B	+	Forecasting low growth will be more likely to result in adequate provision than Option C	++	Forecasting high growth will very likely to result in adequate provision
2. Protect and enhance biodiversity at all levels, achieve biodiversity net gain and safeguard features of geological interest.	++	Significantly less waste arisings could mean much fewer facilities required which would lower any risk of adverse impacts	+	Less waste arisings could mean fewer facilities required which would lower any risk of adverse impacts	0	No significant effect	-	Low growth in waste arisings could require additional facilities which, dependent on location of sites in relation to habitats/species/geological features, could have	--	High growth in waste arisings could require many more additional facilities compared to Option D which, dependent on location of sites in relation to habitats/species/geologica

Sustainability Appraisal Objectives	Option A: High decline in household waste generation		Option B: Low decline in household waste generation		Option C: No change in household waste generation		Option D: Low growth in household waste generation		Option E: High growth in household waste generation	
								an adverse impact		l features, could have an adverse impact
3. Promote sustainable patterns of movement and the use of more sustainable modes of transport.	++	Significantly less arisings could mean much fewer facilities required which would substantially reduce the haulage of waste and road congestion and would not require new transport infrastructure to be developed	+	Less arisings could mean fewer facilities required which would reduce the haulage of waste and road congestion and would not require new transport infrastructure to be developed	0	No significant effect	-	Low growth in arisings could require additional facilities which would increase the haulage of waste and road congestion and would require new transport infrastructure to be developed	--	High growth in arisings could require many more additional facilities which would substantially increase the haulage of waste and road congestion and would require more new transport infrastructure to be developed than in Option D.
4. Protect the quality of the historic	++	Significantly less arisings	+	Less arisings could mean	0	No significant effect	-	Low growth in arisings	--	High growth in arisings

Sustainability Appraisal Objectives	Option A: High decline in household waste generation		Option B: Low decline in household waste generation		Option C: No change in household waste generation		Option D: Low growth in household waste generation		Option E: High growth in household waste generation	
environment, heritage assets and their settings above and below ground.		could mean much fewer facilities required which would lower any risk of adverse impacts		fewer facilities required which would lower any risk of adverse impacts				could require additional facilities which, dependent on location of sites in relation to heritage assets, could have an adverse impact		could require many more additional facilities compared to Option D which, dependent on location of sites in relation to heritage assets, could have an adverse impact
5. Protect and enhance the quality and character of our townscape and landscape.	++	Significantly less arisings could mean much fewer facilities required which would lower any risk of adverse impacts	+	Less arisings could mean fewer facilities required which would lower any risk of adverse impacts	0	No significant effect	-	Low growth in arisings could require additional facilities which, dependent on location of sites in relation to landscape	--	High growth in arisings could require many more additional facilities compared to Option D which, dependent on location of sites in

Sustainability Appraisal Objectives	Option A: High decline in household waste generation		Option B: Low decline in household waste generation		Option C: No change in household waste generation		Option D: Low growth in household waste generation		Option E: High growth in household waste generation	
								and townscape, could have an adverse impact		relation to landscape and townscape, could have an adverse impact
6. Reduce the impact and risk of flooding.	?	Impact would be dependent on the location and type of facilities required to deal with waste arisings	?	Impact would be dependent on the location and type of facilities required to deal with waste arisings	0	No significant effect	?	Impact would be dependent on the location and type of facilities required to deal with waste arisings	?	Impact would be dependent on the location and type of facilities required to deal with waste arisings
7. Minimise any possible impacts on, and increase adaptability to, climate change.	++	Significantly less arisings could mean much fewer facilities required which could considerably reduce greenhouse	+	Less arisings could mean fewer facilities required which could reduce greenhouse gas emissions	0	No significant effect	-	Low growth in arisings could require additional facilities which could increase greenhouse gas	--	High growth in arisings could require more additional facilities than in Option D which could considerably increase

Sustainability Appraisal Objectives	Option A: High decline in household waste generation		Option B: Low decline in household waste generation		Option C: No change in household waste generation		Option D: Low growth in household waste generation		Option E: High growth in household waste generation	
		gas emissions						emissions		greenhouse gas emissions
8. Protect high quality agricultural land and soil.	++	Significantly less arisings could mean much fewer facilities required which would lower any risk of adverse impacts	+	Less arisings could mean fewer facilities required which would lower any risk of adverse impacts	0	No significant effect	-	Low growth in arisings could require additional facilities which, dependent on location of sites in relation to high quality agricultural land and soil, could have an adverse impact	--	High growth in arisings could require many more additional facilities compared to Option D which, dependent on location of sites in relation to high quality agricultural land and soil, could have an adverse impact
9. Promote more efficient use of land and resources.	++	Significantly less waste arisings could considerably reduce the amount of	+	Less waste arisings could reduce the amount of land and resources	0	No significant effect	-	Low growth in arisings could require greater use of land and	--	High growth in arisings could require much greater use of land and

Sustainability Appraisal Objectives	Option A: High decline in household waste generation		Option B: Low decline in household waste generation		Option C: No change in household waste generation		Option D: Low growth in household waste generation		Option E: High growth in household waste generation	
		land and resources required		required				resources		resources than Option D.
10. Promote energy efficiency and maximise renewable energy opportunities from new or existing development.	?	Impact would be dependent on the type of facilities required to deal with waste arisings	?	Impact would be dependent on the type of facilities required to deal with waste arisings	0	No significant effect	?	Impact would be dependent on the type of facilities required to deal with waste arisings	?	Impact would be dependent on the type of facilities required to deal with waste arisings
11. Protect and improve local air quality.	?	Impact would be dependent on the type of facilities required to deal with waste arisings	?	Impact would be dependent on the type of facilities required to deal with waste arisings	0	No significant effect	?	Impact would be dependent on the type of facilities required to deal with waste arisings	?	Impact would be dependent on the type of facilities required to deal with waste arisings
12. Protect and improve water quality and promote efficient use of water.	?	Impact would be dependent on the type of facilities required to deal with waste	?	Impact would be dependent on the type of facilities required to deal with waste	0	No significant effect	?	Impact would be dependent on the type of facilities required to deal with	?	Impact would be dependent on the type of facilities required to deal with

Sustainability Appraisal Objectives	Option A: High decline in household waste generation		Option B: Low decline in household waste generation		Option C: No change in household waste generation		Option D: Low growth in household waste generation		Option E: High growth in household waste generation	
		arisings		arisings				waste arisings		waste arisings
13. Support wider economic development and promote local job opportunities.	-	Significantly less arisings could result in loss of local job opportunities because less waste handling would be required	0	No significant effect	0	No significant effect	0	No significant effect	+	High growth in arisings could generate more local job opportunities in order to deal with the waste
14. Protect and improve human health and quality of life.	?	Impact would be dependent on the location and type of facilities required to deal with waste arisings	?	Impact would be dependent on the location and type of facilities required to deal with waste arisings	0	No significant effect	?	Impact would be dependent on the location and type of facilities required to deal with waste arisings	?	Impact would be dependent on the location and type of facilities required to deal with waste arisings

Summary

- The likely impact of Options A, B, D and E was uncertain in terms of several of the SA objectives which covered specific environmental and social issues, such as air quality and human health and quality of life. This was due to the lack of detail at this stage. Option C had no significant effect on the same SA objectives.
- Option A had a negative effect and Option E had a positive effect on SA objective 13, with the remaining options having no significant effect on this objective.
- There were significant differences between the options in relation to SA objectives 1, 2, 3, 4, 5, 7, 8, 9. Option A scored very positively against seven of these objectives, although it scored very negatively against SA objective 1, whilst Option E scored very negatively against seven of these objectives, although it scored very positively against SA objective 1.
- Option A is therefore considered to be the most sustainable, although it should be noted that it scored negatively against SA objective 13 and very negatively against SA objective 1.

ISSUE: 2. What scenario should be used to forecast future Commercial and Industrial (C&I) waste arisings?

Sustainability Appraisal Objectives	Option A: No change in C&I waste produced		Option B: Low growth in C&I waste produced		Option C: Medium growth in C&I waste produced		Option D: High growth in C&I waste produced	
1. Ensure that adequate provision is made for a network of suitable waste management sites for the safe treatment and disposal of waste.	-	Forecasting no change risks inadequate provision	+	Forecasting low growth will be likely to result in adequate provision	+	Forecasting medium growth will be likely to result in adequate provision	++	Forecasting high growth will be very likely to result in adequate provision
2. Protect and enhance biodiversity at all levels, achieve biodiversity net gain and safeguard features of geological interest.	0	No significant effect	-	Low growth in arisings could require additional facilities which, dependent on location of sites in relation to habitats/species/geological features, could have an adverse impact	-	Medium growth in arisings could require additional facilities which, dependent on location of sites in relation to habitats/species/geological features, could have an adverse impact	--	High growth in arisings could require many more additional facilities compared to Options B and C which, dependent on location of sites in relation to habitats/species/geological features, could have an adverse impact
3. Promote sustainable patterns of movement and the use of	0	No significant effect	-	Low growth in arisings could require additional facilities which would increase the haulage of waste and road congestion	-	Medium growth in arisings could require additional facilities which would increase the haulage of waste and road congestion	--	High growth in arisings could require many more additional facilities which would substantially increase the haulage of

Sustainability Appraisal Objectives	Option A: No change in C&I waste produced		Option B: Low growth in C&I waste produced		Option C: Medium growth in C&I waste produced		Option D: High growth in C&I waste produced	
more sustainable modes of transport.				and would require new transport infrastructure to be developed		and would require new transport infrastructure to be developed		waste and road congestion and would require more new transport infrastructure to be developed than in Options B and C.
4. Protect the quality of the historic environment, heritage assets and their settings above and below ground.	0	No significant effect	-	Low growth in arisings could require additional facilities which, dependent on location of sites in relation to heritage assets, could have an adverse impact	-	Medium growth in arisings would require additional facilities which, dependent on location of sites in relation to heritage assets, could have an adverse impact	--	High growth in arisings would require many more additional facilities compared to Options B and C which, dependent on location of sites in relation to heritage assets, could have an adverse impact
5. Protect and enhance the quality and character of our townscape and landscape.	0	No significant effect	-	Low growth in arisings could require additional facilities which, dependent on location of sites in relation to landscape and townscape, could have an adverse impact	-	Medium growth in arisings could require additional facilities which, dependent on location of sites in relation to landscape and townscape, could have an adverse impact	--	High growth in arisings could require many more additional facilities compared to Options B and C which, dependent on location of sites in relation to landscape and townscape, could have an adverse impact
6. Reduce the impact and risk of flooding.	0	No significant effect	?	Impact would be dependent on the location and type of facilities required to deal with waste arisings	?	Impact would be dependent on the location and type of facilities required to deal with waste arisings	?	Impact would be dependent on the location and type of facilities required to deal with waste arisings

Sustainability Appraisal Objectives	Option A: No change in C&I waste produced		Option B: Low growth in C&I waste produced		Option C: Medium growth in C&I waste produced		Option D: High growth in C&I waste produced	
7. Minimise any possible impacts on, and increase adaptability to, climate change.	0	No significant effect	-	Low growth in arisings could require additional facilities which could increase greenhouse gas emissions	-	Medium growth in arisings could require additional facilities which could increase greenhouse gas emissions	--	High growth in arisings could require more additional facilities, compared to Options B and C, which could considerably increase greenhouse gas emissions
8. Protect high quality agricultural land and soil.	0	No significant effect	-	Low growth in arisings could require additional facilities which, dependent on location of sites in relation to high quality agricultural land and soil, could have an adverse impact	-	Medium growth in arisings could require additional facilities which, dependent on location of sites in relation to high quality agricultural land and soil, could have an adverse impact	--	High growth in arisings could require many more additional facilities compared to Options B and C which, dependent on location of sites in relation to high quality agricultural land and soil, could have an adverse impact
9. Promote more efficient use of land and resources.	0	No significant effect	-	Low growth in waste arisings could require greater use of land and resources	-	Medium growth in waste arisings could require greater use of land and resources	--	High growth in waste arisings could require much greater use of land and resources than Options B and C.
10. Promote energy efficiency and maximise renewable energy opportunities	0	No significant effect	?	Impact would be dependent on the type of facilities required to deal with waste arisings	?	Impact would be dependent on the type of facilities required to deal with waste arisings	?	Impact would be dependent on the type of facilities required to deal with waste arisings

