

Sustainability Appraisal for waste strategy alternatives for the Oxfordshire Minerals and Waste Local Plan Part 1

Prepared by LUC

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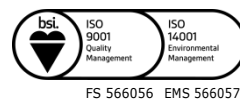
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1 Introduction

- 1.1 Oxfordshire County Council (the Council) is currently preparing Part 1 of their new Minerals and Waste Local Plan, the Core Strategy. This was submitted to the Secretary of State for independent examination in December 2015. Following his Interim Report (October 2016) the Inspector required the Council to consider reasonable alternatives with regards to certain policies.
- 1.2 This appendix provides information on the alternatives that are being considered during the post-Examination process to undertake the further Strategic Environmental Assessment / Sustainability Appraisal (referred to hereafter as 'SA') required and finalise the Main Modifications that Oxfordshire County Council will be proposing to publish for consultation.
- 1.3 This appendix presents the SA assessment results of those policies with reasonable alternative options. This work will inform the Council's selection and rejection of these options.

2 Methodology

- 2.1 The methodology used to undertake the assessment of reasonable alternatives (options) will be consistent with the approach undertaken for the Submission Core Strategy. This is summarised below.
- 2.2 In order to be able to easily compare the effects of each option against each of the SA objectives, assessments have been combined into a single table rather than having separate tables for each option. Using this helps ensure that all alternatives will be assessed at the same level of detail and allows easier comparison.
- 2.3 Each policy option was assessed against each of the 12 SA objectives, and a judgement was made with regards to the likely effect that the option would have on that objective. These judgements were recorded as a colour coded symbol, as shown in **Table 2.1** below. **Table 2.2** to **Table 2.5** explain the terminology and symbology used with regards to the assessment of duration, reversibility, scale and permanence of effects, as presented in **Chapter 3**.

Table 2.1 Key to symbols and colour coding used in the SA of the Core Strategy

Significance Assessment	Description
++	The option is likely to have a significant positive effect
+	The option is likely to have a positive effect which is not significant
0	No predicted effects / no clear link
?	Uncertain or insufficient information on which to determine effect
-	The option is likely to have a negative effect which is not significant
--	The option is likely to have a significant negative effect
+/-	The option is likely to have some positive and some negative effects (mixed effect)

Table 2.2 Duration of effects identified

Duration	Approximate timing of effect
Short Term	0-5 years
Medium Term	5 years to end of Plan period in 2031
Long Term	After life of plan (post 2031)

Table 2.3 Reversibility of effects identified

Symbol	Meaning	Comment
R	Reversible effect	Environmental effect that can be reversed, for example an incident of water pollution can be cleaned up over time.
I	Irreversible effect	Environmental effect that cannot be reversed such as the loss of a historic feature or the loss of agricultural soil due to permanent development.

Table 2.4 Scale of effects identified

Symbol	Meaning	Comment
L	Local	Within Oxfordshire Local Authority areas
R	Regional	Oxfordshire and surrounding counties
N	National	UK or a wider global impact

Table 2.5 Permanence of effects identified

Symbol	Meaning	Comment
P	Permanent	Effect even after mineral and waste activities have ceased
T	Temporary	Effect during mineral and waste activities

2.4 **Table 2.6** below summarises the SA objectives against which the options are assessed. The full SA framework is detailed in **Appendix 1**. The table also includes a 'reference term', which is a short title for each SA Objective to be used in the assessment tables in **Chapter 3**.

Table 2.6 SA Objectives

SA Objective	Reference Term
1 To protect, maintain, and enhance Oxfordshire's biodiversity and geological diversity including natural habitats, flora and fauna and protected species	Biodiversity & geodiversity
2a To protect and enhance landscape character and local distinctiveness	Landscape
2b To conserve and enhance the historic environment, heritage assets and their settings	Historic environment
3 To maintain and improve ground and surface water quality	Water quality
4 To improve and maintain air quality to levels which do not damage natural systems	Air quality
5 To reduce greenhouse gas emissions to reduce the cause of climate change	Greenhouse gas emissions
6 To reduce the risk of flooding	Flood risk
7 To minimise the impact of transportation of aggregates and waste products on the local and strategic road network	Transport effects
8 To minimise negative impacts of waste management facilities and mineral extraction on people and local communities	Population and health
9 To protect, improve and where necessary restore land and soil quality	Soils
10 To contribute towards moving up the waste hierarchy in Oxfordshire	Waste hierarchy
11 To enable Oxfordshire to be self-sufficient in its waste management and to provide for its local need for aggregates as set out in the LAA	Self-sufficiency
12 To support Oxfordshire's economic growth and reduce disparities across the County	Economic growth

3 Assessment results

- 3.1 This chapter details the results of the assessment of reasonable alternatives. Reasonable alternatives were identified with regards to Policies W2, W3, W4 and W11.

Policy W2: Oxfordshire waste management targets - C&I targets

Option 1: Retain Submission C&I targets

- 3.2 Commercial and industrial (C&I) dry recycling targets to be retained as per the Submission Core Strategy. These are as follows:

Year	2016	2021	2026	2031
C&I dry recycling target	55%	60%	65%	65%

Option 2: Increase C&I targets at a slower rate

- 3.3 Commercial and industrial dry recycling targets to increase at a slower rate as put forward by BPP Consulting in February 2014, as put forward in representations. These are as follows:

Year	2016	2021	2026	2031
C&I recycling target	55%	60%	60%	65%

- 3.4 The above options relate to targets for recycling waste, rather than actual levels that must be achieved. However, for the purpose of this assessment, it has been assumed that these targets will be achieved. It has also been assumed that, of C&I waste that is not recycled, a substantial proportion of this will be sent to landfill, although a proportion will be sent to alternative waste treatment, such as energy from waste, which is still lower down the waste hierarchy than recycling.

Table 3.1 Assessment of reasonable alternatives to Policy W2 - C&I targets

SA Objective		Assessment of effect						
		Duration			Reversibility	Scale	Permanence	Evidence and Reference
		Short term	Medium term	Long term				
1	Biodiversity & geodiversity	+/ ?	+/ ?	+/ ?	I	L	P	
		+/ ?	+/ ?	+/ ?	I	L	P	<p><u>Option 2: Increase C&I targets at a slower rate</u></p> <p>The targets aim to significantly reduce the proportions of waste going to landfill, which will reduce the land-take needed to manage waste, which will have positive implications for this objective. This option is likely to take longer to achieve this and therefore lead to a greater overall land-take, than Option 1, due to a greater amount of waste being sent to landfill for an additional five years in comparison. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column.</p> <p>Provision of new recycling facilities may have effects on biodiversity and geodiversity, but effects will be dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation.</p>

		Summary for topic			Both options perform similarly with regards to biodiversity and geodiversity, as effects will largely depend on the locations of waste management facilities and their associated mitigation measures. Option 1 is expected to lead to greater reduction of land-take, as reaching the 65% target earlier will reduce the amount of waste sent to landfill for an extra five years in comparison to Option 2. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column. Both options are expected to lead to provision of new waste facilities, which may have biodiversity and geodiversity impacts depending on their location and any relevant mitigation measures. Whilst Option 1 is likely to deliver such facilities earlier, both options reach the same recycling target by 2031 and therefore long-term effects of new facilities would be the same for both options.			
2a	Landscape							
		+/ ?	+/ ?	+/ ?	I	L	P	<p>Option 1: Retain Submission C&I targets</p> <p>The targets aim to significantly reduce the proportions of waste going to landfill, which will reduce the land-take needed to manage waste, which will have positive implications for this objective. This option is likely achieve this sooner and therefore lead to a slightly greater reduction in land-take, than Option 2, although this is unlikely to be of such a scale to alter the scoring in the 'Duration' column.</p> <p>The provision of new waste facilities may have impacts on landscape character, although effects will be dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation.</p>
		+/ ?	+/ ?	+/ ?	I	L	P	<p>Option 2: Increase C&I targets at a slower rate</p> <p>The targets aim to significantly reduce the proportions of waste going to landfill, which will reduce the land-take needed to manage waste, which will have positive implications for this objective. This option is likely to take longer to achieve this and therefore lead to a greater overall land-take, than Option 1, due to a greater amount of waste being sent to landfill for an additional five years in comparison. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column.</p> <p>The provision of new waste facilities may have impacts on landscape character, although effects will be dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation.</p>
		Summary for topic			Both options are expected to divert waste from landfill and therefore reduce the amount of land-take required for landfill and reduce associated landscape impacts. Option 1 will lead to an overall greater reduction in land-take, as the 65% target will be reached five years earlier. Both options are expected to lead to provision of new waste facilities, which may have landscape impacts depending on their location and any relevant mitigation measures. Whilst Option 1 is likely to deliver such facilities earlier, both options reach the same recycling target by 2031 and therefore long-term effects of new facilities would be the same for both options.			

2b	Historic environment	+/?	+/?	+/?	I	L	P	<p>Option 1: Retain Submission C&I targets</p> <p>The targets aim to significantly reduce the proportions of waste going to landfill, which will reduce the land-take needed to manage waste. This is expected to reduce the likelihood of landfill sites within or next to areas of sensitive historic environment. This option is likely achieve this sooner and therefore lead to a slightly greater reduction in land-take, than Option 2, although this is unlikely to be of such a scale to alter the scoring in the 'Duration' column.</p> <p>The provision of new waste facilities may have impacts on the historic environment although effects will be dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation.</p>
		+/?	+/?	+/?	I	L	P	<p>Option 2: Increase C&I targets at a slower rate</p> <p>The targets aim to significantly reduce the proportions of waste going to landfill, which will reduce the land-take needed to manage waste. This is expected to reduce the likelihood of landfill sites within or next to areas of sensitive historic environment. This option is likely to take longer to achieve this and therefore lead to a greater overall land-take, than Option 1, due to a greater amount of waste being sent to landfill for an additional five years in comparison. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column.</p> <p>The provision of new waste facilities may have impacts on the historic environment, although effects will be dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation.</p>
		Summary for topic			Both options are expected to divert waste from landfill and therefore reduce the amount of land-take required for landfill and reduce associated impacts on the historic features and their settings. Option 1 will lead to an overall greater reduction in land-take, as the 65% target will be reached five years earlier. Both options are expected to lead to provision of new waste facilities, which may have landscape impacts depending on their location and any relevant mitigation measures. Whilst Option 1 is likely to deliver such facilities earlier, both options reach the same recycling target by 2031 and therefore long-term effects of new facilities would be the same for both options.			
3	Water quality	?	+/?	+/?	I	L	P	<p>Option 1: Retain Submission C&I targets</p> <p>Effects will be dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation. However, a reduction in landfill could have a positive effect in the medium and long term by reducing the risk of groundwater pollution. Option 1 is expected to achieve this sooner, as it will lead to a reduced amount of waste sent to landfill for an extra five years in comparison to Option 2 and therefore a greater reduction in waste sent to landfill overall. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column.</p>

		?	+/?	+/?	I	L	P	<p>Option 2: Increase C&I targets at a slower rate</p> <p>Effects will be dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation. However, a reduction in landfill could have a positive effect in the medium and long term by reducing the risk of groundwater pollution. This option is expected to take longer to achieve this, as it will lead to a greater amount of waste being sent to landfill for an additional five years in comparison to Option 1. Therefore, overall, a greater amount of waste will be sent to landfill compared to Option 1. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column.</p>
		Summary for topic						Both options perform similarly with regards to water quality. Effects are largely dependent on location of waste management facilities, although both options may have positive effects in the medium to long term by reducing the risk of groundwater pollution from landfill. Option 1 is expected to achieve this sooner as it would achieve the 65% recycling rate in a shorter timeframe. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column.
4	Air quality	?	?	?				<p>Option 1: Retain Submission C&I targets</p> <p>Effects will be dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation.</p>
		?	?	?				<p>Option 2: Increase C&I targets at a slower rate</p> <p>Effects will be dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation.</p>
		Summary for topic						Both options perform similarly with regards to air quality, as effects will largely depend on the locations of waste management facilities and any mitigation measures to be implemented.
5	Greenhouse gas emissions	+	++	++	R	N	P	<p>Option 1: Retain Submission C&I targets</p> <p>The strategy seeks to minimise disposal of waste to landfill. This has positive effects on reducing the emission of the greenhouse gas methane associated with landfilling biodegradable waste. Relative to carbon dioxide, methane is 21 times more potent as a greenhouse gas than CO₂¹. This option is expected to reduce methane emissions slightly more than Option 2, as it will result in less waste being sent to landfill overall, because more waste will be recycled between 2026 and 2031. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column.</p>

¹ Comparative Assessment of Greenhouse Gas Emissions from Waste Management Services February 2010 (Updated from November 2009) Zero Waste Scotland

										<p>Option 2: Increase C&I targets at a slower rate</p> <p>The strategy seeks to minimise disposal of waste to landfill. This has positive effects on reducing the emission of the greenhouse gas methane associated with landfilling biodegradable waste. Relative to carbon dioxide, methane is 21 times more potent as a greenhouse gas than CO₂². This option is expected to result in slightly higher methane emissions than Option 1, as it will result in more waste being sent to landfill overall, because less waste will be recycled between 2026 and 2031. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column.</p>
										<p>Summary for topic</p> <p>Both options perform similarly with regards to greenhouse gas emissions as both will reduce the amount of waste sent to landfill, which can result in emissions of methane gas. Option 1 performs slightly better than Option 2 as reaching the 65% target earlier will reduce the amount of waste sent to landfill for an extra five years in comparison to Option 2. Therefore, overall, a greater amount of waste will be sent to landfill compared to Option 1. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column.</p>
6	Flood risk									<p>Option 1: Retain Submission C&I targets</p> <p>Effects will be is dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation.</p>
										<p>Option 2: Increase C&I targets at a slower rate</p> <p>Effects will be is dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation.</p>
										<p>Summary for topic</p> <p>Both options perform similarly with regards to flood risk, as effects will largely depend on the locations of waste management facilities and any mitigation measures to be implemented.</p>
7	Transport effects									<p>Option 1: Retain Submission C&I targets</p> <p>Effects will be dependent on the locations of the different facilities and the distance that waste needs to be transported to be managed.</p>
										<p>Option 2: Increase C&I targets at a slower rate</p> <p>Effects will be dependent on the locations of the different facilities and the distance that waste needs to be transported to be managed.</p>
										<p>Summary for topic</p> <p>Uncertain effects were identified against both options, as effects will depend on the locations of different waste facilities.</p>

