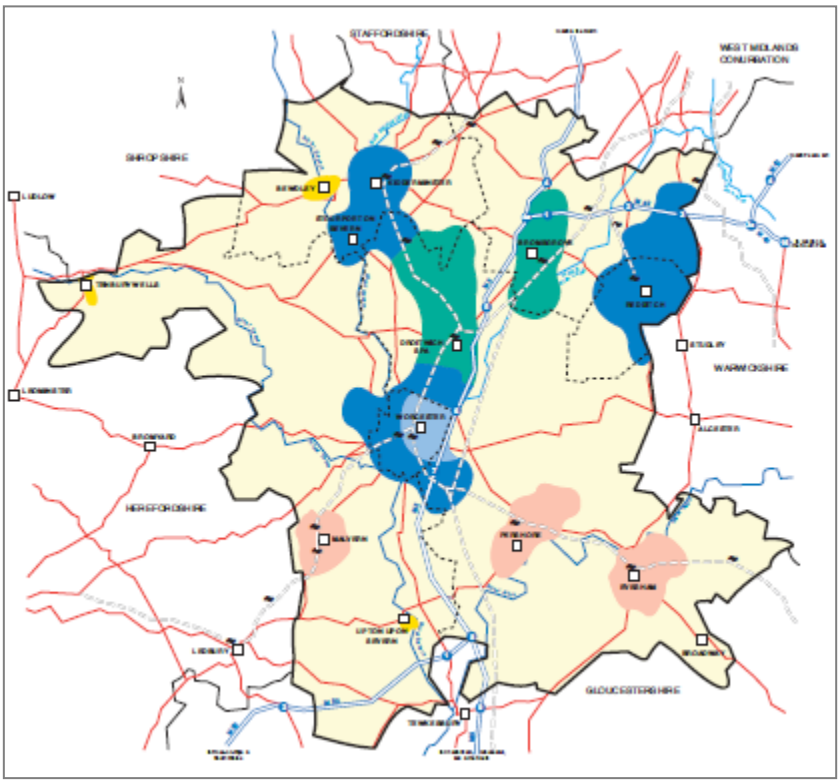
Worcestershire Waste Core Strategy Background Document:

Developing the Spatial Strategy



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Last updated 16th June 2011

This is a revised version of the document produced for the Waste Core Strategy Publication Document (Regulation 27) consultation.
It has been revised to make the content clearer but none of the data or outcomes of the original document have been changed.

Contents

1. Introduction

1.1. The Waste Core Strategy is required to provide "*sufficient opportunities for new waste management facilities of the right type, in the right place and at the right time*."[1]

1.2. This document sets out how the approach to directing development to the right place has been developed in the Waste Core Strategy.

[1] Planning Policy Statement 10 (2005): Planning for Sustainable Waste Management.

2. Refreshed Issues and Options consultation

2.1. The Draft Vision Statement in the *Refreshed Issues and Options* consultation included a section relating to the location of waste management facilities:

> *"Most new waste management activities will be located close to where most wastes are produced. By 2027, most waste management activity will be in the broad area centred in and around Worcester, Kidderminster and Redditch, where most of Worcestershire's development and future growth are concentrated… Waste related development will be located…in or adjoining the growth areas proposed in the Regional Spatial Strategy, principally in or around Worcester and Redditch and in connection with major development areas in these towns. There will be some new waste management facilities in or around Bromsgrove and Droitwich and possibly somewhere they would assist the regeneration of Kidderminster and the growth of the high technology corridor between Longbridge and Malvern. There will be fewer new facilities however in Stourport, Bewdley and Evesham and fewer still in or near Malvern, Pershore, Upton and Tenbury unless special local conditions justify it."*

2.2. This reflected the status of each settlement and the approach to regional waste policy being developed in the emerging Phase 2 Revision of the West Midlands Regional Spatial Strategy (RSS) at that time. It provided a broad vision statement that was later refined.

2.3. The vision statement was broadly supported in the consultation.

3. Emerging Preferred Options consultation

Purpose

3.1. The *Emerging Preferred Options* consultation was the first to address the question "where should new waste management capacity be provided?" The approach proposed in the consultation was based on emerging RSS policy (in the Phase Two revision) that:

- Most new development should be focused on Worcester as the sub-regional focus and Redditch as a 'settlement of significant development'.
- Worcester, Redditch and Kidderminster are identified as Local Regeneration areas and strategic town centres and are also identified as well placed for regional or sub-regional scale waste facilities.
- Further development is likely along the Central Technology Belt (developed along the line of Longbridge, Bromsgrove, Droitwich, Worcester and Malvern).
- Future development in the rest of the county is expected to maintain the key role of market towns and foster wider rural regeneration.
- Areas broadly west of Droitwich and north of Malvern identified as a rural regeneration zone where the priorities include economic diversification.
- New employment land should be distributed in the following proportions:
    - 28.1% Worcester City
    - 23.9% Wychavon
    - 17.7% Redditch
    - 11.5% Wyre Forest
    - 11.5% Malvern Hills
    - 7.3% Bromsgrove
- The emerging RSS policies were quite clear that there was a hierarchy of settlements where development should be focused. There was and still is no evidence to justify not following this.

3.2. Based on emerging RSS policy the *Emerging Preferred Options* consultation set out a 'possible hierarchy of broad areas for allocating capacity':

- The settlements of significant development of Worcester and Redditch,
- The growth and regeneration of Kidderminster, Bromsgrove and Droitwich
- The High Technology corridor between and including Longbridge and Malvern,
- The major market towns: Evesham, Stourport and Bewdley,
- Tenbury, Pershore and Upton,
- the Rural Regeneration Zone,

- other rural areas

3.3. It was stated that additional consideration would need to be given to the distribution of waste arisings and suggestions for methods of doing this were invited.

3.4. The following considerations were identified as important in relation to where new waste management facilities should be permitted but were not considered in developing the hierarchy of broad areas at this stage:

- ensuring a range of sites of different size and geographical distribution
- good accessibility to the source of waste arisings and/or end users and
- good transport connections including where possible, rail or water.

Application

3.5. The Emerging Preferred Options included little detail regarding the application of the hierarchy of broad areas. It did however set out:

> *"We think that we can match the availability of this kind of land in the Broad Areas identified…with how much new capacity should be provided, to identify a long list of possible locations for new facilities…We are concerned, however, that there is a risk of being over-prescriptive"*

3.6. The next steps identified were:

- to identify areas where new facilities are needed
- to identify general locations where land is available
- to develop criteria to assess what kind of facilities would be suitable on which site
- to produce a series of plans showing the different ways of distributing the capacity we need and how it relates to our research on the availability of land.

This was intended to produce a set of alternative options on a map base which would be analysed and consulted on.

Consultation responses

3.7. The use of the Spatial Hierarchy in the policy proposal received 63% support during the consultation. The main issues of concern related to the application of the concept, with a number of consultees questioning the link between the hierarchy and the Waste Core Strategy objectives. There were also questions over how the hierarchy would direct development

3.8. The broad hierarchy itself only received 53% support in the consultation.

3.9. Consultees made specific reference to changes in the RSS context, which meant that Redditch was no longer a settlement of significant development. It was also felt that Bewdley was incorrectly positioned in the hierarchy. It was suggested that Bewdley should sit lower down the hierarchy as it would sit more comfortably with Tenbury as a market town located in the rural

regeneration zone or Pershore and Upton which have similar characteristics and constraints to development.

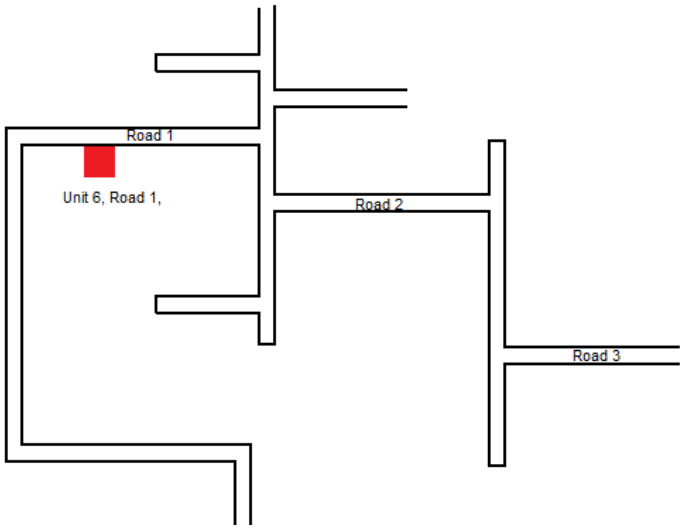
4. First Draft Submission consultation

4.1. The approach in the Emerging Preferred Options consultation received some support, however with only 53 - 63% of respondents agreeing with the approach it was decided that other alternatives should be considered in developing the First Draft Submission consultation.

4.2. As a starting point, we considered several alternative approaches to setting out where waste management development should be directed. These were:

i. Directing development to specific sites
ii. Directing development to large areas of land
iii. Directing development to broad locations
iv. Identifying sub-county apportionments for city, borough and district boundaries

- ***Directing development to specific sites:***



4.3. This approach would provide certainty for developers and would allow for detailed site assessments to be undertaken in relation to potential environmental impacts. It would also enable a clear identification of whether enough land would be available to meet the capacity gap.

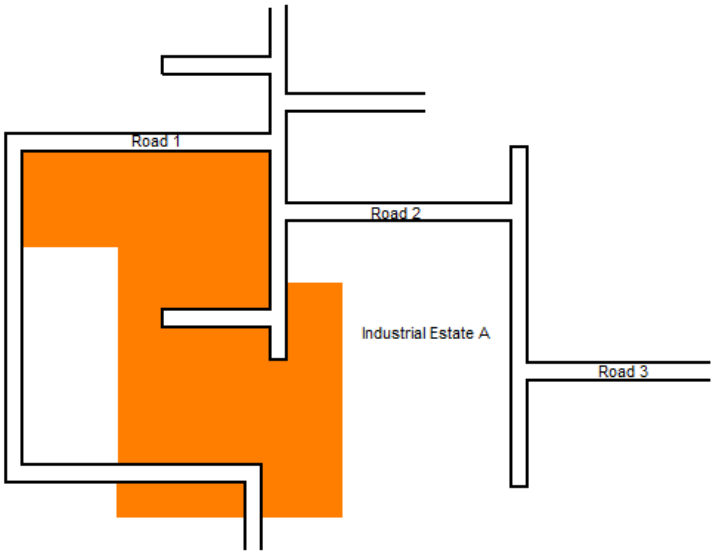
4.4. However the approach would be over prescriptive, not allowing for flexibility to respond to specific proposals. It could also limit innovative approaches to waste management and the mitigation of amenity impacts over time.

4.5. It is difficult to find and assess all potentially suitable sites and any assessment will just be a snap-shot of any site at a specific time. The

experience of Worcestershire and Herefordshire in undertaking both the joint Best Practicable Environmental Option (BPEO) and Joint Municipal Waste Management Strategy (JMWMS) is that surveys of the availability of specific sites can become rapidly out of date and that sites and premises can become unexpectedly available. The circumstance on sites that were recognised as suitable can also change, rendering them unsuitable.

4.6. For these reasons this approach was not pursued in the development of the Waste Core Strategy.

- **Identifying large areas of land that might be suitable for waste management development:**



4.7. This approach would allow for a broad assessment of potential environmental impacts; however more detailed assessments would be required as proposals were brought forward. It would give developers a degree of certainty but would also be flexible. In addition, with several potential sites available in these broader locations, the turnover of properties is more likely to ensure that individual sites are available for waste management facilities to be developed.

4.8. Several approaches to identifying appropriate areas were considered:

a) *Directing development to locations with high levels of waste arisings or resource demand*
Using data published by ADAS[2] on the composition and distribution of waste arisings, AWM has identified commercial and industrial waste arisings and resource demand[3] for each LSOA[4] in the West Midlands,

[2] *Study into Commercial and Industrial Waste Arisings,* ADAS April 2009 ("the ADAS Study")
[3] *West Midlands Landfill Diversion Strategy* (AWM) 2009
[4] The smallest scale at which this information is available is by Lower-level Super Output Areas (LSOA) which are areas that roughly equate to 1,500 people and are used in collecting Census data.

based on the industrial mix in the LSOA and the expected arisings from these activities. These are shown for Worcestershire in Figure 6. Patterns of C&I waste arisings.

The data relating to arisings and resource demand by LSOA could be used to assess sites, with sites favoured in LSOAs with the highest levels of arisings and resource demand.

Evaluation
This would allow for detailed consideration of proximity but would not provide any overall direction for development and may make it more difficult to provide a strategic network of sites which supports the needs of the local economy. This approach would not be in accordance with PPS10.

b) *Directing development to locations that are in proximity to current waste management facilities*
This would allow facilities to benefit from clustering but could lead to an under provision of waste management capacity in some areas.

Evaluation
This would allow for detailed consideration of proximity but would not provide any overall direction for development and may make it more difficult to provide a strategic network of sites which supports the needs of the local economy. This approach would not be in accordance with PPS10.

c) *Directing development to locations that have good transport connections*
Sites could be assessed in terms of access to water and rail transport and the strategic highway network.

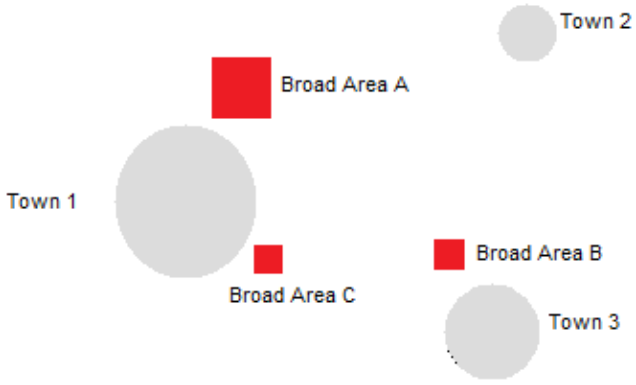
Evaluation
This would allow for detailed consideration of transport connectivity but would not provide any overall direction for development and may make it more difficult to provide a strategic network of sites which supports the needs of the local economy. This approach would not be in accordance with PPS10.

Proximity to the rail or water network could facilitate new or re-established connections. However, multi-modal potential would usually be required with good connections to the strategic highway network in addition to connections to either rail or water. For example, it is very unlikely that all movements of waste or other goods could be by water or rail, access will be needed for staff and visitors and it is unlikely that all sources of arisings, onward treatment facilities or end users could be well connected by water or rail.

In addition, this criterion does not take into account proximity to arisings, onward treatment facilities or end users.

d) *Assessing a range of criteria*
Factors in a-c above could be considered alongside other matters, including environmental considerations. This assessment was developed in preparing the First Draft Submission Consultation. Further details are set out in Annex A: Identifying areas of land that might be suitable for Waste Management Development: Method for Identifying Areas of Search for the First Draft Submission Consultation

- ***Identifying broad locations on a key diagram*:**



4.9. This approach would be less likely to be out-dated due to the large range of potential sites available in these areas, however it is only broadly indicative and only allows for very limited assessments of environmental impacts and does not provide certainty for communities or developers. It would also be very difficult to assess whether there was available suitable land in the Broad Areas to facilitate development to fill the capacity gap.

4.10. Several options were considered:

a) *Directing development to those settlements with the highest levels of waste arisings*
AWM has identified commercial and industrial waste arisings for each LSOA in the West Midlands based on the industrial mix in the LSOA and the expected arisings from these activities. These are shown for Worcestershire in Figure 6. Patterns of C&I waste arisings. These arisings are largely concentrated around the main settlements, and it is believed that municipal waste arisings reflect this distribution, with 71% of the population of Worcestershire living in urban areas.

Evaluation
This is a useful indication of arisings and shows patterns across the county. However it is difficult to identify specific arisings in each settlement and this approach could not be used to derive a 'land requirement' for each settlement.

b) *Directing development to those settlements with the highest levels of resource demand*

AWM has identified levels of resource demand for recyclate and heat for each LSOA in the West Midlands based on the industrial mix in the LSOA and the expected levels of demand from these activities. These are shown in **Figure 8. Patterns of resource demand for organics, energy and recyclate in Worcestershire**. These demands are largely concentrated around the main settlements.