Sustainability Appraisal Objectives	Option A: No change in C&I waste produced		Option B: Low growth in C&I waste produced		Option C: Medium growth in C&I waste produced		Option D: High growth in C&I waste produced	
from new or existing development.								
11. Protect and improve local air quality.	0	No significant effect	?	Impact would be dependent on the type of facilities required to deal with waste arisings	?	Impact would be dependent on the type of facilities required to deal with waste arisings	?	Impact would be dependent on the type of facilities required to deal with waste arisings
12. Protect and improve water quality and promote efficient use of water.	0	No significant effect	?	Impact would be dependent on the type of facilities required to deal with waste arisings	?	Impact would be dependent on the type of facilities required to deal with waste arisings	?	Impact would be dependent on the type of facilities required to deal with waste arisings
13. Support wider economic development and promote local job opportunities.	0	No significant effect	+	Low growth in waste arisings could generate some local job opportunities to handle waste and forecasting growth should ensure sufficient provision to deal with waste	+	Medium growth in arisings could generate more local job opportunities to handle waste and forecasting growth should ensure sufficient provision to deal with waste	++	High growth in arisings could generate substantially more local job opportunities to handle waste than Options B and C and forecasting growth should ensure sufficient provision to deal with waste
14. Protect and improve human health and quality of life.	0	No significant effect	?	Impact would be dependent on the location and type of facilities required to deal with waste arisings	?	Impact would be dependent on the location and type of facilities required to deal with waste arisings	?	Impact would be dependent on the location and type of facilities required to deal with waste arisings

Summary

- Option A had a negative impact on SA objective 1, but had no significant effect on any of the other SA objectives.
- The impacts of Options B, C and D on SA objectives 6, 10, 11, 12 and 14 were uncertain due to the lack of detail at this stage.
- Both Options B and C had a positive impact on SA objectives 1 and 13, but had a negative impact on SA objectives 2, 3, 4, 5, 7, 8 and 9.
- Option D had a very positive impact on SA objectives 1 and 13, but had a very negative impact on SA objectives 2, 3, 4, 5, 7, 8 and 9.
- None of these options appears to be very sustainable but Option A can be considered to be the least unsustainable, due to its lack of significant effects on most of the SA objectives, compared to the large number of SA objectives which are negatively impacted upon, in the case of Options B and C, and very negatively impacted upon, in the case of Option D. It should, nevertheless, be noted that Option A had a negative impact on SA objective 1 and did not have positive impacts on any of the SA objectives.

ISSUE: 3. What scenario should be used to forecast future Construction, Demolition and Excavation (C, D & E) waste arisings?

Sustainability Appraisal Objectives	Option A: No change in C, D & E waste produced		Option B: Low growth in C, D & E waste produced		Option C: Medium growth in C, D & E waste produced		Option D: High growth in C, D & E waste produced	
1. Ensure that adequate provision is made for a network of suitable waste management sites for the safe treatment and disposal of waste.	-	Forecasting no change risks inadequate provision	+	Forecasting low growth could result in adequate provision	+	Forecasting medium growth will be likely to result in adequate provision	++	Forecasting high growth will very likely to result in adequate provision
2. Protect and enhance biodiversity at all levels, achieve biodiversity net gain and safeguard features of geological interest.	0	No significant effect	-	Low growth in arisings could require additional facilities which, dependent on location of sites in relation to habitats/species/geological features, could have an adverse impact	-	Medium growth in arisings could require additional facilities which, dependent on location of sites in relation to habitats/species/geological features, could have an adverse impact	--	High growth in arisings could require many more additional facilities compared to Options B and C which, dependent on location of sites in relation to habitats/species/geological features, could have an adverse impact
3. Promote sustainable patterns of	0	No significant effect	-	Low growth in arisings could require additional facilities which would	-	Medium growth in arisings could require additional facilities which would	--	High growth in arisings could require many more additional facilities which

Sustainability Appraisal Objectives	Option A: No change in C, D & E waste produced		Option B: Low growth in C, D & E waste produced		Option C: Medium growth in C, D & E waste produced		Option D: High growth in C, D & E waste produced	
movement and the use of more sustainable modes of transport.				increase the haulage of waste and road congestion and would require new transport infrastructure to be developed		increase the haulage of waste and road congestion and would require new transport infrastructure to be developed		would substantially increase the haulage of waste and road congestion and would require more new transport infrastructure to be developed than in Options B and C
4. Protect the quality of the historic environment, heritage assets and their settings above and below ground.	0	No significant effect	-	Low growth in arisings could require additional facilities which, dependent on location of sites in relation to heritage assets, could have an adverse impact	-	Medium growth in arisings could require additional facilities which, dependent on location of sites in relation to heritage assets, could have an adverse impact	--	High growth in arisings could require many more additional facilities compared to Options B and C which, dependent on location of sites in relation to heritage assets, could have an adverse impact
5. Protect and enhance the quality and character of our townscape and landscape.	0	No significant effect	-	Low growth in arisings could require additional facilities which, dependent on location of sites in relation to landscape and townscape, could have an adverse impact	-	Medium growth in arisings could require additional facilities which, dependent on location of sites in relation to landscape and townscape, could have an adverse impact	--	High growth in arisings could require many more additional facilities compared to Options B and C which, dependent on location of sites in relation to landscape and townscape, could have an adverse impact
6. Reduce the impact and	0	No significant	?	Impact would be dependent on the location	?	Impact would be dependent on the location	?	Impact would be dependent on the location

Sustainability Appraisal Objectives	Option A: No change in C, D & E waste produced		Option B: Low growth in C, D & E waste produced		Option C: Medium growth in C, D & E waste produced		Option D: High growth in C, D & E waste produced	
risk of flooding.		effect		and type of facilities required to deal with waste arisings		and type of facilities required to deal with waste arisings		and type of facilities required to deal with waste arisings
7. Minimise any possible impacts on, and increase adaptability to, climate change.	0	No significant effect	-	Low growth in arisings could require additional facilities which could increase greenhouse gas emissions	-	Medium growth in arisings could require additional facilities which could increase greenhouse gas emissions	--	High growth in arisings could require more additional facilities than Option C which could considerably increase greenhouse gas emissions.
8. Protect high quality agricultural land and soil.	0	No significant effect	-	Low growth in arisings could require additional facilities which, dependent on location of sites in relation to high quality agricultural land and soil, could have an adverse impact	-	Medium growth in arisings could require additional facilities which, dependent on location of sites in relation to high quality agricultural land and soil, could have an adverse impact	--	High growth in arisings could require many more additional facilities compared to Options B and C which, dependent on location of sites in relation to high quality agricultural land and soil, could have an adverse impact
9. Promote more efficient use of land and resources.	0	No significant effect	-	Low growth in waste arisings would require greater use of land and resources	-	Medium growth in waste arisings would require greater use of land and resources	--	High growth in waste arisings would require much greater use of land and resources
10. Promote energy efficiency and	0	No significant effect	?	Impact would be dependent on the type of facilities required to deal	?	Impact would be dependent on the type of facilities required to deal	?	Impact would be dependent on the type of facilities required to deal

Sustainability Appraisal Objectives	Option A: No change in C, D & E waste produced		Option B: Low growth in C, D & E waste produced		Option C: Medium growth in C, D & E waste produced		Option D: High growth in C, D & E waste produced	
maximise renewable energy opportunities from new or existing development.				with waste arisings		with waste arisings		with waste arisings
11. Protect and improve local air quality.	0	No significant effect	?	Impact would be dependent on the type of facilities required to deal with waste arisings	?	Impact would be dependent on the type of facilities required to deal with waste arisings	?	Impact would be dependent on the type of facilities required to deal with waste arisings
12. Protect and improve water quality and promote efficient use of water.	0	No significant effect	?	Impact would be dependent on the type of facilities required to deal with waste arisings	?	Impact would be dependent on the type of facilities required to deal with waste arisings	?	Impact would be dependent on the type of facilities required to deal with waste arisings
13. Support wider economic development and promote local job opportunities.	0	No significant effect	+	Low growth in arisings could generate some local job opportunities to handle waste and forecasting growth should ensure sufficient provision to deal with waste	+	Medium growth in arisings could generate more local job opportunities to handle waste and forecasting growth should ensure sufficient provision to deal with waste	++	High growth in arisings could generate substantially more local job opportunities to handle waste than Options B and C and forecasting growth should ensure sufficient provision to deal with waste
14. Protect and improve	0	No significant	?	Impact would be dependent on the location	?	Impact would be dependent on the location	?	Impact would be dependent on the location

Sustainability Appraisal Objectives	Option A: No change in C, D & E waste produced	Option B: Low growth in C, D & E waste produced	Option C: Medium growth in C, D & E waste produced	Option D: High growth in C, D & E waste produced
human health and quality of life.	effect	and type of facilities required to deal with waste arisings	and type of facilities required to deal with waste arisings	and type of facilities required to deal with waste arisings

Summary

- Option A had a negative impact on SA objective 1, but had no significant effect on any of the other SA objectives.
- The impacts of Options B, C and D on SA objectives 6, 10, 11, 12 and 14 were uncertain due to the lack of detail at this stage.
- Both Options B and C had a positive impact on SA objectives 1 and 13, but had a negative impact on SA objectives 2, 3, 4, 5, 7, 8 and 9.
- Option D had a very positive impact on SA objectives 1 and 13, but had a very negative impact on SA objectives 2, 3, 4, 5, 7, 8 and 9.
- None of these options appears to be very sustainable but Option A can be considered to be the least unsustainable, due to its lack of significant effects on most of the SA objectives, compared to the large number of SA objectives which are negatively impacted upon, in the case of Options B and C, and very negatively impacted upon, in the case of Option D. It should, nevertheless, be noted that Option A had a negative impact on SA objective 1 and did not have positive impacts on any of the SA objectives.

ISSUE: 4. What scenario should be used to forecast future Hazardous waste arisings?

Sustainability Appraisal Objectives	Option A: No change in Hazardous waste produced		Option B: Decline in Hazardous waste produced		Option C: Growth in Hazardous waste produced	
1. Ensure that adequate provision is made for a network of suitable waste management sites for the safe treatment and disposal of waste.	-	Forecasting no change risks inadequate provision.	--	Forecasting decline risks inadequate provision to a greater degree than Option A.	+	Forecasting growth will be likely to result in adequate provision
2. Protect and enhance biodiversity at all levels, achieve biodiversity net gain and safeguard features of geological interest.	0	No significant effect.	+	Less arisings could mean fewer facilities required which could lower any risk of adverse impacts	-	Growth in arisings could require additional facilities which, dependent on location of sites in relation to habitats/species/geological features, could have an adverse impact
3. Promote sustainable patterns of movement and the use of more sustainable modes of transport.	0	No significant effect.	+	Less arisings could mean fewer facilities required which could reduce the haulage of waste and road congestion and may not require new transport	-	Growth in arisings could require additional facilities which could increase the haulage of waste and road congestion and could require new transport infrastructure to be developed

Sustainability Appraisal Objectives	Option A: No change in Hazardous waste produced	Option B: Decline in Hazardous waste produced	Option C: Growth in Hazardous waste produced
		infrastructure to be developed	
4. Protect the quality of the historic environment, heritage assets and their settings above and below ground.	0	No significant effect.	+ Less arisings could mean fewer facilities required which could lower any risk of adverse impacts
5. Protect and enhance the quality and character of our townscape and landscape.	0	No significant effect.	+ Less arisings could mean fewer facilities required which could lower any risk of adverse impacts
6. Reduce the impact and risk of flooding.	0	No significant effect.	? Impact would be dependent on the location and type of facilities required to deal with waste arisings
7. Minimise any possible impacts on, and increase	0	No significant	+ Less arisings