² Comparative Assessment of Greenhouse Gas Emissions from Waste Management Services February 2010 (Updated from November 2009) Zero Waste Scotland

8	Population and health							<p>Option 1: Retain Submission C&I targets</p> <p>The targets aim to significantly reduce the proportions of waste going to landfill. As less landfill would be required, it is likely that fewer communities would be affected by negative effects associated with proximity to landfill sites, including noise, odour and pests, than otherwise. Communities already affected by landfill sites may be so for less time than otherwise, as reduced demand for landfill space may lead to sites being restored sooner.</p> <p>Effects will be dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation.</p>
								<p>Option 2: Increase C&I targets at a slower rate</p> <p>The targets aim to significantly reduce the proportions of waste going to landfill. As less landfill would be required, it is likely that fewer communities would be affected by negative effects associated with proximity to landfill sites, including noise, odour and pests, than otherwise. Communities already affected by landfill sites may be so for less time than otherwise, as reduced demand for landfill space may lead to sites being restored sooner. This option is likely to take longer to achieve this and therefore lead to a greater overall land-take, than Option 1, due to a greater amount of waste being sent to landfill for an additional five years in comparison. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column.</p> <p>Effects will be dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation.</p>
		Summary for topic			Both options may reduce negative effects from landfill (noise, odour etc.) on local communities, by reducing the amount of landfill required. Option 1 will achieve this sooner and lead to an overall greater reduction in land-take, as the 65% target will be reached five years earlier.			
9	Soils				I	L	P	<p>Option 1: Retain Submission C&I targets</p> <p>The targets aim to significantly reduce the proportions of waste going to landfill, which will reduce the land-take needed to manage waste, which will have positive implications for this objective. This option is likely achieve this sooner and therefore lead to a slightly greater reduction in land-take, than Option 2, although this is unlikely to be of such a scale to alter the scoring in the 'Duration' column.</p>
					I	L	P	<p>Option 2: Increase C&I targets at a slower rate</p> <p>The targets aim to significantly reduce the proportions of waste going to landfill, which will reduce the land-take needed to manage waste, which will have positive implications for this objective. This option is likely to take longer to achieve this and therefore lead to a greater overall land-take, than Option 1, due to a greater amount of waste being sent to landfill for an additional five years in comparison. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column.</p>

		Summary for topic			Both options perform similarly with regards soils, as both will reduce the land-take needed to manage waste. Option 1 is expected to lead to greater reduction of land-take, as reaching the 65% target earlier will reduce the amount of waste sent to landfill for an extra five years in comparison to Option 2. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column.		
10	Waste hierarchy	+	++	++	R	L	<p>Option 1: Retain Submission C&I targets</p> <p>The targets aim to significantly reduce the proportions of waste going to landfill by increasing recycling targets. This is expected to contribute to ensuring waste is moved up the waste hierarchy as high as possible.</p> <p>This option is likely to perform better by encouraging waste to move up the waste hierarchy sooner than Option 2, thus resulting in less waste being sent to landfill overall. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column.</p>
		+	++	++	R	L	<p>Option 2: Increase C&I targets at a slower rate</p> <p>The targets aim to significantly reduce the proportions of waste going to landfill by increasing recycling targets. This is expected to contribute to ensuring waste is moved up the waste hierarchy as high as possible.</p> <p>This option is likely to perform worse than Option 1 as the rate of increase in proportion of waste recycled would be slower. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column.</p>
		Summary for topic			Both options perform similarly with regards to waste hierarchy, as both aim to increase the proportion of waste recycled. Option 1 is expected to perform better than Option 2, as it encourages waste to move up the waste hierarchy sooner than Option 2. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column.		
11	Self-sufficiency	0	0	0			<p>Option 1: Retain Submission C&I targets</p> <p>No effect (Oxfordshire is net self-sufficient in waste management).</p>
		0	0	0			<p>Option 2: Increase C&I targets at a slower rate</p> <p>No effect (Oxfordshire is net self-sufficient in waste management).</p>
		Summary for topic			No effect (Oxfordshire is net self-sufficient in waste management).		
12	Economic growth	+	+	+	R	L	<p>Option 1: Retain Submission C&I targets</p> <p>Encouraging the recycling of waste is likely to support Oxfordshire's economy as this is likely to create new markets for waste products and provide new job opportunities at new waste facilities.</p>

		+	+	+	R	L	P	<p>Option 2: Increase C&I targets at a slower rate</p> <p>Encouraging the recycling of waste is likely to support Oxfordshire’s economy as this is likely to create new markets for waste products and provide new job opportunities at new waste facilities.</p>
		Summary for topic						<p>Both options perform similarly with regards to economic growth, as both are likely to create new markets for waste products and new job opportunities.</p>
<p>Recommendation of preferred option</p>	<p>Options 1 and 2 perform similarly against all SA objectives. This is due to the fact that under both scenarios, the C&I dry recycling target is set to reach 65% by 2031. Option 1 aims to achieve this sooner and therefore will result in more waste diverted from landfill overall than Option 2. As such, Option 1 is considered the most sustainable option.</p> <p>In achieving the 65% target five years earlier than Option 2, less waste will be sent to landfill for an additional five years under Option 1. As such, the overall amount of waste sent to landfill in Option 1 will be less than for Option 2. As a result, Option 1 requires slightly less land-lake for landfill than Option 2, although both ultimately reduce land-take required for waste disposal. However, such differences are unlikely to be of a large enough scale to alter the scoring in the ‘Duration’ column.</p> <p>Positive effects are generally related to reducing land-take for waste management. Where land-take is greater, there is a higher possibility of landfill being located in or near to a designated or notable feature (e.g. a site designated for nature conservation or an AONB). Many effects depend on the location of any future waste recycling facilities, which has resulted in uncertainty against a number of objectives.</p> <p>Both options could have a long term positive effect with regards to SA Objective 3 (water quality) by reducing risk of groundwater contamination from landfill. Other positive effects relate to SA Objectives 10 and 12, as both options will ensure waste moves up the waste hierarchy and both are likely to lead to new markets and new job opportunities associated with waste facilities.</p>							

Policy W2: Oxfordshire waste management targets - CDE targets

Option 1: Retain Submission CDE targets

- 3.6 Construction, Demolition and Excavation (CDE) dry recycling targets to be retained as per the Submission Core Strategy. These are as follows:

Year	2016	2021	2026	2031
CDE dry recycling target	55%	60%	60%	60%

Option 2: Increase CDE targets

- 3.7 Construction, Demolition and Excavation (CDE) dry recycling targets to be increased as agreed between the Council and objectors and put forward by the Council at the Examination Hearing as a suggested proposed modification. These are as follows:

Year	2016	2021	2026	2031
CDE recycling target	55%	60%	65%	70%

- 3.8 The above options relate to targets for recycling waste, rather than actual levels that must be achieved. However, for the purpose of this assessment, it has been assumed that these targets will be achieved. It has also been assumed that, of any CDE waste that is not recycled, a substantial proportion of this will be sent to landfill, although a proportion will be managed by (non-landfill) permanent deposit to land, which is still lower down the waste hierarchy than recycling.

Table 3.2 Assessment of reasonable alternatives to Policy W2 – CDE target

SA Objective		Assessment of effect						
		Duration			Reversibility	Scale	Permanence	Evidence and Reference
		Short term	Medium term	Long term				
1	Biodiversity & geodiversity	+/ ?	+/ ?	+/ ?	I	L	P	
		+/ ?	+/ ?	+/ ?	I	L	P	<p>Option 2: Increase CDE targets</p> <p>The targets aim to significantly reduce the proportions of waste going to landfill, which will reduce the land-take needed to manage waste, which will have positive implications for this objective. In reaching higher levels of recycling, this option would reduce land-take more than Option 1, further minimising effects on biodiversity and geodiversity. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column.</p> <p>Provision of new recycling facilities may have effects on biodiversity and geodiversity, but effects will be dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation.</p>
		Summary for topic						<p>Both options perform similarly with regards to biodiversity and geodiversity, as effects will largely depend on the locations of waste management facilities and their associated mitigation measures. Option 2 is expected to lead to greater reduction of land-take, as reaching higher recycling targets will reduce the amount of waste sent to landfill. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column. Both options are expected to lead to provision of new waste facilities, which may have biodiversity and geodiversity impacts depending on their location and any relevant mitigation measures. Option 2 is likely to deliver more and/or larger facilities for recycling, therefore implications of new facilities may be of a greater magnitude than Option 1.</p>

2a	Landscape	+/ ?	+/ ?	+/ ?	I	L	P	<p>Option 1: Retain Submission CDE targets</p> <p>The targets aim to significantly reduce the proportions of waste going to landfill, which will reduce the land-take needed to manage waste, which will have positive implications for this objective.</p> <p>The provision of new waste facilities may have impacts on landscape character, although effects will be dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation.</p>
		+/ ?	+/ ?	+/ ?	I	L	P	<p>Option 2: Increase CDE targets</p> <p>The targets aim to significantly reduce the proportions of waste going to landfill, which will reduce the land-take needed to manage waste, which will have positive implications for this objective. In reaching higher levels of recycling, this option would reduce land-take more than Option 1, further minimising effects on landscape. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column.</p> <p>The provision of new waste facilities may have impacts on landscape character, although effects will be dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation.</p>
		Summary for topic			<p>Both options are expected to divert waste from landfill and therefore reduce the amount of land-take required for landfill and reduce associated landscape impacts. Option 2 is expected to lead to greater reduction of land-take, as reaching higher recycling targets will reduce the amount of waste sent to landfill. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column. Both options are expected to lead to provision of new waste facilities, which may have landscape impacts depending on their location and any relevant mitigation measures. Option 2 is likely to deliver more and/or larger facilities for recycling, therefore implications of new facilities may be of a greater magnitude than Option 1.</p>			
2b	Historic environment	+/ ?	+/ ?	+/ ?	I	L	P	<p>Option 1: Retain Submission CDE targets</p> <p>The targets aim to significantly reduce the proportions of waste going to landfill, which will reduce the land-take needed to manage waste. This is expected to reduce the likelihood of landfill sites within or next to areas of sensitive historic environment.</p> <p>The provision of new waste facilities may have impacts on the historic environment, although effects will be dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation.</p>

		+/ ?	+/ ?	+/ ?	I	L	P	<p>Option 2: Increase CDE targets</p> <p>The targets aim to significantly reduce the proportions of waste going to landfill, which will reduce the land-take needed to manage waste. This is expected to reduce the likelihood of landfill sites within or next to areas of sensitive historic environment. In reaching higher levels of recycling, this option would reduce land-take more than Option 1, further minimising effects on landscape. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column.</p> <p>The provision of new waste facilities may have impacts on the historic environment, although effects will be dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation.</p>
		Summary for topic			<p>Both options are expected to divert waste from landfill and therefore reduce the amount of land-take required for landfill and reduce associated impacts on the historic features and their settings. Option 2 is expected to lead to greater reduction of land-take, as reaching higher recycling targets will reduce the amount of waste sent to landfill. Both options are expected to lead to provision of new waste facilities, which may have landscape impacts depending on their location and any relevant mitigation measures. Whilst Option 1 is likely to deliver such facilities earlier, both options reach the same recycling target by 2031 and therefore long-term effects of new facilities would be the same for both options.</p>			
3	Water quality	?	+/ ?	+/ ?	I	L	P	<p>Option 1: Retain Submission CDE targets</p> <p>Effects will be dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation. However, a reduction in landfill could have a positive effect in the medium and long term by reducing the risk of groundwater pollution.</p>
		Summary for topic			<p>Option 2: Increase CDE targets</p> <p>Effects will be dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation. However, a reduction in landfill could have a positive effect in the medium and long term by reducing the risk of groundwater pollution. In reaching higher levels of recycling, this option would reduce the amount of waste sent to landfill more than Option 1, further minimising effects on water quality. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column.</p>			
		Summary for topic			<p>Both options perform similarly with regards to water quality. Effects are largely dependent on location of waste management facilities, although both options may have positive effects in the medium to long term by reducing the risk of groundwater pollution from landfill. Option 2 is expected to lead to greater reduction of waste sent to landfill, further minimising the risk of groundwater pollution. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column.</p>			

4	Air quality	?	?	?				<p><u>Option 1: Retain Submission CDE targets</u></p> <p>Effects will be dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation.</p>
		?	?	?				<p><u>Option 2: Increase CDE targets</u></p> <p>Effects will be dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation.</p>
		<u>Summary for topic</u>			Both options perform similarly with regards to air quality, as effects will largely depend on the locations of waste management facilities and any mitigation measures to be implemented.			
5	Greenhouse gas emissions	?	?	?				<p><u>Option 1: Retain Submission CDE targets</u></p> <p>Effects will be dependent upon the location of waste management facilities required to meet these targets and the distance between these facilities and locations of waste arisings.</p>
		?	?	?				<p><u>Option 2: Increase CDE targets</u></p> <p>Effects will be dependent upon the location of waste management facilities required to meet these targets and the distance between these facilities and locations of waste arisings.</p>
		<u>Summary for topic</u>			Both options perform similarly with regards to greenhouse gas emissions as effects will be dependent upon the location of waste management facilities required to meet these targets and the distance between these facilities and locations of waste arisings.			
6	Flood risk	?	?	?				<p><u>Option 1: Retain Submission CDE targets</u></p> <p>Effects will be dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation.</p>
		?	?	?				<p><u>Option 2: Increase CDE targets</u></p> <p>Effects will be is dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation.</p>
		<u>Summary for topic</u>			Both options perform similarly with regards to flood risk, as effects will largely depend on the locations of waste management facilities and any mitigation measures to be implemented.			
7	Transport effects	?	?	?				<p><u>Option 1: Retain Submission CDE targets</u></p> <p>Effects will be dependent on the locations of the different facilities and the distance that waste needs to be transported to be managed.</p>
		?	?	?				<p><u>Option 2: Increase CDE targets</u></p> <p>Effects will be dependent on the locations of the different facilities and the distance that waste needs to be transported to be managed.</p>