Evaluation

This is a useful indication of resource demand and shows patterns across the County. However it is difficult to identify specific demand in each settlement and this approach could not be used to derive a 'land requirement' for each settlement.

c) *Directing development to those settlements with the best transport connections*

Water and rail transport are more sustainable than road transport and therefore should be encouraged wherever possible. A number of potential opportunities for developing rail and water connections for waste movement exist (as shown in Figure 4: Geographic Hierarchy for waste management in Worcestershire
Figure 5. Area of coverage), however these sites are not immediately usable for such activities and there are only a limited number of sites where connections to these transport networks are possible.

In order to reduce waste miles by road, the WCS could use potential for connectivity to the water and rail network as a determining feature in site allocations.

Evaluation

Proximity to the rail or water network could facilitate new or re-established connections. However, multi-modal potential would usually be required with good connections to the strategic highway network in addition to connections to either rail or water. For example, it is very unlikely that all movements of waste or other goods could be by water or rail, access will be needed for staff and visitors and it is unlikely that all sources of arisings, onward treatment facilities or end users could be well connected by water or rail.

Neither the Local Transport Plan (LTP) nor the current investment proposals for rail and water transport undertakers include any proposals to develop infrastructure which could serve waste facilities in Worcestershire.

In addition, this criterion does not take into account proximity to arisings, onward treatment facilities or end users and this approach could not be used to derive a 'land requirement' for each settlement.

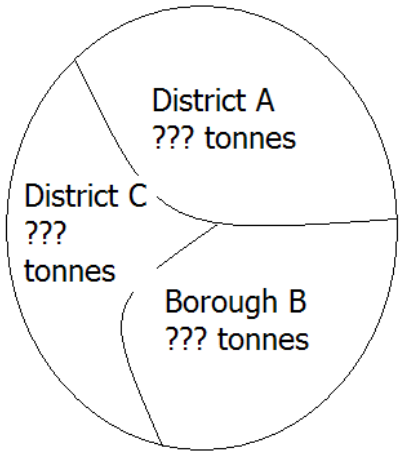
d) *Directing development in accordance with a hierarchy of settlements*

This approach could develop the concept of the hierarchy set out in the Emerging Preferred Options consultation and would allow for a combination of factors to be considered, including those in a-c above.

Evaluation

Deriving the exact land requirements for each settlement directly from this method would not be possible, however it could be possible to split the distribution between each level of the hierarchy and this could be used to direct development to the most appropriate locations.

- ***Identifying sub-county apportionments for city, borough and district boundaries*:**



4.11. Several options were considered:

a) *Directing development to those districts with the highest levels of waste arisings and resource demand*

Advantage West Midlands (AWM)[5] has identified commercial and industrial waste arisings for each Lower-level Super Output Area (LSOA)[6] in the West Midlands based on the industrial mix in each LSOA and the expected arisings from these activities.

This can be calculated at a district level and added to Municipal Waste arisings for each district to show the overall arisings per district (see Table 1). This broadly matches the pattern of distribution of current waste management capacity by District.

[5] West Midlands Landfill Diversion Strategy (AWM) 2009

[6] The smallest scale at which this information is available is by Lower-level Super Output Areas (LSOA) which are areas that roughly equate to 1,500 people and are used in collecting Census data.

Table 1: Waste Arisings by District

District	C & I arisings	MSW arisings	Total arisings		Current distribution of capacity
			Total	%	
Bromsgrove	37,671	41,672	79,343	6.2	3.5%
Malvern Hills	36,751	24,102	60,853	4.8	3.4%
Redditch	142,770	28,940	171,710	13	13.3%
Worcester City	45,992	32,562	78,554	6.1	4.3%
Wychavon	384,781	44,686	429,467	33.5	35.9%
Wyre Forest	422,436	38,439	460,875	36	39.5%

We could make provision for the total amount of land needed by dividing it according to the distribution of arisings from each district, as shown in Table 2.

Table 2: Hectares by District - based on current arisings

District	Distribution of waste arisings	Hectares for waste management development (by 2025/6) to the nearest 0.5Ha
Bromsgrove	6%	2.5 – 3.5
Malvern Hills	5%	2 – 3
Redditch	13%	5 – 7
Worcester City	6%	2.5 – 3.5
Wychavon	34%	14.5 – 19
Wyre Forest	36%	15 – 20

Note: For the First Draft Submission land requirements were based on the assumption that the amount of land required was 42.5-55.5ha, the above figures give a range of 41.5-56.0ha due to rounding. This has now been revised.

Evaluation

It would be possible to use the distribution of waste arisings to derive the amount of land required in each district. However this approach does not consider proximity to urban areas, onward treatment facilities or end-users or any future growth in arisings. Nor does it give consideration to existing capacity. The proportion of waste capacity in Bromsgrove District, Worcester City and Malvern Hills is lower than the proportion of the arisings, whereas that in Wyre Forest and Wychavon is greater. This method does not make provision to consider this.

a) *Directing development to those districts with the highest levels of future growth*

Future waste arisings from Commercial and Industrial waste could be estimated by considering future growth in employment land. The proposed RSS phase 2 revisions proposed the following specific distribution of new employment land in the county.

28.1% Worcester City
23.9% Wychavon
17.7% Redditch
11.5% Wyre Forest

11.5% Malvern Hills
7.3% Bromsgrove.

These percentages were a useful indicator of where, at a sub regional level, most new development should take place and broadly where new arisings of Commercial and Industrial wastes were likely to be generated. The details of the location and timing of new employment land will be developed in more detail in District Council Local Development Documents. The nature of the businesses themselves and of the wastes likely to be produced is however dependent on development management decisions to be made in the future.

We could use this approach to divide the land requirements between each district, as shown in Table 3.

Table 3: Hectares by District - based on future growth

District	Future Distribution of employment land	Hectares for waste management development (by 2025/6) to the nearest 0.5%
Worcester City	28.1%	12 – 15.5
Wychavon	23.9%	10 – 13
Redditch	17.7%	7.5 – 10
Wyre Forest	11.5%	5 – 6
Malvern Hills	11.5%	5 – 6
Bromsgrove	7.3%	3 – 4

Note: amount of land required is 42.5-55.5ha, the above figures give a range of 42.5-54.5ha due to rounding. This has now been revised.

Evaluation

It would be possible to use the distribution of employment to derive the amount of land required in each district. However this approach does not consider existing arisings or current treatment capacity or the existing distribution of employment land. It may be useful to fill any future capacity gap, however a capacity gap exists at present and this may not be the most suitable approach to addressing this. The fact that the coalition government intends to revoke the RSS also throws into question whether this scale and distribution of new development will take place.

4.12. In the *Refreshed Issues and Options* consultation the majority of consultees supported the idea of allocating future waste management capacity by district. However as this option was developed, the limitations to this approach became apparent:

- consultees generally wanted waste management facilities to be directed to urban areas and allocating waste management capacity by district would not on its own direct development to these areas;
- This approach cannot take into account proximity to onward treatment facilities, end-users, future growth or transport connections;
- It is difficult to derive a 'capacity requirement' for each area, for example the current proportion of waste capacity in Bromsgrove

District, Worcester City and Malvern Hills is lower than the proportion of the arisings, whereas that in Wyre Forest and Wychavon is greater. This method does not make provision to consider this.

Approach taken forward in the First Draft Submission consultation

4.13. The *First Draft Submission* consultation combined two of the approaches set out above:

Approach ii) Identifying large areas of land that might be suitable for waste management development: This was used to identify Areas of Search, such as industrial estates, that would be suitable for waste management development (as set out in Annex A: Identifying areas of land that might be suitable for Waste Management Development: Method for Identifying Areas of Search for the First Draft Submission Consultation).

Approach iii) Identifying broad locations on a key diagram. This built on the earlier concept of the 'spatial hierarchy' and was used to focus areas of search in the most appropriate broad areas. The approach adopted to identify 'areas of search' is set out in Annex A.

4.14. . Several alternative approaches were considered, but the final methodology assessed:

- Compatible land use: based on emerging RSS policy
- Constraints: based on national and local priorities
- Proximity: this considered waste arisings, resource demand and was informed by the geographic hierarchy that was developed in the First Draft Submission consultation.

4.15. The next section of this background document sets out how the geographic hierarchy has been developed and how this has been used to refine the purpose and application of the 'areas of search'.

Developing the geographic hierarchy

4.16. In preparing the *First Draft Submission* consultation, the factors which should inform the geographic hierarchy were reconsidered.

4.17. The arisings data in the ADAS report and AWM Landfill Diversion Strategy provided a more recent and more sophisticated approach than that used in the emerging RSS Phase Two revision, and these were used to inform part of the approach. The geographic hierarchy in the *First Draft Submission* consultation was then developed based on:

- **C&I waste arisings per hectare in each LSOA** (see Figure 6. Patterns of C&I waste arisings): Data from the AWM Landfill Diversion Strategy was plotted to show **tonnes per annum** of C&I waste arisings in each Lower-level Super Output Area (LSOA) in the county. Using GIS mapping's statistical analysis tools, this was split

into seven geometric categories[7], from highest arisings to lowest. Because LSOAs are based on the population, each one representing around 1,500 people, their size varied significantly with some very large LSOAs covering rural areas and some very small ones in urban areas. This meant that the level of arisings in some of the larger LSOAs was shown as being high (categories 5, 6, and 7). In order to make use of the data, some interpretation was required, and the data was converted to show **tonnes per annum per hectare** for each LSOA to show the level of arisings across the county on a more equal basis.

- **Resource demand per hectare in each LSOA** (see Figure 8. Patterns of resource demand for organics, energy and recyclate in Worcestershire): Data from the AWM Landfill Diversion Strategy was plotted to show resource demand as tonnes per annum resource demand in each Lower-level Super Output Area (LSOA) in the county. Using GIS mapping's statistical analysis tools, this was split into seven geometric categories[8], from highest arisings to lowest. In order to make use of the data, some interpretation was required, and the data was converted to show resource demand in **tonnes per hectare** for each LSOA to show the level of demand across the county on a more equal basis.
- **Existing treatment capacity** (see Figure 21. Focus of arisings, resource demand and capacity). The capacity of facilities was considered and preference was given to those areas where there was potential to realise benefits from the clustering of facilities.
- **The hierarchy of settlements in the RSS** (as was the case for the Emerging Preferred Options consultation).

4.18. This took into account the broad policy approach in the emerging RSS revision, the use of better, more locationally specific data, but also involved emerging local policy considerations, including the First Draft Submission objectives WO7 'to reduce waste miles' and WO8 'to encourage communities in Worcestershire to take responsibility for their own waste and involve all those affected as openly and effectively as possible'.

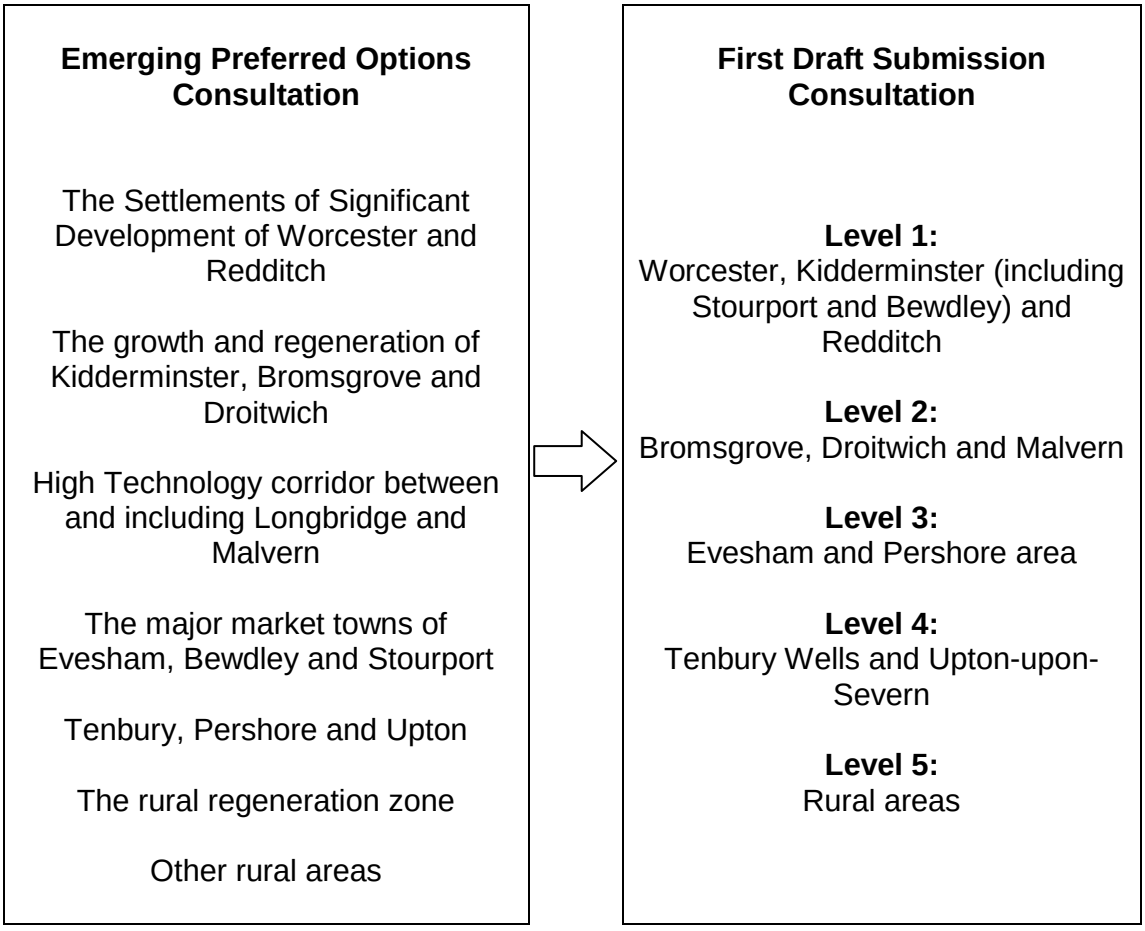
4.19. Due to the additional factors taken into account, the 'geographic hierarchy' developed at the *First Draft Submission* stage differed from that in the Emerging Preferred Options. The two geographic hierarchies are set out in Figure 1. The main differences are that:

- Broad areas at the top of the hierarchy were grouped rather than being listed separately, combining Worcester and Redditch. This introduced flexibility and responded to comments in the consultation that the role of Redditch should be increased.
- Kidderminster was also grouped with Worcester and Redditch due to high concentrations of arisings and resource demand.

[7] A geometric series is a pattern where a constant coefficient multiplies each value in the series.
[8] A geometric series is a pattern where a constant coefficient multiplies each value in the series.

- Stourport and Bewdley were included as part of Kidderminster as there was little differentiation in the characteristics of the arisings and resource demand across these areas.
- Pershore was considered alongside Evesham. This reflected its role as a market town, but also the comparable concentrations of arisings and resource demand between the two areas.
- Tenbury has low concentrations of arisings and was moved down the hierarchy, to be considered alongside Upton.
- The Central Technology Belt was not included as an entity, however it was considered in developing the hierarchy in the First Draft Submission consultation.
- The levels of the hierarchy were numbered to emphasise that they are distinct from each other and make it easier to develop a sequential approach.

Figure 1: Changes between Emerging Preferred Options consultation and First Draft Submission consultation



4.20. The application of the hierarchy was one issue of concern during the *Emerging Preferred Options* consultation. In the *First Draft Submission* consultation the main application of the geographic hierarchy was to direct the identification of areas of search, with more areas of search being identified at higher levels of the geographic hierarchy.

4.21. This approach was intended to deliver the objectives of the strategy. It was aimed at enabling communities to take responsibility for their own waste, providing waste management services that support local businesses and directing new development to urban, centralised locations, reflecting the approach which was popular in the *Refreshed Issues and Options* consultation.

Using a 'geographic hierarchy' to guide areas of search

4.22. In order to identify broad areas where facilities are needed, the geographic hierarchy was used to set what was called an 'aspirational distribution' of *areas of search* for future waste management facilities across the county. Five options were considered in developing the 'aspirational distribution', as set out in Table 4.