Sustainability Appraisal Objectives		Option A: No change in Hazardous waste produced	Option B: Decline in Hazardous waste produced	Option C: Growth in Hazardous waste produced
adaptability to, climate change.		effect.	could mean fewer facilities required which could reduce greenhouse gas emissions	require additional facilities which could increase greenhouse gas emissions
8. Protect high quality agricultural land and soil.	0	No significant effect.	+ Less arisings could mean fewer facilities required which could lower any risk of adverse impacts	- Growth in arisings could require additional facilities which, dependent on location of sites in relation to high quality agricultural land and soil, could have an adverse impact
9. Promote more efficient use of land and resources.	0	No significant effect.	+ Less waste arisings could reduce the amount of land and resources required	- Growth in arisings could require greater use of land and resources
10. Promote energy efficiency and maximise renewable energy opportunities from new or existing development.	0	No significant effect.	? Impact would be dependent on the type of facilities required to deal with waste arisings	? Impact would be dependent on the type of facilities required to deal with waste arisings
11. Protect and improve local air quality.	0	No significant	? Impact would	? Impact would be

Sustainability Appraisal Objectives	Option A: No change in Hazardous waste produced		Option B: Decline in Hazardous waste produced		Option C: Growth in Hazardous waste produced	
		effect.		be dependent on the type of facilities required to deal with waste arisings		dependent on the type of facilities required to deal with waste arisings
12. Protect and improve water quality and promote efficient use of water.	0	No significant effect.	?	Impact would be dependent on the type of facilities required to deal with waste arisings	?	Impact would be dependent on the type of facilities required to deal with waste arisings
13. Support wider economic development and promote local job opportunities.	0	No significant effect.	0	No significant effect.	+	Growth in arisings could generate more local job opportunities to handle waste and forecasting growth should ensure sufficient provision to deal with waste
14. Protect and improve human health and quality of life.	0	No significant effect.	?	Impact would be dependent on the location and type of facilities required to deal with waste arisings	?	Impact would be dependent on the location and type of facilities required to deal with waste arisings

Summary

- Option A had a negative impact on SA objective 1, but had no significant effect on any of the other SA objectives.
- The impacts of Options B and C on SA objectives 6, 10, 11, 12 and 14 were uncertain due to the lack of detail at this stage.
- Option B had positive impacts on SA objectives 2, 3, 4, 5, 7, 8 and 9, whereas Option C had negative impacts on these objectives.
- However, Option B had a very negative impact on SA objective 1, whereas Option C had a positive impact on this objective.
- Option C also had a positive impact on SA objective 13, whereas Option B had no significant effect on this objective.
- Option B, given the number of positive impacts it had, can be considered to be the most sustainable option, however it should be noted that Option B had a very negative impact on SA objective 1.

ISSUE: 5. What scenario should be used to forecast future Agricultural waste arisings?

Sustainability Appraisal Objectives	Option A: No change in Agricultural waste produced		Option B: Decline in Agricultural waste produced		Option C: Growth in Agricultural waste produced	
1. Ensure that adequate provision is made for a network of suitable waste management sites for the safe treatment and disposal of waste.	-	Forecasting no change risks inadequate provision	--	Forecasting decline risks inadequate provision to a greater degree than Option A.	+	Forecasting growth will be likely to result in adequate provision
2. Protect and enhance biodiversity at all levels, achieve biodiversity net gain and safeguard features of geological interest.	0	No significant effect.	+	Less arisings could mean fewer facilities required which could lower any risk of adverse impacts	-	Growth in arisings could require additional facilities which, dependent on location of sites in relation to habitats/species/geological features, could have an adverse impact
3. Promote sustainable patterns of movement and the use of more sustainable modes of transport.	0	No significant effect.	+	Less arisings could mean fewer facilities required which could reduce the haulage of waste and road	-	Growth in arisings could require additional facilities which could increase the haulage of waste and road congestion and could require new transport infrastructure to be developed

Sustainability Appraisal Objectives	Option A: No change in Agricultural waste produced		Option B: Decline in Agricultural waste produced		Option C: Growth in Agricultural waste produced	
				congestion and may not require new transport infrastructure to be developed		
4. Protect the quality of the historic environment, heritage assets and their settings above and below ground.	0	No significant effect.	+	Less arisings could mean fewer facilities required which could lower any risk of adverse impacts	-	Growth in arisings could require additional facilities which, dependent on location of sites in relation to heritage assets, could have an adverse impact
5. Protect and enhance the quality and character of our townscape and landscape.	0	No significant effect.	+	Less arisings could mean fewer facilities required which could lower any risk of adverse impacts	-	Growth in arisings could require additional facilities which, dependent on location of sites in relation to landscape and townscape, could have an adverse impact
6. Reduce the impact and risk of flooding.	0	No significant effect.	?	Impact would be dependent on the	?	Impact would be dependent on the location and type of facilities

Sustainability Appraisal Objectives	Option A: No change in Agricultural waste produced		Option B: Decline in Agricultural waste produced		Option C: Growth in Agricultural waste produced	
				location and type of facilities required to deal with waste arisings		required to deal with waste arisings
7. Minimise any possible impacts on, and increase adaptability to, climate change.	0	No significant effect.	+	Less arisings could mean fewer facilities required which could reduce greenhouse gas emissions	-	Growth in arisings could require additional facilities which could increase greenhouse gas emissions
8. Protect high quality agricultural land and soil.	0	No significant effect.	+	Less arisings could mean fewer facilities required which could lower any risk of adverse impacts	-	Growth in arisings could require additional facilities which, dependent on location of sites in relation to high quality agricultural land and soil, could have an adverse impact
9. Promote more efficient use of land and resources.	0	No significant effect.	+	Decline in waste	-	Growth in arisings could require greater use

Sustainability Appraisal Objectives	Option A: No change in Agricultural waste produced		Option B: Decline in Agricultural waste produced		Option C: Growth in Agricultural waste produced	
				arisings could reduce the amount of land and resources required		of land and resources
10. Promote energy efficiency and maximise renewable energy opportunities from new or existing development.	0	No significant effect.	?	Impact would be dependent on the type of facilities required to deal with waste arisings	?	Impact would be dependent on the type of facilities required to deal with waste arisings
11. Protect and improve local air quality.	0	No significant effect.	?	Impact would be dependent on the type of facilities required to deal with waste arisings	?	Impact would be dependent on the type of facilities required to deal with waste arisings
12. Protect and improve water quality and promote efficient use of water.	0	No significant effect.	?	Impact would be dependent on the type of facilities required to deal with	?	Impact would be dependent on the type of facilities required to deal with waste arisings

Sustainability Appraisal Objectives	Option A: No change in Agricultural waste produced		Option B: Decline in Agricultural waste produced		Option C: Growth in Agricultural waste produced	
				waste arisings		
13. Support wider economic development and promote local job opportunities.	0	No significant effect.	0	No significant effect	+	Growth in arisings could generate more local job opportunities to handle waste and forecasting growth should ensure sufficient provision to deal with waste
14. Protect and improve human health and quality of life.	0	No significant effect.	?	Impact would be dependent on the location and type of facilities required to deal with waste arisings	?	Impact would be dependent on the location and type of facilities required to deal with waste arisings

Summary

- Option A had a negative impact on SA objective 1, but had no significant effect on any of the other SA objectives.
- The impacts of Options B and C on SA objectives 6, 10, 11, 12 and 14 were uncertain due to the lack of detail at this stage.
- Option B had positive impacts on SA objectives 2, 3, 4, 5, 7, 8 and 9, whereas Option C had negative impacts on these objectives.

- However, Option B had a very negative impact on SA objective 1, whereas Option C had a positive impact on this objective.
- Option C also had a positive impact on SA objective 13, whereas Option B had no significant effect on this objective.
- Option B, given the number of positive impacts it had, can be considered the most sustainable option, however it should be noted that Option B had a very negative impact on SA objective 1.

ISSUE: 6. What scenario should be used to forecast future Mining waste arisings?

Sustainability Appraisal Objectives	Option A: No change in Mining waste produced		Option B: Decline in Mining waste produced		Option C: Growth in Mining waste produced	
1. Ensure that adequate provision is made for a network of suitable waste management sites for the safe treatment and disposal of waste.	-	Forecasting no change risks inadequate provision	--	Forecasting decline risks inadequate provision to a greater degree than Option A.	+	Forecasting growth will be likely to result in adequate provision
2. Protect and enhance biodiversity at all levels, achieve biodiversity net gain and safeguard features of geological interest.	0	No significant effect.	+	Less arisings could mean fewer facilities required which could lower any risk of adverse impacts	-	Growth in arisings could require additional facilities which, dependent on location of sites in relation to habitats/species/geological features, could have an adverse impact
3. Promote sustainable patterns of movement and the use of more sustainable modes of transport.	0	No significant effect.	+	Less arisings could mean fewer facilities required which could reduce the haulage of waste and road	-	Growth in arisings could require additional facilities which could increase the haulage of waste and road congestion and could require new transport infrastructure to be developed

Sustainability Appraisal Objectives	Option A: No change in Mining waste produced		Option B: Decline in Mining waste produced		Option C: Growth in Mining waste produced	
				congestion and may not require new transport infrastructure to be developed		
4. Protect the quality of the historic environment, heritage assets and their settings above and below ground.	0	No significant effect.	+	Less arisings could mean fewer facilities required which could lower any risk of adverse impacts	-	Growth in arisings could require additional facilities which, dependent on location of sites in relation to heritage assets, could have an adverse impact
5. Protect and enhance the quality and character of our townscape and landscape.	0	No significant effect.	+	Less arisings could mean fewer facilities required which could lower any risk of adverse impacts	-	Growth in arisings could require additional facilities which, dependent on location of sites in relation to landscape and townscape, could have an adverse impact
6. Reduce the impact and risk of flooding.	0	No significant effect.	?	Impacts would be dependent on	?	Impacts would be dependent on the location and type of facilities

Sustainability Appraisal Objectives	Option A: No change in Mining waste produced		Option B: Decline in Mining waste produced		Option C: Growth in Mining waste produced	
				the location and type of facilities required to deal with waste arisings		required to deal with waste arisings
7. Minimise any possible impacts on, and increase adaptability to, climate change.	0	No significant effect.	+	Less arisings could mean fewer facilities required which could reduce greenhouse gas emissions	-	Growth in arisings could require additional facilities which could increase greenhouse gas emissions
8. Protect high quality agricultural land and soil.	0	No significant effect.	+	Less arisings could mean fewer facilities required which could lower any risk of adverse impacts	-	Growth in arisings could require additional facilities which, dependent on location of sites in relation to high quality agricultural land and soil, could have an adverse impact
9. Promote more efficient use of land and resources.	0	No significant effect.	+	Decline in waste	-	Growth in arisings could require greater use of land

Sustainability Appraisal Objectives	Option A: No change in Mining waste produced		Option B: Decline in Mining waste produced		Option C: Growth in Mining waste produced	
				arisings could reduce the amount of land and resources required		and resources
10. Promote energy efficiency and maximise renewable energy opportunities from new or existing development.	0	No significant effect.	?	Impact would be dependent on the type of facilities required to deal with waste arisings	?	Impact would be dependent on the type of facilities required to deal with waste arisings
11. Protect and improve local air quality.	0	No significant effect.	?	Impact would be dependent on the type of facilities required to deal with waste arisings	?	Impact would be dependent on the type of facilities required to deal with waste arisings
12. Protect and improve water quality and promote efficient use of water.	0	No significant effect.	?	Impact would be dependent on the type of facilities required to deal with	?	Impact would be dependent on the type of facilities required to deal with waste arisings

Sustainability Appraisal Objectives	Option A: No change in Mining waste produced		Option B: Decline in Mining waste produced		Option C: Growth in Mining waste produced	
				waste arisings		
13. Support wider economic development and promote local job opportunities.	0	No significant effect.	0	No significant effect	+	Growth in arisings could generate more local job opportunities to handle waste and forecasting growth should ensure sufficient provision to deal with waste
14. Protect and improve human health and quality of life.	0	No significant effect.	?	Impact would be dependent on the location and type of facilities required to deal with waste arisings	?	Impact would be dependent on the location and type of facilities required to deal with waste arisings

Summary

- Option A had a negative impact on SA objective 1, but had no significant effect on any of the other SA objectives.
- The impacts of Options B and C on SA objectives 6, 10, 11, 12 and 14 were uncertain due to the lack of detail at this stage.
- Option B had positive impacts on SA objectives 2, 3, 4, 5, 7, 8 and 9, whereas Option C had negative impacts on these objectives.

