



Bradford Local Development  
Framework  
Waste Development Plan  
Document



Sustainability Appraisal:  
Supplement to the SA Report

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# 1 Introduction

## 1.1 Background

The preparation of the Bradford Waste Development Plan Document (DPD) is being subject to a full integrated sustainability appraisal (SA) and strategic environmental assessment (SEA) in line with the requirements of:

- Statutory Instrument 2004 No. 1633: The Environmental Assessment of Plans and Programmes Regulations 2004 (which requires a environmental assessment to be carried out on certain plans and programmes prepared by public authorities that are likely to have a significant effect upon the environment)(known as the SEA Regulations); and
- The Planning and Compulsory Purchase Act 2004 and Planning Policy Statement 12 (PPS12) (which requires sustainability appraisal (SA) of all emerging Development Plan Documents and Supplementary Planning Documents).

The sustainability appraisal is being carried out by ENVIRON using a team of consultants experienced in SA and SEA of local authority spatial planning documents.

## 1.2 This Report

In January 2011, the Council published the Waste Management DPD: Preferred Approach for public consultation, for a period of 10 weeks. The Council received over 300 formal representations on the document, while the comments related to a range of matters in the consultation document, a significant number of comments were received to the proposed shortlisted sites. The Council has taken account of the comments on the site assessment methodology and proposed a number of changes. It has then re assessed all the sites again including the new sites put to the Council as part of the preferred approach consultation.

This has resulted in an amended short list of sites retaining some sites previously proposed, but also proposing some alternate sites. The comments received during the public consultation have been documented within the Summary of Representations.

**The addition of new alternate sites is considered to be a significant change and it is important that the revised sites are subject to further SA.** This report is a supplement to the SA report that was published in January 2011. The January 2011 document reported on the assessment of the Bradford Preferred Approach Waste Management Development Plan Document (DPD) (January 2011).

Chapter 5 of the Preferred Approach Waste Management DPD has been amended to reflect the removal and addition of sites identified for waste management facilities. The changes that have been made to the preferred approach are:

**Table 1.1: Changes made to the preferred approach**

Shortlisted potential sites in January 2011	Shortlisted potential sites in October 2011
Site 1 – Princeroyd Way, Ingleby Road, Listerhills	Site 1 – Princeroyd Way, Ingleby Road, Listerhills
Site 11- Ripley Road, Bowling	Site 11- Ripley Road, Bowling
Site 29 - Ingleby Road, Girlington	
	Site 31- Hollingwood Lane, Paradise Green
	Site 35- Staithgate Lane, Odsal
	Site 48- Staithgate Lane South, Low Moor
Site 56 - Royds Hall Lane, Woodside	
Site 57 - Neville Road / Lower Lane, Bowling	
Sites 71-74-Belton Road/Keighley Road, Silsden	
	Site 78- Aire Valley Road, Worth Village Keighley
Site 92- Waste PFI Site, Bowling Back Lane	Site 92- Bowling Back Lane HWS, Bowling Back Lane
Site 102 - Stockbridge Depot, Royd Ings Avenue, Stockbridge	
	Site 104 - Merrydale Road, Euroway
	Site 121- Steel Stock and Scrapholders Site, Birkshall Lane

The following five sites have been removed from consideration:

- Site 29 - Ingleby Road, Girlington;
- Site 56 - Royds Hall Lane, Woodside;
- Site 57 - Neville Road / Lower Lane, Bowling;
- Sites 71-74-Belton Road/Keighley Road, Silsden; and
- Site 102 - Stockbridge Depot, Royd Ings Avenue, Stockbridge.

The reasons for removing these sites are presented in Table 1.2.

**Table 1.2: Reasons for removing sites from the shortlist**

Sites removed from shortlist	Reasons for removal
Site 29 - Ingleby Road, Girlington	Some potentially abnormally high cumulative development costs have been identified which may affect the viability of developing the site for a waste management facility including steep areas of the site, scrub requiring clearance and access improvements steep sided areas of scrub requiring clearance . The site also scored poorly on the additional criteria (see Section 2.1 for the additional criteria) and subsequently falls out of the preferred sites.

Site 56 - Royds Hall Lane, Woodside	Although the site was included in the January 2011 SA Report this site was not included in the Preferred Approach Waste Management Plan DPD. This is because the site has been developed for alternative uses.
Site 57 - Neville Road / Lower Lane, Bowling	The developable area is unlikely to be sufficient for modern waste management facilities for MSW & C&I.
Sites 71-74-Belton Road/Keighley Road, Silsden	A proportion of the sites are within flood zones which reduces their developable area to below the threshold needed for modern waste management facilities for MSW & C&I.
Site 102 - Stockbridge Depot, Royd Ings Avenue, Stockbridge	Site is within flood zone and is therefore not considered suitable for waste management facilities.

The SA commentary for these sites (listed in Table 1.2) was undertaken in 2010 and is provided in Annex A for completeness.

The following nine sites have been subject to SA as part of this report:

- Site 1 – Princeroyd Way, Ingleby Road
- Site 11 – Ripley Road, Bowling
- Site 31- Hollingwood Lane, Paradise Green;
- Site 35- Staithgate Lane, Odsal;
- Site 48- Staithgate Lane South, Low Moor;
- Site 78- Aire Valley Road, Worth Village Keighley;
- Site 92 – Bowling Back Lane HWS, Bowling Back Lane
- Site 104 - Merrydale Road, Euroway; and
- Site 121- Steel Stock and Scrapholders Site, Birkshall Lane.

These sites have been identified as the most suitable sites as they were the highest scoring sites across all fourteen criteria, as well as passing all six of the initial criteria (see Section 2.1 for further information about site selection criteria).

### 1.3 The SA process

This report is the most recent stage of the SA process for the Bradford Waste DPD. Previous stages have included:

- Scoping Report (original (May 2007) and revised (December 2008) versions);
- Review of first draft site selection criteria and provision of recommendations for amendment of the criteria;
- Assessment of policy options presented in the Issues and Options document dated November 2009: internal report of the methodology and findings of the SA of options produced in May 2010; and

- Assessment of the policies presented within the Preferred Approach Waste Management Plan DPD: SA Report prepared in January 2011.

Once further consultation has been undertaken on the amended Preferred Approach, a Submission Draft of the Waste DPD will be produced. At this time an updated SA report will be produced.



## 2 Approach to the supplementary SA

### 2.1 Site Options Selection Process

The Site Options Selection Process has been undertaken by the plan authors, with involvement of the SA team (see 2.2 for further details). A long list of potential sites was developed and tested by the plan authors. The Issues and Options Paper (November 2009) considered that there was no other realistic option other than to use a set of locational criteria for the location of Municipal Solid Waste and Commercial and Industrial Waste Management Facilities. The process of identifying sites at which to locate waste management facilities is a hierarchical three-stage process. This hierarchical process 'sieves' the sites identified, removing sites from consideration as the process is undertaken.

The first task of this process is to identify all potential sites. The second task involves identifying which of these are reasonable sites to be considered based on a number of criteria. Thirdly, the suitability of the remaining sites was evaluated in relation to certain waste management technologies on the basis of a more detailed consideration of environmental and social constraints. This process is set out in more detail in the Revised Site Assessment Report (October 2011).

Through revisions to the site assessment methodology following comments received during public consultation, some changes were made to the Initial Constraints (Environmental and Heritage Absolute Constraints and Conflicting RUDP Designated Allocations) that the sites were reviewed against. As a result of these changes, the following criteria were added to the Environmental and Heritage Absolute Constraints:

- Regionally Important Geological Sites (RIGS);
- Special Protection Areas (SPAs);
- Site of Ecological and Geological Importance (SEGIs); and
- Ancient Woodlands.