		Summary for topic			Uncertain effects were identified against both options, as effects will depend on the locations of different waste facilities.		
8	Population and health	+/ ?	+/ ?	+/ ?	R	L	<p>Option 1: Retain Submission CDE targets</p> <p>The targets aim to significantly reduce the proportions of waste going to landfill. As less landfill would be required, it is likely that fewer communities would be affected by negative effects associated with proximity to landfill sites, including noise, odour and pests, than otherwise. Communities already affected by landfill sites may be so for less time than otherwise, as reduce demand for landfill space may lead to sites being restored sooner.</p> <p>Effects will be dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation.</p>
		+/ ?	+/ ?	+/ ?	R	L	<p>Option 2: Increase CDE targets</p> <p>The targets aim to significantly reduce the proportions of waste going to landfill. As less landfill would be required, it is likely that fewer communities would be affected by negative effects associated with proximity to landfill sites, including noise, odour and pests, than otherwise. Communities already affected by landfill sites may be so for less time than otherwise, as reduced demand for landfill space may lead to sites being restored sooner. Option 2 is expected to lead to greater reduction of waste sent to landfill, therefore minimising negative effects associated with landfill to a greater degree than Option 1. This difference is unlikely to be of such a scale to alter the scoring in the 'Duration' column.</p> <p>Effects will be dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation.</p>
		Summary for topic			Both options may reduce negative effects from landfill (noise, odour etc.) on local communities, by reducing the amount of landfill required. Option 2 is expected to lead to greater reduction of waste sent to landfill, therefore minimising negative effects associated with landfill to a greater degree than Option 1. This difference is unlikely to be of such a scale to alter the scoring in the 'Duration' column. Both options are expected to require provision of new recycling facilities, but the effects of these would depend on the location of such facilities and any associated mitigation measures.		
9	Soils	+	+	+	I	L	<p>Option 1: Retain Submission CDE targets</p> <p>The targets aim to significantly reduce the proportions of waste going to landfill, which will reduce the land-take needed to manage waste, which will have positive implications for this objective.</p>
		+	+	+	I	L	<p>Option 2: Increase CDE targets</p> <p>The targets aim to significantly reduce the proportions of waste going to landfill, which will reduce the land-take needed to manage waste, which will have positive implications for this objective. This option aims to divert a higher proportion of waste sent to landfill and therefore further reduce associate land-take, in comparison with Option 1. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column.</p>

		Summary for topic			Both options perform similarly with regards soils, as both will reduce the land-take needed to manage waste. Option 2 performs better than Option 1 as it aims to divert a higher proportion of waste away from landfill, resulting in lower levels of land-take. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column.			
10	Waste hierarchy	+	++	++	R	L	P	Option 1: Retain Submission CDE targets The targets aim to significantly reduce the proportions of waste going to landfill by increasing recycling targets. This is expected to contribute to ensuring waste is moved up the waste hierarchy.
		+	++	++	R	L	P	Option 2: Increase CDE targets The targets aim to significantly reduce the proportions of waste going to landfill by increasing recycling targets. This is expected to contribute to ensuring waste is moved up the waste hierarchy as high as possible. This option is likely to perform better than Option 1, as it will lead to a greater proportion of waste being moved up the waste hierarchy. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column.
		Summary for topic			Both options perform similarly with regards to waste hierarchy, as both aim to increase the proportion of waste recycled. Option 2 is expected to perform better than Option 1, as it encourages a higher proportion of waste to move up the waste hierarchy. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column.			
11	Self-sufficiency	0	0	0				Option 1: Retain Submission CDE targets No effect (Oxfordshire is net self-sufficient in waste management).
		0	0	0				Option 2: Increase CDE targets No effect (Oxfordshire is net self-sufficient in waste management).
		Summary for topic			No effect (Oxfordshire is net self-sufficient in waste management).			
12	Economic growth	+	+	+	R	L	P	Option 1: Retain Submission CDE targets Encouraging the recycling of waste is likely to support Oxfordshire's economy as this is likely to create new markets for waste products and provide new job opportunities at new waste facilities.
		+	+	+	R	L	P	Option 2: Increase CDE targets Encouraging the recycling of waste is likely to support Oxfordshire's economy as this is likely to create new markets for waste products and provide new job opportunities at new waste facilities.
		Summary for topic			Both options perform similarly with regards to economic growth, as both are likely to create new markets for waste products and new job opportunities.			

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<p>Recommendation of preferred option</p>	<p>Options 1 and 2 perform similarly against all SA objectives. This is due to the fact that under both scenarios, the CDE dry recycling target would increase. Option 2 is considered to be more sustainable than Option 1, as it involves higher recycling targets, which are likely to lead to a lower proportion of waste being sent to landfill, resulting in less land-take, a lower risk of groundwater pollution and lower levels of greenhouse gas emissions, although both options reduce overall proportions of waste sent to landfill. However, such differences are unlikely to be of a large enough scale to alter the scoring in the 'Duration' column.</p> <p>Positive effects are generally related to reducing land-take for waste management. Where land-take is greater, there is a higher possibility of landfill being located in or near to a designated or notable feature (e.g. a site designated for nature conservation or an AONB). Many effects depend on the location of any future waste facilities, which has resulted in uncertainty against a number of objectives.</p> <p>Both options could have a long term positive effect with regards to SA Objective 3 (water quality) by reducing risk of groundwater contamination from landfill. Other positive effects relate to SA Objectives 10 and 12, as both options will ensure waste moves up the waste hierarchy and both are likely to lead to new markets and new job opportunities associated with waste facilities.</p>
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Policy W3: Provision for waste management capacity

Option 1: Additional capacity requirement considered a cap for provision made

- 3.9 Any additional capacity requirement for composting/food waste treatment and non-hazardous waste recycling (for MSW and C&I wastes) and inert waste recycling (for CDE waste) is to be considered as a cap for the amount of provision to be made.

Option 2: Additional capacity requirement considered to be minimum provision which can be exceeded if appropriate

- 3.10 Any additional capacity requirement for composting/food waste treatment and non-hazardous waste recycling (for MSW and C&I wastes) and inert waste recycling (for CDE waste) is to be considered a minimum amount of provision to be made which can be exceeded if suitable sites are available, with no cap on provision and no requirement for need to be demonstrated.
- 3.11 For the purpose of this assessment it has been assumed that any waste not subject to composting/food waste treatment and non-hazardous waste recycling (for MSW and C&I wastes) and inert waste recycling (for CDE waste) will go to:
- a) Landfill within or outside Oxfordshire; or
 - b) residual waste treatment within or outside Oxfordshire (MSW and C&I wastes only); or
 - c) permanent deposit to land within or outside Oxfordshire (CDE waste only); or
 - d) composting/food waste treatment or non-hazardous waste recycling outside Oxfordshire (MSW and C&I wastes only); or
 - e) inert waste recycling outside Oxfordshire (CDE waste only).
- 3.12 In the case of a), b) and c), these are waste management routes that are lower down the waste hierarchy than recycling and composting/food waste treatment. In the case of d) and e), these would generally result in waste being transported longer distances to management facilities.
- 3.13 Both options are expected to meet the forecast demand for composting/food waste and recycling in Oxfordshire. Should demand exceed that forecast, Option 1 may result in a greater amount of waste being sent to landfill and/or residual waste treatment (within or outside Oxfordshire), or to recycling or composting/food waste treatment facilities outside Oxfordshire. Option 2 may allow more waste to be diverted from landfill, therefore lowering land-take associated with landfill sites, although it could result in over-capacity for waste management which may attract waste from other areas to be imported into the county. This has resulted in an element of uncertainty for many of the assessments for both options.

Table 3.3 Assessment of reasonable alternatives to Policy W3

SA Objective		Assessment of effect						
		Duration			Reversibility	Scale	Permanence	Evidence and Reference
		Short term	Medium term	Long term				
1	Biodiversity & geodiversity	?	?	?				
		+/ ?	+/ ?	+/ ?	I	L	P	<p>Option 2: Additional capacity requirement considered to be minimum provision</p> <p>Effects are uncertain as they will be dependent upon exact locations for where this provision is to be located. The implementation of Policies W4 and W5 as well as the common core policies are expected to address this uncertainty. This option could perform better than Option 1, as it would allow more waste to be diverted from landfill, therefore lowering land-take associated with landfill sites, although this would depend on how any additional waste, for which recycling or composting/food waste treatment capacity was not provided in Oxfordshire under Option 1, was managed.</p>
		Summary for topic						<p>The effects of both options on biodiversity and geodiversity remain uncertain, as these depend on the locations of facilities for processing such waste. Option 2 could perform better than Option 1 as it would allow more waste to be diverted from landfill, therefore lowering land-take associated with landfill sites, although this would depend on how any additional waste, for which recycling or composting/food waste treatment capacity was not provided in Oxfordshire under Option 1, was managed. Option 2 could lead to greater cumulative effects as it allows the provision of a greater number of waste facilities, although this remains uncertain.</p>

2a	Landscape	?	?	?			<p>Option 1: Additional capacity requirement considered a cap for provision made</p> <p>The provision of new waste facilities may have impacts on landscape character, although effects will be dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation.</p> <p>In addition, should demand exceed that forecast, Option 1 may result in a greater amount of waste being sent to landfill, leading to an increase in land-take for landfill, although this would depend on how any additional waste, for which recycling or composting/food waste treatment capacity was not provided in Oxfordshire, was managed.</p>	
		+/ ?	+/ ?	+/ ?	I	L	P	<p>Option 2: Additional capacity requirement considered to be minimum provision</p> <p>The provision of new waste facilities may have impacts on landscape character, although effects will be dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation. This option has the opportunity to provide a greater number of waste facilities, which could lead to greater cumulative impacts on landscape, although this remains uncertain.</p> <p>This option could perform better than Option 1, as it would allow more waste to be diverted from landfill, therefore lowering land-take associated with landfill sites, although this would depend on how any additional waste, for which recycling or composting/food waste treatment capacity was not provided in Oxfordshire under Option 1, was managed.</p>
		Summary for topic						<p>Uncertain effects are associated with both options, as the impacts of new waste facilities would be dependent on their location and associated mitigation measures. Option 2 could perform better than Option 1 as it would allow more waste to be diverted from landfill, therefore lowering land-take associated with landfill sites, although this would depend on how any additional waste, for which recycling or composting/food waste treatment capacity was not provided in Oxfordshire under Option 1, was managed. Option 2 could lead to greater cumulative effects as it allows the provision of a greater number of waste facilities, although this remains uncertain.</p>
2b	Historic environment	?	?	?			<p>Option 1: Additional capacity requirement considered a cap for provision made</p> <p>The provision of new waste facilities may have impacts on the historic environment, although effects will be dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation.</p> <p>In addition, should demand exceed that forecast, Option 1 may result in a greater amount of waste being sent to landfill, leading to an increase in land-take for landfill, although this would depend on how any additional waste, for which recycling or composting/food waste treatment capacity was not provided in Oxfordshire, was managed.</p>	

		+/ ?	+/ ?	+/ ?		I	L	P	<p>Option 2: Additional capacity requirement considered to be minimum provision</p> <p>The provision of new waste facilities may have impacts on the historic environment, although effects will be dependent upon the location of waste management facilities required to meet these targets and mitigation measures associated with their development and operation. This option has the opportunity to provide a greater number of waste facilities, which could lead to greater cumulative impacts on the historic environment, although this remains uncertain.</p> <p>This option could perform better than Option 1, as it would allow more waste to be diverted from landfill, therefore lowering land-take associated with landfill sites, although this would depend on how any additional waste, for which recycling or composting/food waste treatment capacity was not provided in Oxfordshire under Option 1, was managed.</p>
		Summary for topic			<p>Uncertain effects are associated with both options, as the impacts of new waste facilities would be dependent on their location and associated mitigation measures. Option 2 could perform better than Option 1 as it would allow more waste to be diverted from landfill, therefore lowering land-take associated with landfill sites, although this would depend on how any additional waste, for which recycling or composting/food waste treatment capacity was not provided in Oxfordshire under Option 1, was managed. Option 2 could lead to greater cumulative effects as it allows the provision of a greater number of waste facilities, although this remains uncertain.</p>				
3	Water quality	?	?	?					<p>Option 1: Additional capacity requirement considered a cap for provision made</p> <p>Implications of provision of waste facilities are uncertain as they will be dependent upon exact locations for where this provision is to be located. The implementation of Policies W4 and W5 as well as the common core policies are expected to address this uncertainty.</p> <p>In addition, should demand exceed that forecast, Option 1 may result in a greater amount of waste being sent to landfill, leading to an increase in land-take for landfill, although this would depend on how any additional waste, for which recycling or composting/food waste treatment capacity was not provided in Oxfordshire, was managed.</p>
		?	+/ ?	+/ ?		I	L	P	<p>Option 2: Additional capacity requirement considered to be minimum provision</p> <p>This option could perform better than Option 1, as it would allow more waste to be diverted from landfill, although this would depend on how any additional waste, for which recycling or composting/food waste treatment capacity was not provided in Oxfordshire under Option 1, was managed. A reduction in landfill could have a positive effect in the medium and long term by reducing the risk of groundwater pollution.</p> <p>Implications of provision of waste facilities are uncertain as they will be dependent upon exact locations for where this provision is to be located. The implementation of Policies W4 and W5 as well as the common core policies are expected to address this uncertainty.</p>

		Summary for topic			Uncertain effects are recorded against both options, as effects will depend on the locations for where waste facilities would be located. Option 2 could perform better than Option 1 as it would allow more waste to be diverted from landfill, which could reduce the risk of groundwater pollution from landfill, although this would depend on how any additional waste, for which recycling or composting/food waste treatment capacity was not provided in Oxfordshire under Option 1, was managed.			
4	Air quality	?	?	?			Option 1: Additional capacity requirement considered a cap for provision made Effects are uncertain as they will be dependent upon exact locations for where this provision is to be located. The implementation of Policies W4 and W5 as well as the common core policies are expected to address this uncertainty.	
		?	?	?			Option 2: Additional capacity requirement considered to be minimum provision Effects are uncertain as they will be dependent upon exact locations for where this provision is to be located. The implementation of Policies W4 and W5 as well as the common core policies are expected to address this uncertainty.	
		Summary for topic			Both options are assessed as having uncertain effects with regards to air quality, as effects depend on the locations for where waste facilities would be located.			
5	Greenhouse gas emissions	+/ ?	+/ ?	+/ ?	R	N	P	Option 1: Additional capacity requirement considered a cap for provision made This option is expected to result in more waste being diverted from landfill than currently, which, in the case of Municipal Solid Waste (MSW) and C&I waste, will help to reduce the levels of methane generated by this type of waste management. Relative to carbon dioxide, methane is 21 times more potent as a greenhouse gas than CO ₂ ³ . Should demand exceed that forecast, Option 1 may result in a greater amount of waste being sent to landfill and/or residual waste treatment (within or outside Oxfordshire), or to recycling or composting/food waste treatment facilities outside Oxfordshire. As such, there is some uncertainty with regards to the implications of this option with regards to SA Objective 5.