- However, Option B had a very negative impact on SA objective 1, whereas Option C had a positive impact on this objective.
- Option C also had a positive impact on SA objective 13, whereas Option B had no significant effect on this objective.
- Option B, given the number of positive impacts it had, can be considered the most sustainable option, however it should be noted that Option B had a very negative impact on SA objective 1.

ISSUE: 7. What scenario should be used to forecast future Low-level Radioactive waste arisings?

Sustainability Appraisal Objectives	Option A: No change in Low-level Radioactive waste produced		Option B: Decline in Low- level Radioactive waste produced		Option C: Growth in Low-level Radioactive waste produced	
1. Ensure that adequate provision is made for a network of suitable waste management sites for the safe treatment and disposal of waste.	-	Forecasting no change risks inadequate provision	--	Forecasting decline risks inadequate provision to a greater degree than Option A.	+	Forecasting growth will be likely to result in adequate provision
2. Protect and enhance biodiversity at all levels, achieve biodiversity net gain and safeguard features of geological interest.	0	No significant effect.	+	Less arisings could mean fewer facilities required which could lower any risk of adverse impacts	-	Growth in arisings could require additional facilities which, dependent on location of sites in relation to habitats/species/geological features, could have an adverse impact
3. Promote sustainable patterns of movement and the use of more sustainable modes of transport.	0	No significant effect.	+	Less arisings could mean fewer facilities required which could reduce the haulage of waste and road	-	Growth in arisings could require additional facilities which could increase the haulage of waste and road congestion and could require new transport infrastructure to be developed

Sustainability Appraisal Objectives	Option A: No change in Low-level Radioactive waste produced		Option B: Decline in Low- level Radioactive waste produced		Option C: Growth in Low-level Radioactive waste produced	
				congestion and may not require new transport infrastructure to be developed		
4. Protect the quality of the historic environment, heritage assets and their settings above and below ground.	0	No significant effect.	+	Less arisings could mean fewer facilities required which could lower any risk of adverse impacts	-	Growth in arisings could require additional facilities which, dependent on location of sites in relation to heritage assets, could have an adverse impact
5. Protect and enhance the quality and character of our townscape and landscape.	0	No significant effect.	+	Less arisings could mean fewer facilities required which could lower any risk of adverse impacts	-	Growth in arisings could require additional facilities which, dependent on location of sites in relation to landscape and townscape, could have an adverse impact
6. Reduce the impact and risk of flooding.	0	No significant effect.	?	Impact would be dependent on the	?	Impact would be dependent on the location and type of facilities

Sustainability Appraisal Objectives	Option A: No change in Low-level Radioactive waste produced		Option B: Decline in Low- level Radioactive waste produced		Option C: Growth in Low-level Radioactive waste produced	
				location and type of facilities required to deal with waste arisings		required to deal with waste arisings
7. Minimise any possible impacts on, and increase adaptability to, climate change.	0	No significant effect.	+	Less arisings could mean fewer facilities required which could reduce greenhouse gas emissions	-	Growth in arisings could require additional facilities which could increase greenhouse gas emissions
8. Protect high quality agricultural land and soil.	0	No significant effect.	+	Less arisings could mean fewer facilities required which could lower any risk of adverse impacts	-	Growth in arisings could require additional facilities which, dependent on location of sites in relation to high quality agricultural land and soil, could have an adverse impact
9. Promote more efficient use of land and resources.	0	No significant effect.	+	Decline in waste	-	Growth in waste arisings could require greater use

Sustainability Appraisal Objectives	Option A: No change in Low-level Radioactive waste produced		Option B: Decline in Low- level Radioactive waste produced		Option C: Growth in Low-level Radioactive waste produced	
				arisings may reduce the amount of land and resources required		of land and resources
10. Promote energy efficiency and maximise renewable energy opportunities from new or existing development.	0	No significant effect.	?	Impact would be dependent on the type of facilities required to deal with waste arisings	?	Impact would be dependent on the type of facilities required to deal with waste arisings
11. Protect and improve local air quality.	0	No significant effect.	?	Impact would be dependent on the type of facilities required to deal with waste arisings	?	Impact would be dependent on the type of facilities required to deal with waste arisings
12. Protect and improve water quality and promote efficient use of water.	0	No significant effect.	?	Impact would be dependent on the type of facilities required to deal with	?	Impact would be dependent on the type of facilities required to deal with waste arisings

Sustainability Appraisal Objectives	Option A: No change in Low-level Radioactive waste produced		Option B: Decline in Low- level Radioactive waste produced		Option C: Growth in Low-level Radioactive waste produced	
				waste arisings		
13. Support wider economic development and promote local job opportunities.	0	No significant effect.	0	No significant effect.	+	Growth in arisings could generate more local job opportunities to handle waste and forecasting growth should ensure sufficient provision to deal with waste.
14. Protect and improve human health and quality of life.	0	No significant effect.	?	Impact would be dependent on the location and type of facilities required to deal with waste arisings	?	Impact would be dependent on the location and type of facilities required to deal with waste arisings

Summary

- Option A had a negative impact on SA objective 1, but had no significant effect on any of the other SA objectives.
- The impacts of Options B and C on SA objectives 6, 10, 11, 12 and 14 were uncertain due to the lack of detail at this stage.
- Option B had positive impacts on SA objectives 2, 3, 4, 5, 7, 8 and 9, whereas Option C had negative impacts on these objectives.

- However, Option B had a very negative impact on SA objective 1, whereas Option C had a positive impact on this objective.
- Option C also had a positive impact on SA objective 13, whereas Option B had no significant effect on this objective.
- Option B, given the number of positive impacts it had, can be considered the most sustainable option, however it should be noted that Option B had a very negative impact on SA objective 1.

ISSUE: 8. What recycling rate should be applied to LACW future arisings to calculate what recycling capacity is required throughout the plan period?

Sustainability Appraisal Objectives	Option A: No change (39% recycling rate)		Option B: Small increase (51% recycling rate)		Option C: Medium increase (55% recycling rate)		Option D: High increase (65% recycling rate)	
1. Ensure that adequate provision is made for a network of suitable waste management sites for the safe treatment and disposal of waste.	-	Applying the current recycling rate could risk inadequate provision if the recycling rate were to increase.	+	Applying a small increase in recycling rate will be likely to result in adequate provision	+	Applying a medium increase in recycling rate will be likely to result in adequate provision	++	Applying a high increase in recycling rate will be very likely to result in adequate provision
2. Protect and enhance biodiversity at all levels, achieve biodiversity net gain and safeguard features of geological interest.	0	No significant effect.	?	A small increase in recycling rates could require additional recycling facilities which, dependent on location of sites in relation to habitats/species/geological features, could have an adverse	?	A medium increase in recycling rates could require additional recycling facilities which, dependent on location of sites in relation to habitats/species/geological features, could	?	A high increase in recycling rates could require additional recycling facilities which, dependent on location of sites in relation to habitats/species/geological features, could have an adverse

Sustainability Appraisal Objectives	Option A: No change (39% recycling rate)		Option B: Small increase (51% recycling rate)		Option C: Medium increase (55% recycling rate)		Option D: High increase (65% recycling rate)	
				impact. However, if the waste is not recycled there would have to be additional alternative types of waste facilities to handle the waste further down the waste hierarchy		have an adverse impact. However, if the waste is not recycled there would have to be additional alternative types of waste facilities to handle the waste further down the waste hierarchy		impact. However, if the waste is not recycled there would have to be additional alternative types of waste facilities to handle the waste further down the waste hierarchy
3. Promote sustainable patterns of movement and the use of more sustainable modes of transport.	0	No significant effect.	?	A small increase in recycling rates could require additional recycling facilities which could increase the haulage of waste and road congestion and could require new transport infrastructure to be developed. However, if the	?	A medium increase in recycling rates could require additional recycling facilities which could increase the haulage of waste and road congestion and could require new transport infrastructure to be developed.	?	A high increase in recycling rates could require additional recycling facilities which could increase the haulage of waste and road congestion and could require new transport infrastructure to be developed. However, if the

Sustainability Appraisal Objectives	Option A: No change (39% recycling rate)		Option B: Small increase (51% recycling rate)		Option C: Medium increase (55% recycling rate)		Option D: High increase (65% recycling rate)	
				waste is not recycled there would have to be additional alternative types of waste facilities to handle the waste further down the waste hierarchy		However, if the waste is not recycled there would have to be additional alternative types of waste facilities to handle the waste further down the waste hierarchy		waste is not recycled there would have to be additional alternative types of waste facilities to handle the waste further down the waste hierarchy
4. Protect the quality of the historic environment, heritage assets and their settings above and below ground.	0	No significant effect.	?	A small increase in recycling rates could require additional recycling facilities which, dependent on location of sites in relation to heritage assets, could have an adverse impact, could have an adverse impact. However, if the waste is not recycled there	?	A medium increase in recycling rates could require additional recycling facilities which, dependent on location of sites in relation to heritage assets, could have an adverse impact, could have an adverse impact. However, if the waste is not	?	A high increase in recycling rates could require additional recycling facilities which, dependent on location of sites in relation to heritage assets, could have an adverse impact, could have an adverse impact. However, if the waste is not recycled there

Sustainability Appraisal Objectives	Option A: No change (39% recycling rate)		Option B: Small increase (51% recycling rate)		Option C: Medium increase (55% recycling rate)		Option D: High increase (65% recycling rate)	
				would have to be additional alternative types of waste facilities to handle the waste further down the waste hierarchy		recycled there would have to be additional alternative types of waste facilities to handle the waste further down the waste hierarchy		would have to be additional alternative types of waste facilities to handle the waste further down the waste hierarchy
5. Protect and enhance the quality and character of our townscape and landscape.	0	No significant effect.	?	A small increase in recycling rates could require additional recycling facilities which, dependent on location of sites in relation to landscape and townscape, could have an adverse impact. However, if the waste is not recycled there would have to be additional alternative types of waste facilities	?	A medium increase in recycling rates could require additional recycling facilities which, dependent on location of sites in relation to landscape and townscape, could have an adverse impact. However, if the waste is not recycled there would have to be additional alternative types	?	A high increase in recycling rates could require additional recycling facilities which, dependent on location of sites in relation to landscape and townscape, could have an adverse impact. However, if the waste is not recycled there would have to be additional alternative types of waste facilities

Sustainability Appraisal Objectives	Option A: No change (39% recycling rate)		Option B: Small increase (51% recycling rate)		Option C: Medium increase (55% recycling rate)		Option D: High increase (65% recycling rate)	
				to handle the waste further down the waste hierarchy		of waste facilities to handle the waste further down the waste hierarchy		to handle the waste further down the waste hierarchy
6. Reduce the impact and risk of flooding.	0	No significant effect	?	Impact would be dependent on the location and type of facilities required to deal with increased capacity for recycling	?	Impact would be dependent on the location and type of facilities required to deal with increased capacity for recycling	?	Impact would be dependent on the location and type of facilities required to deal with increased capacity for recycling
7. Minimise any possible impacts on, and increase adaptability to, climate change.	0	No significant effect	?	Impact would be dependent on whether additional facilities for recycling versus additional facilities to deal with waste further down the waste hierarchy would increase or decrease greenhouse gas emissions	?	Impact would be dependent on whether additional facilities for recycling versus additional facilities to deal with waste further down the waste hierarchy would increase or decrease greenhouse gas emissions	?	Impact would be dependent on whether additional facilities for recycling versus additional facilities to deal with waste further down the waste hierarchy would increase or decrease greenhouse gas emissions

Sustainability Appraisal Objectives	Option A: No change (39% recycling rate)		Option B: Small increase (51% recycling rate)		Option C: Medium increase (55% recycling rate)		Option D: High increase (65% recycling rate)	
8. Protect high quality agricultural land and soil.	0	No significant effect.	?	A small increase in recycling rates could require additional recycling facilities which, dependent on location of sites in relation to high quality agricultural land and soil, could have an adverse impact. However, if the waste is not recycled there would have to be additional alternative types of waste facilities to handle the waste further down the waste hierarchy	?	A medium increase in recycling rates could require additional recycling facilities which, dependent on location of sites in relation to high quality agricultural land and soil, could have an adverse impact. However, if the waste is not recycled there would have to be additional alternative types of waste facilities to handle the waste further down the waste hierarchy	?	A high increase in recycling rates could require additional recycling facilities which, dependent on location of sites in relation to high quality agricultural land and soil, could have an adverse impact. However, if the waste is not recycled there would have to be additional alternative types of waste facilities to handle the waste further down the waste hierarchy
9. Promote more efficient use of land and resources.	0	No significant effect	+	A small increase in recycling rates would marginally	+	A medium increase in recycling rates	++	A high increase in recycling rates would markedly