4.23. Each option gives greater weighting to the upper levels of the hierarchy but the extent differs. None of the aspirational distribution was allocated to the rural areas as much of the county is rural but with extremely low levels of arisings and resource demand. The amount which would be required would be insignificant when spread across the rural areas of the county and it was considered that doing so would not be a realistic option. None of the consultations undertaken during the preparation of the strategy supported significant development in rural areas.

4.24. In practice, there are large industrial estates which serve but do not directly adjoin the main towns of the county. These sites are significant sources of arisings and, potentially, of future resource demand. There is a tendency for industrial estates to be located along transport corridors between the main towns. Flexibility in considering settlement boundaries can allow for this to be taken into account.

Table 4. Options for aspirational distribution of *areas of search*

Level of the hierarchy	Options considered				
	i) Majority of distribution to top level of hierarchy (%)	ii) Almost equal distribution by level of hierarchy (%)	iii) Almost equal distribution by settlement at each level of hierarchy (%)	iv) Halving proportion at each level of hierarchy (%)	v) Halving proportion by settlement at each level of hierarchy (%)
Worcester, Kidderminster and Redditch	**75**	**30**	**36**	**55**	**60**
Worcester and its expansion areas	25	10	12	18.3	20
Kidderminster area	25	10	12	18.3	20
Redditch	25	10	12	18.3	20
Bromsgrove, Droitwich and Malvern	**15**	**27.5**	**30**	**27**	**30**
Bromsgrove	5	9	10	9	10
Droitwich	5	9	10	9	10
Malvern	5	9	10	9	10
Evesham and Pershore	**7.5**	**22.5**	**18**	**13**	**8**
Evesham	3.75	7.5	9	6.5	4
Pershore	3.75	7.5	9	6.5	4
Tenbury Wells and Upton-upon-Severn	**2.5**	**20**	**16**	**5**	**2**
Tenbury Wells	1.25	10	8	2.5	1
Upton-upon-Severn	1.25	10	8	2.5	1
Rural areas	**0**	**0**	**0**	**0**	**0**

Evaluation

i) Majority of distribution to top level of hierarchy
This option would reinforce the roles of Worcester, Kidderminster and Redditch in waste management but underplays the role of Droitwich, Bromsgrove and Malvern and would focus waste management development in the north of the county. It is likely that this distribution would not allow for sufficient facilities to be delivered at each focus of arisings in the middle of the hierarchy.

ii) Almost equal distribution by level of hierarchy
This option would allow facilities to be developed equally throughout the county and each focus of arisings to have some new waste management development. However, it underplays the role of Worcester, Kidderminster and Redditch and overplays the role of Tenbury Wells and Upton-upon Severn giving them equal weighting to the settlements in the top level of the hierarchy.

iii) Almost equal distribution by settlement at each level of hierarchy
This option more closely reflects the different roles of the settlements but still underplays the role of Worcester, Kidderminster and Redditch and overplays the role of Tenbury Wells and Upton-upon-Severn. It would allow for facilities to be developed in Bromsgrove, Droitwich and Malvern.

iv) Halving proportion at each level of hierarchy
This option gives clear preference to the upper levels of the hierarchy and, overall, recognises the roles of each settlement. It slightly overplays the role of Pershore and Evesham although to a lesser extent than options ii and iii.

v) Halving proportion by settlement at each level of hierarchy
This option gives clear preference to the upper levels of the hierarchy and, overall, recognises the roles of each settlement. It would provide sufficient land at the upper levels of the hierarchy, and allow those settlements in the middle to maintain their role. It is possible that the low proportion of distribution in Tenbury Wells and Upton-upon-Severn could constrain development but this is thought to be unlikely.

Preferred Approach for the First Draft Submission Consultation: v) Halving proportion by settlement at each level of hierarchy

4.25. This method gave the best reflection of the roles of both the levels of the hierarchy and of each settlement.

4.26. It is possible that the low proportion of distribution in Tenbury Wells and Upton-upon-Severn could constrain development but if this is the case, then the general approach would allow for further sites in these areas to be brought forward. In reality some settlements would be able to deliver more than they are assigned in the aspirational distribution and some less. To allow for this, the approach sought to deliver the proportions required for each level of the hierarchy, with the split within these levels being as equal as possible.

Consultation responses

4.27. The broad geographic hierarchy received overall support in the *First Draft Submission* Consultation. However, the concept of areas of search that was being developed was felt to be overly complicated. In response to this, it was decided that the broad geographic hierarchy would be refined and strengthened to form the main basis for directing development to the right place in the *Publication Document (Regulation 27)* consultation.

4.28. Concerns were also raised over the concept of an 'aspirational distribution'. There were questions about whether this approach might cap future development and whether some of the distributions were deliverable. The approach was felt to be over prescriptive and risked frustrating the development of new facilities in response to future changes in the economy. It was considered that so detailed an approach could be inflexible, prevent

new waste facilities locating where new sources of arisings emerged and might limit innovation, rather than enabling sustainable development.

4.29. There was also some concern over whether the application of the '*areas of search*' concept was also becoming over prescriptive and might limit rather than enable new waste facilities to take advantage of opportunities. The next section sets out how the broad geographic hierarchy has been developed, the changes made in response to the *First Draft Submission* consultation and how this has been developed to form the *Spatial Strategy*.

5. Publication Document (Regulation 27) consultation

5.1. Following the support received in the *First Draft Submission* consultation, the role of the geographic hierarchy was strengthened and that of *areas of search* was reduced. Rather than using *areas of search* to direct development, it was decided that a 'spatial strategy' would be developed based on the geographic hierarchy and that this would be used to direct development in a sequential manner. *Areas of search* have been retained but their role has been downgraded and is now only to guide developers to potentially suitable areas and for use as evidence that the strategy is deliverable.

5.2. This approach was still intended to direct development to areas close to arisings, end-users and onward treatment facilities, but would also consider other factors including environmental impacts and deliverability. This was an approach that was supported by the Interim Sustainability Appraisal report for the First Draft Submission consultation.

5.3. As a result several other considerations were taken into account and the hierarchy was refined. It is now informed by:

Waste arisings, resource demand and onward treatment

- Concentration of waste arisings
- Concentration of resource demand
- Existing waste management capacity: this now considered both areas where there was an under-provision of capacity in relation to arisings, and the potential onward treatment benefits from clustering waste management facilities in a particular area
- *An Economic Strategy for Worcestershire 2010-2020*.
- Anticipated future development: this based on the proposals set out in the RSS Phase 2 revision as the best available information

Connectivity

- Transport links

Opportunities and environmental considerations

- Results of the Habitats Regulations Assessment
- The availability of potentially suitable land in each geographic zone: giving an indication of the potential to deliver new waste management development in each geographic zone

5.4. A profile of each the settlements in Worcestershire has been developed based on the assessment of these factors (see *Appendix 2. The Role of each Settlement in Waste Management*). The following sections details how the additional considerations where taken into account. The changes to the geographic hierarchy are then outlined.

Additional considerations

Concentration of waste arisings

5.5. In the *First Draft Submission* document the hierarchy was based on the concentration of C&I waste arisings. This was extended in the *Publication Document* to include other waste streams.

- **Commercial and Industrial Waste**

  Data from the AWM Landfill Diversion Strategy was plotted to show **tonnes per annum per hectare**, as in the *First Draft Submission Consultation.* Due to the scale of C&I arisings and accuracy of the figures, patterns of C&I waste arisings were given significant weight in developing the geographic hierarchy.

- **Agricultural Waste**

  Although a detailed breakdown of agricultural waste arisings is not available, it is generally considered that arisings are in rural areas. Arisings are dispersed across a wide area, although likely to be more concentrated in the south of the county where horticulture is most prevalent. The levels of agricultural waste arisings in the county are low and therefore this was given little weight in defining the geographic hierarchy.

- **Construction and Demolition Waste**

  Construction and demolition waste arisings relate to new development and therefore it is considered that C&D arisings will follow anticipated patterns of future development (see below) concentrated in and around existing settlements.

- **Municipal Solid Waste**

  MSW arisings are concentrated where there are higher densities of households and are therefore greatest in urban areas. Municipal waste arisings are lower than C&I arisings but the data is relatively accurate. The patterns of arisings were therefore given significant weight in the development of the hierarchy.

Settlement	Population in Urban Area (%)
Worcester	17
Kidderminster	14
Redditch	13
Malvern	6
Bromsgrove	5
Evesham	5

Droitwich Spa	4
Bewdley	2
Pershore	1
Tenbury	1
Upton	1
(Other areas)	(31)

- **Hazardous Waste**

  Hazardous waste arises as part of the other waste streams, although it is managed separately. It therefore reflects the patterns of arisings from the other waste streams.

- **Overall arisings**

  Overall, waste arisings are predominantly concentrated in Redditch, Kidderminster and Worcester, with some concentration of arisings in Malvern, Droitwich Spa, Bromsgrove, Evesham and Pershore. There is a local concentration of arisings in Upton upon Severn, Bewdley and Tenbury Wells.

Concentration of resource demand

5.6. In the *First Draft Submission* document the hierarchy was based on the concentration of resource demand. This was also used in the *Publication Document*.

5.7. Overall, resource demand is predominantly concentrated in Redditch, Kidderminster and Worcester, with some concentration of demand in Malvern, Droitwich Spa and Bromsgrove. There is a local concentration of resource demand in Evesham and Pershore. Concentration of demand in Upton upon Severn, Bewdley and Tenbury Wells is little above the surrounding areas.

Existing waste management capacity

5.8. In the *First Draft Submission* consultation the focus was on onward treatment opportunities, however in preparing the geographic hierarchy as set out in the *Publication document* consideration was also given to those areas which had high levels of waste arisings and resource demand and comparatively low waste management capacity.

5.9. This is set out simply *Table 5. Comparison of waste arisings and resource demand v treatment capacity*, *Figure 7. Existing Waste Sites* and *Figure 21. Focus of arisings, resource demand and capacity* show the distribution of waste management facilities and their relative capacities.

Table 5. Comparison of waste arisings and resource demand v treatment capacity

		Waste arisings and	Waste management

		resource demand	capacity (excl waste water treatment)
Areas which would benefit from development of waste management facilities	**Opportunities to benefit from resource demand by clustering facilities**		
	Redditch	High	High
	Kidderminster	High	High
	Opportunity to increase capacity to reflect scale of waste arisings		
	Worcester	High	Low
	Malvern	Medium	Low
	Droitwich Spa	Medium	Low
Areas which may benefit from some development of waste management facilities	**Fewer opportunities to benefit from resource demand, existing capacity closely aligned to waste arisings**		
	Bromsgrove	Medium	Medium
	Evesham	Low	Low
	Pershore	Low	Medium
Areas with limited benefit from the development of waste management facilities	**Little opportunities to benefit from resource demand, low levels of waste arisings**		
	Bewdley	Very low	None
	Tenbury Wells	Very low	None
	Upton upon Severn	Low	Low

Availability of land

5.10. Deliverability is an important consideration in developing the Waste Core Strategy. One aspect that therefore needed to be considered was the potential to deliver new waste management development in each geographic zone. A high-level assessment was carried out, considering constraints:

- **Areas of Outstanding Natural Beauty (AONB)**
  The potential for future development of waste management facilities to the west of Malvern was limited due to potential impacts on the adjacent AONB. The potential for adverse impacts on the Cotswolds AONB is equally important in the south eastern corner of the county.

- **Flood Zone 3**
  Flood Zone 3 is a constraint to development in most of the settlements in the Geographic Hierarchy. However, in most settlements the impact is limited and would not impact greatly on the ability to deliver waste management facilities in the area as a whole. The majority of Upton upon Severn is affected by Flood Zone 3 and this has been considered in developing the Geographic Hierarchy.

- **Source Protection Zone 1**
  Source Protection Zone 1 areas are present in the north of the county. They do not cover large areas and are protected through policy criteria and therefore have not had a significant impact on the development of the Geographic Hierarchy.

5.11. A more detailed assessment was then undertaken of currently available land that would potentially be suitable for waste management development. This used the Worcestershire County Council Property Search database to find out how much land was available in identified 'areas of search'.

5.12. Detail of how 'areas of search' were identified in preparing the *First Draft Submission* consultation is set out in Annex A; to summarise, all industrial estates in the County were assessed against a set of criteria which considered constraints, site infrastructure and transport links.

5.13. Following the *First Draft Submission* consultation it was clear that the concept of 'areas of search' could only be used broadly and that any definition of specific sites would require a more detailed assessment. There are two important reasons why this would not be appropriate in the Core Strategy:

- firstly, details of each site would need to be set out and key development criteria would need to be presented for each site. As we acknowledge that we have not assessed all potentially suitable sites, and that other sites not assessed may be equally suitable, this approach was felt to be unsuitable at this stage; and
- secondly, that defining sites is not appropriate in a Core Strategy other than to identify sites for "strategic" facilities on which the Strategy depends. No such facilities have been proposed. PPS 12 specifically states (paragraph 4.7) that *"in general the core strategy will not include site specific detail which can date quickly."*

5.14. The '*areas of search*' [9] have been retained as indicative areas that meet basic assessment criteria. Unit/land availability on these sites has been assessed through the Worcestershire County Council Property Search database.

5.15. Following refinement of the approach, a number of changes were made to the locations identified as *areas of search*:

- landfill and mineral workings were not considered to be suitable for inclusion as '*areas of search*' due to their temporary nature.
- a size threshold was introduced, areas less than 2 hectares were not considered to be suitable for inclusion as 'areas of search' due to the limitations of their size on deliverability
- some locations were brought forward which had previously been discounted due to a low 'proximity' score
- Upton-upon-Severn Industrial Estate was removed following a response from the Environment Agency to the *First Draft Submission* consultation which indicated the location was in Flood Zone 3.
- Area 7 Industrial Park, Norton, was assessed and brought forward following a recommendation in response to the *First Draft Submission* consultation.

[9] Please note, all known industrial and derelict employment land in the county was assessed in identifying *areas of search*, however other potentially suitable land as identified in policy WCS 4, including redundant agricultural of forestry buildings or co-location opportunities was not taken into account.

All known industrial and derelict employment land in the county was assessed, however other potentially suitable land as identified in policy **WCS 4**, including redundant agricultural of forestry buildings or co-location opportunities was not taken into account.

5.16. Table 6 shows the *areas of search* taken forward in Annex A of the Publication Document.

Table 6. Identified areas of search in Publication Document

Settlement areas	Areas of Search
Bewdley	(No areas identified)
Bromsgrove	Bromsgrove Technology Park
	Buntsford Gate Business Park
	Buntsford Hill Industrial Estate
	Silver Birches and Basepoint Business Parks
Droitwich Spa	Berry Hill Industrial Estate
	Stonebridge Cross Business Park
	Hampton Lovett Industrial Estate
	North Street Industrial Estate
	Rushock Industrial Estate
Evesham	Bennetts Hill Business Park
	Four Pools Industrial Estate
	Vale Business Park
Kidderminster	Birchen Coppice Trading Estate
	Cursley Distribution Park
	Finepoint Business Park
	Foley Business Park
	Foley Industrial Estate
	Former British Sugar Site
	Gemini Business Park
	Greenhill Industrial Estate
	Hartlebury Trading Estate
	Hoo Farm Industrial Estate
	Ikon Trading Estate
	Oldington Trading Estate
	Vale Industrial Estate
Malvern	Blackmore Business and Technology Park
	Enigma Business Park
	Link Business Centre
	Merebrook Industrial Estate
	Spring Lane Industrial Estate
Pershore	Keytec7 Business Park
	Pershore Trading Estate
	Racecourse Road Trading Estate
Redditch	East Moons Moat
	Kingfisher Enterprise Park
	Lakeside Industrial Estate
	Park Farm Industrial Estate
	Pipers Road Park Farm
	Ravensbank Business Park
	Washford Industrial Estate
	Weights Farm Business Park
Tenbury Wells	Tenbury Business Park.
Upton-upon-Severn	Upton Business Centre, Welland Road
Worcester	Area 7 Industrial Park, Norton
	Ball Mill Top Business Centre

	Berkeley Business Park
	Buckholt Business Centre
	Diglis Industrial Estate
	Great Western Business Park
	Newtown Road Industrial Estate
	Sherriff Street Industrial Estate
	Shire Business Park
	Shrubhill Industrial Estate
	Top Barn Business Centre
	Venture Business Park
	Warndon Business Park
	Weir Lane Industrial Estate

Using the areas of search to identify potentially suitable land

5.17. In order to identify whether adequate land is available to enable facilities which fill the capacity gap to be delivered, a high-level assessment of locations has been undertaken and 58 Areas of Search have been identified as potentially suitable for waste management facilities[10].