³ Comparative Assessment of Greenhouse Gas Emissions from Waste Management Services February 2010 (Updated from November 2009) Zero Waste Scotland

		+/ ?	+/ ?	+/ ?	R	N	P	<p><u>Option 2: Additional capacity requirement considered to be minimum provision</u></p> <p>This option is expected to result in more waste being diverted from landfill than currently, which, in the case of MSW and C&I waste, will help to reduce the levels of methane generated by this type of waste management. Relative to carbon dioxide, methane is 21 times more potent as a greenhouse gas than CO₂⁴.</p> <p>This option may perform better than Option 1, as it would allow for greater composting/food waste treatment, non-hazardous waste recycling and inert waste recycling, therefore allowing more waste to be diverted from landfill and lower associated methane gas production, although this would depend on how any additional waste, for which recycling or composting/food waste treatment capacity was not provided in Oxfordshire under Option 1, was managed. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column.</p> <p>This option could result in over-capacity for waste management, which may attract waste from other areas to be imported into the county. This could lead to increased greenhouse gas emissions from vehicles travelling from outside the county to access waste facilities in Oxfordshire, resulting in some uncertainty against this objective.</p>
		<u>Summary for topic</u>					Both options may lead to a reduction in greenhouse gas emissions in the form of methane from landfill (other than from CDE waste, which does not include biodegradable material). Option 2 may perform slightly better than Option 1 as it would have the potential to divert a greater amount of waste from landfill, although this would depend on how any additional waste, for which recycling or composting/food waste treatment capacity was not provided in Oxfordshire under Option 1, was managed. However, this is unlikely to be of such a scale to alter the scoring in the 'Duration' column.	
6	Flood risk	?	?	?				<p><u>Option 1: Additional capacity requirement considered a cap for provision made</u></p> <p>Effects are uncertain as they will be dependent upon exact locations for where this provision is to be located. The implementation of Policies W4 and W5 as well as the common core policies are expected to address this uncertainty.</p>
		?	?	?				<p><u>Option 2: Additional capacity requirement considered to be minimum provision</u></p> <p>Effects are uncertain as they will be dependent upon exact locations for where this provision is to be located. The implementation of Policies W4 and W5 as well as the common core policies are expected to address this uncertainty.</p>
		<u>Summary for topic</u>					Uncertain effects have been identified against both options, as effects are dependent upon exact locations for where provision of new facilities is to be located.	

⁴ Comparative Assessment of Greenhouse Gas Emissions from Waste Management Services February 2010 (Updated from November 2009) Zero Waste Scotland

7	Transport effects	?	?	?			<p>Option 1: Additional capacity requirement considered a cap for provision made</p> <p>Effects are uncertain as they will be dependent upon exact locations for where this provision is to be located. The implementation of Policies W4 and W5 as well as the common core policies are expected to address this uncertainty. In addition, should demand exceed that forecast, Option 1 may result in a greater amount of waste being sent to landfill and/or residual waste treatment (within or outside Oxfordshire), or to recycling or composting/food waste treatment facilities outside Oxfordshire.</p>	
		+/ ?	+/ ?	+/ ?	I	L	P	<p>Option 2: Additional capacity requirement considered to be minimum provision</p> <p>Effects are uncertain as they will be dependent upon exact locations for where this provision is to be located. The implementation of Policies W4 and W5 as well as the common core policies are expected to address this uncertainty. In the short term and medium term effects may be neutral as additional provision is not required for some waste streams.</p> <p>In allowing greater capacity for waste treatment this option allows for greater provision of facilities. This may result in waste facilities being closer to sources of waste than in Option 1, which would lead to an associated reduction in transportation distances to waste facilities.</p> <p>This option could result in over-capacity for waste management, which may attract waste from other areas to be imported into the county, leading to an associated increase in traffic in the county, resulting in some uncertainty against this objective.</p>
		Summary for topic				<p>The effects of both options on transport will be dependent upon exact locations for where this provision is to be located. Option 2 could perform better than Option 1, as it could lead to a greater number of waste facilities. This could result in reduced transportation distance from the source of waste to its treatment.</p>		
8	Population and health	?	?	?			<p>Option 1: Additional capacity requirement considered a cap for provision made</p> <p>Effects are uncertain as they will be dependent upon exact locations for where this provision is to be located. The implementation of Policies W4 and W5 as well as the common core policies are expected to address this uncertainty.</p>	
		?	?	?			<p>Option 2: Additional capacity requirement considered to be minimum provision</p> <p>Effects are uncertain as they will be dependent upon exact locations for where this provision is to be located. The implementation of Policies W4 and W5 as well as the common core policies are expected to address this uncertainty.</p>	
		Summary for topic				<p>Uncertain effects have been identified against both options, as effects are dependent upon exact locations for where provision of new facilities is to be located.</p>		

9	Soils	?	?	?				<p>Option 1: Additional capacity requirement considered a cap for provision made</p> <p>Implications of provision of waste facilities are uncertain as they will be dependent upon exact locations for where this provision is to be located. The implementation of Policies W4 and W5 as well as the common core policies are expected to address this uncertainty.</p> <p>In addition, should demand exceed that forecast, Option 1 may result in a greater amount of waste being sent to landfill, leading to an increase in land-take for landfill, although this would depend on how any additional waste, for which recycling or composting/food waste treatment capacity was not provided in Oxfordshire, was managed.</p>
		+/ ?	+/ ?	+/ ?	I	L	P	<p>Option 2: Additional capacity requirement considered to be minimum provision</p> <p>This option could perform better than Option 1, as it would allow more waste to be diverted from landfill, which could conserve more soil resources, although this would depend on how any additional waste, for which recycling or composting/food waste treatment capacity was not provided in Oxfordshire under Option 1, was managed.</p> <p>Implications of provision of waste facilities are uncertain as they will be dependent upon exact locations for where this provision is to be located. The implementation of Policies W4 and W5 as well as the common core policies are expected to address this uncertainty.</p>
		Summary for topic						<p>Option 2 could perform better than Option 1, as it would allow more waste to be diverted from landfill, which could conserve more soil resources, although this would depend on how any additional waste, for which recycling or composting/food waste treatment capacity was not provided in Oxfordshire under Option 1, was managed. Uncertainty is recorded against both options, as implications of provision of new waste facilities will be dependent upon exact locations for where this provision is to be located.</p>
10	Waste hierarchy	+	+	+	R	L	P	<p>Option 1: Additional capacity requirement considered a cap for provision made</p> <p>Policy W3 encourages the provision of new facilities for re-use, recycling and composting of waste and for treatment of food waste which will contribute towards moving up the waste hierarchy.</p>
		+	+	+	R	L	P	<p>Option 2: Additional capacity requirement considered to be minimum provision</p> <p>Policy W3 encourages the provision of new facilities for re-use, recycling and composting of waste and for treatment of food waste which will contribute towards moving up the waste hierarchy.</p> <p>This option may perform better than Option 1, as it allows for the provision of greater recycling capacity, which could lead to a greater amount of waste moving up the hierarchy. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column.</p>
		Summary for topic						<p>Both options are likely to have positive effects with regards to the waste hierarchy, as they require additional capacity for waste recycling. Option 2 may perform slightly better than Option 1 as it would allow for greater provision for composting, recycling and food waste treatment facilities. This difference is unlikely to be of such a scale to alter the scoring in the 'Duration' column.</p>

11	Self-sufficiency	++	++	++	R	L	P	<u>Option 1: Additional capacity requirement considered a cap for provision made</u> Policy W3 makes provision in accordance with Oxfordshire's assessed needs therefore enabling the County to be net self-sufficient in its waste management. In the event that waste production increases more than forecast, capping additional waste capacity may restrict the ability of Oxfordshire to recycle an equivalent amount of waste to what it produces, in line with recycling targets.
		++	++	++	R	L	P	<u>Option 2: Additional capacity requirement considered to be minimum provision</u> Policy W3 makes provision in accordance with Oxfordshire's assessed needs therefore enabling the County to be net self-sufficient in its waste management. This option is more likely to enable Oxfordshire to be self-sufficient in waste management as it allows flexibility to accommodate for any unforeseen increase in demand. This effect is unlikely to be of such a scale to alter the scoring in the 'Duration' column, as both options will allow the county to meet its recycling targets.
		<u>Summary for topic</u>				Both options are likely to perform positively with regards to self-sufficiency, as both will make sufficient provision of recycling facilities to meet the county's target. Option 2 is likely to have a greater contribution to self-sufficiency as it allows for flexibility to provide additional capacity if recycling rates exceed the Council's targets. As both options will have significant positive effects, it is not possible to express this difference in the scores in the 'Duration' column.		
12	Economic growth	+	+	+	R	L	P	<u>Option 1: Additional capacity requirement considered a cap for provision made</u> Indirectly new waste management facilities to deliver the required capacity should provide local job opportunities and therefore support the local economy.
		+	+	+	R	L	P	<u>Option 2: Additional capacity requirement considered to be minimum provision</u> Indirectly new waste management facilities to deliver the required capacity should provide local job opportunities and therefore support the local economy. This option could lead to greater job opportunities than Option 1 as it may lead to provision of more facilities.
		<u>Summary for topic</u>				Both options are assessed as having positive effects with regards to economic growth, as they would lead to the creation of new job opportunities. Option 2 may lead to provision of more facilities and therefore more job opportunities, although this is unlikely to be of such a scale to alter the scoring in the 'Duration' column.		

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Recommendation of preferred option	<p>Both options generally have similar effects with regards to most SA Objectives.</p> <p>Option 2 may reduce the amount of land-take for landfill in comparison to Option 1, which could lead to positive effects on biodiversity, landscape and the historic environment, although this would depend on how any additional waste, for which recycling or composting/food waste treatment capacity was not provided in Oxfordshire under Option 1, was managed. Many potential effects of both Options 1 and 2 are dependent on the locations at which new facilities are provided.</p> <p>In potentially allowing for waste facility capacity over the county's targets, Option 2 may have more scope to achieve self-sufficiency and economic gains. As such, Option 2 is considered the more sustainable option.</p>
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Policy W4: Locations for facilities to manage the principal waste streams

3.14 The full options that have been assessed are presented in **Appendix 2** of this document. Below is a summary of each of the options.

Option 1: Retain Submission Policy W4

3.15 Policy as included in the Submission Core Strategy.

Option 2: Suitable alternatives accessible via Oxfordshire lorry route network

3.16 Some elements of the supporting text from the Submission Core Strategy to now be included in the policy. This includes clarifying that locations beyond the zones identified for the named towns may be appropriate for waste facilities where there is access to the Oxfordshire lorry route network. This option also specifies that areas for waste facilities exclude the Oxford Meadows, Cothill Fen, Little Wittenham and Hackpen Hill Special Areas of Conservation and a 200 metre dust impact buffer zone adjacent to these SACs, as well as specifying that the AONBs are not generally suitable for locating waste management facilities.

Option 3: Banbury as suitable alternative

3.17 This alternative builds on Option 2 by 'reclassifying' Banbury as a suitable area for strategic waste management facilities. The supporting text would be updated to expand the zone around Oxford from 10km to 15km.

Option 4: Smaller towns as suitable alternatives

3.18 This alternative builds on Option 3 by adding smaller towns as possible locations for non-strategic waste management facilities in part b).

Option 5: Further dispersal

This alternative is a dispersal strategy which combines a) and b) in Option 4 to locate both strategic and non-strategic waste management facilities at all of the specified locations.

Table 3.4 Assessment of reasonable alternatives to Policy W4

SA Objective		Assessment of effect						
		Duration			Reversibility	Scale	Permanence	Evidence and Reference
		Short term	Medium term	Long term				
1	Biodiversity & geodiversity	?	?	?				
		+/?	+/?	+/?	I	L	P	<p>Option 2: Suitable alternatives accessible via Oxfordshire lorry route network</p> <p>Effects will depend upon the exact location and type of facilities. This option states in the policy that waste facilities around Oxford, Abingdon, Didcot and Wantage and Grove will avoid nearby Special Areas of Conservation (SACs) (Oxford Meadows, Cothill Fen, Little Wittenham and Hackpen Hill SACs) and provide a 200m dust impact buffer zone adjacent to these. This provides some limited protection to these sites. The policy refers to the criteria in Policy W5 and Core Policies which are expected to mitigate adverse environmental effects. In particular, Policy C7 states that development likely to adversely affect sites of international nature conservation importance, including SACs, will not be permitted.</p>
		+/?	+/?	+/?	I	L	P	<p>Option 3: Banbury as suitable alternative</p> <p>As above for Option 2.</p>
		+/?	+/?	+/?	I	L	P	<p>Option 4: Smaller towns as suitable alternatives</p> <p>As above for Option 2.</p>
		+/?	+/?	+/?	I	L	P	<p>Option 5: Further dispersal</p> <p>As above for Option 2.</p>
		Summary for topic						

2a	Landscape	?	?	?			<p>Option 1: Retain Submission Policy W4</p> <p>Effects will depend upon the exact location and type of facilities. The policy restricts the scale of facilities in the more remote rural areas which should help to protect local landscapes. The policy refers to the criteria in Policy W5 and Core Policies which are expected to help mitigate adverse environmental effects.</p>
		+/- /?	+/- /?	+/- /?	I	L	<p>Option 2: Suitable alternatives accessible via Oxfordshire lorry route network</p> <p>In allowing waste facilities to be provided further from the settlements named in the policies, where access to the lorry network is available, this option could open up more rural areas to the possibility of development of waste facilities. Development of facilities in more rural areas may have a greater landscape impact than developing facilities in the proximity of existing built up areas. However, effects are uncertain as they will depend upon the exact location and type of facilities.</p> <p>The policy restricts the scale of facilities in the more remote rural areas which should help to protect local landscapes. This option states in the policy that waste management facilities should not be located within Areas of Outstanding Natural Beauty (AONBs) except where it can be demonstrated that the 'major development test' is met, which is expected to help retain the natural beauty of these areas. The policy refers to the criteria in Policy W5 and Core Policies which are expected to help mitigate adverse environmental effects.</p>
		+/- /?	+/- /?	+/- /?	I	L	<p>Option 3: Banbury as suitable alternative</p> <p>As above for Option 2.</p>
		+/- /?	+/- /?	+/- /?	I	L	<p>Option 4: Smaller towns as suitable alternatives</p> <p>As above for Option 2.</p>
		+/- /?	+/- /?	+/- /?	I	L	<p>Option 5: Further dispersal</p> <p>In allowing waste facilities to be provided further from the settlements named in the policies, and in allowing strategic waste facilities in proximity to smaller towns, this option could open up more rural areas to the possibility of development of waste facilities. Development of facilities in more rural areas may have a greater landscape impact than developing facilities in the proximity of existing built up areas. However, effects are uncertain as they will depend upon the exact location and type of facilities.</p> <p>The policy restricts the scale of facilities in the more remote rural areas which should help to protect local landscapes. This option states in the policy that waste management facilities should not be located within Areas of Outstanding Natural Beauty (AONBs) except where it can be demonstrated that the 'major development test' is met, which is expected to help retain the natural beauty of these areas. The policy refers to the criteria in Policy W5 and Core Policies which are expected to help mitigate adverse environmental effects.</p>