Sustainability Appraisal Objectives	Option A: No change (39% recycling rate)		Option B: Small increase (51% recycling rate)		Option C: Medium increase (55% recycling rate)		Option D: High increase (65% recycling rate)	
				promote more efficient use of land and resources		would promote more efficient use of land and resources		promote more efficient use of land and resources
10. Promote energy efficiency and maximise renewable energy opportunities from new or existing development.	0	No significant effect	?	Impact would be dependent on the type of facilities required to deal with increased capacity for recycling	?	Impact would be dependent on the type of facilities required to deal with increased capacity for recycling	?	Impact would be dependent on the type of facilities required to deal with increased capacity for recycling
11. Protect and improve local air quality.	0	No significant effect	?	Impact would be dependent on the location and type of facilities required to deal with increased capacity for recycling	?	Impact would be dependent on the location and type of facilities required to deal with increased capacity for recycling	?	Impact would be dependent on the location and type of facilities required to deal with increased capacity for recycling
12. Protect and improve water quality and promote efficient use of water.	0	No significant effect	?	Impact would be dependent on the location and type of facilities required to deal with increased capacity for recycling	?	Impact would be dependent on the location and type of facilities required to deal with increased capacity for recycling	?	Impact would be dependent on the location and type of facilities required to deal with increased capacity for recycling

Sustainability Appraisal Objectives	Option A: No change (39% recycling rate)		Option B: Small increase (51% recycling rate)		Option C: Medium increase (55% recycling rate)		Option D: High increase (65% recycling rate)	
13. Support wider economic development and promote local job opportunities.	0	No significant effect	+	Recycling will contribute to the move towards a circular economy which should create new opportunities for wider economic growth	+	Recycling will contribute to the move towards a circular economy which should create new opportunities for wider economic growth	++	Recycling will contribute to the move towards a circular economy which should create new opportunities for wider economic growth
14. Protect and improve human health and quality of life.	0	No significant effect	?	Impact would be dependent on the location and type of facilities required to deal with increased capacity for recycling	?	Impact would be dependent on the location and type of facilities required to deal with increased capacity for recycling	?	Impact would be dependent on the location and type of facilities required to deal with increased capacity for recycling

Summary

- Option A had a negative impact on SA objective 1, but had no significant effect on any of the other SA objectives.
- The impacts of Options B and C on SA objectives 2, 3, 4, 5, 6, 7, 8, 10, 11, 12 and 14 were uncertain due to the lack of detail at this stage, however their impacts on objectives 1, 9 and 13 were positive.
- Similarly, the impacts of Option D on SA objectives 2, 3, 4, 5, 6, 7, 8, 10, 11, 12 and 14 were uncertain due to the lack of detail at this stage, but its impact on objectives 1, 9 and 13 was very positive.
- Option A was the only option which had a negative impact, whilst Option D was the only option which had very positive impacts, therefore Option D can be considered to be the most sustainable option.

ISSUE: 9. What recycling rate should be applied to C&I future arisings to calculate what recycling capacity is required throughout the plan period?

Sustainability Appraisal Objectives	Option A: No change (52% recycling rate)		Option B: Medium increase (65% recycling rate)		Option C: High increase (70% recycling rate)	
1. Ensure that adequate provision is made for a network of suitable waste management sites for the safe treatment and disposal of waste.	-	Applying the current recycling rate could risk inadequate provision if the recycling rate increases	+	Applying a medium increase in recycling rate will be likely to result in adequate provision	++	Applying a high increase in recycling rate will be very likely to result in adequate provision
2. Protect and enhance biodiversity at all levels, achieve biodiversity net gain and safeguard features of geological interest.	0	No significant effect.	?	A medium increase in recycling rates could require additional recycling facilities which, dependent on location of sites in relation to habitats/ species/geological features, could have an adverse impact. However, if the waste is not recycled there would have to be additional alternative types	?	A high increase in recycling rates could require additional recycling facilities which, dependent on location of sites in relation to habitats/ species/geological features, could have an adverse impact. However, if the waste is not recycled there would have to be additional alternative types of waste facilities

Sustainability Appraisal Objectives	Option A: No change (52% recycling rate)		Option B: Medium increase (65% recycling rate)		Option C: High increase (70% recycling rate)	
				of waste facilities to handle the waste further down the waste hierarchy		to handle the waste further down the waste hierarchy
3. Promote sustainable patterns of movement and the use of more sustainable modes of transport.	0	No significant effect.	?	A medium increase in recycling rates could require additional recycling facilities which could increase the haulage of waste and road congestion and could require new transport infrastructure to be developed. However, if the waste is not recycled there would have to be additional alternative types of waste facilities to handle the waste further down the waste	?	A high increase in recycling rates could require additional recycling facilities which could increase the haulage of waste and road congestion and could require new transport infrastructure to be developed. However, if the waste is not recycled there would have to be additional alternative types of waste facilities to handle the waste further down the waste hierarchy

Sustainability Appraisal Objectives	Option A: No change (52% recycling rate)		Option B: Medium increase (65% recycling rate)		Option C: High increase (70% recycling rate)	
				hierarchy		
4. Protect the quality of the historic environment, heritage assets and their settings above and below ground.	0	No significant effect.	?	A medium increase in recycling rates could require additional recycling facilities which, dependent on location of sites in relation to heritage assets, could have an adverse impact, could have an adverse impact. However, if the waste is not recycled there would have to be additional alternative types of waste facilities to handle the waste further down the waste hierarchy	?	A high increase in recycling rates could require additional recycling facilities which, dependent on location of sites in relation to heritage assets, could have an adverse impact, could have an adverse impact. However, if the waste is not recycled there would have to be additional alternative types of waste facilities to handle the waste further down the waste hierarchy
5. Protect and enhance the quality and character of our townscape and landscape.	0	No significant effect.	?	A medium increase in recycling rates could require	?	A high increase in recycling rates could require additional

Sustainability Appraisal Objectives	Option A: No change (52% recycling rate)		Option B: Medium increase (65% recycling rate)		Option C: High increase (70% recycling rate)	
				additional recycling facilities which, dependent on location of sites in relation to landscape and townscape, could have an adverse impact, could have an adverse impact. However, if the waste is not recycled there would have to be additional alternative types of waste facilities to handle the waste further down the waste hierarchy		recycling facilities which, dependent on location of sites in relation to landscape and townscape, could have an adverse impact, could have an adverse impact. However, if the waste is not recycled there would have to be additional alternative types of waste facilities to handle the waste further down the waste hierarchy
6. Reduce the impact and risk of flooding.	0	No significant effect	?	Impacts would be dependent on the location and type of facilities required to deal with increased capacity for recycling	?	Impacts would be dependent on the location and type of facilities required to deal with increased capacity for recycling
7. Minimise any possible impacts on, and increase	0	No significant	?	Impacts would be	?	Impacts would be

Sustainability Appraisal Objectives	Option A: No change (52% recycling rate)		Option B: Medium increase (65% recycling rate)		Option C: High increase (70% recycling rate)	
adaptability to, climate change.		effect		dependent on whether additional facilities for recycling versus additional facilities to deal with waste further down the waste hierarchy would increase or decrease greenhouse gas emissions		dependent on whether additional facilities for recycling versus additional facilities to deal with waste further down the waste hierarchy would increase or decrease greenhouse gas emissions
8. Protect high quality agricultural land and soil.	0	No significant effect.	?	A medium increase in recycling rates could require additional recycling facilities which, dependent on location of sites in relation to high quality agricultural land and soil, could have an adverse impact. However, if the waste is not recycled there would have to be additional	?	A high increase in recycling rates could require additional recycling facilities which, dependent on location of sites in relation to high quality agricultural land and soil, could have an adverse impact. However, if the waste is not recycled there would have to be additional alternative types

Sustainability Appraisal Objectives	Option A: No change (52% recycling rate)		Option B: Medium increase (65% recycling rate)		Option C: High increase (70% recycling rate)	
				alternative types of waste facilities to handle the waste further down the waste hierarchy		of waste facilities to handle the waste further down the waste hierarchy
9. Promote more efficient use of land and resources.	0	No significant effect	+	A medium increase in recycling rates would promote more efficient use of land and resources	++	A high increase in recycling rates would markedly promote more efficient use of land and resources
10. Promote energy efficiency and maximise renewable energy opportunities from new or existing development.	0	No significant effect	?	Impact would be dependent on the type of facilities required to deal with increased capacity for recycling	?	Impact would be dependent on the type of facilities required to deal with increased capacity for recycling
11. Protect and improve local air quality.	0	No significant effect	?	Impact would be dependent on the location and type of facilities required to deal with increased capacity for recycling	?	Impact would be dependent on the location and type of facilities required to deal with increased capacity for recycling
12. Protect and improve water quality and promote efficient use of water.	0	No significant effect	?	Impact would be dependent on the	?	Impact would be dependent on the

Sustainability Appraisal Objectives	Option A: No change (52% recycling rate)		Option B: Medium increase (65% recycling rate)		Option C: High increase (70% recycling rate)	
				location and type of facilities required to deal with increased capacity for recycling		location and type of facilities required to deal with increased capacity for recycling
13. Support wider economic development and promote local job opportunities.	0	No significant effect	+	Recycling will contribute to the move towards a circular economy which should create new opportunities for wider economic growth	++	Recycling will contribute to the move towards a circular economy which should create new opportunities for wider economic growth
14. Protect and improve human health and quality of life.	0	No significant effect	?	Impact would be dependent on the location and type of facilities required to deal with waste arisings	?	Impact would be dependent on the location and type of facilities required to deal with waste arisings

Summary

- Option A had a negative impact on SA objective 1, but had no significant effect on any of the other SA objectives.
- The impacts of Options B and C on SA objectives 2, 3, 4, 5, 6, 7, 8, 10, 11, 12 and 14 were uncertain due to the lack of detail at this stage.
- Option B had positive impacts, and Option C had very positive impacts, on SA objectives 1, 9 and 13.

- Option A was the only option which had a negative impact, whilst Option C was the only option which had very positive impacts, therefore Option C can be considered to be the most sustainable option.

ISSUE: 10. What recycling rate should be applied to C, D & E future arisings to calculate what recycling capacity is required throughout the plan period?