Local Nature Reserves were removed from the list of Environmental and Heritage Absolute Constraints because they are known locally as Bradford Local Wildlife Sites and they are included on the list of Environmental and Heritage Absolute Constraints. If any of these constraints were identified on a site, it was considered a 'fail' by the plan authors. Sites were also tested against designated allocations to ensure they aligned with the land use policy set out within the Replacement Unitary Development Plan. Sites of conflicting designated allocations were considered a 'fail'. New Sites for Recreation Open Space & Playing Fields and Urban Greenspace designations were added to the list of Conflicting RUDP Designated Allocations. In addition, the Mineral Reserves designation has been changed to Mineral Extraction Sites.

At the same time that the review of sites was undertaken by the plan authors, the results of the SA commentary and up to date information relating to the status of each site i.e. whether they had recently been developed out for another use were considered.

As a result of the review, the Preferred Approach was changed as set out within Section 1.2.

## 2.2 SA of Site Options

In order that the site selection and assessment process incorporates important sustainability issues identified as a part of the SA, the SA team has been involved in developing the site assessment methodology which is being undertaken as part of the development of the DPD. The SA team have prepared a commentary on the site assessment methodology with suggested enhancements to the method, as appropriate.

The SA team has also had an input into the site assessment process by providing a sustainability commentary of each site in the short list, commenting on constraints identified, the risk of adverse sustainability effects and the opportunities for positive sustainability effects. The SA team has focused on the following issues because they are not covered by Initial Constraints used by the plan authors and these are considered key site constraints:

- Flood Risk;
- Biodiversity and Nature Conservation, including presence of habitats and/or vegetation on the sites;
- Heritage assets;
- Water quality, air quality and soils;
- Proximity to a railway; and
- Public rights of way located nearby.

The SA commentary has been guided by the SA Framework. Two matrices were created based on the SA Framework and all objectives and appraisal questions which were considered to be not relevant to the SA commentary were blocked out on the basis that they were irrelevant to the appraisal of sites or they would produce the same results for each site (see Annex A for a copy of the SA Framework showing blocked out objectives and questions). A significance 'score' has been given per site for each SA Objective and comments were made to justify the 'score'. The definitions of significance are provided within Table 2.1.

<b>Table 2.1: Defining Significance</b>		
<b>Score</b>	<b>Description</b>	<b>Symbol</b>
Significant positive impact	The option / plan achieves all of the applicable SEA questions and has a positive effect with relation to characteristics of the effect and the sensitivity of the receptors	++
Minor positive impact	The option / plan achieves some of the SEA questions and has a positive effect with relation to characteristics of the effect and the sensitivity of the receptors	+
Neutral	The option / plan does not have an effect on the achievement of the SEA Objective or SEA questions	0
Minor negative impact	The option / plan conflicts with some of the SEA questions and has a negative effect with relation to characteristics of the effect and the sensitivity of the receptors	-

<b>Score</b>	<b>Description</b>	<b>Symbol</b>
Significant negative impact	The option / plan conflicts with all of the applicable SEA questions and has a negative effect with relation to characteristics of the effect and the sensitivity of the receptors. In addition the future baseline indicates a worsening trend in the absence of intervention	- -
Uncertain	It is unclear whether there is the potential for a negative or positive effect on the SEA Objective	?

A commentary of the key points is provided for each site, which provides additional information to the findings of the site selection process. Each matrix was used to appraise up to five sites.

Once the findings of the SA Commentary were summarised for each site, a conclusion was reached regarding whether the site fell into one of the three categories presented in Table 2.2. A 'green' conclusion was given when the appraisal of a site did not identify any negative scores or uncertain scores that were deemed to be significant. An 'orange' conclusion was reached if the appraisal of a site identified negative or uncertain scores which would require Environmental Impact Assessment or other technical studies of a planning application in order to determine impacts and put forward mitigation. A 'red' conclusion was reached when significant negative effects were identified which it was considered could not be mitigated, due to the nature of effects identified.

The conclusions have been made on the basis of a worst case scenario.

No significant constraints have been identified in the assessment.	
Some constraints have been identified in the assessment. Environmental Impact Assessment or other site specific technical studies are likely to be required of planning applications in order to determine potential impacts and put forward appropriate mitigation.	
Some significant constraints have been identified in the assessment. Due to the nature of the constraints it is questionable whether potential impacts could be mitigated.	

The conclusions provide the plan authors with an indication of the risks associated with taking each site forward with regards to the sustainability issues identified. For example, a 'red' conclusion does not indicate that a site should not be taken forward but indicates that there are significant risks associated with taking that site forward which it may not be possible to mitigate. The justification for the conclusions is provided for each site within the commentary (see Section 3).

Where potential negative and uncertain effects have been identified through the SA of site options, mitigation measures have been identified in order to offset such effects.

### **2.3 Sources of Data**

The SA commentary has made use of the following data sources:

- Sustainability Appraisal Bradford Local Development Framework, Waste Development Plan Document Final Scoping Report (ENVIRON, May 2007);
- Site selection results undertaken by the plan authors in 2010 and 2011;
- GIS files provided by Bradford Metropolitan District Council;
- Multi-Agency Government Information Centre accessed at [www.magic.gov.uk](http://www.magic.gov.uk);
- Flood risk information and maps; and
- Environment Agency website <http://www.environment-agency.gov.uk/>.

## 3 The Sustainability Appraisal Commentary

### 3.1 Results

Table 3.1 presents the SA commentary for the site assessment which supplements the findings of the site assessment undertaken by the plan authors. The matrices, which can be found in Annex C, provide more detail than the summaries presented in Table 3.1. The summarised commentary in Table 3.1 focuses on constraints which have not already been identified within the site assessment. The commentary text for sites 1, 11 and 92 (sites which were previously shortlisted) has been altered slightly in order to provide more information to the reader. The previous commentary for these sites can be found in Annex A.

The key to the colour coding is presented within Table 2.2.

<b>Table 3.1: Bradford District Site Assessments – SA commentary</b>		
<b>Site number</b>	<b>Commentary</b>	<b>Conclusion</b>
1	A number of minor negative effects are identified in relation to flooding, visual impact and air and noise quality. Environment Agency mapping indicates that a small amount of the site could be located within the flood zone. The site will have significant positive effects on landscape (due to its low visibility) and in relation to quality of the built environment and historic assets (no assets are nearby and current environment is largely industrial). Air quality, noise and landscape and visual assessment and mitigation would be required as there is a residential area and school close to the site. The effect on the rest of the SA objectives will be minor negative, minor positive or uncertain. A minor negative effect is identified because the site is adjacent to a protected recreation ground which could be affected by redevelopment.	
11	Will have no significant negative effects. A significant positive effect is identified because there is a railway and rail freight facility within 200m and therefore modal shift to rail transport could be possible. The effect on the rest of the SA objectives will be minor negative, minor positive, uncertain or neutral. There are no nature conservation or heritage designations in the site surrounds and the site is previously developed land. Residential land uses in the vicinity of the site could be affected by changes to noise and air quality. Air quality and noise should be assessed and mitigation measures put in place to minimize any adverse effects. Stack emissions would be controlled through environmental permitting under the Environmental Permitting (England and Wales) Regulations 2007.	
31	This site is greenfield and therefore development of the site will result in the loss of soil resources. A minor negative effect is also identified because the distance to potential rail freight facilities is unlikely to encourage a significant shift to rail transport. The site is not designated open space, however, protected recreation open space is situated directly south of the site and the site is currently being used for recreation. Development of the site may pose potential risks to a Bradford Wildlife Site immediately south of the site, particularly with regards to air quality. Air quality and noise assessment would be required as residential receptors are located nearby. Visual assessment may also be required for this reason.	
35	The site has no significant negative or significant positive effects. The rest of the effects are neutral, uncertain, minor negative or minor positive. The minor negative effects relate to the fact that the site is greenfield and therefore redevelopment does not represent an efficient use of land and could result in loss of soil resources. The site adjoins a railway line but is at a distance from rail freight facilities. Therefore, modal shift is possible, but only at significant investment. There is also a minor negative effect in relation to the proximity of Bradford Wildlife Sites to the site and there is also uncertainty over the ecological value of the site itself.	