		Summary for topic			Options 2, 3, 4 and 5 perform better than Option 1 as they state in the policy that waste facilities should generally not be located in AONBs. Whilst Policy C8 states that landscape character and AONBs will be preserved, this is reinforced by Options 2, 3, 4 and 5. Options 2, 3, 4 and 5 may lead to development of waste facilities in more rural areas, which could have greater landscape impacts. This is particularly the case for Option 5, which allows strategic waste facilities in proximity to smaller towns.
2b	Historic environment	?	?	?	Option 1: Retain Submission Policy W4 Effects will depend upon the exact location and type of facilities. The policy refers to the criteria in Policy W5 and Core Policies which are expected to mitigate adverse environmental effects.
		?	?	?	Option 2: Suitable alternatives accessible via Oxfordshire lorry route network Effects will depend upon the exact location and type of facilities. The policy refers to the criteria in Policy W5 and Core Policies which are expected to mitigate adverse environmental effects.
		?	?	?	Option 3: Banbury as suitable alternative As above for Option 2.
		?	?	?	Option 4: Smaller towns as suitable alternatives As above for Option 2.
		?	?	?	Option 5: Further dispersal As above for Option 2.
		Summary for topic			All options are assessed as having uncertain effects with regards to the historic environment, as effects will depend on the location and type of new facilities.
3	Water quality	?	?	?	Option 1: Retain Submission Policy W4 Effects will depend upon the exact location and type of facilities. The policy refers to the criteria in Policy W5 and Core Policies which are expected to mitigate adverse environmental effects.
		?	?	?	Option 2: Suitable alternatives accessible via Oxfordshire lorry route network Effects will depend upon the exact location and type of facilities. The policy refers to the criteria in Policy W5 and Core Policies which are expected to mitigate adverse environmental effects.
		?	?	?	Option 3: Banbury as suitable alternative As above for Option 2.
		?	?	?	Option 4: Smaller towns as suitable alternatives As above for Option 2.

		?	?	?				<p><u>Option 5: Further dispersal</u></p> <p>As above for Option 2.</p>
		Summary for topic						All options are assessed as having uncertain effects with regards to water quality, as effects will depend on the location and type of new facilities.
4	Air quality	?	?	?				<p><u>Option 1: Retain Submission Policy W4</u></p> <p>Effects will depend upon the exact location and type of facilities. The policy refers to the criteria in Policy W5 and Core Policies which are expected to mitigate adverse environmental effects.</p>
		?	?	?				<p><u>Option 2: Suitable alternatives accessible via Oxfordshire lorry route network</u></p> <p>Effects will depend upon the exact location and type of facilities. The policy refers to the criteria in Policy W5 and Core Policies which are expected to mitigate adverse environmental effects.</p>
		?	?	?				<p><u>Option 3: Banbury as suitable alternative</u></p> <p>Effects will depend upon the exact location and type of facilities. The policy refers to the criteria in Policy W5 and Core Policies which are expected to mitigate adverse environmental effects.</p>
		?	?	?				<p><u>Option 4: Smaller towns as suitable alternatives</u></p> <p>Effects will depend upon the exact location and type of facilities. The policy refers to the criteria in Policy W5 and Core Policies which are expected to mitigate adverse environmental effects.</p>
		?	?	?				<p><u>Option 5: Further dispersal</u></p> <p>Effects will depend upon the exact location and type of facilities. The policy refers to the criteria in Policy W5 and Core Policies which are expected to mitigate adverse environmental effects.</p>
		Summary for topic						All options are assessed as having uncertain effects with regards to air quality, as effects will depend on the location and type of new facilities.
5	Greenhouse gas emissions	+	+	+	R	N	P	<p><u>Option 1: Retain Submission Policy W4</u></p> <p>Provision of facilities close to waste arisings is likely to reduce greenhouse gas emissions associated with waste transportation.</p>
		+/ ?	+/ ?	+/ ?	R	N	P	<p><u>Option 2: Suitable alternatives accessible via Oxfordshire lorry route network</u></p> <p>Provision of facilities close to waste arisings is likely to reduce greenhouse gas emissions associated with waste transportation. In this option the policy states that locations further from these towns may be appropriate where there is access to the Oxfordshire lorry route. This could result in facilities further from the main areas of waste arisings, leading to longer transport distances and more associated greenhouse gas emissions, although this depends on the exact location of facilities, particularly in relation to the areas they serve.</p>

		Summary for topic			All options, except Option 5, are likely to have positive effects with regards to greenhouse gas emissions, as all will lead to provision of waste management facilities near larger towns, where most waste arisings will occur. This will minimise the distance waste needs to be transported. Option 2 has an element of uncertainty as it allows provision of waste management facilities further from arisings. Whilst this is also true of Options 3 and 4, these options would lead to reductions in transportation from arisings to waste facilities by providing a wider distribution of waste facilities across the county. Whilst Option 5 would lead to a wider distribution of waste facilities across the county, it could result in facilities with appropriate capacity being located further from large towns where waste arisings are greater. This could lead to increased transport distances from waste arisings to management facilities and an associated increase in greenhouse gas emissions.		
6	Flood risk	?	?	?			Option 1: Retain Submission Policy W4 Effects will depend upon the exact location and type of facilities. The policy refers to the criteria in Policy W5 and Core Policies which are expected to mitigate adverse environmental effects.
		?	?	?			Option 2: Suitable alternatives accessible via Oxfordshire lorry route network Effects will depend upon the exact location and type of facilities. The policy refers to the criteria in Policy W5 and Core Policies which are expected to mitigate adverse environmental effects.
		?	?	?			Option 3: Banbury as suitable alternative Effects will depend upon the exact location and type of facilities. The policy refers to the criteria in Policy W5 and Core Policies which are expected to mitigate adverse environmental effects.
		?	?	?			Option 4: Smaller towns as suitable alternatives Effects will depend upon the exact location and type of facilities. The policy refers to the criteria in Policy W5 and Core Policies which are expected to mitigate adverse environmental effects.
		?	?	?			Option 5: Further dispersal Effects will depend upon the exact location and type of facilities. The policy refers to the criteria in Policy W5 and Core Policies which are expected to mitigate adverse environmental effects.
		Summary for topic			All options are assessed as having uncertain effects with regards to flood risk, as effects will depend on the location and type of new facilities.		
7	Transport effects	+/ ?	+/ ?	+/ ?	R	L	P Option 1: Retain Submission Policy W4 Provision of facilities close to waste arisings is likely to minimise adverse effects associated with waste transportation. However, effects will depend upon the exact location and type of facilities.

		+/ ?	+/ ?	+/ ?	R	L	<p><u>Option 2: Suitable alternatives accessible via Oxfordshire lorry route network</u></p> <p>Provision of facilities close to waste arisings is likely to minimise adverse effects associated with waste transportation.</p> <p>In this option the policy states that locations further from these towns may be appropriate where there is access to the Oxfordshire lorry route. This could result in facilities further from the main areas of waste arisings, leading to longer transport distances, although this depends on the exact location of facilities, particularly in relation to the areas they serve.</p>
		+/ ?	++ /?	++ /?	R	L	<p><u>Option 3: Banbury as suitable alternative</u></p> <p>Provision of facilities close to waste arisings is likely to minimise adverse effects associated with waste transportation.</p> <p>In this option the policy states that locations further from these towns may be appropriate where there is access to the Oxfordshire lorry route. This could result in facilities further from the main areas of waste arisings, leading to longer transport distances, although this depends on the exact location of facilities, particularly in relation to the areas they serve. However, this option also identifies Banbury as an area for location of a strategic waste management facility. This is likely to lead to a better distribution of strategic waste facilities across the county, leading to a reduction in transportation distance from arisings, particularly for waste from Banbury itself. In addition, increasing the zone within which waste facilities could be located for Oxford city from 10km to 15km could allow greater flexibility for facilities to be sited to serve Oxfordshire, the main source of waste arisings in the county.</p>
		+/ ?	++ /?	++ /?	R	L	<p><u>Option 4: Smaller towns as suitable alternatives</u></p> <p>Provision of facilities close to waste arisings is likely to minimise adverse effects associated with waste transportation.</p> <p>In this option the policy states that locations further from these towns may be appropriate where there is access to the Oxfordshire lorry route. This could result in facilities further from the main areas of waste arisings, leading to longer transport distances, although this depends on the exact location of facilities, particularly in relation to the areas they serve. However, this option also identifies Banbury as an area for location of a strategic waste management facility and small towns as locations for non-strategic waste facilities. This is likely to lead to a better distribution of waste facilities across the county, leading to a reduction in transportation distance from arisings, particularly for waste from Banbury. In addition, increasing the zone within which waste facilities could be located for Oxford city from 10km to 15km could allow greater flexibility for facilities to be sited to serve Oxfordshire, the main source of waste arisings in the county.</p>

		?	?	?				<p><u>Option 5: Further dispersal</u></p> <p>This option could lead to provision of strategic and non-strategic waste facilities in or close to larger and smaller towns. Greater dispersal of waste facilities could contribute to reducing transport distances between waste arisings and waste management facilities. In addition, increasing the zone within which waste facilities could be located for Oxford city from 10km to 15km could allow greater flexibility for facilities to be sited to serve Oxfordshire, the main source of waste arisings in the county. However, this option could also result in strategic waste facilities being located in areas where waste arisings are relatively small, requiring longer transport distances from large towns to facilities with appropriate capacity, where a higher proportion of waste arisings are likely to occur.</p>
		<u>Summary for topic</u>						<p>All options, except Option 5, are likely to have positive effects with regards to transport, as all will lead to provision of waste management facilities near larger towns, where most waste arisings will occur. This will minimise the distance waste needs to be transported. Options 2, 3 and 4 allow provision of waste management facilities further from arisings, but transport effects for all options are partially dependent on the exact location of provision of waste facilities. Options 3 and 4 are expected to lead to a better distribution of waste facilities across the county, leading to reductions in transportation from arisings to waste facilities. Whilst Option 5 would lead to a wider distribution of waste facilities across the county, it could result in facilities with appropriate capacity being located further from large towns where waste arisings are greater. This could lead to increased transport distances from waste arisings to management facilities and an associated increase in greenhouse gas emissions.</p>
8	Population and health	?	?	?				<p><u>Option 1: Retain Submission Policy W4</u></p> <p>Effects will depend upon the exact location and type of facilities. If sites are located near to residential areas they may have a negative impact on local populations. However, Core Policies are expected to help mitigate adverse environmental/health effects.</p>
		?	?	?				<p><u>Option 2: Suitable alternatives accessible via Oxfordshire lorry route network</u></p> <p>Effects will depend upon the exact location and type of facilities. If sites are located near to residential areas they may have a negative impact on local populations. However, Core Policies are expected to help mitigate adverse environmental/health effects.</p>
		?	?	?				<p><u>Option 3: Banbury as suitable alternative</u></p> <p>Effects will depend upon the exact location and type of facilities. If sites are located near to residential areas they may have a negative impact on local populations. However, Core Policies are expected to help mitigate adverse environmental/health effects.</p>

		?	?	?			<p><u>Option 4: Smaller towns as suitable alternatives</u></p> <p>If sites are located near to residential areas they may have a negative impact on local populations. This could be a particular issue if waste facilities are allocated in or near smaller towns where no waste facilities currently exist, as such communities would be newly exposed to impacts such as noise and odour. However, this could also be the case for all other options, as effects will depend upon the exact location and type of facilities. Core Policies are expected to help mitigate adverse environmental/health effects.</p>
		?	?	?			<p><u>Option 5: Further dispersal</u></p> <p>If sites are located near to residential areas they may have a negative impact on local populations. This could be a particular issue if waste facilities are allocated in or near smaller towns where no waste facilities currently exist, as such communities would be newly exposed to impacts such as noise and odour. Whilst this could also be the case for all other options, this option is more likely to lead to strategic waste facilities in more rural areas. Core Policies are expected to help mitigate adverse environmental/health effects.</p>
		<u>Summary for topic</u>					All options are assessed as having uncertain effects with regards to population and health, as effects will depend on the location and type of new facilities.
9	Soils	?	?	?			<p><u>Option 1: Retain Submission Policy W4</u></p> <p>Effects will depend upon the exact location and type of facilities. Core Policies may help minimise adverse effects on soils.</p>
		?	?	?			<p><u>Option 2: Suitable alternatives accessible via Oxfordshire lorry route network</u></p> <p>Effects will depend upon the exact location and type of facilities. Core Policies may help minimise adverse effects on soils.</p>
		?	?	?			<p><u>Option 3: Banbury as suitable alternative</u></p> <p>Effects will depend upon the exact location and type of facilities. Core Policies may help minimise adverse effects on soils.</p>
		?	?	?			<p><u>Option 4: Smaller towns as suitable alternatives</u></p> <p>Effects will depend upon the exact location and type of facilities. Core Policies may help minimise adverse effects on soils.</p>
		?	?	?			<p><u>Option 5: Further dispersal</u></p> <p>Effects will depend upon the exact location and type of facilities. Core Policies may help minimise adverse effects on soils.</p>
		<u>Summary for topic</u>					All options are assessed as having uncertain effects with regards to soils, as effects will depend on the location and type of new facilities.