Sustainability Appraisal Objectives	Option A: No change (80% recycling rate)		Option B: Medium increase (90% recycling rate)		Option C: High increase (95% recycling rate)	
1. Ensure that adequate provision is made for a network of suitable waste management sites for the safe treatment and disposal of waste.	-	Applying the current recycling rate could risk inadequate provision if the recycling rate increases	+	Applying a medium increase in recycling rate will be likely to result in adequate provision	++	Applying a high increase in recycling rate will be very likely to result in adequate provision
2. Protect and enhance biodiversity at all levels, achieve biodiversity net gain and safeguard features of geological interest.	0	No significant effect.	?	A medium increase in recycling rates could require additional recycling facilities which, dependent on location of sites in relation to habitats/ species/geological features, could have an adverse impact. However, if the waste is not recycled there would have to be additional alternative types	?	A high increase in recycling rates could require additional recycling facilities which, dependent on location of sites in relation to habitats/ species/geological features, could have an adverse impact. However, if the waste is not recycled there would have to be additional alternative types of waste facilities

Sustainability Appraisal Objectives	Option A: No change (80% recycling rate)		Option B: Medium increase (90% recycling rate)		Option C: High increase (95% recycling rate)	
				of waste facilities to handle the waste further down the waste hierarchy		to handle the waste further down the waste hierarchy
3. Promote sustainable patterns of movement and the use of more sustainable modes of transport.	0	No significant effect.	?	A medium increase in recycling rates could require additional recycling facilities which could increase the haulage of waste and road congestion and could require new transport infrastructure to be developed. However, if the waste is not recycled there would have to be additional alternative types of waste facilities to handle the waste further down the waste	?	A high increase in recycling rates could require additional recycling facilities which could increase the haulage of waste and road congestion and could require new transport infrastructure to be developed. However, if the waste is not recycled there would have to be additional alternative types of waste facilities to handle the waste further down the waste hierarchy

Sustainability Appraisal Objectives	Option A: No change (80% recycling rate)		Option B: Medium increase (90% recycling rate)		Option C: High increase (95% recycling rate)	
				hierarchy		
4. Protect the quality of the historic environment, heritage assets and their settings above and below ground.	0	No significant effect.	?	A medium increase in recycling rates could require additional recycling facilities which, dependent on location of sites in relation to heritage assets, could have an adverse impact, could have an adverse impact. However, if the waste is not recycled there would have to be additional alternative types of waste facilities to handle the waste further down the waste hierarchy	?	A high increase in recycling rates could require additional recycling facilities which, dependent on location of sites in relation to heritage assets, could have an adverse impact, could have an adverse impact. However, if the waste is not recycled there would have to be additional alternative types of waste facilities to handle the waste further down the waste hierarchy
5. Protect and enhance the quality and character of our townscape and landscape.	0	No significant effect.	?	A medium increase in recycling rates could require	?	A high increase in recycling rates could require additional

Sustainability Appraisal Objectives	Option A: No change (80% recycling rate)		Option B: Medium increase (90% recycling rate)		Option C: High increase (95% recycling rate)	
				additional recycling facilities which, dependent on location of sites in relation to landscape and townscape, could have an adverse impact. However, if the waste is not recycled there would have to be additional alternative types of waste facilities to handle the waste further down the waste hierarchy		recycling facilities which, dependent on location of sites in relation to landscape and townscape, could have an adverse impact. However, if the waste is not recycled there would have to be additional alternative types of waste facilities to handle the waste further down the waste hierarchy
6. Reduce the impact and risk of flooding.	0	No significant effect	?	Impacts would be dependent on the location and type of facilities required to deal with increased capacity for recycling	?	Impacts would be dependent on the location and type of facilities required to deal with increased capacity for recycling
7. Minimise any possible impacts on, and increase adaptability to, climate change.	0	No significant effect	?	Impacts would be dependent on whether additional	?	Impacts would be dependent on whether additional

Sustainability Appraisal Objectives	Option A: No change (80% recycling rate)		Option B: Medium increase (90% recycling rate)		Option C: High increase (95% recycling rate)	
				facilities for recycling versus additional facilities to deal with waste further down the waste hierarchy would increase or decrease greenhouse gas emissions		facilities for recycling versus additional facilities to deal with waste further down the waste hierarchy would increase or decrease greenhouse gas emissions
8. Protect high quality agricultural land and soil.	0	No significant effect.	?	A medium increase in recycling rates could require additional recycling facilities which, dependent on location of sites in relation to high quality agricultural land and soil, could have an adverse impact, could have an adverse impact. However, if the waste is not recycled there would have to be additional	?	A high increase in recycling rates could require additional recycling facilities which, dependent on location of sites in relation to high quality agricultural land and soil, could have an adverse impact, could have an adverse impact. However, if the waste is not recycled there would have to be additional alternative types

Sustainability Appraisal Objectives	Option A: No change (80% recycling rate)		Option B: Medium increase (90% recycling rate)		Option C: High increase (95% recycling rate)	
				alternative types of waste facilities to handle the waste further down the waste hierarchy		of waste facilities to handle the waste further down the waste hierarchy
9. Promote more efficient use of land and resources.	0	No significant effect	+	A medium increase in recycling rates would promote more efficient use of land and resources	++	A high increase in recycling rates would markedly promote more efficient use of land and resources
10. Promote energy efficiency and maximise renewable energy opportunities from new or existing development.	0	No significant effect	?	Impacts would be dependent on the type of facilities required to deal with increased capacity for recycling	?	Impacts would be dependent on the type of facilities required to deal with increased capacity for recycling
11. Protect and improve local air quality.	0	No significant effect	?	Impact would be dependent on the location and type of facilities required to deal with increased capacity for recycling	?	Impact would be dependent on the location and type of facilities required to deal with increased capacity for recycling
12. Protect and improve water quality and promote efficient use of water.	0	No significant effect	?	Impacts would be dependent on the	?	Impacts would be dependent on the

Sustainability Appraisal Objectives	Option A: No change (80% recycling rate)		Option B: Medium increase (90% recycling rate)		Option C: High increase (95% recycling rate)	
				location and type of facilities required to deal with increased capacity for recycling		location and type of facilities required to deal with increased capacity for recycling
13. Support wider economic development and promote local job opportunities.	0	No significant effect	+	Recycling will contribute to the move towards a circular economy which should create new opportunities for wider economic growth	++	Recycling will contribute to the move towards a circular economy which should create new opportunities for wider economic growth
14. Protect and improve human health and quality of life.	0	No significant effect	?	Impact would be dependent on the location and type of facilities required to deal with increased capacity for recycling.	?	Impact would be dependent on the location and type of facilities required to deal with increased capacity for recycling.

Summary

- Option A had a negative impact on SA objective 1, but had no significant effect on any of the other SA objectives.
- The impacts of Options B and C on SA objectives 2, 3, 4, 5, 6, 7, 8, 10, 11, 12 and 14 were uncertain due to the lack of detail at this stage.
- Option B had positive impacts, and Option C had very positive impacts, on SA objectives 1, 9 and 13.

- Option A was the only option which had a negative impact, whilst Option C was the only option which had very positive impacts, therefore Option C can be considered to be the most sustainable option.

ISSUE: 11. What level of recovery provision should be planned for throughout the plan period?

Sustainability Appraisal Objectives	Option A: No change to current recovery provision		Option B: Increase recovery provision	
1. Ensure that adequate provision is made for a network of suitable waste management sites for the safe treatment and disposal of waste.	-	Planning for no change could risk inadequate recovery provision	+	Planning for increase will be likely to ensure adequate provision
2. Protect and enhance biodiversity at all levels, achieve biodiversity net gain and safeguard features of geological interest.	0	No significant effect	?	This could require additional recovery facilities which, dependent on location of sites in relation to habitats/species/geological features, could have an adverse impact. However, if the waste is not recovered there would have to be additional alternative types of waste facilities to handle the waste further down the waste hierarchy
3. Promote sustainable patterns of movement and the use of more sustainable modes of transport.	0	No significant effect	?	This could require additional recovery facilities which could increase the haulage of waste

Sustainability Appraisal Objectives	Option A: No change to current recovery provision		Option B: Increase recovery provision	
				and road congestion and could require new transport infrastructure to be developed. However, if the waste is not recovered there would have to be additional alternative types of waste facilities to handle the waste further down the waste hierarchy
4. Protect the quality of the historic environment, heritage assets and their settings above and below ground.	0	No significant effect	?	This could require additional recovery facilities which, dependent on location of sites in relation to heritage assets, could have an adverse impact. However, if the waste is not recovered there would have to be additional alternative types of

Sustainability Appraisal Objectives	Option A: No change to current recovery provision		Option B: Increase recovery provision	
				waste facilities to handle the waste further down the waste hierarchy
5. Protect and enhance the quality and character of our townscape and landscape.	0	No significant effect	?	This could require additional recovery facilities which, dependent on location of sites in relation to landscape and townscape, could have an adverse impact. However, if the waste is not recovered there would have to be additional alternative types of waste facilities to handle the waste further down the waste hierarchy
6. Reduce the impact and risk of flooding.	0	No significant effect	?	Impacts would be dependent on the location and type of facilities required to deal with increased capacity for recovery

Sustainability Appraisal Objectives	Option A: No change to current recovery provision		Option B: Increase recovery provision	
7. Minimise any possible impacts on, and increase adaptability to, climate change.	0	No significant effect	?	Impacts would be dependent on whether additional facilities for recovery versus additional facilities to deal with waste further down the waste hierarchy would increase or decrease greenhouse gas emissions
8. Protect high quality agricultural land and soil.	0	No significant effect	?	This could require additional recovery facilities which, dependent on location of sites in relation to high quality agricultural land and soil, could have an adverse impact. However, if the waste is not recovered there would have to be additional alternative types of waste facilities to handle the waste

Sustainability Appraisal Objectives	Option A: No change to current recovery provision		Option B: Increase recovery provision	
				further down the waste hierarchy
9. Promote more efficient use of land and resources.	0	No significant effect	?	As recovery uses waste as a source of energy, it could contribute to more efficient use of resources, depending on the efficiency of the recovery facility in converting waste to energy. However, if the material going to recovery facilities could have been recycled then it is not being treated as high up the waste hierarchy as possible.
10. Promote energy efficiency and maximise renewable energy opportunities from new or existing development.	0	No significant effect	?	Recovery facilities could offset the use of fossil fuels but to what degree is uncertain
11. Protect and improve local air quality.	0	No significant effect	?	Impacts would be dependent on the location and type of facilities required to

Sustainability Appraisal Objectives	Option A: No change to current recovery provision		Option B: Increase recovery provision	
				deal with increased capacity for recovery
12. Protect and improve water quality and promote efficient use of water.	0	No significant effect	?	Impacts would be dependent on the location and type of facilities required to deal with increased capacity for recovery
13. Support wider economic development and promote local job opportunities.	0	No significant effect	+	As recovery uses waste to provide energy it could make some contribution to the move towards a circular economy which should create new opportunities for wider economic growth
14. Protect and improve human health and quality of life.	0	No significant effect	?	Impacts would be dependent on the location and type of facilities required to deal with increased capacity for recovery

Summary

- Option A had a negative impact on SA objective 1, but had no significant effect on any of the other SA objectives.
- The impacts of Option B on SA objectives 2, 3,4,5,6,7,8, 9,10, 11,12,14 were uncertain due to the lack of detail at this stage.
- However, Option B had a positive impact on SA objectives 1 and 13 and can therefore be considered to be more sustainable than Option A.

ISSUE: 12. Should the Plan make additional provision for disposal of waste throughout the plan period?

Sustainability Appraisal Objectives	Option A: Make no additional provision for disposal of waste		Option B: Make additional provision for disposal of waste	
1. Ensure that adequate provision is made for a network of suitable waste management sites for the safe treatment and disposal of waste.	-	Not planning for any additional provision could risk inadequate disposal provision.	+	Making additional provision will be likely to ensure there is adequate provision available.
2. Protect and enhance biodiversity at all levels, achieve biodiversity net gain and safeguard features of geological interest.	0	No significant effect	-	This would require additional disposal facilities which, dependent on location of sites in relation to habitats/species/geological features, could have an adverse impact.
3. Promote sustainable patterns of movement and the use of more sustainable modes of transport.	0	No significant effect	+	The availability of disposal facilities within Nottinghamshire would reduce the haulage distances of waste for which there is no other treatment option, compared to having to export this waste to facilities outside Nottinghamshire.

Sustainability Appraisal Objectives	Option A: Make no additional provision for disposal of waste		Option B: Make additional provision for disposal of waste	
4. Protect the quality of the historic environment, heritage assets and their settings above and below ground.	0	No significant effect	-	This would require additional disposal facilities which, dependent on location of sites in relation to heritage assets could have an adverse impact.
5. Protect and enhance the quality and character of our townscape and landscape.	0	No significant effect	-	This would require additional disposal facilities which, dependent on location of sites in relation to landscape and townscape, could have an adverse impact.
6. Reduce the impact and risk of flooding.	0	No significant effect	?	Impact would be dependent on the location of facilities required for additional disposal provision.
7. Minimise any possible impacts on, and increase adaptability to, climate change.	0	No significant effect	-	Disposal facilities could result in additional greenhouse gas emissions.

Sustainability Appraisal Objectives	Option A: Make no additional provision for disposal of waste		Option B: Make additional provision for disposal of waste	
8. Protect high quality agricultural land and soil.	0	No significant effect	-	This would require additional disposal facilities which, dependent on location of sites in relation to high quality agricultural land and soil, could have an adverse impact.
9. Promote more efficient use of land and resources.	0	No significant effect	--	Additional disposal provision would represent the most inefficient use of land and resources in terms of the waste hierarchy.
10. Promote energy efficiency and maximise renewable energy opportunities from new or existing development.	0	No significant effect	--	Additional disposal provision would not provide any opportunities for energy efficiency or use of renewable energy.
11. Protect and improve local air quality.	0	No significant effect	?	Impact would be dependent on the location of facilities required for additional disposal provision.