5.18. In December 2010/January 2011 the availability of units on the identified areas of search was assessed. This is only a snap-shot but is useful in indicating likely land availability. The Council's database held details of a total of over 270 units available for rent/sale[11] totalling 41 hectares of suitable land.

Settlement areas	Available land
Redditch	10.17
Kidderminster	8.85
Droitwich Spa	8.18
Worcester	6.17
Evesham	4.67
Malvern	2.83
Bromsgrove	0.88 (but does not include recently permitted sites)
Pershore	0.24
Bewdley	-
Tenbury Wells	-
Upton-upon-Severn	-

5.19. It should be noted that the land available does not include new industrial estates currently being developed or new industrial land that will be brought forward through the City, District and Borough Development Frameworks. The County Council will engage with City, Borough and District councils to ensure that waste management is considered when allocating future employment land.

[10]Existing landfill capacity in Worcestershire is sufficient to meet need during the lifetime of the strategy. Therefore, landfill has not been considered in assessing the areas of search.

[11] Based on areas of search only.

Transport links

5.20. Transport links were also considered.

Table xxx: Transport links

	Road	Rail	Water
	Settlements with multimodal potential		
Droitwich Spa	✓	✓	✓
Worcester	✓	✓	✓
Malvern	✓	✓	×
Kidderminster	✓	✓	✓
	Settlements on motorways and principal lorry routes.		
Redditch	✓	×	×
	Settlements on with principal lorry routes.		
Evesham	✓	×	×
Pershore	✓	×	×
	Other settlements		
Bewdley			
Tenbury Wells			
Upton upon Severn			

Habitats Regulations Assessment

5.21. The Habitats Regulations Assessment found that there was no likely significant effect on European sites across most of the county. However, the findings of the air pollution assessment were that likely significant effects of thermal treatment facilities at certain scales were uncertain on the Lyppard Grange Special Area of Conservation in Worcester. This led to the development of 'Worcester zone b' in the geographic hierarchy within which development of any thermal treatment facilities would be limited.

An Economic Strategy for Worcestershire 2010-20

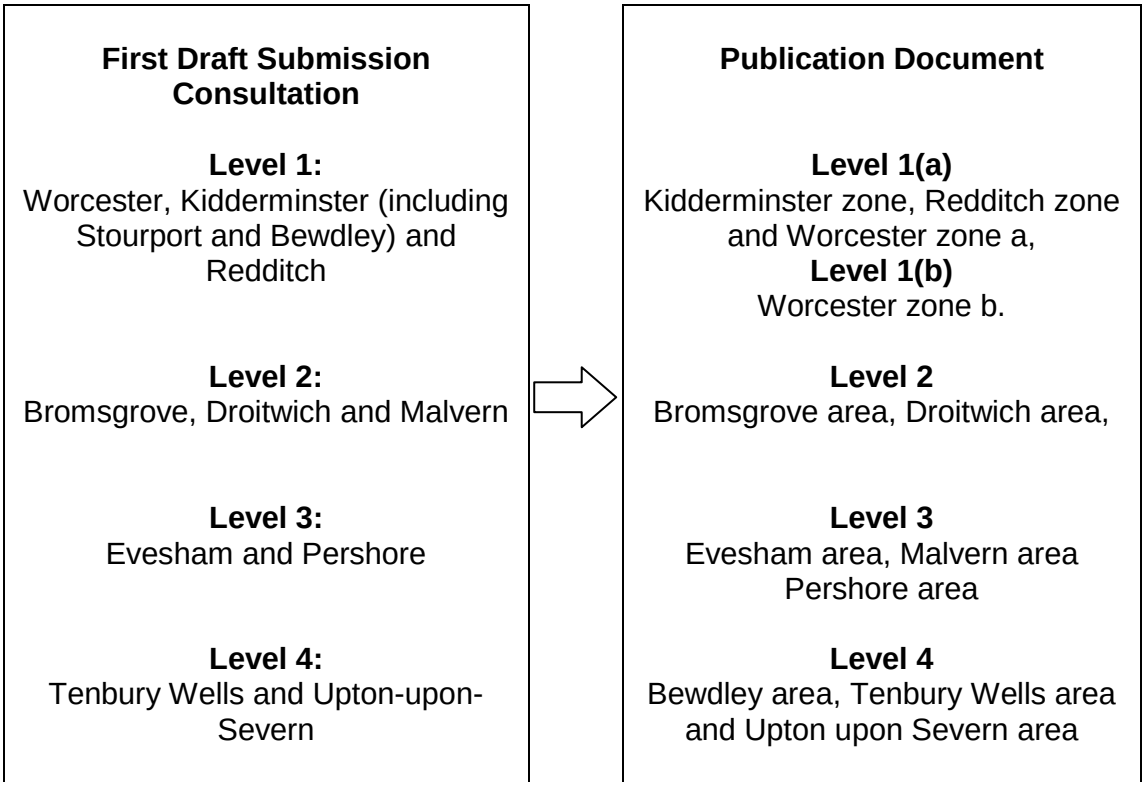
5.22. The Economic strategy for Worcestershire 2010-2020 identifies environmental technologies as a key growth sector. The waste management industry has a role to play through developing technology, improving skills in the green economy and facilitating the management of waste as a resource. The Economic Strategy includes the concept of the Central Technology Belt, which runs from the Malvern Hills, through Worcester to Bromsgrove and into Birmingham, to promote more technology and knowledge-based industries in the county. The Central Technology Belt was considered as a factor in developing the Geographic Hierarchy.

Changes to the hierarchy in the Publication Document

5.23. Although the hierarchy remained broadly the same, the consideration of these additional factors resulted in a number of changes in the hierarchy (see **Figure 2**):

- Worcester has been sub-divided into zones 1a) and 1b) to reflect the findings of the *Habitats Regulations Assessment*.
- Malvern has been moved from level 2 to level 3. This is due to:
  - concentrations of current waste arisings being more in line with the Evesham zone than the other settlements in level 2;
  - future economic development in Malvern being more likely to be high-tech with lower waste arisings than more traditional industries;
  - transport links to the strategic highways network to and from Malvern not being as strong as in other level 1 and 2 zones;
  - little available industrial land in the Malvern area, meaning that there is less potential for the development of facilities than in other level 2 areas.
- It has been recognised that Bewdley has different characteristics to the rest of the Kidderminster area, with little industrial land within or around the town. As such it has been considered as a zone in its own right rather than as part of the Kidderminster zone.
- Level 5 was renamed 'other areas' rather than 'rural areas' to better describe those areas that are not identified in other levels of the hierarchy. This takes into account some of the 'other areas' in the north of the county that are more urban in nature.
- The broad areas have been illustrated on a key diagram and named as **geographic zones** rather than settlement areas to avoid any confusion with 'areas' defined in other plans or policies.

Figure 2: Changes following First Draft Submission consultation



Level 5: Rural areas	**Level 5** Other areas

Application: How the areas in the Geographic Hierarchy have been defined

This section sets out how the considerations detailed above and the application of local knowledge have been used to define the extent of the zones in the Geographic Hierarchy. These are set out in Figure 4.

Kidderminster zone

The Kidderminster zone includes Stourport on Severn and extends towards the village of Hartlebury. This corresponds to the concentrations of waste arisings and resource demand. It also follows the road transport corridors.

Kidderminster and Stourport on Severn are included together in the Kidderminster zone due to their proximity, strong transport links and the clustering of waste management facilities between the two towns and in particular along the A451 (Stourport Road).

There is distinct difference between this area and Bewdley, which is reflect in the definition.

This zone crosses district boundaries, with most of the zone in Wyre Forest District, and the rest in Wychavon District.

Redditch zone

The Redditch zone encompasses the more urban part of the borough, reflecting patterns of waste arisings and resource demand. It extends to the north along the A435(T) and A441 and around junction 3 of the M42. There is a small cluster of metal recycling sites on the A435(T).

This zone crosses borough/district boundaries, with most of the zone in Redditch Borough, and the rest in Bromsgrove District. The two districts have strong housing and employment links and are currently considering the possible provision of some of Redditch`s housing and employment growth in Bromsgrove district.

Worcester zones

The Worcester zones in general were defined based on transport corridors and patterns of waste arisings and resource demand.

The habitats regulations assessment had a significant impact on the definition of the Worcester zones, resulting in a split between Worcester zone 1a which would potentially be suitable for any type of waste management development and zone 1b where the Habitats Assessment showed that likely significant effects from some scales of thermal treatment facilities were uncertain. (see Figure 10 - Figure 14).

The Worcester zones cross city/district boundaries, with most of the zone in Worcester City, some in Malvern Hills District, and the rest in Wychavon District. This reflects the strong housing and employment links between the three districts, which are currently exploring the development of a joint plan to make provision for most of Worcester's growth to the West, North West, South and South East of the city boundaries.

Bromsgrove zone

Bromsgrove zone reflects the concentration of arisings and resource demand and access to the strategic highway network.

Droitwich zone

The predominant factors in defining this zone were the concentration of C&I waste arisings and resource demand, the distribution of industrial estates and possible future housing and employment growth between Droitwich and Worcester. The zone broadly follows the A442 and the railway line. This zone provides a link between Kidderminster zone and Worcester zones, which are in level 1.

Evesham zone

Evesham zone reflects the concentration of arisings and resource demand. This encompasses both the urban area and rural areas which have good access to A44 and railway line. This takes into account the intensive horticulture and agriculture in the area and allows for suitable co-location opportunities.

Malvern zone

The western boundary of the Malvern zone has been defined by the AONB. The other predominant factors considered in defining this zone have been the concentration of waste arisings and resource demand. The location of existing industrial estates and the proposal in the SWJCS Preferred Options to extend housing and employment development to the North-east and East of the town broadly follows the A449.

Pershore zone

Pershore zone reflects the concentration of arisings and resource demand. This encompasses both the urban area and rural areas which have good access to A44 and railway line. It also takes into account the intensive scale of horticulture and agriculture in the area and allows for suitable co-location opportunities. The definition of this zone also covers the existing significant waste management facilities in proximity to Pershore.

Bewdley zone

This zone is small and distinct reflecting the focus and limited scale of waste arisings in this area, access to the A456 and distribution of existing employment land.

Tenbury Wells zone

This zone is small and distinct reflecting the limited scale and focus of waste arisings in this area, access to the A456 and A4112 and the distribution of existing employment land, across the county boundary into Burford in Shropshire.

Upton upon Severn zone

This zone is small and distinct reflecting the focus of waste arisings in this area, access to the A38, A4104 and distribution of existing employment land.

All other areas

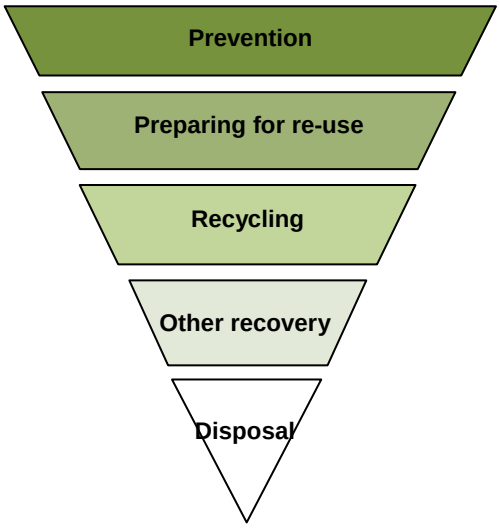
These areas generally have low levels of waste arisings and resource demand and do not benefit from clustering of onward treatment facilities. Co-location opportunities are also expected to be limited.

Application: How the Geographic Hierarchy has been used to drive policy

5.24. The Geographic Hierarchy was used as the basis for developing a 'spatial strategy' for the Waste Core Strategy. It is based on two broad concepts:

- Directing development to the 'highest appropriate level' of the geographic hierarchy in a sequential manner: this gives greater flexibility and allows for proposals at lower levels of the hierarchy where this is the best location for that particular facility. The justification in such cases should be based on proximity to waste arisings, end-users or onward treatment facilities.
- Delivering the waste management hierarchy (Figure 3) alongside the geographic hierarchy: the concept of approaching the geographic hierarchy in a sequential manner was developed into the spatial strategy to enable the implementation and delivery of the waste hierarchy in a strategic way.

Figure 3: Waste Management Hierarchy



5.25. The Waste Core Strategy *Publication Document* is intended to achieve the Spatial Strategy set out below:

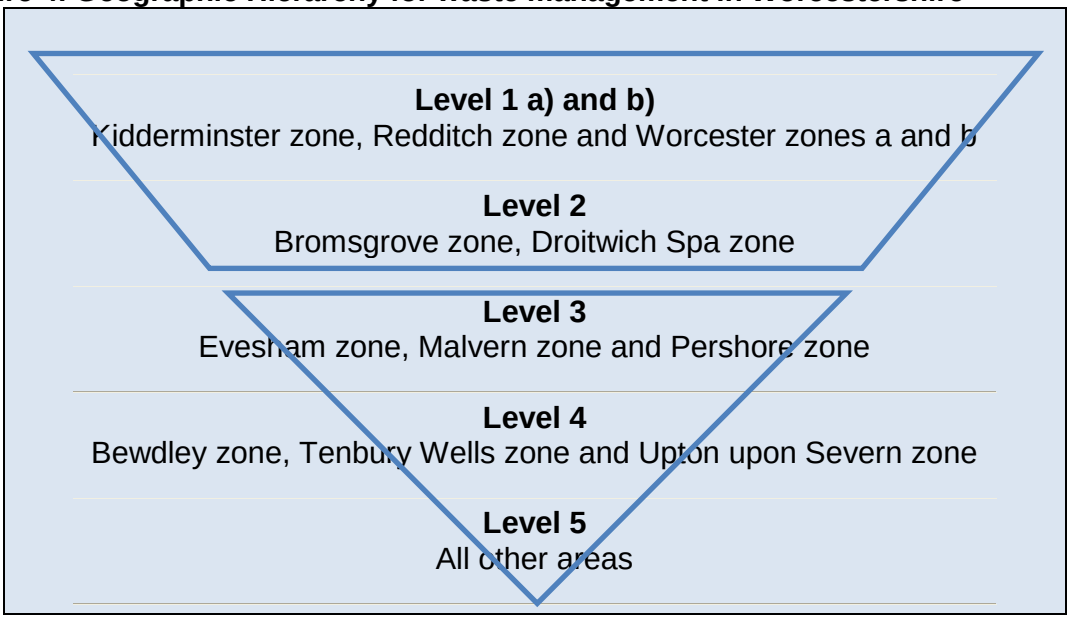
Spatial Strategy

Facilities will be directed to land that has had a previous economic use. They will be located where they are best suited to serve the needs of local communities and the local economy and minimise the distance waste is moved by road.

The distribution will be based on the geographic hierarchy (***Figure 4*** *and* **Error! Reference source not found.** *in this background document).*

This hierarchy takes account of patterns of current and predicted future waste arisings and resource demand[12], onward treatment facilities, connections to the strategic transport network, and potential for the future development of waste management facilities[13]. The Habitats Regulations Assessment and Strategic Flood Risk Assessment have also been taken into account.[14]

Figure 4: Geographic Hierarchy for waste management in Worcestershire



[12] Refers to the demand for resources from organic waste recovery (e.g. composting), recycling and energy recovery, developed as part of the West Midlands Landfill Diversion Strategy (AWM 2009).