<b>Table 3.1: Bradford District Site Assessments – SA commentary</b>		
<b>Site number</b>	<b>Commentary</b>	<b>Conclusion</b>
48	The site has no significant negative or significant positive effects. The rest of the effects are neutral, uncertain, minor negative or minor positive. The minor negative effects relate to the fact that the site is Greenfield and therefore redevelopment does not represent an efficient use of land and could result in loss of soil resources. The site adjoins a railway line but is at a distance from rail freight facilities. Therefore, modal shift is possible, but only at significant investment. There is also a minor negative effect in relation to the proximity of Bradford Wildlife Sites to the site and there is also uncertainty over the ecological value of the site itself.	
78	The site has no significant negative effects and one significant positive effect. The latter relates to the sites suitability for freight transport. The rest of the effects are neutral, uncertain, minor negative or minor positive. The minor negative effects relate to the act that the site is near to two Bradford Wildlife Sites and it is visually prominent, although the site and its immediate surroundings are currently of low landscape quality.	
92	The site has no significant negative or significant positive effects. Minor negative effects are identified because the distance to potential rail freight facilities is unlikely to encourage a significant shift to rail transport, there is a risk of bats being present in existing structures on site and there are two listed buildings c500m from the site. However, it is likely that the potential negative effects associated with bats and Listed Buildings can be mitigated if, through assessment, potential negative effects are identified. The rest of the effects are neutral, uncertain or minor positive.	
104	The site is Greenfield and therefore the development will result in the loss of soil resources. The development of the site could also result in air and noise effects. There are mature trees present on the site. The condition and value of these trees is unknown. This would need to be assessed in more detail to understand the risk of habitat loss, should the trees be lost to development. There is also a Bradford Wildlife site in close proximity to the site. Ecological assessment and mitigation measures would be required in order to ensure that the site is not negatively affected by the development of the site. Given the distance to potential rail freight facilities, it is unlikely that a significant shift to rail transport could be achieved.	

<b>Table 3.1: Bradford District Site Assessments – SA commentary</b>		
<b>Site number</b>	<b>Commentary</b>	<b>Conclusion</b>
121	The site has no significant negative effects. A significant positive effect is recorded in relation to modal shift. There is a railway line within close proximity to the site and a working railway siding within the site. Minor negative effects are identified because there is a risk of bats being present in existing structures on site and there are two listed buildings c500m from the site. However, it is likely that the potential negative effects associated with bats and Listed Buildings can be mitigated if, through assessment, potential negative effects are identified. The rest of the effects are neutral, uncertain or minor positive. The rest of the effects are neutral, uncertain or minor positive.	



### 3.1.1 Effects of the sites

The assessment identified the following significant negative effects with relation to the assessment of the new preferred sites:

- Site 104 in relation to soil resources and potential air and noise effects on neighbouring receptors.

In addition, the following uncertain effects have been identified which have the potential to give rise to significant negative effects:

- All of the sites in relation to Biodiversity Action Plan (BAP) targets;
- Sites 1, 11, 35, 48, 78, 92 and 121 in relation to effects on habitats; and
- Sites 31 and 78 in relation to landscape and visual effects.

The assessment identified the following significant positive effects:

- Site 1 in relation to effects on landscape and improving the quality of the built environment and making efficient use of land;
- Site 11 in relation to encouraging modal shift;
- Site 78 in relation to encouraging modal shift; and
- Site 121 in relation to encouraging modal shift.

### 3.2 Cumulative Effects

The SEA Regulations require an assessment of cumulative effects. Cumulative effects arise, for instance, where several developments each have insignificant effects but together have a significant effect; or where several individual effects of the plan (e.g. noise, dust and visual) have a combined effect. The term can also be used to describe synergistic effects, which interact to produce a total effect greater than the sum of the individual effects.

A cumulative effects assessment of the new Preferred Approach shortlist of sites has been undertaken and is presented in Table 3.2. Cumulative effects of the policies and the Waste Management DPD as a whole will be undertaken at the Submission draft stage. The new preferred shortlist of potential sites performs better and is associated with fewer identified cumulative effects compared with the former shortlist of sites.

<b>Table 3.2: Potential cumulative effects (Bradford Waste Management DPD)</b>		
<b>Policies and Sites</b>	<b>Potential cumulative effect</b>	<b>Mitigation / enhancement measures needed</b>
Effects on environmental receptors of the various sites put forward in the plan.	<p>Where a number of sites are put forward there is the potential for a cumulative effect on certain types of habitats, species and other environmental receptors such as heritage assets and landscape.</p> <p>However, the cumulative effect of the sites on environmental receptors is likely to be <b>neutral</b>. All of the sites are in built up areas and this will minimise the risk of cumulative effects.</p>	None
Effects of all of the sites in relation to effects on transport.	<p>All of the sites, if implemented are likely to be taking waste from a large area within Bradford and this could cause <b>negative cumulative effects</b> on road transport.</p> <p>Because the exact mix of sites that will come forward is uncertain (and whether sites will utilise alternative modes – even if they are available), the effect on transport is difficult to judge. To reduce the risk of cumulative negative effects on transport, mitigation has been suggested (see opposite).</p>	Before sites go ahead the effects on road transport should be assessed as part of the planning application. This should assess the impacts in relation to other developments (including waste development) that are reasonably foreseeable and that might cause cumulative impacts in association with the development.

### 3.3 Mitigation Measures

Mitigation measures have been identified which relate to actions to be undertaken before a site were to become operational as a waste management site. The mitigation measures are as follows:

- For **all of the sites** appraised, ecological surveys should be undertaken at the planning application stage and any mitigation required should work towards the achievement of the local BAP targets;
- **Site 1:** Before site development takes place the following effects will need to be investigated and mitigated: flooding issues (as the site is located in Flood Zone 3), the potential on the site for habitat fragmentation, habitat enhancement (including helping to achieve BAP targets), traffic effects (as there is no rail access to the site), air quality and noise (sensitive receptors nearby), effects on the local cycle route and protected recreation area that are near to the site.
- **Site 11:** Before site development takes place the following effects will need to be investigated and mitigated: the potential on the site for habitat fragmentation and habitat enhancement (including helping to achieve BAP targets). Air quality and noise should be assessed and mitigation put in place as necessary due to residential receptors located nearby;
- **Site 31:** Air quality, noise and visual effects should be assessed and mitigation put in place as necessary due to residential receptors located nearby;
- **Site 78:** Visual and landscape assessment would be required due to the sites visibility and prominence within the area. Visual improvements to the site should be sought through its redevelopment;
- **Site 92:** Before site development takes place the following effects in particular will need to be investigated and mitigated: effects on the two Listed Buildings west of the site, the effect on the quality of the surrounding built environment and the potential on the site for habitat fragmentation, habitat enhancement (including helping to achieve BAP targets). Air quality, noise and visual effects should be assessed and mitigation put in place as necessary due to residential receptors located nearby;
- **Site 104:** Air quality and noise assessment and appropriate mitigation will be required in order to ensure there are no negative effects on sensitive receptors; and
- **Site 121:** Before site development takes place the following effects in particular will need to be investigated and mitigated: effects on the two Listed Buildings west of the site, the effect on the quality of the surrounding built environment and the potential on the site for habitat fragmentation, habitat enhancement (including helping to achieve BAP targets).

## **Annex A: SA Commentary for Original Sites**

Table A.1 presents the SA Commentary of the shortlisted sites presented within the preferred approach Waste Management DPD. Further details about this round of assessment can be found in *Bradford Waste Management DPD Sustainability Appraisal Report* (December 2010).