Sustainability Appraisal Objectives	Option A: Make no additional provision for disposal of waste		Option B: Make additional provision for disposal of waste	
12. Protect and improve water quality and promote efficient use of water.	0	No significant effect	?	Impact would be dependent on the location of facilities required for additional disposal provision.
13. Support wider economic development and promote local job opportunities.	0	No significant effect	0	No significant effect.
14. Protect and improve human health and quality of life.	0	No significant effect	?	Impact would be dependent on the location of facilities required for additional disposal provision.

Summary

- Option A had a negative impact on SA objective 1, but had no significant effect on any of the other SA objectives.
- The impacts of Option B were more varied, with a positive impact on SA objectives 1 and 3; no significant effect on SA objective 13; uncertainty as to the impacts in respect of SA objectives 6, 11, 12 and 14; a negative impact on SA objectives 2, 4, 5, 7 and 8; and a very negative impact on SA objectives 9 and 10.
- Neither of these options appears to be very sustainable but Option A can be considered to be less unsustainable, due to its lack of significant effects on most of the SA objectives, compared to Option B's numerous negative or very negative impacts on over half of the SA objectives. It should, nevertheless, be noted that Option A had a negative impact on SA objective 1 and did not have positive impacts on any of the SA objectives.

ISSUE: 13. Where should future waste management facilities be located within the plan area?

Sustainability Appraisal Objectives	Option A: Locate all facilities in main urban areas	Option B: Locate large facilities in Nottingham, Mansfield and Ashfield with smaller/medium facilities also in Newark, Worksop, and Retford	Option C: Spread facilities evenly across the plan area	Option D: No preference of locations of facilities
1. Ensure that adequate provision is made for a network of suitable waste management sites for the safe treatment and disposal of waste.	+ This would provide waste facilities close to where much of the waste is produced. However, a lack of provision outside main urban areas would result in waste being transported further to be treated.	++ This would provide a more even spread of waste facilities across all urban areas where the majority of the waste is produced.	+ Provision of facilities equidistantly in relation to all settlements throughout the Plan area could reduce transport distances. However, it is unlikely to be feasible to have the larger types of facilities provided in such a way as there would only be a limited number of such facilities required.	? This would leave it for the market to determine locations of facilities.
2. Protect and enhance biodiversity at all levels,	? Impact would be dependent on	? Impact would be dependent on	? Impact would be dependent on	? Impact would be dependent on

Sustainability Appraisal Objectives	Option A: Locate all facilities in main urban areas		Option B: Locate large facilities in Nottingham, Mansfield and Ashfield with smaller/medium facilities also in Newark, Worksop, and Retford		Option C: Spread facilities evenly across the plan area		Option D: No preference of locations of facilities	
achieve biodiversity net gain and safeguard features of geological interest.		location of facilities in relation to habitats/species/geological features		location of facilities in relation to habitats/species/geological features		location of facilities in relation to habitats/species/geological features		location of facilities in relation to habitats/species/geological features
3. Promote sustainable patterns of movement and the use of more sustainable modes of transport.	+	As the facilities would be located in close proximity to the sources of waste, this could promote sustainable patterns of movement	+	As the facilities would be located in close proximity to the sources of waste, this could promote sustainable patterns of movement	I	This may promote sustainable patterns of movement in relation to smaller facilities, such as Household Waste Recycling Centres, however the opposite effect could occur in relation to larger facilities	?	The market would determine the location of facilities and so there is insufficient information to assess what impact this would have
4. Protect the quality of the historic environment, heritage assets and their settings above and below ground.	?	Impact would be dependent on location of facilities in relation to heritage assets	?	Impact would be dependent on location of facilities in relation to heritage assets	?	Impact would be dependent on location of facilities in relation to heritage assets	?	Impact would be dependent on location of facilities in relation to heritage assets

Sustainability Appraisal Objectives	Option A: Locate all facilities in main urban areas		Option B: Locate large facilities in Nottingham, Mansfield and Ashfield with smaller/medium facilities also in Newark, Worksop, and Retford		Option C: Spread facilities evenly across the plan area		Option D: No preference of locations of facilities	
5. Protect and enhance the quality and character of our townscape and landscape.	?	Impact would be dependent on location of facilities in relation to townscape and landscape	?	Impact would be dependent on location of facilities in relation to townscape and landscape	?	Impact would be dependent on location of facilities in relation to townscape and landscape	?	Impact would be dependent on location of facilities in relation to townscape and landscape
6. Reduce the impact and risk of flooding.	?	Impact would be dependent on the specific location and type of facilities	?	Impact would be dependent on the specific location and type of facilities	?	Impact would be dependent on the specific location and type of facilities	?	Impact would be dependent on the specific location and type of facilities
7. Minimise any possible impacts on, and increase adaptability to, climate change.	+	As the facilities would be located in close proximity to the sources of waste, the associated reduction in waste transport distances would minimise transport related greenhouse gas	+	As the facilities would be located in close proximity to the sources of waste, the associated reduction in waste transport distances would minimise transport related greenhouse gas	I	This could decrease or increase waste transport distances, therefore transport related greenhouse gas emissions could decrease or increase	?	The market would determine the location of facilities and so there is insufficient information to assess what impact this would have

Sustainability Appraisal Objectives	Option A: Locate all facilities in main urban areas		Option B: Locate large facilities in Nottingham, Mansfield and Ashfield with smaller/medium facilities also in Newark, Worksop, and Retford		Option C: Spread facilities evenly across the plan area		Option D: No preference of locations of facilities	
		emissions		emissions				
8. Protect high quality agricultural land and soil.	?	Impact would be dependent on location of facilities in relation to high quality agricultural land and soil	?	Impact would be dependent on location of facilities in relation to high quality agricultural land and soil	?	Impact would be dependent on location of facilities in relation to high quality agricultural land and soil	?	Impact would be dependent on location of facilities in relation to high quality agricultural land and soil
9. Promote more efficient use of land and resources.	+	Within urban areas there would be more opportunity to make of use of previously developed land or buildings and to utilise existing infrastructure	+	Within urban areas there would be more opportunity to make of use of previously developed land or buildings and to utilise existing infrastructure	-	There would be less opportunity to make of use of previously developed land or buildings and to utilise existing infrastructure	?	The market would determine the location of facilities and so there is insufficient information to assess what impact this would have
10. Promote energy efficiency and maximise renewable energy opportunities from new or existing development.	0	No clear link	0	No clear link	0	No clear link	0	No clear link
11. Protect and improve local	?	Impact would be	?	Impact would be	?	Impact would be	?	Impact would be

Sustainability Appraisal Objectives	Option A: Locate all facilities in main urban areas		Option B: Locate large facilities in Nottingham, Mansfield and Ashfield with smaller/medium facilities also in Newark, Worksop, and Retford		Option C: Spread facilities evenly across the plan area		Option D: No preference of locations of facilities	
air quality.		dependent on the specific location and type of facilities		dependent on the specific location and type of facilities		dependent on the specific location and type of facilities		dependent on the specific location and type of facilities
12. Protect and improve water quality and promote efficient use of water.	?	Impact would be dependent on the specific location and type of facilities	?	Impact would be dependent on the specific location and type of facilities	?	Impact would be dependent on the specific location and type of facilities	?	Impact would be dependent on the specific location and type of facilities
13. Support wider economic development and promote local job opportunities.	0	No clear link	0	No clear link	0	No clear link	0	No clear link
14. Protect and improve human health and quality of life.	?	Impact would be dependent on the specific location and type of facilities	?	Impact would be dependent on the specific location and type of facilities	?	Impact would be dependent on the specific location and type of facilities	?	Impact would be dependent on the specific location and type of facilities

Summary

- The likely impact of all the options was uncertain in terms of several of the SA objectives which covered specific environmental and social issues, such as air quality and human health and quality of life. This was due to the lack of detail at this stage.

- None of the options had any clear link with SA objectives 10 and 13.
- Options A and B were very similar in their impacts on the remaining SA objectives, with both having a positive impact on SA objectives 3, 7 and 9. In respect of SA objective 1, Option A had a positive impact whereas Option B had a very positive impact.
- Option C had a positive impact on SA objective 1 but a negative impact on SA objective 9 and could have either a positive or a negative impact on SA objectives 3 and 7.
- Option D's impact was uncertain on most of the SA objectives.
- Options A and B were more sustainable than the other two options. Option B was marginally more sustainable than Option A given that it had a very positive, rather than just a positive, impact on SA objective 1.

ISSUE 14: How should the plan ensure sufficient waste management provision and capacity throughout the plan period?

Sustainability Appraisal Objectives	Option A: Allocate specific sites		Option B: Allocate preferred areas		Option C: Identify types of sites/ areas that would be suitable in principle		Option D: Do not allocate sites/ preferred areas or identify areas suitable in principle and assess each proposal on their own merit		Option E: A combination of Options A, B, C and D	
1. Ensure that adequate provision is made for a network of suitable waste management sites for the safe treatment and disposal of waste.	++	This should ensure adequate provision	+	This may ensure adequate provision but not with the same degree of certainty as Option A	-	This would risk there being inadequate provision but not to the same degree as Option D	--	This would risk there being inadequate provision	I	Impact would be dependent on the details of the combination of options
2. Protect and enhance biodiversity at all levels, achieve biodiversity net gain and safeguard features of geological interest.	+	Site allocation would afford the opportunity to ensure locations which would not adversely affect biodiversity/ geological interest	I	Impact would be dependent on whether there is biodiversity/ geological interest in the preferred area which could be adversely affected by	I	Impact would be dependent on whether there is biodiversity/ geological interest in the identified area which could be adversely affected by waste	?	Impact would be dependent on the criteria used to assess proposals on their own merit	I	Impact would be dependent on the details of the combination of options

Sustainability Appraisal Objectives	Option A: Allocate specific sites		Option B: Allocate preferred areas		Option C: Identify types of sites/ areas that would be suitable in principle		Option D: Do not allocate sites/ preferred areas or identify areas suitable in principle and assess each proposal on their own merit		Option E: A combination of Options A, B, C and D	
				waste development		development				
3. Promote sustainable patterns of movement and the use of more sustainable modes of transport.	+	Site allocation would afford the opportunity to select locations where sources of, and markets for, waste and opportunities for linking to sustainable transport modes, are taken into account	I	Impact would be dependent on whether the preferred area enables location of waste facilities in close proximity to sources of, and markets for, waste and provide opportunities for linking to sustainable transport modes	I	Impact would be dependent on whether the identified area enables location of waste facilities in close proximity to sources of, and markets for, waste and provide opportunities for linking to sustainable transport modes	?	Impact would be dependent on the criteria used to assess proposals on their own merit	I	Impact would be dependent on the details of the combination of options
4. Protect the quality of the historic	+	Site allocation would afford	I	Impact would be	I	Impact would be dependent	?	Impact would be	I	Impact would be

Sustainability Appraisal Objectives	Option A: Allocate specific sites		Option B: Allocate preferred areas		Option C: Identify types of sites/ areas that would be suitable in principle		Option D: Do not allocate sites/ preferred areas or identify areas suitable in principle and assess each proposal on their own merit		Option E: A combination of Options A, B, C and D	
environment, heritage assets and their settings above and below ground.		the opportunity to ensure locations which would not adversely affect heritage assets		dependent on whether there are heritage assets in the preferred area which could be adversely affected by waste development		on whether there are heritage assets in the identified area which could be adversely affected by waste development		dependent on the criteria used to assess proposals on their own merit		dependent on the details of the combination of options
5. Protect and enhance the quality and character of our townscape and landscape.	+	Site allocation would afford the opportunity to ensure locations which would not adversely affect townscape and landscape	I	Impact would be dependent on whether the townscape/ landscape in the preferred area which could be adversely affected by	I	Impact would be dependent on whether the townscape/ landscape in the identified area which could be adversely affected by waste	?	Impact would be dependent on the criteria used to assess proposals on their own merit	I	Impact would be dependent on the details of the combination of options