[13] The broad geographic hierarchy and the proposed distribution of new development would be in accordance with the adopted WMRSS and the evidence base for the proposed Phase 2 revision. With the exception of Wyre Forest which now has an adopted Core Strategy, District Councils in, and County, District and Unitary councils adjoining the county are still developing their Core Strategies but the general pattern of development is expected to maintain and reinforce the current distribution of population and employment up to at least 2026.

[14] See background document '*Spatial strategy*'.

Note: Within each level of the hierarchy, zones are listed alphabetically, not in order of importance. The zones are illustrated on the Key Diagram (**Error! Reference source not found.** *in this background document*).

Facilities that enable the re-use and recycling[15] of waste
Re-use and recycling facilities (including treatment, storage, sorting and transfer facilities) will be enabled in all geographic zones. These facilities will be directed to the highest appropriate level of the geographic hierarchy. This means that most facilities will be located in the upper levels of the geographic hierarchy.

'Other recovery' facilities[16]
'Other recovery' facilities will be necessary to manage waste which cannot be re-used or recycled and to ensure that it is treated as a resource. To be viable these facilities are often larger in scale and few will be needed to meet the capacity gap.

To recognise their scale and role, 'other recovery' facilities will only be enabled in upper levels of the geographic hierarchy. To reflect the findings of the Habitats Regulations Assessment (HRA), only smaller[17] 'other recovery' facilities will be enabled in Worcester zone b.

Disposal and landfill
The evidence base[18] demonstrates that there is no need for new landfill capacity. The strategy will encourage management of waste at higher levels of the waste hierarchy. Therefore landfill and disposal facilities will not be encouraged at any level of the geographic hierarchy.

[15] Article 3(17) of the revised Waste Framework Directive specifically mentions the reprocessing of organic material as being included in the definition of recycling, therefore for the Waste Core Strategy open windrow composting, in-vessel composting and anaerobic digestion are included as recycling alongside other physical and chemical treatment processes.
[16] Article 3(17) of the revised Waste Framework Directive defines "Recovery" as "any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy". In the Waste Core Strategy "other recovery" includes thermal treatment and any recovery facilities that do not fall into the category of recycling.
[17] With likely significant effects the same as or less than a thermal treatment facility with a throughput of 150,000 tonnes per annum and stack height of 80 metres.
[18] See background documents '*Landfill*' and '*Arisings and capacity*'.

Figure 13. Habitat Regulations Assessment Figure 7.1d
Figure 14. Habitat Regulations Assessment Figure 7.1e

Appendix 1. The waste management context of the county

The existing situation of the county provides the context from which decisions about future waste management development must be made. Knowing about the strengths and weaknesses of, for example, the county's transport systems, economic situation and changes likely to occur due to climate change all have an impact on the locations in which it will be suitable to develop waste management facilities.

The Publication Document contains a section entitled "Spatial Portrait" which sets out this context in detail[19]. It is included here as it provides the background for the decisions which were made in developing the Spatial Strategy. This is followed by a section which summarises the role that each of the main settlements in the county plays in terms of waste management.

An Overview of Waste Management in Worcestershire

The county of Worcestershire (see Figure 4: Geographic Hierarchy for waste management in Worcestershire
Figure 5. Area of coverage) has a population of 556,50020 and covers an area of 173,529 ha. There are six District, City and Borough Councils in Worcestershire: Bromsgrove; Malvern Hills; Redditch; Worcester City; Wychavon; and Wyre Forest. Worcestershire is part of the West Midlands region and adjoins the South West region.

Economy

71% of the population of Worcestershire live in urban areas, principally Worcester, Redditch and Kidderminster, Stourport on Severn, Bromsgrove, Malvern, Droitwich Spa and Evesham, with over one sixth of the population living in Worcester. Some smaller towns, notably Bewdley, Pershore, Upton-upon-Severn and Tenbury Wells provide a traditional market town role serving an extensive rural hinterland.

Future growth in Worcestershire is expected to maintain and reinforce the current distribution of population and employment, with a focus in and around Worcester, Redditch and Kidderminster and some growth in Malvern, Droitwich Spa and Evesham. Waste Management facilities have a role to play in providing the necessary infrastructure to serve these communities and support the local economy.

[19] More information on developing the Spatial Portrait can be found in the background document "*Spatial Portrait*"
[20] ONS mid year estimate 2009

Agriculture, most distinctively horticulture, particularly orchards and market gardening, dominates the use of land in the County. Only 1% of the West Midlands is Grade 1 Agricultural Land Quality and virtually all of this is in Worcestershire and Herefordshire[21]. Current trends in agriculture mean that there are redundant agricultural and forestry buildings in Worcestershire which could be suitable for waste management facilities.

At 78%, employment in Worcestershire is above the West Midlands average (71%) and England average (74%)[22]. Employment in the county is predominantly urban based, with the majority being service-based but with manufacturing also being locally important. The towns in the north of the county have traditionally relied on manufacturing although this has declined in recent years. In the south of the county food-related industries are important. Worcester, Malvern and to a lesser degree Droitwich Spa have large distribution, research and professional and educational sectors and form part of the Central Technology Belt[23].

Waste management is estimated to contribute £95.9 million per year to the economy of Worcestershire[24]. About 12,000 people work in the waste sector in the West Midlands[25], with 1,250 people employed in "sewage and refuse disposal, sanitation and similar activities" in Worcestershire[26]. This is a modest number, but is expected to rise by 2020[27], even without any impetus from the Waste Core Strategy. With this increase, waste management is likely to have a growing role in future "green" employment in the county.

Mineral extraction plays a small but important role in the County's economy. There are nationally important resources of Industrial Sand in the Bromsgrove area, useful reserves of sand and gravel, mostly in river valleys; hard rock resources are more limited. There are also limited coal resources in the Bayton, Mamble, Menithwood, Abberley area in the northwest of the county, small areas to the west of Stourport-on-Severn and an area to the northwest of Kidderminster, concentrated on the Shatterford, Upper Arley and Pound Green area. Restoration of mineral workings can require waste materials to be imported and used as fill. With future potential for mineral extraction in the county, the Waste Core Strategy will be mindful of this.

Transport

[21] *Agricultural Land Classification (ALC) Statistics*, DEFRA, www.defra.gov.uk
[22] *Worcestershire County Economic Assessment 2009-2010*.
[23] The concept arose as part of the Regional Economic Strategy, its status is unclear at present but it is now being considered as part of the county Economic Development Strategy.
[24] Gross value added (GVA) based on number of employees in the categories: Sewerage, Collection of non-hazardous waste, Collection of hazardous waste, Treatment and disposal of non-hazardous waste, Treatment and disposal of hazardous waste, Dismantling of wrecks, Recovery of sorted materials and Remediation activities and other waste management services in Worcestershire in 2007. Worcestershire County Council.
[25] *Energy and Utility Skills Labour Market Investigation 2006* and *Census of Population 2001*. EU Skills AACS LMI March 2001.
[26] Annual Business Inquiry, Worcestershire County Council. Note that the West Midlands and Worcestershire figures are not directly comparable due to the use of different categories.
[27] Annual Business Inquiry, Worcestershire County Council.

The county's strategic transport network is shown on Figure 4: Geographic Hierarchy for waste management in Worcestershire
Figure 5. Area of coverage.

The River Avon passes through Evesham and Pershore and is navigable throughout the County. The River Severn is navigable in Upton, Worcester and as far north as Stourport-on-Severn. The River Severn is currently used for freight transportation between Ryall and Ripple mineral workings, demonstrating that water transportation can be commercially viable in the county.

The canal network is extensive and connects to systems to the north, south and east of the County. Worcester (Worcester & Birmingham canal) and Stourport (Staffordshire & Worcestershire Canal) are placed on the river and canal network and the Droitwich Canals have recently undergone restoration to link to the River Severn and the Worcester & Birmingham Canal. There are however some limitations on vessel size due to the locks on or between the canals and there is little likelihood of increased freight traffic on the county's canals in the foreseeable future. The Waste Core Strategy encourages the consideration of freight transport by water where possible, but recognises that potential is limited.

The strategic rail network within Worcestershire has strong links to the north and south of the County. Worcester, Kidderminster, Redditch, Bromsgrove, Droitwich, Malvern, Evesham and Pershore are all connected to the rail network. There is rail capacity for freight movement on most routes in Worcestershire although this is not available at peak times. There are, however, no major rail freight facilities located in the county. The development of new stations or railheads is likely to be challenging. Trainloads generally convey around 1000 tonnes payload meaning that even on a weekly train basis a terminal/waste transfer station would need to have throughput of 52,000 tonnes a year. There is no evidence to suggest that such a terminal would be economically viable in Worcestershire at present. However the Waste Core Strategy will encourage potential for rail transport to be considered where appropriate.

At present all of the County's waste is transported by road. Motorway links to the M5, M42 and M50 mean that there are long distance movements into, out of and across the County[28]. Worcester, Droitwich, Bromsgrove and Redditch are well placed on the motorway network. Upton, Pershore and Evesham are connected to the motorway network by A roads and Kidderminster and Malvern are also well placed on the strategic highways network. Bewdley is connected to Kidderminster by the A456. Tenbury is further from the other main settlements but is connected by the A456 to Kidderminster in the east and Herefordshire and Shropshire to the west.

There is relatively little traffic congestion on the county's road network, but the limited number of river crossings is a key cause of congestion in Worcester and local road congestion can be a major constraint on growth in other parts of the county.

There are currently 9 Air Quality Management Areas (AQMAs) either in existence or in the process of being designated in Worcestershire due to poor air quality.

[28] Worcestershire's Local Transport Plan 2006-2011 http://worcestershire.whub.org.uk/ltp-2006/wcc-transport-ltp-final-2006-2011.pdf

The AQMAs are associated with busy arterial and main roads. This is a cross-boundary issue. Air quality issues will be a consideration in developing waste management facilities.

Climate Change

In 2007 Worcestershire's CO2 emissions were 3.9 million tonnes. 44% of the CO2 emissions from Worcestershire were produced by industry and commerce, 33% from the domestic sector and 23% from transport29.

The greenhouse gases that make the largest contribution to global warming are carbon dioxide, methane and nitrous oxide. All three can be produced during the management and disposal of wastes. In the UK waste management is estimated to contribute around 2.5% of total greenhouse gas emissions and 41% of all methane emissions. Most of these emissions come from the landfill of biodegradable waste. Re-using and recycling waste can reduce the greenhouse gas emissions produced as waste decomposes. These activities can also result in a greenhouse gas reduction and energy benefit by recovering energy or recycling materials and reducing the need for virgin materials.

In Worcestershire climate change is likely to lead to more frequent extreme weather events such as flooding and higher wind speeds. Some areas are also likely to experience increased outdoor fire risk.30 Land instability is already an issue of potential concern in parts of the county where there has been former coal mining. This is likely to increase, with increased risk of subsidence in areas with clay soils.

As a result of climate change, the county should expect warmer wetter winters as well as hotter drier summers. This means that during the summer months the possibility of water shortages increases. Over half of public water supply in Worcestershire is provided from groundwater sources. It is possible that water shortages could frustrate development, including waste management, over the life of the Strategy31.

Seasonal variations in temperature and precipitation are also likely and could impact on waste management activities, affecting decomposition rates of waste. As such, the processes involved in and design of some waste treatment methods may change over the life of the Strategy to reflect this.

Waste Management

Waste arisings

Amount of waste arising

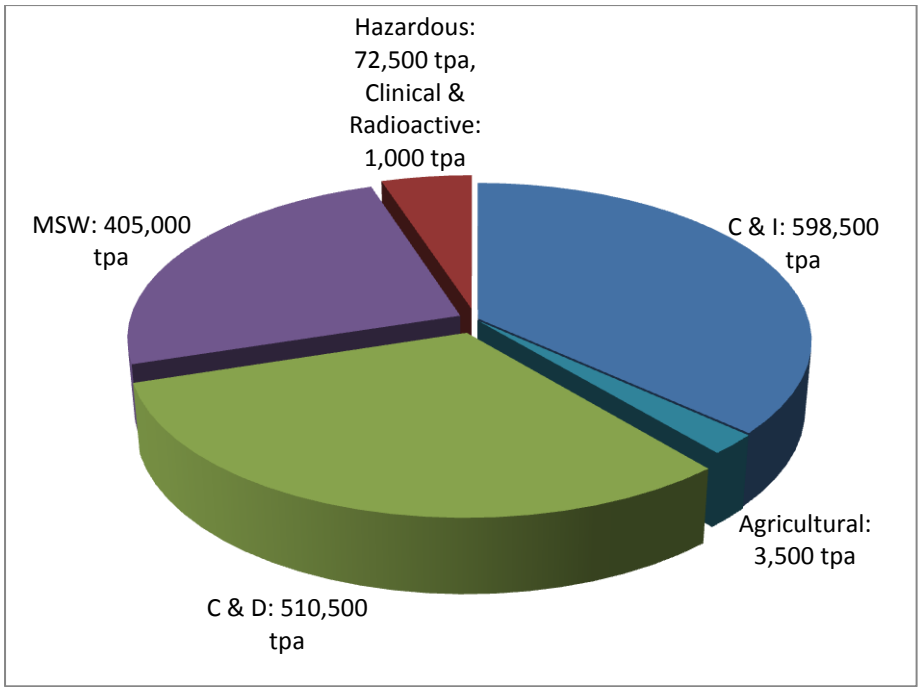
[29] These figures exclude emissions from motorways.
[30] See "*Planning for Climate Change in Worcestershire: Technical Research Paper*" for more details of anticipate Climate Change effects in the County and background document "*Climate change and waste management in Worcestershire* ".
[31] Customer security of water supplied by Severn Trent Water is currently ranked poorly and increases in housing numbers and the predicted increase in water usage per person per day will put further pressure on water supply in Worcestershire.

It is estimated that approximately 1,591,000 tonnes of waste are produced in Worcestershire each year[32] (waste arisings). This is categorised into:

- **Commercial and Industrial Waste (C&I):** Business waste. For the purpose of the Waste Core Strategy this includes:
  - **Agricultural waste:** All wastes that are discarded from agricultural premises except on-farm animal and plant wastes which fall outside the scope of the Waste Core Strategy[33].
- **Construction demolition and excavation waste (C&D):** Waste from building works and other related operations.
- **Municipal Solid Waste (MSW):** This waste is mainly collected from households.
- **Hazardous waste:** Waste defined as needing special management because it is difficult to handle or potentially polluting or dangerous. For the purpose of the Waste Core Strategy this includes:
  - **Clinical waste:** produced from healthcare and similar activities that may pose a risk of infection or may prove hazardous to any person coming into contact with it.
  - **Radioactive waste:** radioactive waste from non-nuclear industries is mostly produced by hospitals, pharmaceutical companies, education and research establishments.

The amount of waste arisings from each of these waste streams is shown in Figure 15.

Figure 15: Waste arisings in Worcestershire (2010)

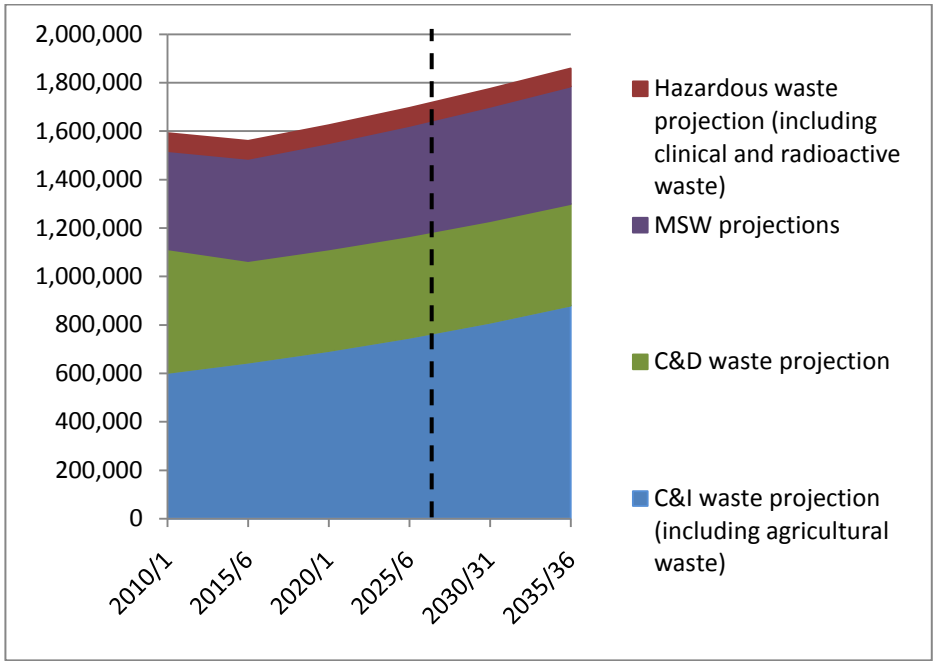


Note: The MSW figures include both Herefordshire and Worcestershire's waste.