<b>Table A.1: Bradford District Site Assessments – SA commentary (former preferred approach)</b>		
<b>Site number</b>	<b>Commentary</b>	<b>Conclusion</b>
1	Environment Agency flood mapping shows the site to be located in an area of flood risk equivalent to Flood Zone 3. It is close to some sensitive receptors (a stream, and a cycle path) and there is no railway nearby. The site will therefore not encourage a shift from road freight.	
11	There is a railway and rail freight facility within 200m and no nature conservation or heritage designations in the site surrounds. However, there is residential land uses in the vicinity of the site.	
29	This site is close to some sensitive receptors (a stream, and a cycle path) and there is no railway nearby. The site will therefore not encourage a shift from road freight.	
56	This site is suburban and Greenfield, therefore development of the site will result in the loss of soil resources. It is located in a mixed residential and industrial suburban area and there is no railway in the site surrounds. The site will therefore not encourage a shift from road freight.	
57	This site is brownfield and close to sensitive receptors - a Bradford Wildlife Area lies immediately north-east and, depending on the type of waste management technology selected, development of the site could have adverse air quality impacts on this wildlife site.	
71-74	These sites have been grouped together in the site assessment. Three major constraints are identified. The sites are located predominantly in Environment Agency Flood Zone 3. Site 71 is outside of a flood zone but is approximately 20m from flood zone 2 and flood risk could potentially be an issue in the future with climate change. The size of the site and, therefore, the likely scale of development would be likely to have a significant adverse effect on residential uses to the north, in Silsden. Also, a Conservation Area lies directly north of the site and development of the site would be likely to affect its setting.	
92	No constraints have been identified in relation to this site.	

**Table A.1: Bradford District Site Assessments – SA commentary (former preferred approach)**

Site number	Commentary	Conclusion
102	<p>Runoff with need to be controlled on this site as it is next to a washlands area and the River Aire and the site should not increase flood risk elsewhere in the catchment. The site is within an area at risk from flooding but benefits from flood defences. Run-off will also need to be controlled to avoid water pollution in the river. There is a Bradford Wildlife Area across the river from this site, approximately 100m away on the other side of the River Aire. Whether the redevelopment of this site could affect the wildlife site may need to be assessed and mitigation put in place, particularly during construction. The site is not near to a railway line and therefore will not help to shift any freight from roads.</p>	

## **Annex B: SA Framework**

## SA Framework

The SA Framework has been based on the SA Framework developed for the SA of the Bradford LDF Core Strategy DPD. It has been revised so that the objectives and appraisal questions within it are relevant to the appraisal of a waste management plan.

The SA Objectives and appraisal questions which have been deemed to be irrelevant to the appraisal of sites, or which would produce the same results for each site have been shown in grey in the SA Framework below and have been removed for ease of presentation from the appraisal matrices in Annex B.

SA Framework	
SA Objectives	Appraisal Questions. Will the selection of the site ...?
SA1: Ensure the prudent and efficient use of energy and natural resources and the promotion of renewable energy.	<ul style="list-style-type: none"> <li>▪ Encourage the use of sustainable materials (with low embodied carbon) or materials with low environmental impacts in the construction of waste management facilities?</li> <li>▪ Lead to a reduction of the amount of waste that will require treatment?</li> <li>▪ Minimise any adverse impacts on water resources at all stages of waste management?</li> </ul>
SA2: Minimise the growth in waste and increase the amount of waste which is re-used, recycled and recovered.	<ul style="list-style-type: none"> <li>▪ Put in place adequate and sustainable treatment facilities?</li> <li>▪ Help the District to meet its recovery and recycling targets?</li> <li>▪ Help the authority meet its quota under the LATS?</li> <li>▪ Encourage the use of and markets for waste derived products? (e.g. use of Incinerator Bottom Ash Aggregate in civil construction projects where it is displacing the consumption of new quarried materials).</li> </ul>
SA3: Reduce the District's impact on climate change and vulnerability to its effects.	<ul style="list-style-type: none"> <li>▪ Reduce the potential for greenhouse gas emissions caused by waste management and reduce vulnerability of waste management facilities to the effects of climate change (including increased flooding)?</li> <li>▪ Encourage the development of renewables and energy efficiency within the waste sector?</li> </ul>
SA4: Safeguard and improve air, water and soil resources and reduce the number of people affected by noise and dust from waste management sites.	<ul style="list-style-type: none"> <li>▪ Change the amount of pollution and nuisance caused by waste management?</li> <li>▪ Guide waste management towards areas that help to improve the land resource (for example, towards previously used land and away from valuable agricultural land)?</li> </ul>
SA5: To conserve, restore, expand and enhance the internationally, nationally and locally valued wildlife species and habitats.	<ul style="list-style-type: none"> <li>▪ Include actions that directly or indirectly affect Natura 2000 sites, SSSIs, RIGS or other designated sites?</li> <li>▪ Include actions that will cause habitat loss or fragmentation or restoration, expansion or enhancement of wildlife networks or habitats?</li> </ul>



<b>SA Framework</b>	
<b>SA Objectives</b>	<b>Appraisal Questions. Will the selection of the site ...?</b>
SA6: Ensure restoration to biodiversity end use for waste (landfill) sites and contribute to realising local and national BAP targets.	<ul style="list-style-type: none"> <li>▪ Include actions that help to reach targets or compromise targets of BAPs?</li> <li>▪ Include actions to ensure restoration to biodiversity is a priority where appropriate?</li> </ul>
SA7: To maintain, restore and enhance the character, value and diversity of natural and man-made landscapes.	<ul style="list-style-type: none"> <li>▪ Protect, restore and enhance the landscape?</li> </ul>
SA8: Increase proximity of waste management infrastructure to current and future centres of population in order to reduce mileage travelled and encouraging waste segregation in new development.	<ul style="list-style-type: none"> <li>▪ Include actions that change mileage travelled per tonne of waste?</li> <li>▪ Allow residents in new developments to segregate their waste, both inside and outside their homes by provision of sufficient space for separate storage and collection systems?</li> </ul>
SA9: Reduce nuisance caused to communities by waste transport.	<ul style="list-style-type: none"> <li>▪ Cause a change in traffic flows or the nature of traffic (an increase in HGVs for example) that affects communities or areas valued for their environmental importance?</li> </ul>
SA10: Encourage a modal shift away from road freight.	<ul style="list-style-type: none"> <li>▪ Include actions that would encourage a shift from road freight to rail freight?</li> </ul>
SA11: Improve the quality of the built environment, protect and enhance historic assets and make efficient use of land.	<ul style="list-style-type: none"> <li>▪ Reduce the impact of waste management on the quality of the built environment?</li> <li>▪ Maximise use of previously developed land where possible?</li> </ul>
SA12: Avoid, protect and enhance historic assets.	<ul style="list-style-type: none"> <li>▪ Preserve and where relevant enhance sites of built and archaeological heritage and their settings?</li> <li>▪ Aim to steer development away from archaeologically sensitive sites?</li> <li>▪ Preserve, manage or enhance the historic environment character and opportunity areas?</li> </ul>
SA13: Improve the quality and range of services available within communities and connections to wider networks.	<ul style="list-style-type: none"> <li>▪ Improve the accessibility of waste management and treatment services to centres of population?</li> </ul>
SA14: Ensure local communities take more responsibility for their own waste	<ul style="list-style-type: none"> <li>▪ Reduce the amount of waste that is treated outside of the District?</li> </ul>
SA15: Avoid impacts on open space, cultural, leisure and recreation opportunities	<ul style="list-style-type: none"> <li>▪ Ensure that open space, cultural, leisure and recreation opportunities are not affected by waste management?</li> </ul>
SA16: Reduce the impact of the waste industry on people's safety and security, health and quality of life	<ul style="list-style-type: none"> <li>▪ Cause a change in the number of people directly affected by waste management (living in close proximity to a site or an access route) whose impact cannot be mitigated?</li> <li>▪ Cause a cumulative impact on certain communities?</li> </ul>
SA17: Support employment in the waste industry for local people.	<ul style="list-style-type: none"> <li>▪ Include actions that change the number of local people directly employed in skilled jobs in the waste industry?</li> </ul>