10	Waste hierarchy	0	0	0				<u>Option 1: Retain Submission Policy W4</u> No effects predicted.
		0	0	0				<u>Option 2: Suitable alternatives accessible via Oxfordshire lorry route network</u> No effects predicted.
		0	0	0				<u>Option 3: Banbury as suitable alternative</u> No effects predicted.
		0	0	0				<u>Option 4: Smaller towns as suitable alternatives</u> No effects predicted.
		0	0	0				<u>Option 5: Further dispersal</u> No effects predicted.
		Summary for topic						No effects predicted.
11	Self-sufficiency	+/-	+/-	+/-	R	L	P	<u>Option 1: Retain Submission Policy W4</u> In locating waste management facilities relatively close to the primary markets, waste is less likely to be transported to suitable facilities in other areas. However, limited facilities in the north and west of the county could result in waste in these areas being exported to other areas.
		+/-	+/-	+/-	R	L	P	<u>Option 2: Suitable alternatives accessible via Oxfordshire lorry route network</u> In locating waste management facilities relatively close to the primary markets, waste is less likely to be transported to suitable facilities in other areas. However, limited facilities in the north and west of the county could result in waste in these areas being exported to other areas, although the chances of this may be reduced by allowing waste management facilities to be located further from these markets if they have access to the lorry route network.
		+/-	+/-	+/-	R	L	P	<u>Option 3: Banbury as suitable alternative</u> This option may lead to waste management facilities being better located in terms of main markets, particularly by identifying Banbury as a suitable area for a strategic waste management facility. However, locating waste facilities close to the boundary of the county at Banbury may make this a convenient location for waste from outside the county to be transported in. This could increase Oxfordshire's importation of waste.

		+/-	+/-	+/-	R	L	P	<p>Option 4: Smaller towns as suitable alternatives</p> <p>This option may lead to waste management facilities being better located in terms of main markets, particularly by identifying Banbury as a suitable area for a strategic waste management facility. However, locating waste facilities close to the boundary of the county at Banbury and smaller towns, such as Henley-on-Thames and Thame, may make this a convenient location for waste from outside the county to be transported in. This could increase Oxfordshire's importation of waste.</p>
		-/?	-/?	-/?	R	L	P	<p>Option 5: Further dispersal</p> <p>Locating waste facilities close to the boundary of the county at Banbury and smaller towns, such as Henley-on-Thames and Thame, may make this a convenient location for waste from outside the county to be transported in. This could increase Oxfordshire's importation of waste. This option would not necessarily result in waste management facilities being well located in relation to areas of waste arisings, as it would allow a greater distribution of strategic and non-strategic waste facilities across the county.</p>
		Summary for topic						<p>Mixed effects are recorded against Options 1 and 2, as these options would generally lead to provision of waste facilities in proximity to the main areas of waste arisings, but may lead to export of waste in the west and north of the county. Mixed effects are also recorded against Options 3 and 4, as they will lead to a wider distribution of waste facilities, which could more efficiently serve more markets but may encourage importing of waste to facilities close to the county boundaries. Option 5 may lead to importation of waste, but may also lead to facilities less well located with regards to main waste arisings.</p>
12	Economic growth	0	0	0				<p>Option 1: Retain Submission Policy W4</p> <p>No effects predicted.</p>
		+	+	+	I	L	P	<p>Option 2: Suitable alternatives accessible via Oxfordshire lorry route network</p> <p>In allowing waste facilities to be developed further from the towns named in the policy, where there is access to the lorry route network, may contribute to reducing economic disparities across the county by contributing to the rural economy.</p>
		+	+	+	I	L	P	<p>Option 3: Banbury as suitable alternative</p> <p>In allowing waste facilities to be developed further from the towns named in the policy, where there is access to the lorry route network, may contribute to reducing economic disparities across the county by contributing to the rural economy.</p>
		+	+	+	I	L	P	<p>Option 4: Smaller towns as suitable alternatives</p> <p>In allowing waste facilities to be developed further from the towns named in the policy, where there is access to the lorry route network, and providing the opportunity for non-strategic waste facilities in or near smaller towns, this option may contribute to reducing economic disparities across the county by contributing to the rural economy.</p>

		+	+	+	I	L	P	<p>Option 5: Further dispersal</p> <p>In allowing waste facilities to be developed further from the towns named in the policy, where there is access to the lorry route network, and in allowing greater dispersal of waste facilities, this policy may contribute to reducing economic disparities across the county by contributing to the rural economy.</p>
		Summary for topic						<p>Options 2, 3, 4 and 5 are assessed as having positive effects as they may contribute to reducing economic disparity across the county by boosting the economy in rural areas.</p>
<p>Recommendation of preferred option</p>	<p>Options 3 and 4 appear to be the most sustainable, as they are expected to lead to a wider distribution of waste facilities across the county, whilst providing larger facilities in areas where waste arisings are likely to be greatest. This would minimise transportation distances from waste arisings to waste management facilities, leading to associated positive effects with regards to greenhouse gases and transport. This is especially true with regards to identifying Banbury as a location for a strategic waste management facility, as this is a large town with expected growth and is therefore expected to produce a lot of waste. Banbury is in the north of the county and will serve an area a considerable distance from the other areas identified for strategic waste facilities. Option 4 would also allow non-strategic waste facilities to be located around smaller towns, which will add to increasing the distribution of waste facilities, but this difference is unlikely to be of such a scale to alter the scoring in the 'Duration' column for SA Objectives 5 and 7.</p> <p>Uncertainty has been assessed against all options for a number of objectives, as many effects will depend on the exact location and type of facilities.</p> <p>Option 5 would lead to a greater dispersal of waste facilities across the county, which may lead to strategic waste facilities being located a considerable distance from the main areas of waste arisings.</p>							

Policy W11: Safeguarding waste management sites

Option 1: Do not safeguard temporary waste sites where planning permission expires before the end of the Plan period

- 3.19 The Submitted Core Strategy approach to not allow for temporary waste management sites to be safeguarded where the planning permission expires before the end of the plan period.

Option 2: Safeguard all permitted waste sites.

- 3.20 The suggested modification approach is to safeguard all permitted waste management sites for the duration of their planning permission, whether or not the permission allows the use to continue to the end of the plan period.

Table 3.5 Assessment of reasonable alternatives to Policy W11

SA Objective		Assessment of effect						
		Duration			Reversibility	Scale	Permanence	Evidence and Reference
		Short term	Medium term	Long term				
1	Biodiversity & geodiversity	0	0	0				
		0	0	0				Option 2: Safeguard all permitted waste sites No effects predicted.
		Summary for topic						No effects predicted.
2a	Landscape	0	0	0				Option 1: Do not safeguard temporary waste sites where planning permission expires before the end of the plan period. No effects predicted.
		0	0	0				Option 2: Safeguard all permitted waste sites No effects predicted.
		Summary for topic						No effects predicted.
2b	Historic environment	0	0	0				Option 1: Do not safeguard temporary waste sites where planning permission expires before the end of the plan period. No effects predicted.
		0	0	0				Option 2: Safeguard all permitted waste sites No effects predicted.
		Summary for topic						No effects predicted.

3	Water quality	0	0	0				<p><u>Option 1: Do not safeguard temporary waste sites where planning permission expires before the end of the plan period.</u></p> <p>No effects predicted.</p>
		0	0	0				<p><u>Option 2: Safeguard all permitted waste sites</u></p> <p>No effects predicted.</p>
		Summary for topic						No effects predicted.
4	Air quality	0	0	0				<p><u>Option 1: Do not safeguard temporary waste sites where planning permission expires before the end of the plan period.</u></p> <p>No effects predicted.</p>
		0	0	0				<p><u>Option 2: Safeguard all permitted waste sites</u></p> <p>No effects predicted.</p>
		Summary for topic						No effects predicted.
5	Greenhouse gas emissions	+/ ?	+/ ?	+/ ?	R	N	T	<p><u>Option 1: Do not safeguard temporary waste sites where planning permission expires before the end of the plan period.</u></p> <p>Safeguarded sites can help to ensure that there are suitable sites within Oxfordshire for waste management allowing for waste to be managed within the County and therefore reducing the distances waste is transported for management. Safeguarded sites do not include landfill and as such safeguarding may allow for more waste to be diverted from landfill, which would help to reduce the levels of methane generated by this type of waste management. Relative to carbon dioxide, methane is 21 times more potent as a greenhouse gas than CO₂⁵.</p> <p>It is expected that capacity will be available to meet the county's waste management targets, but less flexibility with regards to safeguarded sites and potential additional capacity may limit Oxfordshire in reaching its full waste management potential. As such it is uncertain whether there will be a need to export some waste and how this option will affect greenhouse gas emissions associated with vehicular transport.</p>

⁵ Comparative Assessment of Greenhouse Gas Emissions from Waste Management Services February 2010 (Updated from November 2009) Zero Waste Scotland

		+	+	+/ ?	R	N	T	<p>Option 2: Safeguard all permitted waste sites</p> <p>Safeguarding temporary sites would allow safeguarding of greater waste management capacity, which could help to ensure that there are suitable sites within Oxfordshire for waste management allowing for waste to be managed within the County and therefore minimising greenhouse gases associated with vehicular transport. This would reduce the distances waste is transported for management as waste transported elsewhere would be minimised. Safeguarded sites do not include landfill and as such safeguarding may allow for more waste to be diverted from landfill, which would help to reduce the levels of methane generated by this type of waste management. Relative to carbon dioxide, methane is 21 times more potent as a greenhouse gas than CO₂⁶.</p> <p>These impacts could be of a greater magnitude with regards to Option 2 in the medium term, as more sites would be safeguarded. However, as planning permissions expire, this opportunity may reduce towards the end of the plan period.</p>
		Summary for topic						Option 2 performs better in the short- to medium-term, as it may allow greater waste management capacity in Oxfordshire. Longer term effects remain uncertain as planning permissions on temporary sites expire. Uncertain effects were recorded against Option 1 as it is uncertain whether more limited flexibility and potentially lower capacity for future waste management sites will affect the amount of waste being transported out of the county.
6	Flood risk	0	0	0				<p>Option 1: Do not safeguard temporary waste sites where planning permission expires before the end of the plan period.</p> <p>No effects predicted.</p>
		0	0	0				<p>Option 2: Safeguard all permitted waste sites</p> <p>No effects predicted.</p>
		Summary for topic						No effects predicted.
7	Transport effects	+/ ?	+/ ?	+/ ?	R	L	T	<p>Option 1: Do not safeguard temporary waste sites where planning permission expires before the end of the plan period.</p> <p>Safeguarded sites can help to ensure that there are suitable sites within Oxfordshire for waste management allowing for waste to be managed within the County and therefore reducing the distances waste is transported for management.</p> <p>It is expected that capacity will be available to meet the county's waste management targets, but less flexibility with regards to safeguarded sites and potential additional capacity may limit Oxfordshire in reaching its full waste management potential. As such it is uncertain whether there will be a continued need to transport some waste out of the county.</p>

⁶ Comparative Assessment of Greenhouse Gas Emissions from Waste Management Services February 2010 (Updated from November 2009) Zero Waste Scotland

		+	+	+/?	R	L	T	<p>Option 2: Safeguard all permitted waste sites</p> <p>Safeguarding all permitted temporary waste sites would allow safeguarding of greater waste management capacity, which could help to ensure that there are suitable sites within Oxfordshire for waste management allowing for waste to be managed within the County. This would reduce the distances waste is transported for management as waste transported elsewhere would be minimised. However, as planning permissions expire, this opportunity may reduce towards the end of the plan period.</p>
		Summary for topic						<p>Option 2 performs better in the short- to medium-term, as it may allow greater waste management capacity in Oxfordshire. Longer term effects remain uncertain as planning permissions on temporary sites expire. Uncertain effects were recorded against Option 1 as it is uncertain whether more limited flexibility and potentially lower capacity for future waste management sites will affect the amount of waste being transported out of the county.</p>
8	Population and health	0	0	0				<p>Option 1: Do not safeguard temporary waste sites where planning permission expires before the end of the plan period.</p> <p>No effects predicted.</p>
		0	0	0				<p>Option 2: Safeguard all permitted waste sites</p> <p>No effects predicted.</p>
		Summary for topic						No effects predicted.
9	Soils	0	0	0				<p>Option 1: Do not safeguard temporary waste sites where planning permission expires before the end of the plan period.</p> <p>No effects predicted.</p>
		0	0	0				<p>Option 2: Safeguard all permitted waste sites</p> <p>No effects predicted.</p>
		Summary for topic						No effects predicted.
10	Waste hierarchy	+/?	+/?	+/?	R	L	T	<p>Option 1: Do not safeguard temporary waste sites where planning permission expires before the end of the plan period.</p> <p>Safeguarded sites do not include landfill and as such safeguarding may allow greater capacity for facilities further up the waste hierarchy and divert more waste from landfill.</p>
		+/?	+/?	+/?	R	L	T	<p>Option 2: Safeguard all permitted waste sites</p> <p>Safeguarded sites do not include landfill and as such safeguarding may allow greater capacity for facilities further up the waste hierarchy and divert more waste from landfill.</p>

		Summary for topic			Effects will be the same under both options as they both may allow greater capacity for facilities further up the waste hierarchy and divert more waste from landfill.			
11	Self-sufficiency	+/ ?	+/ ?	+/ ?	R	L	T	<p><u>Option 1: Do not safeguard temporary waste sites where planning permission expires before the end of the plan period.</u></p> <p>Safeguarding sites can indirectly contribute to self-sufficiency by making sure there are suitable sites available for waste management within the County.</p> <p>It is expected that capacity will be available to meet the county's waste management targets, but less flexibility with regards to safeguarded sites and potential additional capacity may limit Oxfordshire in reaching its full waste management potential. As such it is uncertain whether there would be a need to export some waste out of the county.</p>
		+	+	+	R	L	T	<p><u>Option 2: Safeguard all permitted waste sites</u></p> <p>Safeguarding all permitted waste sites would allow safeguarding of greater waste management capacity, which could help to ensure that there are sufficient suitable sites within Oxfordshire for waste management allowing for waste to be managed within the County. As planning permissions expire, this opportunity may reduce towards the end of the plan period. Nevertheless in safeguarding greater capacity than Option 1, this option would allow more flexibility to address increased demand for waste management. This option could result in over-capacity for waste management, which may attract waste from other areas to be imported into the county.</p>
		Summary for topic			Option 2 performs better in the short- to medium-term, as it may allow greater waste management capacity in Oxfordshire. Longer term effects remain uncertain as planning permissions on these temporary sites expire. Uncertain effects were recorded against Option 1 as it is uncertain whether more limited flexibility and potentially lower capacity for future waste management sites will affect the amount of waste being transported out of the county.			
12	Economic growth	+	+	+	R	L	P	<p><u>Option 1: Do not safeguard temporary waste sites where planning permission expires before the end of the plan period.</u></p> <p>Safeguarding waste sites will help to retain local jobs associated with the waste industry and support the local economy.</p>
		+	+	+/ ?	R	L	T	<p><u>Option 2: Safeguard all permitted waste sites</u></p> <p>Safeguarding temporary waste sites may help to retain local jobs associated with the waste industry and support the local economy. As planning permissions expire, this opportunity may reduce towards the end of the plan period.</p> <p>This option could result in over-capacity for waste management, which may attract waste from other areas to be imported into the county.</p>

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		Summary for topic	Option 2 performs better in the short- to medium-term, as it may allow greater waste management capacity in Oxfordshire. Longer term effects remain uncertain as planning permissions on these temporary sites expire.
Recommendation of preferred option		<p>Option 2 appears to be the most sustainable option, although its beneficial effects are likely to be most apparent in the short- to medium-term. Positive effects associated with Option 2 relate to the fact that it will temporarily allow greater waste capacity in Oxfordshire, which may reduce the need to export waste outside the county.</p> <p>Option 1 is generally assessed as having more uncertain effects, as it is uncertain whether more limited flexibility and potentially lower capacity for future waste management sites will affect the amount of waste being transported out of the county.</p>	

4 Summary

- 4.1 This appendix has considered the likely significant effects of four sets of reasonable alternatives with regards to Policies W2, W3, W4 and W11 of the Oxfordshire Minerals and Waste Local Plan Part 1 – Core Strategy.