[32] Based on 2010 figure/projections. See background document "*Arisings and Capacity*"
[33] On-farm animal and plant wastes currently fall outside the legal definition of controlled waste in England and Wales.

Waste arisings are expected to grow over the period of the strategy as illustrated in Figure 16: Projected waste arisings34. This has been taken into account in developing the Waste Core Strategy objectives and policy framework.

Figure 16: Projected waste arisings



Distribution of arisings

Concentrations of waste arisings broadly reflect the distribution of population and the location of industry in the county, focusing around the main urban areas[35].

- **C&I:** arisings focus mainly in existing urban areas. Figure 6 illustrates the distribution of C&I waste arisings broken down into Lower-level Super Output Areas (LSOAs[36]).
- **Agricultural waste:** a detailed breakdown of distribution is not available, however arisings are in rural areas and anecdotal evidence suggests that it is more concentrated in the south of County where horticulture is most prevalent.
- **C&D:** arisings relate to new development. Future development in Worcestershire is likely to be focused in and around existing urban areas.
- **MSW:** arisings are concentrated in urban areas where there are higher densities of households.
- **Hazardous waste:** arises as part of the other waste streams, although it is managed separately. It will therefore broadly reflect the distribution of arisings from these streams.

[34] These projections are based on the best available data. The methods are set out in Waste Core Strategy Background document "*Arisings and Capacity*".
[35] For this purpose hazardous, clinical and radioactive waste are considered as component parts of the other waste streams.
[36] Lower-level Super Output Areas are the smallest scale at which Census data can be used. They roughly equate to 1,500 people.

An AWM study[37] that undertook a materials mapping exercise for Paper and Card, Plastic, WEEE and Hazardous material found that the generation of these materials follows the general patterns of population and business concentration, with little differences between specific materials.

With the exception of Wyre Forest, which has an adopted Core Strategy, the District, City and Borough Councils in and adjoining Worcestershire are still developing their Development Plan Documents. In general patterns of development are expected to maintain and reinforce the current distribution of population and employment up to at least 2026.

Current capacity

Worcestershire's MSW is managed jointly with Herefordshire through a partnership between all the councils in the two counties, though an integrated PFI contract with Mercia Waste Management Ltd.

C&I waste is managed largely by the private sector, with the third (voluntary) sector playing a small but increasing role. It is common for some of the capacity at C&I facilities to be used for the treatment of MSW and C&D waste. Dedicated C&D facilities also exist in the County, although the processing of C&D waste increasingly takes place in-situ.

Current waste management capacity is approximately 1,274,500 tonnes[38].

Table 7: Current waste management capacity[39]

	Capacity 2008/9
Re-use and recycling capacity	310,000 tpa
'Other recovery' capacity	8,000 tpa
Sorting and transfer capacity	859,500 tpa
Household recycling centres	97,500 tpa
Landfill capacity	9,778,000 m^3

Waste water treatment capacity is currently adequate across most of the county and Severn Trent Water does not usually operate Sewage Treatment Works with spare capacity[40].

In Worcestershire, most existing facilities are smaller than 0.5ha in size (65% of facilities), with only 22% of facilities being over 1 ha in size. There are however some larger sites in the County, with the largest being approximately 13ha.

In general, waste management facilities tend to be clustered in or near to towns in the north of the County, and are more dispersed in the south. Kidderminster, Redditch and Pershore have high levels of waste management capacity, whilst Worcester, Bromsgrove, Droitwich, Evesham and Malvern have relatively low

[37] WASTE – A FUTURE RESOURCE FOR BUSINESSES: Developing the evidence base for a targeted market intervention strategy for the West Midlands
[38] Not including waste water treatment capacity or landfill.
[39] See background document "*Arisings and capacity*" for further details.
[40] See background document "*Waste water treatment infrastructure*"

levels. Household Recycling Centres (civic amenity sites) are found in or near to all towns in the County. There are also a number of small 'bring' sites in the county which are not shown on this figure.

Waste management facilities tend to be located on industrial estates, with some facilities at minerals workings and landfill sites. There are also several facilities on former airfields or using redundant agricultural buildings.

The distribution and characteristics of existing waste management capacity in Worcestershire have been a fundamental consideration in the development of the Waste Core Strategy and the Council has engaged with all current operators in order to develop an understanding of the current situation.

Capacity gap

In Worcestershire there is currently a 'capacity gap', meaning that waste arisings within the county are greater than the capacity to treat them. The capacity gap was a fundamental driver in the development of the Waste Core Strategy and is one of the main challenges it aims to tackle.

The capacity gap is calculated by considering:

- **Waste arisings:** Current and future projections.
- **Capacity requirements:** This applies targets to the waste arisings to estimate the quantities of waste that will be managed through 're-use and recycling', 'other recovery' and 'disposal or landfill', as well as the capacity required for 'sorting and transfer'.
- **Current capacity:** Operational waste management capacity. This considers 're-use, recycling', 'other recovery' and 'disposal and landfill' and 'sorting and transfer' capacity separately.

Levels of existing capacity and current requirements are shown in Figure 17. The capacity gap is given in Table 8.

Figure 17: Current capacity and requirements (all waste streams)

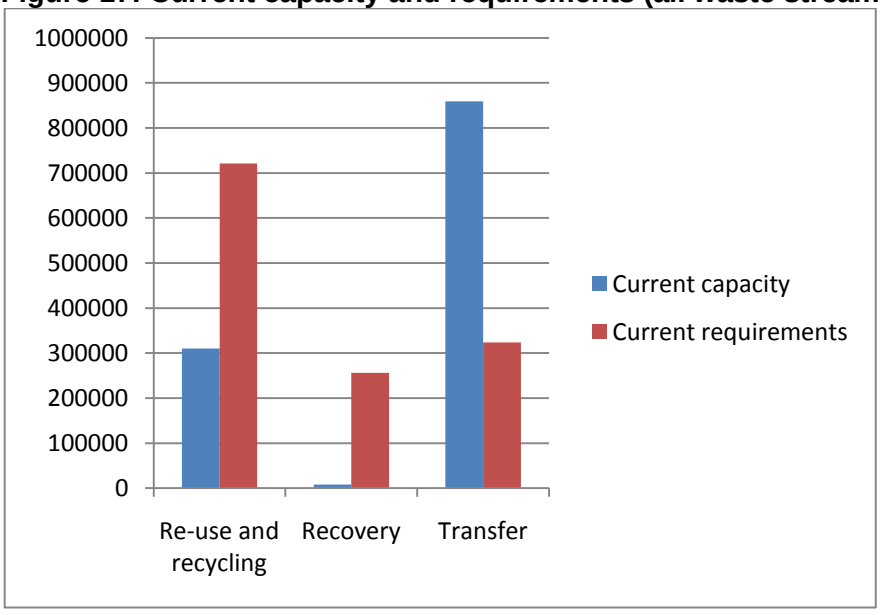


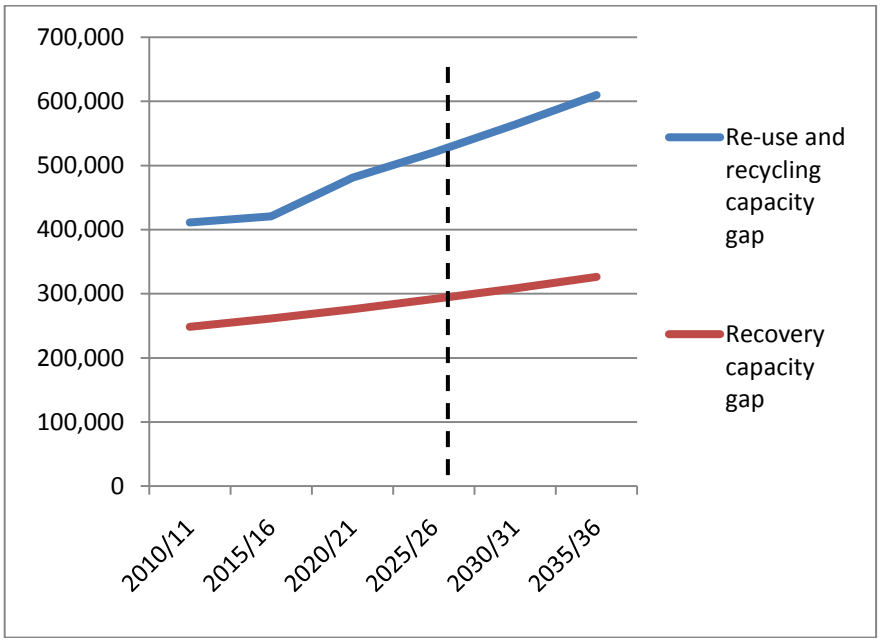
Table 8: Capacity gap (all waste streams)

Management type (all waste streams)	Current capacity gap
Re-use and recycling	411,500 tpa
'Other recovery'	240,500 tpa
Sorting and transfer	0
Disposal and landfill	0

Note: a more detailed breakdown of this information is available in appendix 4.

Figure 18 shows how the capacity gap will grow during the life of the Strategy and beyond, if no new facilities are developed in the county.

Figure 18: Capacity gap projections



The reviewed Joint Municipal Waste Management Strategy (JMWMS) identifies the need for some form of treatment facility to manage residual MSW but the Action Plan for the JMWMS states that suitable development land and the technology to be used are still to be decided. It also proposes that the Household waste site in Tenbury Wells should be redeveloped.

A capacity gap has also been identified for waste water treatment, with some new capacity likely to be required to serve future development in some parts of Worcestershire. Bromsgrove will need much higher waste water treatment capacity to meet the demands of planned expansion, and Redditch and Worcester will need some increased capacity. It has been agreed that the need for and general location of new waste water treatment infrastructure will be identified by the District Councils in their Development Plan Documents, and as part of the infrastructure needed for new development. In addition small scale facilities may be required in order to provide first time sewage for existing dwellings. Any specific proposals will be assessed against the policies in the Waste Core Strategy.

Resource demand

Waste management facilities enable the use of waste as a resource. Therefore the consideration of resource demand is important. Estimates of resource demand (demand for organics, energy and recyclate based on business types[41]) broadly reflect the distribution of waste arisings in the county, being concentrated in and around urban settlements, see Figure 8.

Waste management facilities often form part of a 'treatment chain', and as such existing facilities will also be an important consideration providing potential onward treatment opportunities. There are clusters of facilities in and around Kidderminster and Redditch.

The geographic patterns of resource demand and distribution of existing facilities have been taken into account in developing the approach in the Waste Core Strategy.

Imports and Exports[42]

Some cross boundary movements of waste are inevitable and reflect the normal working of the economy. Some types of waste also require specialised management methods; for such facilities to be viable they often operate at a regional or national level. This may account for some of the imports and exports in Worcestershire.

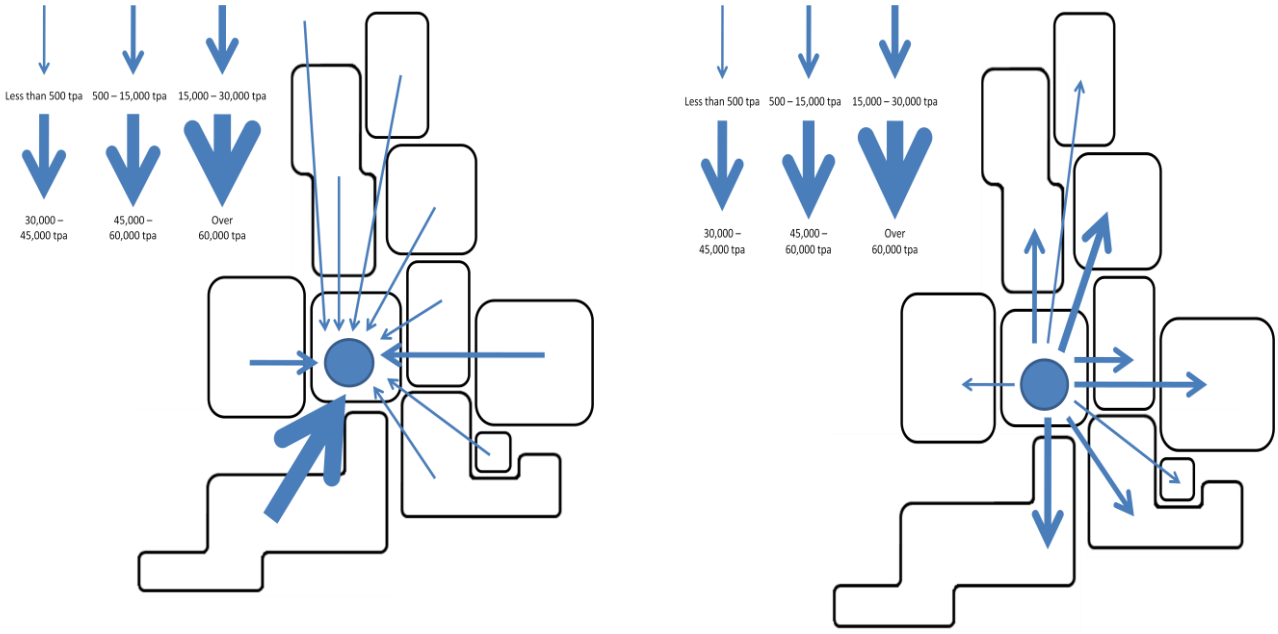
Overall, the evidence is that the amount of waste imported exceeds that exported from the County. There are clear trends relating to waste movements[43], with the most significant volumes of imports coming from the South West at 63,260 tpa and East of England at 3,850 tpa. Imports from other regions (excluding the West Midlands) are less than 600 tpa (see Figure 19). Within the West Midlands, the most significant volume of imports is MSW from Herefordshire.

The pattern of exports from Worcestershire is more diffuse with some materials going to every region in England. The most significant exports are to the South West (20,900 tpa) and Yorkshire and Humber (20,200 tpa) (see Figure 20). The most significant exports within the West Midlands are to Herefordshire, Warwickshire and the West Midlands conurbation.

Figure 19. Waste imports to Worcestershire by Region

Figure 20. Waste exports from Worcestershire by Region

[41] AWM methodology developed as part of the "Landfill Diversion Strategy" AWM 2009
[42] Data source for this section: Environment Agency Waste Data Interrogator 2008
[43] Data about sub regional movements of waste is very poor. We believe that the best source of information is the Environment Agency Waste Data Interrogator (WDI) and we have based our assumptions about waste imports and exports on it. We acknowledge that it is imperfect, considerable volumes of both imports and exports are recorded as "not codeable" by the Agency and their origin and destination cannot be identified. Some movements, but it is not clear how much, are just within and beyond the county. In addition, we know from monitoring the joint waste contract between the two counties that much more MSW is imported from Herefordshire than is shown in the EA Waste Data Interrogator.



Worcestershire is a net importer of hazardous waste44, 45 for waste sorting and transfer but is a net exporter for treatment.

Due to the joint management of Herefordshire and Worcestershire's MSW, movements between the two counties are expected to occur for the lifetime of the integrated Municipal Waste Management contract (currently 2027).