<b>SA Framework</b>	
<b>SA Objectives</b>	<b>Appraisal Questions. Will the selection of the site ...?</b>
SA18: Ensure the provision of adequate waste management capacity.	<ul style="list-style-type: none"><li>▪ Include actions that ensure the plan contributes to sustainable levels of economic growth by maintaining an adequate provision of waste management capability?</li></ul>

## **Annex C: SA Matrices for Preferred Sites**

**Matrix 1 – Sites 1-35**

SA Objectives	Sites									
	Site 1		Site 11		Site 31		Site 35			
SA3: Reduce the District's impact on climate change and vulnerability to its effects.	-	<p>The site is located close to a stream and a small part of the site has the potential to experience flooding issues.</p> <p>The Environment Agency flood mapping shows that a small part of the site is located in Flood Zone 3.</p> <p>Depending on the choice of waste management technology, fuel may be produced for use elsewhere (e.g. pyrolysis oil, electricity from gasification).</p>	+	<p>It is 2.35ha in size and can incorporate most waste management technologies, and there may be potential recipients nearby of heat and electricity generated by the selected waste management technology. Some of these technologies may produce fuels for use elsewhere (e.g. pyrolysis oil, electricity from gasification).</p> <p>No flood risk constraints identified.</p>	+	<p>According to the Environment Agency flood maps, the site is outside of any areas at risk from flooding.</p>	+	<p>According to the Environment Agency flood maps, the site is outside of any areas at risk from flooding.</p>		
SA4: Safeguard and improve air, water and soil resources and reduce the number of people affected by noise and dust from waste management sites.	-	<p>The entire site is PDL, situated immediately south of Clayton Beck. The nearest AQMA is c.1.2km east of the site. No signs of contamination on site.</p> <p>No groundwater source protection zones within this area.</p>	-	<p>The entire site is PDL. It is currently vacant and unused. There are no signs of contamination on site. The nearest surface water feature is located c.200m south of the site.</p> <p>Should the use of this site change to incorporate a waste management facility,</p>	-	<p>The site is Greenfield and therefore works against the achievement of this objective because the development will make use of previously undeveloped soil resources.</p> <p>There are no groundwater source protection zones</p>	-	<p>The site is Greenfield and therefore works against the achievement of this objective because the development will make use of previously undeveloped soil resources.</p> <p>There are no groundwater source protection zones in</p>		

SA Objectives	Sites								
	Site 1		Site 11		Site 31		Site 35		
		<p>Watercourse is adjacent to the site. Development of the site is unlikely to require any direct discharge to the watercourse and if there was it would be under consent with the Environment Agency. Any hardstanding would have oil interceptors in place.</p> <p>The use of this site for a waste management facility is likely to produce dust and noise, plus emissions of NO<sub>x</sub> and CO<sub>2</sub> to the air. There is a residential area and school near to the site. It may be possible to minimise the impact on air quality through assessment and mitigation. Stack emissions would be controlled through environmental permitting under the Environmental Permitting (England and Wales) Regulations 2007.</p>		<p>the site is likely to produce dust and noise, plus emissions of NO<sub>x</sub> and CO<sub>2</sub> to the air. Residential receptors are located nearby. It may be possible to minimise the impact on air quality through assessment and mitigation. Stack emissions would be controlled through environmental permitting under the Environmental Permitting (England and Wales) Regulations 2007. The nearest AQMA is c.1.5km southeast of the site.</p>		<p>within this area, and no surface water feature within 500m of the site. Therefore, development of the site would be unlikely to affect water resources.</p> <p>Should the use of this site change to incorporate a waste management facility, the site is likely to produce dust and noise, plus emissions of NO<sub>x</sub> and CO<sub>2</sub> to the air. Residential receptors are located near to the site. It may be possible to minimise the impact on air quality through assessment and mitigation. Stack emissions would be controlled through environmental permitting under the Environmental Permitting (England and Wales) Regulations 2007. The nearest AQMA is c.2.5km southeast of the site.</p>		<p>this area and there are no surface water features in close proximity to the site.</p> <p>The site is adjacent to the M606 motorway and as such the existing air quality may be affected by exhaust emissions from the motorway.</p> <p>The site is large enough to accommodate the full range of waste management technologies. Should the use of this site change to incorporate a waste management facility, the site is likely to produce dust and noise, plus emissions of NO<sub>x</sub> and CO<sub>2</sub> to the air. It may be possible to minimise the impact on air quality through assessment and mitigation. Stack emissions would be controlled through environmental permitting under the Environmental Permitting (England and Wales)</p>	

SA Objectives	Sites								
	Site 1		Site 11		Site 31		Site 35		
								Regulations 2007. The nearest AQMA is c.2km north-west of the site.	
SA5: To conserve, restore, expand and enhance the internationally, nationally and locally valued wildlife species and habitats.	+	The site is not designated for nature conservation, and there are no designated sites within 1km of the site. No detail of habitats on site is available.	+	The site is not designated for nature conservation, and there are no designated sites within 1km of the site. No detail of habitats on site is available.	-	There are no nature conservation designations on the site. The nearest designated site is a Bradford Wildlife Area located immediately south of the site. Development of the site, therefore, may	-	There are three Bradford Wildlife Sites within 1km of this site. An area of ancient and semi natural woodland lies approx. 100m to the north west of the site but it separated from the site by a railway line in cutting. No detail of habitats	

SA Objectives	Sites									
	Site 1		Site 11		Site 31		Site 35			
	?		?		pose potential risks to this site, particularly with regard to air quality. No detail of habitats on site is available. Environmental assessment would be required of proposals for waste management facilities on this site to ascertain whether the wildlife site and if any habitats on the site would be impacted upon. Mitigation measures might be required to offset any negative effects identified.	?	on site is available. Environmental assessment would be required of proposals for waste management facilities on this site to ascertain whether the wildlife sites and if any habitats on the site would be impacted upon. Mitigation measures might be required to offset any negative effects identified.			
SA6: Ensure restoration to biodiversity end use for waste (landfill) sites and contribute to realising local and national BAP targets.	?	The site is an urban, brownfield site, in proximity to a watercourse. There may be opportunity for biodiversity enhancement through development of the site. Ecological assessment would be required to identify BAP resources which could be enhanced through the development.	?	There may be opportunity for biodiversity enhancement through development of the site.	?	It is unlikely that the redevelopment of this site will contribute to the achievement of BAP targets, unless, through ecological assessment, it was identified that the site contains BAP resources which could be enhanced through the development.	?	It is unlikely that the redevelopment of this site will contribute to the achievement of BAP targets, unless, through ecological assessment, it was identified that the site contains BAP resources which could be enhanced through the development.		

SA Objectives	Sites							
	Site 1		Site 11		Site 31		Site 35	
SA7: To maintain, restore and enhance the character, value and diversity of natural and man-made landscapes.	++	The site is within a primarily industrial area with some residential adjacent. Low visibility due to its position at the bottom of a valley.	+	The entire site is PDL and is currently being used for skip storage. No potential landscape and visual impact is noted as significant.	?	The site is green but is used as a recreational area and is immediately surrounded by industrial units and is therefore unlikely to have any significant effects with regards to landscape and visual. There are residential uses beyond the industrial units and therefore some visual impact assessment may be required.	○	The site is within the Bradford urban area and lies adjacent to industrial land and agricultural land to the west and the A606 motorway to the east. No sensitive receptors within the immediate vicinity have been identified. The development of the site will reduce the area of urban green space in which it is located, but given the surrounding uses, e.g. the motorway and industrial land, it is not considered that its redevelopment would result in a negative effect.
SA10: Encourage a modal shift away from road freight.	-	The site is approx. 2.5 km from a potential rail freight depot and therefore there is a potential that rail could be used to transport material to or from the site but it would be dependent on rail freight facilities being run by another party <sup>1</sup> .	++	The eastern boundary of the site is formed by a railway line, and potential rail freight facilities are situated c.200m north of the site. Therefore, there could be potential for the use of rail freight.	-	The site is approx. 3 km from a potential rail freight depot and therefore there is a potential that rail could be used to transport material to or from the site but it would be dependent on rail freight facilities being run by another party. <sup>1</sup> It is	-	A railway line lies adjacent to the site, largely in a cutting. Gaining access to the line in order to transport waste could be difficult given the physical circumstances. The site is approx. 2.5 km from a potential rail freight depot and