Policy W2 – C&I waste

- 4.2 Options 1 and 2 perform similarly against all SA objectives. This is due to the fact that under both scenarios, the C&I dry recycling target is set to reach 65% by 2031. Option 1 aims to achieve this sooner than Option 2.
- 4.3 In achieving the 65% target five years earlier than Option 2, less waste will be sent to landfill for a longer time under Option 1. As such, the overall amount of waste sent to landfill in Option 1 will be less than under Option 2, thus Option 1 would require less land-take for landfill than Option 2.
- 4.4 In reducing land-take for waste management, both options are likely to have positive effects with regards to SA Objectives 1 (biodiversity and geodiversity), 2a (landscape), 2b (historic environment) and 9 (soils). Along with SA Objectives 4 (air quality), 6 (flood risk) and 7 (transport effects), effects of both options remain uncertain, as many effects depend on the location of any future waste facilities. However, provision of new waste management facilities could lead to negative effects with regards to these SA Objectives, through land-take and provision of industrial development in areas where this may not currently be the case. Such effects are dependent on the location of new facilities and any mitigation measures implemented in their development and design.
- 4.5 Both options may help minimise groundwater pollution and greenhouse gas emissions from landfill sites (SA Objectives 3 and 5). Both options will also help waste move up the waste hierarchy by aiming to divert more waste from landfill (SA Objective 10). Increasing levels of recycling could lead to a reduced demand for landfill, resulting in fewer communities being affected by landfill sites (SA Objective 8). By reaching the 65% target sooner, and therefore reducing waste sent to landfill overall, Option 1 would perform better with regards to these factors, but this is not expected to be by such an extent to be able to distinguish between a minor effect (- or +) and a significant effect (-- or ++).

Policy W2 – CDE waste

- 4.6 Options 1 and 2 perform similarly against all SA objectives. This is due to the fact that under both scenarios, the CDE dry recycling target would increase. Option 2 is considered to be more sustainable than Option 1, as it involves higher recycling targets, which are likely to lead to a lower proportion of waste being sent to landfill, resulting in a greater reduction in the land-take required for waste management.
- 4.7 In reducing land-take for waste management, both options are likely to have positive effects with regards to SA Objectives 1 (biodiversity and geodiversity), 2a (landscape), 2b (historic environment) and 9 (soils). Along with SA Objectives 4 (air quality), 5 (greenhouse gas emissions), 6 (flood risk) and 7 (transport effects), effects of both options remain uncertain, as many effects depend on the location of any future waste facilities. However, provision of new waste management facilities could lead to negative effects with regards to these SA Objectives, through land-take and provision of industrial development in areas where this may not currently be the case. Such effects are dependent on the location of new facilities and any mitigation measures implemented in their development and design. Both options may help minimise groundwater pollution (SA Objective 3) and help waste move up the waste hierarchy by aiming to divert more waste from landfill (SA Objective 10). Increasing levels of recycling could lead to a reduced demand for landfill, resulting in fewer communities being affected by landfill sites (SA Objective 8). By having higher recycling targets and therefore diverting more waste away from

landfill, Option 2 would perform better with regards to these factors, but this is not expected to be by such an extent to be able to distinguish between a minor effect (- or +) and a significant effect (-- or ++).

Policy W3

- 4.8 Options 1 and 2 generally have similar effects with regards to most SA Objectives, although Option 2 is expected to have more positive effects in comparison to Option 1 as it allows greater flexibility should demand exceed forecasted figures.
- 4.9 Option 2 may reduce the amount of land-take for landfill in comparison to Option 1, although this would depend on how any additional waste, for which recycling or composting/food waste treatment capacity was not provided in Oxfordshire under Option 1, was managed. A reduction in land take for landfill could lead to positive effects on biodiversity, landscape and the historic environment.
- 4.10 In further reducing land-take for landfill, Option 2 is more likely to have positive effects with regards to SA Objectives 1 (biodiversity and geodiversity), 2a (landscape), 2b (historic environment) and 9 (soils). Option 2 is also expected to perform better against SA Objective 3 (water quality) and SA Objective 7 (transport). Uncertain remains against many objectives for both Options 1 and 2, as effects are largely dependent on the locations at which new facilities are provided.
- 4.11 In potentially allowing for more waste facility capacity over the county's targets, Option 2 may have more scope to achieve self-sufficiency and economic gains (SA Objectives 11 and 12).

Policy W4

- 4.12 Options 3 and 4 generally perform better in terms of sustainability than Options 1, 2 and 3. This is because Options 3 and 4 allow development of a strategic waste facility at Banbury and non-strategic waste facilities at smaller towns, in addition to the locations for waste facilities identified in Options 1 and 2. This would lead to a wider distribution of waste facilities across Oxfordshire, which would reduce the transportation distance between locations of waste arisings and waste management facilities and a reduction in greenhouse gas emissions associated with such transportation (SA Objectives 5 and 7). Option 4 would also allow non-strategic waste facilities to be located around smaller towns, which will further add to increasing the distribution of waste facilities. Whilst Option 5 would lead to a greater dispersal of waste facilities across the county, this may lead to strategic waste facilities being located a considerable distance from the main areas of waste arisings, which could lead to increased transport distances from arisings to management facilities and associated greenhouse gas emissions.
- 4.13 Uncertainty has been recorded against all options with regards to SA Objectives 1, 2a, 2b, 3, 4, 6, 8 and 9, as effects on these objectives are largely dependent on the exact locations of future waste management facilities. Options 2, 3, 4 and 5 state in the policy that development will not take place within SACs and will not take place within AONBs, unless the 'major development test' is met, which could result in greater sustainability implications with regards to SA Objectives 1 (biodiversity and geodiversity) and 2a (landscape). Options 2, 3, 4 and 5 may open up more rural areas to the possibility of strategic waste facilities by allowing provision of these where there is access to the lorry route network. This could lead to negative impacts with regards to biodiversity and landscape, as more rural areas are more likely to be sensitive to such impacts. Alternatively, this could contribute to the rural economy and reduce economic disparities across the county by providing employment and investment in more rural areas (SA Objective 12).
- 4.14 Options 2, 3, 4 and 5 could lead to more dispersed development locations for waste facilities, which could allow facilities to be located nearer to waste arisings. Options 3, 4 and 5 could lead to development of waste facilities nearer the boundary of Oxfordshire. This could attract in waste from other local authorities, thereby reducing self-sufficiency (SA Objective 11).

Policy W11

- 4.15 Both options are assessed as having neutral effects against all objectives except SA Objectives 5, 7, 10, 11 and 12. This is mainly because this is a non-spatial policy, which does not allocate any

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particular locations for development, as it relates to safeguarding sites, rather than allocating them.

- 4.16 Option 2 performs slightly better than Option 1 in the short- to medium-term, as it may allow greater capacity for waste management and therefore greater flexibility to accommodate demand greater than that forecast. Option 2 may allow more waste to be managed within the county, which could reduce transportation of waste to other authority areas, thus reducing transport distances and associated greenhouse gas emissions. This could also allow a greater level of self-sufficiency in the county.

Appendix 1: SA Framework

SA Objective			
1	To protect, maintain, and enhance Oxfordshire's biodiversity and geological diversity including natural habitats, flora and fauna and protected species	<p>Will the Plan protect, maintain and enhance UK BAP Priority Habitats?</p> <p>Will the Plan conserve and enhance internationally, nationally and regionally important sites of nature conservation importance?</p> <p>Will the Plan protect, maintain and enhance UK BAP Priority Species?</p> <p>Will the Plan contribute to the aims of the Conservation Target Areas?</p> <p>Will the Plan protect and conserve geological SSSIs and Local Geology Sites?</p>	<p>Number/percentage of permitted applications for minerals and waste development which include a restoration scheme which contributes to the objectives of Oxfordshire Habitats Plans for the creation of calcareous grasslands, lowland acid grassland and reedbeds.</p> <p>Number/percentage of planning applications which have an impact on designated sites or BAP habitats.</p> <p>Number/percentage of permitted applications which result in restoration of favourable recovering condition or buffering of designated areas through appropriate habitat creation.</p> <p>Number/percentage of permitted applications for minerals and waste development which include a restoration scheme which contributes to the objectives of Oxfordshire Species Plans.</p> <p>Contribution of the Local Plan policies to Conservation Target Areas for restoration of minerals and waste management sites.</p> <p>Number/percentage of permitted applications which include conditions for the protection or enhancement of Local Geology Sites or geological SSSIs.</p>
2a	To protect and enhance landscape character and local distinctiveness	<p>Will the Plan conserve and enhance Oxfordshire's AONBs & their settings and take into account guidelines associated with specific landscape types?</p> <p>Will the Plan respect, maintain and strengthen local character and distinctiveness?</p>	<p>Minerals and waste development where the anticipated residual landscape impact is neutral or positive.</p> <p>Number/percentage of permitted applications for minerals and waste development which include conditions for the protection or restoration of statutory or non-statutory landscape designations.</p>
b	To conserve and enhance the historic environment, heritage	Will the Plan protect, conserve and/or enhance heritage assets and the historic/prehistoric environment of	Number/percentage of planning applications where archaeological investigations were required prior to approval.

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	assets and their settings	<p>Oxfordshire?</p> <p>Will the Plan contribute to the better management of heritage assets?</p> <p>Will the Plan improve the quality of the historic environment?</p> <p>Will the Plan provide for increased access to and enjoyment of the historic environment?</p> <p>Will the Plan alter the hydrological conditions of water dependent heritage assets, including paleoenvironmental deposits?</p> <p>Will the Plan provide for increased understanding and interpretation of the historic environment?</p> <p>Will the Plan secure a supply of local building and roofing materials?</p>	<p>Number/percentage of applications where archaeological mitigation strategies were developed and implemented.</p> <p>Number/percentage of permitted applications for Minerals and Waste development which include conditions for the protection or enhancement of the historic and prehistoric environment in Oxfordshire.</p> <p>Area of highly sensitive historic landscape characterisation type(s) which have been altered and their character eroded.</p>
3	To maintain and improve ground and surface water quality	<p>Will the Plan affect groundwater quality?</p> <p>Will the Plan affect surface water quality?</p>	<p>Number of permitted applications affecting source protection zones 2 and 3.</p> <p>Number of permitted applications which assess the risk of contamination of groundwater.</p> <p>Number of sites within 50m of a watercourse.</p> <p>Number of permitted applications requiring abstraction licences.</p>
4	To improve and maintain air quality to levels which do not damage natural systems	<p>Will the Plan lead to increased traffic congestion in built up areas?</p> <p>Will Plan lead to increased dust and/or odours?</p>	<p>Number of permitted applications with routeing agreements which avoid AQMAs.</p> <p>Survey of trip generation to civic amenity sites.</p> <p>Number of complaints relating to dust/odours.</p>
5	To reduce greenhouse gas emissions to reduce the cause of climate change	<p>Will the Plan lead to a decrease in production of greenhouse gases such as CO2 and methane?</p>	<p>Proportion of waste and aggregates transported by rail or water.</p> <p>Quantity of biodegradable wastes diverted from landfill.</p>
6	To reduce the risk of flooding	<p>Will the proposal seek to maintain or reduce flood risk?</p>	<p>Number of permitted sites for minerals and waste development within the flood plain (flood zone 3a).</p>

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			<p>Number of sites that are permitted within flood risk zone as identified by the NPPF and Technical Guidance to NPPF.</p> <p>Number of proposals approved against the recommendation of EA advice.</p> <p>Number of mineral restoration schemes identified for flood attenuation.</p>
7	To minimise the impact of transportation of aggregates and waste products on the local and strategic road network	<p>Will the Plan reduce distances travelled by road?</p> <p>Are sites in the Plan well located in relation to surrounding settlements for waste, or markets for minerals?</p> <p>Will the waste facilities or mineral operation serve local needs?</p> <p>Does the Plan facilitate HGV routeing agreements and developer contributions for infrastructure improvements?</p>	<p>Distances travelled by road from new applications to settlements (waste) or markets (minerals).</p> <p>Number of sites with rail/water access.</p> <p>Number of sites with suitable access to appropriate roads.</p> <p>Average distances travelled to waste recycling sites.</p>
8	To minimise negative impacts of waste management facilities and mineral extraction on people and local communities	<p>Will the Plan have impacts which could have a harmful effect on human health?</p> <p>Will the Plan result in loss of amenity through visual impact, noise, dust or vibration for local communities?</p> <p>Will the Plan provide opportunities for enhancement of local amenity and access to the countryside?</p>	<p>Number of permitted applications for mineral or waste development within 250m of sensitive receptors (settlements).</p> <p>Number of sites for mineral or waste development within 250m of sensitive receptors (settlements).</p> <p>Number of noise complaints relating to minerals and waste processing and transportation.</p> <p>Number of permitted applications with restoration conditions which enhance local amenity and /or improve access to the countryside.</p>
9	To protect, improve and where necessary restore land and soil quality	<p>Will the Plan affect high grade agricultural land?</p> <p>Will the Plan lead to soil pollution or contamination?</p>	<p>Area of high grade agricultural land lost to minerals and waste development.</p> <p>Incidences of land contamination related to minerals and waste development.</p>
10	To contribute towards moving up the waste hierarchy in Oxfordshire	<p>Will the Plan increase the amount of waste re-used, recycled or recovered?</p>	<p>Amounts of waste recycled and recovered.</p>

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11	To enable Oxfordshire to be self-sufficient in its waste management and to provide for its local need for aggregates as set out in the LAA	<p>Will the Plan reduce the need for waste to be transported outside Oxfordshire for treatment or disposal?</p> <p>Will the Plan reduce the need for Oxfordshire to import aggregates?</p>	<p>Number of permitted applications for waste management to meet targets to achieve net waste self-sufficiency.</p> <p>Number of permitted applications which contribute to meeting minerals supply requirement.</p>
12	To support Oxfordshire's economic growth and reduce disparities across the County	<p>Will the Plan encourage the provision of more locally based skills and facilities?</p> <p>Will the Plan generate new jobs for the county?</p> <p>Will the Plan support and encourage the growth of small and medium size business?</p>	<p>Number of direct jobs created in the waste/mineral sector per year.</p> <p>Number of new mineral and waste permissions.</p>

Appendix 2: Reasonable alternatives for Policy W4

In determining the most appropriate locational strategy for waste, five alternatives have been identified for assessment. Details of these are provided below, along with information on how the supporting text and Waste Key Diagram would be updated to support any changes to the policy. Underlined and strikethrough text have been used to show changes to the Submission Core Strategy policy.