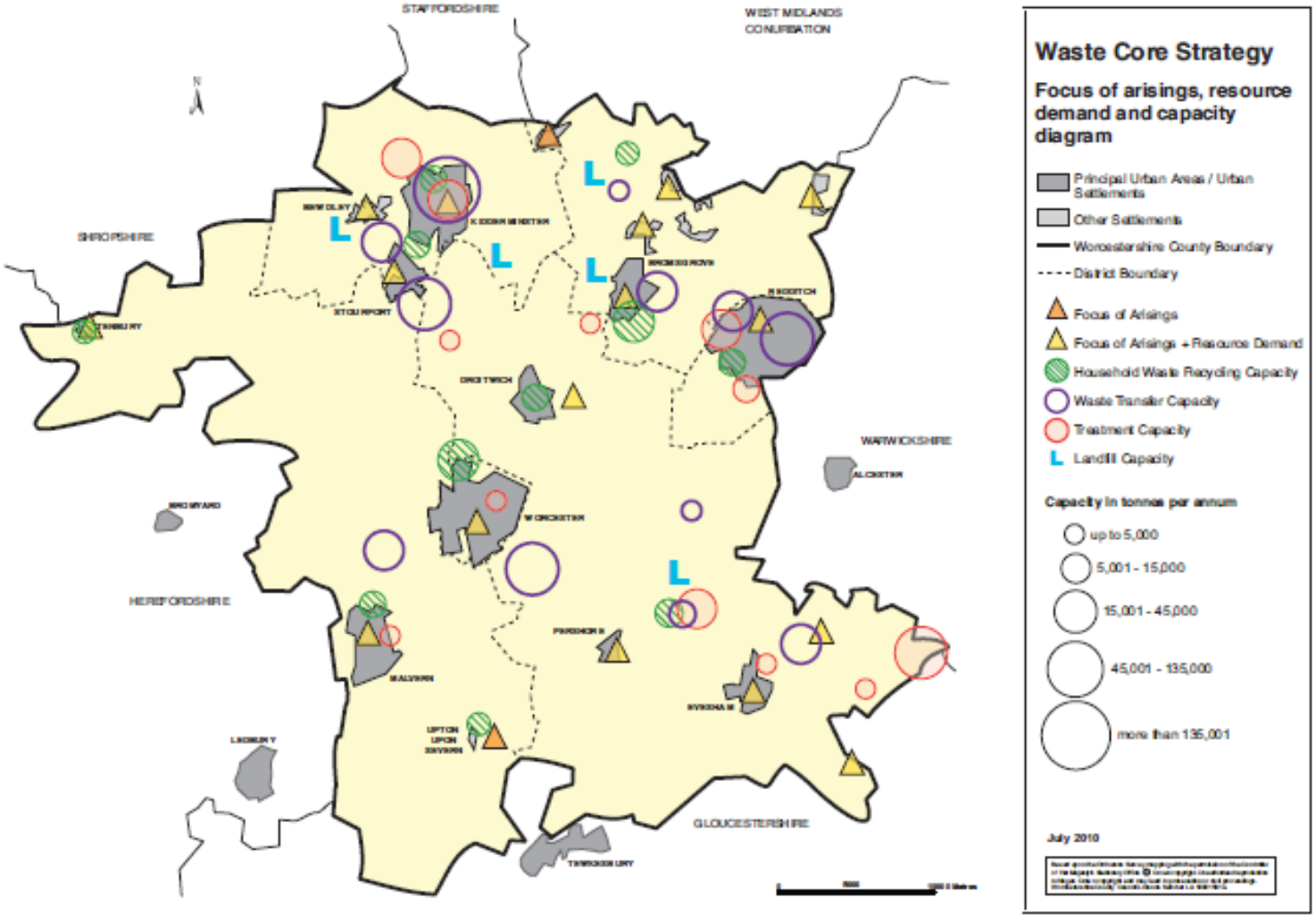
Imports and exports of waste will continue to occur during the life of the strategy due to economies of scale, specialised treatment requirements and market efficiencies. The Waste Core Strategy will not limit future imports and exports. However, in line with the West Midlands RSS and to reflect the consultation comments received, the Waste Core Strategy will aim for 'equivalent self-sufficiency' in waste management capacity. 'Equivalent self-sufficiency' means that Worcestershire's capacity will be adequate to treat waste that arises in the County but allows for inevitable cross-boundary movements that occur.

[44] See background paper *"Hazardous Waste"*
[45] 2009 data from Environment Agency, Hazardous Waste Interrogator

Appendix 2. The Role of each Settlement in Waste Management

Figure 21 illustrates current waste management capacity, foci of waste arisings and resource demand relating to recyclables, organics and energy. It is however only illustrative in nature[46]. Waste water treatment (sewage) capacity is not shown on this figure.

Figure 21. Focus of arisings, resource demand and capacity



[46] Exact locations and more details regarding site size, the materials handled and the issues currently faced are set out in Worcestershire Waste Core Strategy Background Document "Waste Sites in Worcestershire".

The settlements within Worcestershire perform different functions in terms of waste management. The profile for each settlement is set out below[47].

Bewdley area

Commercial and industrial arisings and resource demand in Bewdley is higher than in the surrounding rural areas, although they are modest in comparison to other larger settlements.

Waste arisings, resource demand and onward treatment

- *C&I Waste Arisings:* *0.5%*
- *Waste management capacity:* *0%*
- *Population in Urban Area:* *2%*

There is no waste management capacity in this area.

Future growth in this area is expected to be low and there are currently no industrial estates in this area. There is little waste management capacity in the Bewdley area and some future capacity may be needed to deliver local services and meet the needs of these areas.

Connectivity

There are good transport links to the Kidderminster area by the A456. There are also some links to the rural areas in south Shropshire although this is limited by the presence of the Wyre Forest.

Environmental considerations

Habitat Regulations Assessment

No areas of search have been identified in the Bewdley area. Much of this area is more the 15km from European sites and development and the assessment concludes that beyond this distance the will be no likely significant effects.

However, any development that falls within the flood zones 2 and 3 and the groundwater source protection zones (inner zone, outer zone and total catchment) would need to consider water pollution effects and demonstrate, including consideration of mitigation and control measures as necessary, that there would be no likely significant effects.

Flood

Bewdley has suffered from very severe flooding in recent times, mostly from the River Severn although other, smaller watercourses are also capable of flooding. The town is now protected by multi-million pound flood protection schemes.

Opportunities

[47] The Habitats Regulations Assessment and information relating to opportunities in each area are based on 'areas of search', see background document "Identifying areas of search" for more information.

No areas of search have been identified in the Bewdley area.

Bromsgrove area

Whilst the level of waste arisings in the vicinity of Bromsgrove is lower than in Worcester, Kidderminster and Redditch, they are still substantial and the pattern of distribution reflects the presence of industrial uses on the edge of the town.

Waste arisings, resource demand and onward treatment

- *C&I Waste Arisings:* *6%*
- *Waste management capacity:* *3%*
- *Population in Urban Area:* *5%*

The Bromsgrove area forms part of the Central Technology Belt, has close links to the West Midlands conurbation and high resource demand. Waste management capacity in this area is predominantly for transfer and bulking, with some metal recycling.

Connectivity

The area has good links to the strategic transport network. It is on the M5 and M42 motorways and is connected to the rail network.

Environmental considerations

Habitat Regulations Assessment

The assessment concludes that there would be 'no likely significant effect' on European sites from the development of thermal treatment facilities or from other waste facilities on the areas of search in the Bromsgrove area.

However, any development that falls within the flood zones 2 and 3 and the groundwater source protection zones (inner zone, outer zone and total catchment) would need to consider water pollution effects and demonstrate, including consideration of mitigation and control measures as necessary, that there would be no likely significant effects.

Flood

The District contains the headwaters of three Main Rivers:

- The River Salwarpe/ Sugar Brook/ Spadesbourne Brook/ Battlefield Brook,
- The Gallows Brook, which is located in the northwestern corner of the District and flows due west from the Stourbridge Road, bisecting the village of West Hagley; and
- The River Arrow, which initiates as Main River to the east of Alvechurch and flows south, parallel to the A441 towards Redditch.

All three Rivers can be traced as Ordinary Watercourses back to their sources, located within the Clent and Lickey Hills in the northeastern area of the District. The rest of Bromsgrove District is drained by numerous ordinary watercourses, all of which have their sources located within the District boundaries,

Due to its headwater location, lack of Main Rivers and small watercourses, Bromsgrove District has not suffered from the severe fluvial flooding experienced further downstream in Worcestershire during June and July 2007. However, due to the number of watercourses present, there have been numerous occurrences of smaller-scale flooding, most notably flash flooding from rapid catchment response. In many cases this has resulted in an overwhelming of the road, rail and canal networks and their associated drains and outflows. Along many of the ordinary watercourses flooding is attributable to a lack of maintenance resulting in blockages and reduced flow capacity.

Opportunities

6 areas of search were identified as potentially suitable for waste management facilities in this area. There are approximately 0.8 ha of available land/units in these areas of search listed in the database, however several of the industrial estates are still under-construction and officer observations suggest that land availability is likely to be much higher in the near future.

Droitwich Spa area

Whilst the level of waste arisings in the Droitwich Spa area is lower than in Worcester, Kidderminster and Redditch, they are still substantial and the pattern of distribution reflects the presence of industrial uses on the edge of the town.

Waste arisings, resource demand and onward treatment

- *C&I Waste Arisings:* *8%*
- *Waste management capacity:* *0.5%*
- *Population in Urban Area:* *4%*

The Droitwich Spa area forms part of the Central Technology Belt, has several large industrial estates and has good links to the strategic transport network.

The only waste management capacity in this area is a Household Waste Recycling Centre. However, resource demand in this area is high. There is therefore potential to increase waste management capacity to support the functions of the area.

Connectivity

The area has good links to the strategic transport network. It is on the M5 and M42 motorways and is connected to the rail network. The Droitwich Canals are currently undergoing restoration to link them to the River Severn and the Worcester & Birmingham Canal.

Environmental considerations

Habitat Regulations Assessment

The assessment concludes that there would be 'no likely significant effect' on European sites from the development of thermal treatment facilities or from other waste facilities on the areas of search in the Droitwich Spa area.

However, any development that falls within the flood zones 2 and 3 and the groundwater source protection zones (inner zone, outer zone and total catchment) would need to consider water pollution effects and demonstrate, including consideration of mitigation and control measures as necessary, that there would be no likely significant effects.

Flood

Surface water flooding is a risk in Droitwich. The main causes of flooding within Droitwich are the River Salwarpe, Elmbridge Brook and surface water flooding from sewers and overland flow. In addition, the Droitwich Canal interacts with the River Salwarpe in several places and needs to be considered. These are mapped in the SFRA.

The SFRA recommends that Surface Water Management Plans are produced for Droitwich , that for large developments, a strategic approach to SuDS for runoff attenuation and water quality improvement linking to the green infrastructure plan is required; All of these will assist the determination of future waste management development and inform reviews of the Waste Core Strategy.

Opportunities

4 areas of search were identified as potentially suitable for waste management facilities in this area. There are approximately 8.2 ha of available land/units in these areas of search.

Droitwich Spa's location within the Central Technology Belt and its status within the Regional Spatial Strategy's development hierarchy (Policy CF2) means that it is appropriate for the town to accommodate a significant proportion of the growth target for south Worcestershire. Significant growth has to be either north or south and in both directions the land is subject to Green Belt policy. Broad locations for development to provide for the requirements of Droitwich Spa have been identified as:

- Town centre: retail, residential and employment.
- South: residential and mixed use development comprising 1500 dwellings at the Area of Development Restraint identified in Wychavon District Local Plan referred to as Copcut Lane and greenfield sites either side of Chawson Lane. Residential development, comprising 250 dwellings on greenfield land referred to as the north of Pulley Lane.

The south of the town currently provides minimal employment opportunity so in order to re-dress this balance and to satisfy Droitwich Spa's role as a centre in the Central Technology Belt, employment land should be provided for in the Area of Development Restraint.

Evesham area

Whilst the level of waste arisings in the vicinity of Evesham is lower than in Worcester, Kidderminster and Redditch, they are still substantial and the pattern of distribution reflects the presence of industrial uses on the edge of the town.

Waste arisings, resource demand and onward treatment

- *C&I Waste Arisings:* *4%*
- *Waste management capacity:* *1%*

- *Population in Urban Area:* *5%*

The distribution of arisings reflects Evesham's function as a major market town. The Evesham area has limited waste management capacity and may benefit from increased capacity, particularly in relation to the food growing industry. Resource demand is significant for the south of the County.

Connectivity

This area is well connected to the strategic transport network and is linked to the motorway via A roads. Evesham lies on the navigable River Avon and the Cotswold rail line runs east-west through the town.

Environmental considerations

Habitat Regulations Assessment

The assessment concludes that there would be 'no likely significant effect' on European sites from the development of thermal treatment facilities or from other waste facilities on the areas of search in the Evesham area.

However, any development that falls within the flood zones 2 and 3 and the groundwater source protection zones (inner zone, outer zone and total catchment) would need to consider water pollution effects and demonstrate, including consideration of mitigation and control measures as necessary, that there would be no likely significant effects.

Flood

The main causes of flooding within Evesham are the River Avon, River Isbourne, Battleton Brook, several smaller watercourses and surface water flooding from sewers and overland flow (These are mapped in the SFRA). Evesham experienced river flooding in during June and July 2007.

Opportunities

2 areas of search were identified as potentially suitable for waste management facilities in this area. There are approximately 4.7 ha of available land/units in these areas of search.

The SWJCS Preferred Spatial Strategy for Evesham sets out the following broad locations for development:

- Town Centre - employment, residential and retail;
- East (within the A46T) residential development comprising 1500 on greenfield sites either side of Offenham Road;
- South West – residential development comprising 800 on greenfield site off Pershore Road, Hampton;
- South – employment 10ha at Vale Business Park.

Kidderminster area (Kidderminster, Stourport-on-Severn and Hartlebury)

These areas have high levels of waste arisings and resource demand and are expected to be the focus for future economic and population growth.

Waste arisings, resource demand and onward treatment

- *C&I Waste Arisings:* *14%*
- *Waste management capacity (excluding landfill):* *35%*
- *Population in Urban Area:* *14%*

Although these are distinct settlements in different districts, they are a natural cluster with close links to traditional manufacturing industries and the West Midlands conurbation. These settlements form a focus of waste arisings.

This area has the greatest concentration of waste management facilities for transfer, treatment and disposal and this plays an important role for waste management in the county. It is also one of the areas with the greatest resource demand. Future waste management development in the Kidderminster area could benefit from clustering, as supported by consultation responses.

With links to the West Midlands conurbation and traditional manufacturing industries, waste arisings are currently concentrated in and around these towns. Significant growth is expected in these areas and this is likely to result in a modest increase in arisings

Connectivity

Future growth in waste management in the Kidderminster area would be supported by good connections to the strategic transport network via the A449. Kidderminster is served by rail connecting it to Worcester and Birmingham and is also on the Severn Valley Heritage railway line. There is limited potential for the transport of waste by water.

The River Severn is navigable as far north as Stourport and connects to the Staffordshire & Worcestershire Canal at this point.

Environmental considerations

Habitat Regulations Assessment

The assessment concludes that there would be 'no likely significant effect' on European sites from the development of thermal treatment facilities or from other waste facilities on the areas of search in the Kidderminster area.

However, any development that falls within the flood zones 2 and 3 and the groundwater source protection zones (inner zone, outer zone and total catchment) would need to consider water pollution effects and demonstrate, including consideration of mitigation and control measures as necessary, that there would be no likely significant effects.

Flood

Kidderminster is protected by flood alleviation scheme designed to create a 1% degree of protection. Most of these defences are in good or very good condition. The SFRA identifies that some proposed future housing development sites may be at risk

from flooding. The development of SUDS is particularly recommended to reduce surface water flooding.

Opportunities

13 areas of search were identified as potentially suitable for waste management facilities in this area. There are approximately 8.9 ha of available land/units in these areas of search.

Malvern area

Whilst the level of waste arisings in the vicinity of Malvern is lower than in Worcester, Kidderminster and Redditch, they are still substantial and the pattern of distribution reflects the presence of industrial uses on the eastern edge of the town.

Waste arisings, resource demand and onward treatment

- *C&I Waste Arisings:* *5%*
- *Waste management capacity:* *1%*
- *Population in Urban Area:* *6%*

The Malvern area forms part of the Central Technology belt, one of the High Technology Corridors identified in the West Midlands. Malvern is identified as a Key Node for education/research facilities within the central technology belt, which seeks to cluster opportunities for further research and high technology businesses in close proximity to existing research centres. This is expected to be the focus of economic development in Malvern. Although it is geographically close to Herefordshire, there are few transport links over the Malvern Hills.