<sup>1</sup>The Bradford District Transport Strategy 2006-2021 states that “Opportunities to develop rail freight terminals in the district are considerably limited with one rail served



SA Objectives	Sites									
	Site 1		Site 11		Site 31		Site 35			
		It is considered unlikely that a significant shift to rail transport could be achieved, given the distance to potential rail freight facilities.				considered unlikely that a significant shift to rail transport could be achieved, given the distance to potential rail freight facilities.		therefore there is a potential that rail could be used to transport material to or from the site but it would be dependent on rail freight facilities being run by another party. <sup>1</sup> It is considered unlikely that a significant shift to rail transport could be achieved, given the distance to potential rail freight facilities.		
SA11: Improve the quality of the built environment, protect and enhance historic assets and make efficient use of land.	++	The entire site is PDL.  There are no Listed Buildings within 250m of the site.	+	The entire site is PDL and is currently being used for skip storage. The site has extant planning permission for an energy recovery facility. Albert Mill	-	There is one Listed Building c.200m south-west of the site. The site is a greened over employment site currently being used for recreation.	-	This site works against the achievement of this objective because it is Greenfield land and therefore its development does not represent efficient use		

waste metal site at Shipley, an unused served site in Bradford and two allocations in the UDP at Low Moor and Keighley, neither of which have been implemented”.

SA Objectives	Sites									
	Site 1		Site 11		Site 31		Site 35			
				grade II Listed Building lies 250m from the site. The redevelopment of the site is not likely to harm the setting of this Listed Building and could improve the appearance of the site.		The redevelopment of the site may adversely affect the quality of the immediately surrounding built environment because it will remove an area of open space but it may be possible to mitigate some of the potential adverse effects.		of land. There is a Listed Building c. 200m from the site but it is the other side of the A606 motorway. The site lies within the Bradford urban area and there are no other cultural or heritage assets identified within the immediate area.		
SA12: Avoid, protect and enhance historic assets.	+	There are no sites of archaeological or cultural heritage importance or within 500m of the site.  The nearest site is a Conservation Area located c.800m north of the site.	+	There are no sites of archaeological or cultural heritage importance on the site. The nearest site is Bowling Park, a Historic Park and Garden, located approx. 300m east of the site.	+	There are no sites of archaeological or cultural heritage importance within 500m of the site.  The nearest site is a Conservation Area located c.500m south of the site.	+	There are no sites of archaeological or cultural heritage importance or within 500m of the site.		
SA15: Avoid impacts on open space, cultural, leisure and recreation opportunities	-	There are no known cultural, leisure and recreation opportunities on the site. Directly to the north is a local cycle route and directly east is protected recreation open space which could potentially be affected by redevelopment of the site and this affect should be	○	The site is not designated open space and the redevelopment of the site will not affect any open space or protected leisure uses. Bowling Park, a Historic Park and Garden, is located approx. 300m east of the site.	-	The site is not designated open space, however, protected recreation open space is situated directly south of the site and the site is currently being used for recreation.	○	There are no known cultural, leisure and recreation opportunities on the site. The site is a vacant employment designation. The site lies adjacent to a section of the cycle network.		

SA Objectives	Sites									
	Site 1		Site 11		Site 31		Site 35			
		assessed.								

Summary	Conclusion (see key in Table 2.2)
<p><b>Site 1:</b> A number of minor negative effects are identified in relation to flooding, visual impact and air and noise quality. Environment Agency mapping indicates that a small amount of the site could be located within the flood zone. The site will have significant positive effects on landscape (due to its low visibility) and in relation to quality of the built environment and historic assets (no assets are nearby and current environment is largely industrial). Air quality, noise and landscape and visual assessment and mitigation would be required as there is a residential area and school close to the site. The effect on the rest of the SA objectives will be minor negative, minor positive or uncertain. A minor negative effect is identified because the site is adjacent to a protected recreation ground which could be affected by redevelopment.</p>	
<p><b>Site 11:</b> Will have no significant negative effects. A significant positive effect is identified because there is a railway and rail freight facility within 200m and therefore modal shift to rail transport could be possible. The effect on the rest of the SA objectives will be minor negative, minor positive, uncertain or neutral. There are no nature conservation or heritage designations in the site surrounds and the site is previously developed land. Residential land uses in the vicinity of the site could be affected by changes to noise and air quality. Air quality and noise should be assessed and mitigation measures put in place to minimize any adverse effects. Stack emissions would be controlled through environmental permitting under the Environmental Permitting (England and Wales) Regulations 2007.</p>	
<p><b>Site 31:</b> This site is greenfield and therefore development of the site will result in the loss of soil resources. A minor negative effect is also identified because the distance to potential rail freight facilities is unlikely to encourage a significant shift to rail transport. The site is not designated open space, however, protected recreation open space is situated directly south of the site and the site is currently being used for recreation. Development of the site may pose potential risks to a Bradford Wildlife Site immediately south of the site, particularly with regards to air quality. Air quality and noise assessment would be required as residential receptors are located nearby. Visual assessment may also be required for this reason.</p>	
<p><b>Site 35:</b> The site has no significant negative or significant positive effects. The rest of the effects are neutral, uncertain, minor negative or minor positive. The minor negative effects relate to the fact that the site is greenfield and therefore redevelopment does not represent an efficient use of land and could result in loss of soil resources. The site adjoins a railway line but is at a distance from rail freight facilities. Therefore, modal shift is possible, but only at significant investment. There is also a minor negative effect in relation to the proximity of Bradford Wildlife Sites to the site and there is also uncertainty over the ecological value of the site itself.</p>	

### Site mitigation measures

**All sites:** Ensure appropriate ecological surveys are undertaken at planning application stage and any mitigation required aims to achieve the local BAP targets.

**Site 1:** Before site development takes place the following effects will need to be investigated and mitigated: flooding issues (as part of the site is located in Flood Zone 3), the potential on the site for habitat fragmentation, habitat enhancement (including helping to achieve BAP targets), traffic effects (as there is no rail access to the site), air quality and noise (sensitive receptors nearby), effects on the local cycle route and protected recreation area that are near to the site.

**Site 11:** Before site development takes place the following effects will need to be investigated and mitigated: the potential on the site for habitat fragmentation and habitat enhancement (including helping to achieve BAP targets). Air quality and noise should be assessed and mitigation put in place as necessary due to residential receptors located nearby.

**Site 31:** Air quality, noise and visual effects should be assessed and mitigation put in place as necessary due to residential receptors located nearby.

**Site 39:** Archaeology and heritage should be assessed and necessary mitigation put in place due to potential effects on the setting of a historic battlefield. Landscape and visual effects should also be assessed and necessary mitigation put in place due to the sites location in a suburban area on a hill. Air quality and noise assessment and necessary mitigation will be required due to residential receptors located nearby.