Sustainability Appraisal Objectives	Option A: Allocate specific sites		Option B: Allocate preferred areas		Option C: Identify types of sites/ areas that would be suitable in principle		Option D: Do not allocate sites/ preferred areas or identify areas suitable in principle and assess each proposal on their own merit		Option E: A combination of Options A, B, C and D	
		character		waste development		development				
6. Reduce the impact and risk of flooding.	+	Site allocation would afford the opportunity to ensure locations where impact and risk of flooding would be reduced	I	Impact would be dependent on the existing risk of flooding in the preferred area	I	Impact would be dependent on the existing risk of flooding in the identified area	?	Impact would be dependent on the criteria used to assess proposals on their own merit	I	Impact would be dependent on the details of the combination of options
7. Minimise any possible impacts on, and increase adaptability to, climate change.	0	No clear link	0	No clear link	0	No clear link	?	Impact would be dependent on the nature of the operations	?	Impact would be dependent on the details of the combination of options
8. Protect high quality agricultural land and soil.	+	Site allocation would afford the opportunity to ensure	I	Impact would be dependent on whether there is high	I	Impact would be dependent on whether there is high quality	?	Impact would be dependent on the criteria used	I	Impact would be dependent on the details of the

Sustainability Appraisal Objectives	Option A: Allocate specific sites		Option B: Allocate preferred areas		Option C: Identify types of sites/ areas that would be suitable in principle		Option D: Do not allocate sites/ preferred areas or identify areas suitable in principle and assess each proposal on their own merit		Option E: A combination of Options A, B, C and D	
		locations which would not adversely affect high quality agricultural land and soil		quality agricultural land in the preferred area which could be adversely affected by waste development		agricultural land in the identified area which could be adversely affected by waste development		to assess proposals on their own merit		combination of options
9. Promote more efficient use of land and resources.	+	Site allocation would afford the opportunity to make use of previously developed land/ buildings and utilise existing infrastructure	+	Allocation of preferred areas would afford the opportunity to make use of previously developed land/ buildings and utilise existing infrastructure if for example	+	Identifying types of sites/areas would afford the opportunity to make use of previously developed land/ buildings and utilise existing infrastructure if for example	?	Impact would be dependent on the criteria used to assess proposals on their own merit	I	Impact would be dependent on the details of the combination of options

Sustainability Appraisal Objectives	Option A: Allocate specific sites		Option B: Allocate preferred areas		Option C: Identify types of sites/ areas that would be suitable in principle		Option D: Do not allocate sites/ preferred areas or identify areas suitable in principle and assess each proposal on their own merit		Option E: A combination of Options A, B, C and D	
				existing employment land were to be allocated		existing employment land were to be identified				
10. Promote energy efficiency and maximise renewable energy opportunities from new or existing development.	0	No clear link	0	No clear link	0	No clear link	?	Impact would be dependent on the criteria used to assess proposals on their own merit	?	Impact would be dependent on the details of the combination of options
11. Protect and improve local air quality.	+	Site allocation would afford the opportunity to ensure locations which would not adversely affect local air quality	I	Impact would be dependent on the existing local air quality in the preferred area	I	Impact would be dependent on the existing local air quality in the identified area	?	Impact would be dependent on the criteria used to assess proposals on their own merit	I	Impact would be dependent on the details of the combination of options
12. Protect and	+	Site allocation	I	Impact would	I	Impact would	?	Impact	I	Impact would

Sustainability Appraisal Objectives	Option A: Allocate specific sites		Option B: Allocate preferred areas		Option C: Identify types of sites/ areas that would be suitable in principle		Option D: Do not allocate sites/ preferred areas or identify areas suitable in principle and assess each proposal on their own merit		Option E: A combination of Options A, B, C and D	
improve water quality and promote efficient use of water.		would afford the opportunity to ensure locations which would not adversely affect water quality		be dependent on the existing water quality in the preferred area		be dependent on the existing water quality in the identified area		would be dependent on the criteria used to assess proposals on their own merit		be dependent on the details of the combination of options
13. Support wider economic development and promote local job opportunities.	+	By allocating sites there would be certainty for developers which could create potential for local job opportunities	+	By allocating preferred areas there would be some certainty for developers but not to the same degree as Option A	+	By allocating identified areas there would be some certainty for developers but not to the same degree as Option A	-	This would not provide any certainty for developers	I	Impact would be dependent on the details of the combination of options
14. Protect and improve human health and quality of life.	+	Site allocation would afford the opportunity to ensure	I	Impact would be dependent on the density of	I	Impact would be dependent on the density of settlements within the	?	Impact would be dependent on the criteria used	I	Impact would be dependent on the details of the

Sustainability Appraisal Objectives	Option A: Allocate specific sites		Option B: Allocate preferred areas		Option C: Identify types of sites/ areas that would be suitable in principle		Option D: Do not allocate sites/ preferred areas or identify areas suitable in principle and assess each proposal on their own merit		Option E: A combination of Options A, B, C and D	
		locations which would not adversely affect human health and quality of life		settlements within the preferred area and whether they could be adversely affected by waste development		identified area and whether they could be adversely affected by waste development		to assess proposals on their own merit		combination of options

Summary

- The impact of Option E was difficult to appraise and for most of the SA objectives it was considered that its impact could be either positive or negative depending on the details of the combination of options.
- The impact of Option D on most of the SA objectives was uncertain as it would depend on the criteria used to assess proposals. However, this option also had a very negative impact on SA objective 1 and a negative impact on SA objective 13 and is therefore unsustainable in terms of the economic aspects of sustainability.
- It was considered that the impact of Option C on the majority of SA objectives could be positive or negative. This option also had a negative impact on SA objective 1 but a positive impact on SA objectives 9 and 13.
- Similarly, it was considered that the impact of Option B on the majority of SA objectives could be positive or negative, but this option had positive impacts on SA objectives 1, 9 and 13.
- Option A had a very positive impact on SA objective 1 and a positive impact on all the other SA objectives except 7 and 10, with which there was no clear link. Option A was therefore the most sustainable option.

Issue: 15. Should the plan include a general site criteria policy that identifies types of locations likely to be suitable for different types of waste facilities to help assess the suitability of waste management proposals?

Sustainability Appraisal Objectives	Option A: Include a site criteria policy within the plan		Option B: Do not include a site criteria policy within the plan	
1. Ensure that adequate provision is made for a network of suitable waste management sites for the safe treatment and disposal of waste.	-	There would be a risk that not enough sites would meet the criteria	+	Potentially this would enable adequate provision to be made
2. Protect and enhance biodiversity at all levels, achieve biodiversity net gain and safeguard features of geological interest.	?	Impacts would be dependent on the details of the criteria in the policy	-	There would be a risk that specific issues would not be adequately addressed.
3. Promote sustainable patterns of movement and the use of more sustainable modes of transport.	?	Impacts would be dependent on the details of the criteria in the policy	-	There would be a risk that specific issues would not be adequately addressed.
4. Protect the quality of the historic environment, heritage assets and their settings above and below ground.	?	Impacts would be dependent on the details of the criteria in the policy	-	There would be a risk that specific issues would not be adequately addressed.
5. Protect and enhance the quality and character of our townscape and landscape.	?	Impacts would be dependent on the details of the criteria in the policy	-	There would be a risk that specific issues would not be adequately addressed.
6. Reduce the impact and risk of flooding.	?	Impacts would be dependent on the	-	There would be a risk that specific

Sustainability Appraisal Objectives	Option A: Include a site criteria policy within the plan		Option B: Do not include a site criteria policy within the plan	
		details of the criteria in the policy		issues would not be adequately addressed.
7. Minimise any possible impacts on, and increase adaptability to, climate change.	?	Impacts would be dependent on the details of the criteria in the policy	-	There would be a risk that specific issues would not be adequately addressed.
8. Protect high quality agricultural land and soil.	?	Impacts would be dependent on the details of the criteria in the policy	-	There would be a risk that specific issues would not be adequately addressed.
9. Promote more efficient use of land and resources.	?	Impacts would be dependent on the details of the criteria in the policy	-	There would be a risk that specific issues would not be adequately addressed.
10. Promote energy efficiency and maximise renewable energy opportunities from new or existing development.	?	Impacts would be dependent on the details of the criteria in the policy	-	There would be a risk that specific issues would not be adequately addressed.
11. Protect and improve local air quality.	?	Impacts would be dependent on the details of the criteria in the policy	-	There would be a risk that specific issues would not be adequately addressed.
12. Protect and improve water quality and promote efficient use of	?	Impacts would be	-	There would be a

Sustainability Appraisal Objectives	Option A: Include a site criteria policy within the plan		Option B: Do not include a site criteria policy within the plan	
water.		dependent on the details of the criteria in the policy		risk that specific issues would not be adequately addressed.
13. Support wider economic development and promote local job opportunities.	0	No clear link	0	No clear link
14. Protect and improve human health and quality of life.	?	Impacts would be dependent on the details of the criteria in the policy	-	There would be a risk that specific issues would not be adequately addressed.

Summary

- It was difficult to appraise Option A due to the lack of detail at this stage because the specific criteria which would be in a policy are unknown at this point. Consequently, the impacts of this option on most of the SA objectives was uncertain. However, it was clear that Option A had a negative impact on SA objective 1.
- Option B had a positive impact on SA objective 1 but had a negative impact on all the other SA objectives, except SA objective 13 with which there was no clear link.
- Given the numerous negative impacts of Option B, Option A can be considered as more sustainable than Option B, but its negative impact on SA objective 1 and uncertainty in respect of other SA objectives should be taken into account.

ISSUE 16: How should development management policies be dealt with in the Plan?

Sustainability Appraisal Objectives	Option A: Develop specific policies for specific topic areas.		Option B: Develop criteria-based policies for broad groupings of topic areas.	
1. Ensure that adequate provision is made for a network of suitable waste management sites for the safe treatment and disposal of waste.	0	No clear link. The DM policies would not directly relate to the scale of waste provision.	0	No clear link. The DM policies would not directly relate to the scale of waste provision.
2. Protect and enhance biodiversity at all levels, achieve biodiversity net gain and safeguard features of geological interest.	+	A specific policy could address in detail the relevant issues.	-	There would be a risk that specific issues would not be adequately addressed.
3. Promote sustainable patterns of movement and the use of more sustainable modes of transport.	+	A specific policy could address in detail the relevant issues.	-	There would be a risk that specific issues would not be adequately addressed.
4. Protect the quality of the historic environment, heritage assets and their settings above and below ground.	+	A specific policy could address in detail the relevant issues.	-	There would be a risk that specific issues would not be adequately addressed.
5. Protect and enhance the quality and character of our townscape and landscape.	+	A specific policy could address in detail the relevant issues.	-	There would be a risk that specific issues would not be adequately addressed.

6. Reduce the impact and risk of flooding.	+	A specific policy could address in detail the relevant issues.	-	There would be a risk that specific issues would not be adequately addressed.
7. Minimise any possible impacts on, and increase adaptability to, climate change.	+	A specific policy could address in detail the relevant issues.	-	There would be a risk that specific issues would not be adequately addressed.
8. Protect high quality agricultural land and soil.	+	A specific policy could address in detail the relevant issues.	-	There would be a risk that specific issues would not be adequately addressed.
9. Promote more efficient use of land and resources.	+	A specific policy could address in detail the relevant issues.	-	There would be a risk that specific issues would not be adequately addressed.
10. Promote energy efficiency and maximise renewable energy opportunities from new or existing development.	+	A specific policy could address in detail the relevant issues.	-	There would be a risk that specific issues would not be adequately addressed.
11. Protect and improve local air quality.	+	A specific policy could address in detail the relevant issues.	-	There would be a risk that specific issues would not be adequately addressed.
12. Protect and improve water quality and promote efficient use of water.	+	A specific policy could address in detail the relevant issues.	-	There would be a risk that specific issues would not be adequately addressed.
13. Support wider economic development and promote local job opportunities.	0	No clear link. DM policies are unlikely to address this topic.	0	No clear link. DM policies are unlikely to address this topic.
14. Protect and improve human health and quality of life.	+	A specific policy could address in detail the relevant issues.	-	There would be a risk that specific issues would not be adequately addressed.

Summary

- There was a clear distinction between the two options, with Option A having a positive impact on most of the SA objectives whereas Option B had a negative impact on most of the SA objectives.
- Option A was therefore the most sustainable.