NB: the amended text incorporated in the potential policy alternatives is indicative wording to show how the spatial strategy alternatives could be incorporated in a modified policy W4 that might be included in proposed Main Modifications – it should not be seen as the final proposed wording.

ALTERNATIVE 1

Policy as included in the Submission Core Strategy.

Policy W4: Locations for facilities to manage the principal waste streams

Facilities (other than landfill) to manage the principal waste streams should be located as follows:

- a) Strategic waste management facilities should normally be located in or close to Bicester, Oxford, Abingdon and Didcot, as indicated on the Key Waste Diagram.
- b) Non-strategic waste management facilities should normally be located in or close to Bicester, Oxford, Abingdon and Didcot and the other large towns (Banbury, Witney and Wantage & Grove), as indicated on the Key Waste Diagram.
- c) Elsewhere in Oxfordshire, and particularly in more remote rural areas, facilities should only be small scale, in keeping with their surroundings.

Specific sites for waste management facilities (other than landfill) to meet the requirements set out in Policy W3 will be allocated in accordance with this locational strategy in the Minerals and Waste Local Plan: Part 2 – Site Allocations Document. The suitability of any new sites for allocation in the Site Allocations Document will be assessed against the criteria in policies W5 and C1 – ~~C11~~ C12.

Assume no change to the supporting text or to the Key Diagram, except and to cross refer to proposed new policy C12 on Green Belt.

NB: Reference to the core policies at the end of policy W4 has been changed from 'C1 – C11' (as in the Submitted Plan) to 'C1 – C12' to reflect the Council's intention to propose a modification to include a new policy (C12) on Green Belt (to replace the reference to Green Belt in policy W5), as suggested in Document M9/1b.

ALTERNATIVE 2

This alternative does not add any new 'overall Plan' requirements, but brings into policy elements that were previously covered in supporting text. This alternative builds on the suggested modification in Document M9/1.

Policy W4: Locations for facilities to manage the principal waste streams

Facilities (other than landfill) to manage the principal waste streams should be located as follows:

- a) Strategic waste management facilities should normally be located in or close to Bicester, Oxford, Abingdon and Didcot, as indicated on the Key Waste Diagram. Locations further from these towns may be appropriate where there is access to the Oxfordshire lorry route network in accordance with Policy C10.
- b) Non-strategic waste management facilities should normally be located in or close to Bicester, Oxford, Abingdon and Didcot and the other large towns (Banbury, Witney and Wantage & Grove), as indicated on the Key Waste Diagram. Locations further from these towns may be appropriate where there is access to the Oxfordshire lorry route network in

accordance with Policy C10.

c) Elsewhere in Oxfordshire, and particularly in more remote rural areas, facilities should only be small scale, in keeping with their surroundings.

The locations for strategic and/or non-strategic waste facilities around Oxford, Abingdon, Didcot and Wantage and Grove exclude the Oxford Meadows, Cothill Fen, Little Wittenham and Hackpen Hill Special Areas of Conservation and a 200 metre dust impact buffer zone adjacent to these SACs.

As indicated on the Waste Key Diagram, strategic and non-strategic waste management facilities (that comprise major development) should not be located within Areas of Outstanding Natural Beauty except where it can be demonstrated that the 'major development test' in the NPPF (paragraph 116), and as reflected in policy C8, is met.

Specific sites for waste management facilities (other than landfill) to meet the requirements set out in Policy W3 will be allocated in accordance with this locational strategy in the Minerals and Waste Local Plan: Part 2 – Site Allocations Document. The suitability of any new sites for allocation in the Site Allocations Document will be assessed against the ~~criteria in~~ requirements of policies W5 and C1 – ~~C11~~ C12.

Supporting text update

Change the supporting text, in particular paragraphs 5.33 and 5.34, to reflect the fact that lorry route, AONB and SAC related requirements are now included in policy text and to cross refer to proposed new policy C12 on Green Belt.

ALTERNATIVE 3

This alternative builds on Alternative 2 by 'reclassifying' Banbury and expanding the zone around Oxford from 10km to 15km.

Policy W4: Locations for facilities to manage the principal waste streams

Facilities (other than landfill) to manage the principal waste streams should be located as follows:

a) Strategic waste management facilities should normally be located in or close to Banbury, Bicester, Oxford, Abingdon and Didcot, as indicated on the Key Waste Diagram. Locations further from these towns may be appropriate where there is access to the Oxfordshire lorry route network in accordance with Policy C10.

b) Non-strategic waste management facilities should normally be located in or close to Banbury, Bicester, Oxford, Abingdon and Didcot, and the other large towns (~~Banbury~~, Witney and Wantage & Grove), as indicated on the Key Waste Diagram. Locations further from these towns may be appropriate where there is access to the Oxfordshire lorry route network in accordance with Policy C10.

c) Elsewhere in Oxfordshire, and particularly in more remote rural areas, facilities should only be small scale, in keeping with their surroundings.

The locations for strategic and/or non-strategic waste facilities around Oxford, Abingdon, Didcot and Wantage and Grove exclude the Oxford Meadows, Cothill Fen, Little Wittenham and Hackpen Hill Special Areas of Conservation and a 200 metre dust impact buffer zone adjacent to these SACs.

As indicated on the Waste Key Diagram, strategic and non-strategic waste management facilities (that comprise major development) should not be located within Areas of Outstanding Natural Beauty except where it can be demonstrated that the 'major development test' in the NPPF (paragraph 116), and as reflected in policy C8, is met.

Specific sites for waste management facilities (other than landfill) to meet the requirements set out in Policy W3 will be allocated in accordance with this locational strategy in the Minerals and Waste Local Plan: Part 2 – Site Allocations Document. The suitability of any new sites for

allocation in the Site Allocations Document will be assessed against the ~~criteria in~~ requirements of policies W5 and C1 – ~~C11~~ C12.

Supporting text update

Change the supporting text, in particular paragraphs 5.33 and 5.34, to reflect this alternative, including to reflect the fact that lorry route, AONB and SAC related requirements are now included in policy text and to cross refer to proposed new policy C12 on Green Belt.

In addition, increase the zone around Oxford for strategic and non-strategic waste management facilities to 15km from Oxford City Centre (this is approximately equivalent to including a zone of 12km from the built up area of Oxford as proposed in a representation). This further extends the zone proposed in Document M9/1 which was for 12km from Oxford City centre, this itself being an extension on the 10km in the Submitted Plan.

NB: Representations have also suggested using a 20km zone from the built up area of Oxford for strategic waste management facilities and a 15km zone from the built up area of Oxford for non-strategic facilities. These distances are considered to be too large, for example, the zone of 20km from the built-up area covers all the other large towns in Oxfordshire with the exception of Banbury. They are therefore not considered to be reasonable alternatives.

Key Diagram Update

Amend the Key Diagram to increase the zone around Oxford from 10km to 15km (from City centre); and show Banbury as a location for strategic waste management facilities.

ALTERNATIVE 4

This alternative builds on Alternative 3 by 'reclassifying' Banbury and expanding the zone around Oxford from 10km to 15km (as in Alternative 3), and adding small towns with 2km zones to b).

Policy W4: Locations for facilities to manage the principal waste streams

Facilities (other than landfill) to manage the principal waste streams should be located as follows:

- a) Strategic waste management facilities should normally be located in or close to Banbury, Bicester, Oxford, Abingdon and Didcot, as indicated on the Key Waste Diagram. Locations further from these towns may be appropriate where there is access to the Oxfordshire lorry route network in accordance with Policy C10.
- b) Non-strategic waste management facilities should normally be located in or close to Banbury Bicester, Oxford, Abingdon and Didcot, the other large towns (Banbury, Witney and Wantage & Grove) and the small towns (Carterton, Chipping Norton, Faringdon, Henley-on-Thames, Thame and Wallingford), as indicated on the Key Waste Diagram. Locations further from these towns may be appropriate where there is access to the Oxfordshire lorry route network in accordance with Policy C10.
- c) Elsewhere in Oxfordshire, and particularly in more remote rural areas, facilities should only be small scale, in keeping with their surroundings.

The locations for strategic and/or non-strategic waste facilities around Oxford, Abingdon, Didcot and Wantage and Grove exclude the Oxford Meadows, Cothill Fen, Little Wittenham and Hackpen Hill Special Areas of Conservation and a 200 metre dust impact buffer zone adjacent to these SACs.

As indicated on the Waste Key Diagram, strategic and non-strategic waste management facilities (that comprise major development) should not be located within Areas of Outstanding Natural Beauty except where it can be demonstrated that the 'major development test' in the NPPF (paragraph 116), and as reflected in policy C8, is met.

Specific sites for waste management facilities (other than landfill) to meet the requirements set out in Policy W3 will be allocated in accordance with this locational strategy in the Minerals and

Waste Local Plan: Part 2 – Site Allocations Document. The suitability of any new sites for allocation in the Site Allocations Document will be assessed against the ~~criteria in~~ requirements of policies W5 and C1 – ~~C11~~ C12.

Supporting text update

Change the supporting text, in particular paragraphs 5.33 and 5.34, to reflect this alternative, including to refer to the inclusion of the small towns (with 2km zones from the centres of the towns) as locations for non-strategic waste management facilities, to reflect the fact that lorry route, AONB and SAC related requirements are now included in policy text and to cross refer to proposed new policy C12 on Green Belt.

In addition, increase the zone around Oxford for strategic and non-strategic waste management facilities to 15km from Oxford City Centre (this is approximately equivalent to including a zone of 12km from the built up area of Oxford as proposed in a representation). This further extends the zone proposed in Document M9/1 which was for 12km from Oxford City centre, this itself being an extension on the 10km in the Submitted Plan.

NB: Representations have also suggested using a 20km zone from the built up area of Oxford for strategic waste management facilities and a 15km zone from the built up area of Oxford for non-strategic facilities. These distances are considered to be too large, for example, the zone of 20km from the built-up area covers all the other large towns in Oxfordshire with the exception of Banbury. They are therefore not considered to be reasonable alternatives.

Key Diagram Update

Amend the Key Diagram to increase the zone around Oxford from 10km to 15km (from City centre); show Banbury as a location for strategic waste facilities; and add 2km zones from the centres of the small towns of Carterton, Chipping Norton, Faringdon, Henley-on-Thames, Thame and Wallingford as locations for non-strategic waste facilities.

ALTERNATIVE 5

This alternative is a dispersal strategy which combines a) and b) in Alternative 2 to locate both strategic and non-strategic waste management facilities at all of the specified locations, including within an expanded 15km zone around Oxford and at the small towns with 2km zones.

Policy W4: Locations for facilities to manage the principal waste streams

Facilities (other than landfill) to manage the principal waste streams should be located as follows:

- a) Strategic waste and non-strategic management facilities should normally be located in or close to Banbury, Bicester, Oxford, Abingdon, Didcot, Witney, Wantage & Grove, Carterton, Chipping Norton, Faringdon, Henley-on-Thames, Thame and Wallingford, as indicated on the Key Waste Diagram. Locations further from these towns may be appropriate where there is access to the Oxfordshire lorry route network in accordance with Policy C10.
- b) Elsewhere in Oxfordshire, and particularly in more remote rural areas, facilities should only be small scale, in keeping with their surroundings.

The locations for strategic and/or non-strategic waste facilities around Oxford, Abingdon, Didcot and Wantage and Grove exclude the Oxford Meadows, Cothill Fen, Little Wittenham and Hackpen Hill Special Areas of Conservation and a 200 metre dust impact buffer zone adjacent to these SACs.

As indicated on the Waste Key Diagram, strategic and non-strategic waste management facilities (that comprise major development) should not be located within Areas of Outstanding Natural Beauty except where it can be demonstrated that the 'major development test' in the NPPF (paragraph 116), and as reflected in policy C8, is met.

Specific sites for waste management facilities (other than landfill) to meet the requirements set

out in Policy W3 will be allocated in accordance with this locational strategy in the Minerals and Waste Local Plan: Part 2 – Site Allocations Document. The suitability of any new sites for allocation in the Site Allocations Document will be assessed against the ~~criteria in~~ requirements of policies W5 and C1 – ~~C11~~ C12.

Supporting text update

Change the supporting text, in particular paragraphs 5.33 and 5.34, to reflect this alternative, including to reflect the lack of distinction between locations for strategic and non-strategic waste management facilities (including the small towns, with 2km zones from the centres of the towns), to reflect the fact that lorry route, AONB and SAC related requirements are now included in policy text and to cross refer to proposed new policy C12 on Green Belt.

In addition, increase the zone around Oxford for strategic and non-strategic waste management facilities to 15km from Oxford City Centre (this is approximately equivalent to including a zone of 12km from the built up area of Oxford as proposed in a representation). This further extends the zone proposed in Document M9/1 which was for 12km from Oxford City centre, this itself being an extension on the 10km in the Submitted Plan.

NB: Representations have also suggested using a 20km zone from the built up area of Oxford for strategic waste management facilities and a 15km zone from the built up area of Oxford for non-strategic facilities. These distances are considered to be too large, for example, the zone of 20km from the built-up area covers all the other large towns in Oxfordshire with the exception of Banbury. They are therefore not considered to be reasonable alternatives.

Key Diagram Update

Amend the Key Diagram to remove the distinction between locations for strategic and non-strategic facilities; increase the zone around Oxford from 10km to 15km (from City centre); and add 2km zones from the centres of the small towns of Carterton, Chipping Norton, Faringdon, Henley-on-Thames, Thame and Wallingford as locations for strategic and non-strategic waste facilities.