**Matrix 2 – sites 48-121**

SA Objectives	Sites									
	Site 48		Site 78		Site 92		Site 104		Site 121	
SA3: Reduce the District's impact on climate change and vulnerability to its effects.	+	According to the Environment Agency flood maps, the site is outside of any areas at risk from flooding.	+	According to the Environment Agency flood maps, the site is outside of any areas at risk from flooding.	+	The site is located on the east side of Bradford and there are no surface water features within 500m of the site, and therefore there is very low flood risk.  The Environment Agency flood mapping does not show any flood risk to the site.	+	According to the Environment Agency flood maps, the site is outside of any areas at risk from flooding.	+	According to the Environment Agency flood maps, the site is outside of any areas at risk from flooding.
SA4: Safeguard and improve air, water and soil resources and reduce the number of people affected by noise and dust from waste management sites.	-	The site is Greenfield and therefore works against the achievement of this objective because the development will make use of previously undeveloped soil resources.  There are no groundwater source protection zones in this area and there are no surface water features in close proximity to the site.  The site is adjacent to the M606 motorway and as such the existing air	○	The site is PDL which has been cleared and is vacant. There is some potential for contamination on site from former use. It is unlikely that the change in use of the site would result in a negative effect on soils.  There are no groundwater source protection zones within this area. The River Aire is approx. 200m to the north of the site on the other side of the A650. The road may act as a physical barrier, preventing any runoff	○	The site is PDL. It is currently in use as a council depot and there is some potential for contamination on site. It is unlikely that the change in use of the site would result in a negative effect on soils.  There are no groundwater source protection zones within this area, and there are no surface water features in close proximity to the site.  The site is large enough to accommodate the full range of waste management technologies. Should	--	The site is Greenfield and therefore the development will result in the loss of soil resources. There are no known water features on site and no watercourses within the immediate vicinity of the site. There are no groundwater source protection zones in this area.  The site is close to urban greenspace and therefore could have an effect on sensitive receptors (people using the greenspace). There is the potential for the site to increase the number of people	○	The site is PDL. It is currently in private use for waste management. There is some potential for contamination on site. It is unlikely that the change in use of the site would result in a negative effect on soils.  There are no groundwater source protection zones within this area, and there are no surface water features in close proximity to the site.  The site is large enough to accommodate the full range of waste management technologies. The site

SA Objectives	Sites									
	Site 48		Site 78		Site 92		Site 104		Site 121	
		<p>quality may be affected by exhaust emissions from the motorway.</p> <p>The site is large enough to accommodate the full range of waste management technologies. Should the use of this site change to incorporate a waste management facility, the site is likely to produce dust and noise, plus emissions of NO<sub>x</sub> and CO<sub>2</sub> to the air. It may be possible to minimise the impact on air quality through assessment and mitigation. Stack emissions would be controlled through environmental permitting under the Environmental Permitting (England and Wales) Regulations 2007. The nearest AQMA is c.2km north-west of the site.</p>		<p>from the site entering the River Aire.</p> <p>The site is large enough to accommodate the full range of waste management technologies. Should the use of this site change to incorporate a waste management facility, the site is likely to produce dust and noise, plus emissions of NO<sub>x</sub> and CO<sub>2</sub> to the air. It may be possible to minimise the impact on air quality through assessment and mitigation. Stack emissions would be controlled through environmental permitting under the Environmental Permitting (England and Wales) Regulations 2007. There are no AQMA in Keighley.</p>		<p>the use of this site change to incorporate a waste management facility, the site is likely to produce dust and noise, plus emissions of NO<sub>x</sub> and CO<sub>2</sub> to the air. It may be possible to minimise the impact on air quality through assessment and mitigation. Stack emissions would be controlled through environmental permitting under the Environmental Permitting (England and Wales) Regulations 2007. The nearest AQMA is c.1km north-west of the site.</p>		<p>affected by noise and dust.</p>		<p>is currently being used for waste management and therefore there may not be any changes in levels of noise and air quality impacts. These could require environmental impact assessment and mitigation to ensure that a change in the type of waste management activity would not result in any negative impacts on noise and air quality. Stack emissions would be controlled through environmental permitting under the Environmental Permitting (England and Wales) Regulations 2007. The nearest AQMA is c.1km north-west of the site.</p>
SA5: To conserve,	-	There are no nature	-	There are no nature	?	There are no nature	-	The site is not	?	There are no nature

SA Objectives	Sites				
	Site 48	Site 78	Site 92	Site 104	Site 121
restore, expand and enhance the internationally, nationally and locally valued wildlife species and habitats.	<p>?</p> <p>conservation designations on the site but there are three Bradford Wildlife Sites within 1km of this site.</p> <p>No detail of habitats on site is available, although it is known that the site is cleared.</p> <p>Environmental assessment would be required of proposals for waste management facilities on this site to ascertain whether the wildlife sites and any habitats on the site would be impacted upon. Mitigation measures might be required to offset any negative effects identified.</p>	<p>?</p> <p>conservation designations on the site but it is within 1km of two Bradford Wildlife sites, one to the south west and one north of the site.</p> <p>No detail of habitats on site is available, although it is known that the site is cleared.</p> <p>Environmental assessment would be required of proposals for waste management facilities on this site to ascertain whether the wildlife sites and if any habitats on the site would be impacted upon. Mitigation measures might be required to offset any negative effects identified.</p>	<p>conservation designations on or within 1km of the site.</p> <p>No detail of habitats on site is available.</p>	<p>designated for nature conservation. There is a Bradford Wildlife Site located in close proximity to the site (approx. 200m) and mature trees are present in the site. The condition and value of these trees is unknown. This and potential effects on the wildlife site would need to be assessed in more detail to understand the risk of habitat loss, should the trees be lost to development and the risk of effects on the wildlife site.</p>	<p>conservation designations on or within 1km of the site.</p> <p>The site is currently in use for waste management. It is unknown whether the site contains any habitats but it is unlikely given the sites current use. There are structures on site which would need to be cleared if the site were to be redeveloped for other waste management uses. It is unknown whether these structures might be suitable for bat roosts. Ecological assessment may be required in order to ascertain the ecological value of the site, potential impact from redevelopment and any mitigation measures required.</p>

SA Objectives	Sites									
	Site 48		Site 78		Site 92		Site 104		Site 121	
SA6: Ensure restoration to biodiversity end use for waste (landfill) sites and contribute to realising local and national BAP targets.	?	It is unlikely that the redevelopment of this site will contribute to the achievement of BAP targets, unless, through ecological assessment, it was identified that the site contains BAP resources which could be enhanced through the development.	?	It is unlikely that the redevelopment of this site will contribute to the achievement of BAP targets, unless, through ecological assessment, it was identified that the site contains BAP resources which could be enhanced through the development.  Environmental assessment would be required of proposals for waste management facilities on this site to ascertain whether the river corridor would be affected by development. Mitigation measures might be required to offset any negative effects identified.	-	It is unlikely that the redevelopment of this site will contribute to the achievement of BAP targets, unless, through ecological assessment, it was identified that the site contains BAP resources which could be enhanced through the development.  It may have a negative effect if pipistrelle bats are found to be roosting in the existing buildings on site, and if these will require demolition, a full bat survey should be carried out prior to their demolition.	-	There are mature trees present on the site. The condition and value of these trees is unknown. This would need to be assessed in more detail to understand the risk of biodiversity loss, should the trees be lost to development.	-	It is unlikely that the redevelopment of this site will contribute to the achievement of BAP targets, unless, through ecological assessment, it was identified that the site contains BAP resources which could be enhanced through the development.  It may have a negative effect if pipistrelle bats are found to be roosting in the existing buildings on site, and if these will require demolition, a full bat survey should be carried out prior to their demolition.
					?		?		?	



SA Objectives	Sites				
	Site 48	Site 78	Site 92	Site 104	Site 121
SA7: To maintain, restore and enhance the character, value and diversity of natural and man-made landscapes.	<p><b>O</b> The site is within the Bradford urban area and lies adjacent to industrial land and agricultural land to the west and the A606 motorway to the east. No sensitive receptors within the immediate vicinity have been identified. The development of the site will reduce the area of urban greenspace in which it is located, but given the surrounding uses, e.g. the motorway and industrial land, it is not considered that its redevelopment would result in a negative effect.</p>	<p><b>-</b> The site lies adjacent to a gas works (to the west) which is not considered to be a sensitive receptor. The site is cleared. The site is on low-lying ground and there are several areas of housing on higher ground to the south west (Thwaites Brow) and to the north (Riddlesden). <b>?</b> Redevelopment for waste management use could therefore affect receptors to the north and south. Mitigation for visual and landscape impact is likely to be required. It may not be possible for all landscape and visual effects to be mitigated but the site and surrounding uses are currently of poor landscape quality. Visual and landscape improvements may be possible and should be sought.</p>	<p><b>+</b> The site is within an urban environment and currently in use as a council depot. It is considered unlikely that the redevelopment of the site would result in a landscape impact. Some mitigation for visual impact may be required for localised receptors.</p>	<p><b>-</b> Landscape and visual constraints to the east have been identified. The site is near to green belt and urban greenspace.</p>	<p><b>+</b> This site is currently used for waste management and is situated within the Bowling industrial area. There are no sensitive receptors identified within the immediate vicinity of the site. It is considered unlikely that the redevelopment of the site would result in a landscape impact. Some mitigation for visual impact may be required for localised receptors.</p>

SA Objectives	Sites									
	Site 48		Site 78		Site 92		Site 104		Site 121	
SA10: Encourage a modal shift away from road freight.	-	A railway line lies adjacent to the site, largely in a cutting. Gaining access to the line in order to transport waste could be difficult given the physical circumstances. The site is approx. 2.5 km from a potential rail freight depot and therefore there is a potential that rail could be used to transport material to or from the site but it would be dependent on rail freight facilities being run by another party <sup>1</sup> . It is considered unlikely that a significant shift to rail transport could be achieved, given the distance to potential rail freight facilities.	++	The site has been identified as suitable for use as a rail freight depot <sup>1</sup> . Therefore, there is potential for the use of rail freight.	-	There is a railway line within close proximity to the site and a potential rail freight depot within approx. 1.5 km. There could be potential for the site to use rail transport but the potential is unknown and it could be dependent on rail freight facilities being run by another party. <sup>1</sup> It is considered unlikely that a significant shift to rail transport could be achieved, given the distance to potential rail freight facilities.	-	The site could potentially make use of a potential rail freight depot which is approx. 2.5 km away and therefore there is a potential that rail could be used to transport material to or from the site but it would be dependent on rail freight facilities being run by another party. <sup>1</sup> It is considered unlikely that a significant shift to rail transport could be achieved, given the distance to potential rail freight facilities.	++	There is a railway line within close proximity to the site and a working railway siding within the site. Therefore, there is the potential for use of rail freight

SA Objectives	Sites									
	Site 48		Site 78		Site 92		Site 104		Site 121	
SA11: Improve the quality of the built environment, protect and enhance historic assets and make efficient use of land.	-	This site works against the achievement of this objective because it is Greenfield land and therefore its development does not represent efficient use of land. There is a Listed Building c. 200m from the site but it is the other side of the A606 motorway. The site lies within the Bradford urban area and there are no other cultural or heritage assets identified within the immediate area.	+	The site is cleared PDL and is within an industrial area with a gas works neighbouring the site to the west. The site is visually prominent, lying in a valley with higher receptors in the surrounding area. The redevelopment of the site for waste management is likely could potentially negatively affect these receptors but there is also potential for redevelopment to improve the quality of the site from its current status.  There are no Listed Buildings within 250m.	-	There are two Listed Buildings c.500m west of the site.  The redevelopment of the site may adversely affect the quality of the surrounding built environment but it may be possible to mitigate some of the potential adverse effects.	-	This site works against the achievement of this objective because it is Greenfield land and therefore its development does not represent efficient use of land. No other constraints have been identified within 250m.	-	There is one Listed Building c.500m west of the site.  The redevelopment of the site may adversely affect the quality of the surrounding built environment but it may be possible to mitigate some of the potential adverse effects.
SA12: Avoid, protect and enhance historic assets.	+	There are no sites of archaeological or cultural heritage importance or within 500m of the site.	+	There are no sites of archaeological or cultural heritage importance or within 500m of the site.	+	There are no sites of archaeological or cultural heritage importance on or within 500m of the site.	+	There are no sites of archaeological or cultural heritage importance or within 500m of the site.	+	There are no sites of archaeological or cultural heritage importance on or within 500m of the site.

SA Objectives	Sites									
	Site 48		Site 78		Site 92		Site 104		Site 121	
SA15: Avoid impacts on open space, cultural, leisure and recreation opportunities	+	There are no known cultural, leisure and recreation opportunities on the site. The site is a vacant employment designation. The site lies adjacent to a section of the cycle network.	+	The site is near to a protected playing field, which is separated from the site by the A606. The protected playing field is not likely to be affected by the development.	+	The site is not designated open space, however, a protected playing fields is situated c. 300m south of the site.  A local cycle route runs along the southern site boundary.	+	No constraints although site is next to urban greenspace.	+	There are no constraints identified.

Summary	Conclusion (see key in Table 2.2)
<b>Site 48:</b> The site has no significant negative or significant positive effects. The rest of the effects are neutral, uncertain, minor negative or minor positive. The minor negative effects relate to the fact that the site is Greenfield and therefore redevelopment does not represent an efficient use of land and could result in loss of soil resources. The site adjoins a railway line but is at a distance from rail freight facilities. Therefore, modal shift is possible, but only at significant investment. There is also a minor negative effect in relation to the proximity of Bradford Wildlife Sites to the site and there is also uncertainty over the ecological value of the site itself.	
<b>Site 78:</b> The site has no significant negative effects and one significant positive effect. The latter relates to the sites suitability for freight transport. The rest of the effects are neutral, uncertain, minor negative or minor positive. The minor negative effects relate to the fact that the site is near to two Bradford Wildlife Sites and it is visually prominent, although the site and its immediate surroundings are currently of low landscape quality.	
<b>Site 92:</b> The site has no significant negative or significant positive effects. Minor negative effects are identified because the distance to potential rail freight facilities is unlikely to encourage a significant shift to rail transport, there is a risk of bats being present in existing structures on site and there are two listed buildings c500m from the site. However, it is likely that the potential negative effects associated with bats and Listed Buildings can be mitigated if, through assessment, potential negative effects are identified. The rest of the effects are neutral, uncertain or minor positive.	
<b>Site 104:</b> The site is Greenfield and therefore the development will result in the loss of soil resources. The development of the site could also result in air and noise effects. There are mature trees present on the site. The condition and value of these trees is unknown. This would need to be assessed in more detail to understand the risk of habitat loss, should the trees be lost to development. There is also a Bradford Wildlife site in close proximity to the site. Ecological assessment and mitigation measures would be required in order to ensure that the site is not negatively affected by the development of the site. Given the distance to potential rail freight facilities, it is unlikely that a significant shift to rail transport could be achieved.	

**Site 121:** The site has no significant negative effects. A significant positive effect is recorded in relation to modal shift. There is a railway line within close proximity to the site and a working railway siding within the site. Minor negative effects are identified because there is a risk of bats being present in existing structures on site and there are two listed buildings c500m from the site. However, it is likely that the potential negative effects associated with bats and Listed Buildings can be mitigated if, through assessment, potential negative effects are identified. The rest of the effects are neutral, uncertain or minor positive. The rest of the effects are neutral, uncertain or minor positive.

#### Site mitigation measures

**All sites:** Ensure appropriate ecological surveys are undertaken at planning application stage and any mitigation required aims to achieve the local BAP targets.

**Site 78:** Visual and landscape assessment would be required due to the sites visibility and prominence within the area. Visual improvements to the site should be sought through its redevelopment.

**Site 92:** Before site development takes place the following effects in particular will need to be investigated and mitigated: effects on the two Listed Buildings west of the site, the effect on the quality of the surrounding built environment and the potential on the site for habitat fragmentation, habitat enhancement (including helping to achieve BAP targets). Air quality, noise and visual effects should be assessed and mitigation put in place as necessary due to residential receptors located nearby.

**Site 104:** Air quality and noise assessment and appropriate mitigation will be required in order to ensure there are no negative effects on sensitive receptors.

**Site 121:** Before site development takes place the following effects in particular will need to be investigated and mitigated: effects on the two Listed Buildings west of the site, the effect on the quality of the surrounding built environment and the potential on the site for habitat fragmentation, habitat enhancement (including helping to achieve BAP targets).