Future waste management development to the west of the town is unlikely as the Malvern Hills are designated as an Area of Outstanding Natural Beauty.

Waste management capacity in this area is limited to a Household Waste Recycling Centre and a metal recycling site. However, resource demand in this area is high. There is therefore potential to increase waste management capacity to support the functions of the area.

Connectivity

The majority of industrial areas are to the east of the area which has good highway links to the Worcester area. The town is served by a railway but this is not linked to the industrial areas.

Environmental considerations

Habitat Regulations Assessment

The assessment concludes that there would be 'no likely significant effect' on European sites from the development of thermal treatment facilities or from other waste facilities on the areas of search in the Malvern area.

However, any development that falls within the flood zones 2 and 3 and the groundwater source protection zones (inner zone, outer zone and total catchment)

would need to consider water pollution effects and demonstrate, including consideration of mitigation and control measures as necessary, that there would be no likely significant effects.

Flood

The main cause of flooding within Malvern is surface water flooding from sewers and overland flow.

In Malvern, Whippets Brook is a problem, due to being a quick response catchment. Flooding problems have been identified at Tanhouse Lane, where Whippets brook runs through a residential area. Redevelopment of the Defence Evaluation Research Agency could cause more problems

In Malvern Hills District the main cause of flooding is local watercourses and surface water sewers. In particular, rapid response catchments are of concern and as many of the watercourses at risk from such flooding are less than 3km^2 in area there are no Flood Risk Maps covering these areas. The Environment Agency have produced a Rapid Response Risk Register based on rainfall modelling techniques similar to the Surface Water Vulnerability Maps produced by JBA Consulting and these will be useful to identify areas at risk from rapid response catchments.

Opportunities

5 areas of search were identified as potentially suitable for waste management facilities in this area. There are approximately 2.8 ha of available land/units in these areas of search.

The SWJCS Preferred Options' South Worcestershire Employment Land Review recommends that Malvern should take on additional requirements for B2/B8 (manufacturing / storage and distribution) land to help support existing industry within the area. It expects that the Malvern Hills Science Park would continue to be the leading location in South Worcestershire with regard to the Research and Development sector and that this sector will require further land allocations into the future to cope with expected demand.

The existing Malvern Hills Local Plan allocates a net increase of 4.5ha of employment land at the QinetiQ site, through redevelopment and rationalisation of QinetiQ's existing facilities, which offers the potential for freeing additional employment land in close proximity to QinetiQ. This allocation will be taken forward through the Joint Core Strategy and is included in the 12 ha of employment land that is committed in the Malvern Hills District.[48] Preferred broad locations for growth are considered to the north east and/or east of Malvern, as follows:

- to the north-east of Malvern, in the vicinity of Newland, east of railway to accommodate some 1,100 dwellings and 10 ha of employment land
- to the south of Townsend Way, east of Mayfield Road, for 500 dwellings and 7ha of employment land

Pershore area

Waste arisings, resource demand and onward treatment

[48] South Worcestershire Joint Core Strategy Preferred Options (September 2008) paras 6.9-10

- *C&I Waste Arisings:* *3%*
- *Waste management capacity:* *10%*
- *Population in Urban Area:* *1%*

The distribution of arisings reflects Pershore's function as a major market town. In this area there is one large site which includes landfill, composting, transfer and a household recycling centre. This accounts for the majority of the capacity in this area. There may be benefits in directing future waste management facilities to this area to benefit from this cluster of facilities; however most of the existing facilities are time-limited. Care should also be taken not to over-provide in this area.

Resource demand is significant for the south of the County and several industrial estates exist to the north of the town.

Connectivity

This area is well connected to the strategic transport network.

Environmental considerations

Habitat Regulations Assessment

The assessment concludes that there would be 'no likely significant effect' on European sites from the development of thermal treatment facilities or from other waste facilities on the areas of search in the Pershore area.

However, any development that falls within the flood zones 2 and 3 and the groundwater source protection zones (inner zone, outer zone and total catchment) would need to consider water pollution effects and demonstrate, including consideration of mitigation and control measures as necessary, that there would be no likely significant effects.

Flood

The main causes of flooding within Pershore are the River Avon, several smaller watercourses and surface water flooding from sewers and overland flow. The town is highlighted in the Severn CFMP as having a significant number of properties at risk from fluvial flooding. The Severn CFMP has also highlighted that surface water flooding from run–off is an issue, in Pershore.

Opportunities

3 areas of search were identified as potentially suitable for waste management facilities in this area. There are approximately 0.25 ha of available land/units in these areas of search. There may however but greater opportunity for development in redundant agricultural buildings in this area than in the more urban areas.

In identifying locations for growth of approximately 1,000 dwellings and up to 5ha of employment land the town will need to expand beyond the existing development boundary as defined in the Wychavon District Local Plan 2006 due to limited urban capacity

In directing development to the north of the town it is important that essential infrastructure improvements are in place (Issue 11, Option1). Specifically the link

from the A44/Wyre Piddle By-pass roundabout to Keytec 7 Business Park (identified in the Wychavon Local Plan (2006) Policy SR6 refers), will need to be delivered.

Redditch area

The Redditch area has high levels of waste arisings and resource demand and is expected to be the focus for future economic and population growth.

Waste arisings, resource demand and onward treatment

- *C&I Waste Arisings:* *21%*
- *Waste management capacity (excluding landfill):* *11%*
- *Population in Urban Area:* *13%*

The Redditch area has links to traditional manufacturing industries and the West Midlands conurbation. The area adjoins Warwickshire, with good links to Studley and Alcester.

Following the Kidderminster area, this has the greatest concentration of waste management facilities in the county, with a mixture of facilities for transfer and treatment, however disposal capacity in this area is lower. The Redditch area has one of the highest levels of resource demand.

With links to the West Midlands conurbation and traditional manufacturing industries, waste arisings are currently concentrated in and around these towns. Significant growth is expected in these areas and this is likely to result in a modest increase in arisings

Connectivity

The Redditch area has good connections to the strategic highways network and significant industrial areas which could accommodate waste management facilities. There is limited potential for transport by rail in Redditch, which is the terminus of the Cross-City line. There is no potential for transport of waste by water.

Environmental considerations

Habitat Regulations Assessment

The Redditch area is over 15km from European Sites and the assessment concludes that there would be 'no likely significant effect' on European sites from the development of thermal treatment or waste management facilities.

However, any development that falls within the flood zones 2 and 3 and the groundwater source protection zones (inner zone, outer zone and total catchment) would need to consider water pollution effects and demonstrate, including consideration of mitigation and control measures as necessary, that there would be no likely significant effects.

Flood

Redditch Borough is not prone to the major river flooding As Redditch is located at the base of the incline up to the Birmingham plateau and is on relatively flat land, it

suffers from rapid flash flooding as its numerous brooks and ordinary watercourses deliver storm water from the higher ground to the River Arrow. As the gradient suddenly reduces, the watercourses rapidly exceed their capacity and have a tendency to 'pool', flooding the surrounding area. This is most notable on the Batchley Brook, which flows into the north-western corner of Redditch town. In many cases this is attributable to blockages in the channel or problematic culverts.

The River Arrow flows from the northwest to the southeast through the centre of Redditch town. It is a fast moving river in terms of channel position and, as a result, there are numerous old channel sections located on either side of the active channel through Redditch town. There are very few reports of destructive flooding from the River Arrow within Redditch, with latest reported occurrences in 1900 and 1960, both of which precede any flood defences and channel maintenance.

Multiple accounts of sewer flooding have been reported within the Borough, although limited to Redditch town, Astwood Bank and the village of Feckenham.

Opportunities

8 areas of search were identified as potentially suitable for waste management facilities in this area. There are approximately 10.7 ha of available land/units in these areas of search.

Tenbury Wells area

Commercial and industrial arisings and resource demand in Tenbury is higher than in the surrounding rural areas, although they are modest in comparison to other larger settlements.

Waste arisings, resource demand and onward treatment

- *C&I Waste Arisings:* *<0.5%*
- *Waste management capacity:* *<0.5%*
- *Population in Urban Area:* *1%*

Future growth in this area is expected to be low as much of the area is constrained by flooding.

Connectivity

The Tenbury Wells area has good highway links to Kidderminster, as well as Ludlow in Shropshire and Leominster in Herefordshire.

Environmental considerations

Habitat Regulations Assessment

The assessment concludes that there would be 'no likely significant effect' on European sites from the development of thermal treatment facilities or from other waste facilities on the area of search in the Tenbury Wells area.

However, any development that falls within the flood zones 2 and 3 and the groundwater source protection zones (inner zone, outer zone and total catchment)

would need to consider water pollution effects and demonstrate, including consideration of mitigation and control measures as necessary, that there would be no likely significant effects.

Flood

The main causes of flooding within Tenbury Wells are the River Teme, Kyre Brook and surface water flooding from sewers and overland flow. Flooding usually occurs first from the Kyre Brook before flooding from the River Teme starts. In addition, a culverted section of an un-named watercourse causes flooding at Bog Lane. The cattle market near the centre of town is a low spot and has frequently been flooded. The British Waterways Board report identified 39 flooded properties in Tenbury Wells (2007 floods), mainly from surface water.

Bog Lane has a culverted watercourse which caused severe surface water flooding in 2007. Water follows flow routes along Bog Lane, Berrington Gardens, Cross Street and down towards the centre of town. There are surface water problems at Wheeler Orchard to the south of Tenbury Wells town centre, with an overland flood route affecting properties back to the Kyre Brook. There are similar problems affecting properties near The Crescent.

Opportunities

One area of search has been identified in the Tenbury Wells area. There is currently one available unit on this industrial estate.

The SWJCS Preferred Options states the majority of employment land is situated north of the river in Burford and it is considered that the existing employment sites in Malvern Hills District chould be the focus for small-scale local needs employment growth only.

There is also scope to make more intensive use of the existing land at Tenbury Business Park, to the south of the town. Scope may exist to identify land, for small starter type units/live work units. Employment development at Tenbury Wells will be limited to meeting local needs only enhancing the economic prosperity of the town and its rural surroundings., No specific allocations are anticipated beyond the continued implementation of the existing Tenbury Business Park. The release of any additional land for employment uses at Tenbury, will take place only once Tenbury Business Park has been fully developed and subject to consideration of the full range of employment development opportunities which exist on a cross boundary basis within Burford which is within South Shropshire District.[49]

Upton-upon-Severn area

Commercial and industrial arisings and resource demand in Upton is higher than in the surrounding rural areas, although they are modest in comparison to other larger settlements.

Waste arisings, resource demand and onward treatment

- *C&I Waste Arisings:* *<0.5%*
- *Waste management capacity:* *<0.5%*

[49] South Worcestershire Joint Core Strategy Preferred Options (September 2008) paras 9.13 and 9.14

- *Population in Urban Area:* *1%*

There is very little waste management capacity in this area.

Future growth in this area is expected to be low as much of the area is constrained by flooding.

Connectivity

The Upton-upon-Severn area has good highway links to Worcester, Malvern as well as Tewkesbury in Gloucestershire and the motorway network.

Environmental considerations

Habitat Regulations Assessment

The assessment concludes that there would be 'no likely significant effect' on European sites from the development of thermal treatment facilities or from other waste facilities on the area of search in the Upton-upon-severn area.

However, any development that falls within the flood zones 2 and 3 and the groundwater source protection zones (inner zone, outer zone and total catchment) would need to consider water pollution effects and demonstrate, including consideration of mitigation and control measures as necessary, that there would be no likely significant effects.

Flood

The main causes of flooding within Upton upon Severn are the River Severn and surface water flooding from sewers and overland flow. There is an important flood flow route to west of the town during extreme flood events on the River Severn, which essentially isolates the town. Proposals for permanent defences within Upton upon Severn have been flagged for the near future.

Opportunities

One area of search has been identified in the Upton-upon-Severn area. There is currently one available unit on this industrial estate.

Employment opportunities will be small scale, but there will be scope for some growth in jobs at Upton marina. There may be scope for small-scale employment growth for small workshops or live/work units in Tunnel Hill[50].

Worcester area[51]

The Worcester area has high levels of waste arisings and resource demand and is expected to be the focus for future economic and population growth.

Waste arisings, resource demand and onward treatment

[50] South Worcestershire Joint Core Strategy Preferred Options (September 2008) para 10.11
[51] Worcester City is a constrained area and the South Worcestershire Joint Core Strategy acknowledges the need for growth to take place outside the District boundary.

- *C&I Waste Arisings:* *23%*
- *Waste management capacity (excluding landfill):* *12%*
- *Population in Urban Area:* *17%*

Roughly a third of new employment land in Worcestershire up to 2026 is expected to be in this area and Worcester forms part of the Central Technology Belt. Current waste management capacity is limited to sorting and transfer facilities, with no treatment facilities.

Worcester provides a focus of resource demand, this alongside good connections to strategic transport network would support an increased role for Worcester in waste management.

Connectivity

Worcester is well placed on the strategic transport network. The Cotswold railway line and the Birmingham-Bristol railway run through the city, as do the River Severn and the Worcester & Birmingham Canal. The M5 motorway runs north-south to the east of the city. There are some issues relating to congestion due to the limited river crossing points. There are also several Air Quality Management Areas in Worcester city which result from congestion.

Environmental considerations

Habitat Regulations Assessment

The assessment concludes that there would be 'no likely significant effect' on European sites from the development of thermal treatment facilities on most of the areas of search in the Worcester area; however there are 4 areas of search where this conclusion cannot be made. (This is based on the assessment of a thermal treatment facility of 250ktpa, 80m stack and 250ktpa, 100m stack.)

The assessment does however conclude that there would be no likely significant effects on European sites from the development of a thermal treatment facility of 150ktpa, 80m stack or from other waste facilities on the areas of search in the Worcester area.

The air dispersion modelling indicates no likely significant effects in the west of the area, but that this conclusion cannot be made in the east of the area.

Any development that falls within the flood zones 2 and 3 and the groundwater source protection zones (inner zone, outer zone and total catchment) would need to consider water pollution effects and demonstrate, including consideration of mitigation and control measures as necessary, that there would be no likely significant effects.

Flood Risk

The South Worcestershire Joint Core Strategy SFRA identifies that 14% of Worcester is at risk from flooding and that this could rise to 20% as a result of climate change. Detailed flood zone maps are available and show the areas at greatest risk to be from the River Severn, River Teme, Barbourne Brook and some smaller watercourses with surface water flooding from sewers and overland flow. Canal

flooding has also been recorded in the past which has been attributed to vandalism of the lock gates. These are mapped in the SFRA.

Surface Water Management Plans will be produced for Worcester City which will guide future development. The SFRA recommends that for large developments, a strategic approach to SuDS for runoff attenuation and water quality improvement linking to the green infrastructure plan is required;

Opportunities

14 areas of search were identified as potentially suitable for waste management facilities in this area. There are approximately 6.2 ha of available land/units in these areas of search.

Worcester is identified as a Settlement of Significant Development in the proposed Phase 2 revision of the WMRSS and a New Growth Point. Worcester forms part of the Central Technology Belt.and significant employment related development is anticipated in connection with the Belt. It is highly likely that future development plans for Worcestershire will maintain the city`s role as the focus for new development. The South Worcestershire Joint Core Strategy Preferred Options consultation (September 2008) proposed that Worcester's housing needs and employment needs will be accommodated by:

- infill development within the city,
- limited Greenfield extension at Kilbury Drive immediately outside the City Boundary,
- major urban extensions to the west and north west, and south and south east of the city, and
- limited Greenfield development in the vicinity of Fernhill Heath.
- In addition a Regional Investment Site will be identified outside the city boundary in the vicinity of M5 Junction 6 for indigenous growth.

But recognised that the "emerging evidence" as to where would be best was "proving to be contradictory[52]"

The South Worcestershire Employment Land Review identified a need for 81Ha of new employment land, 41 hectares of which are be identified within or adjacent to the proposed urban extensions.

Other areas

- *C&I Waste Arisings:* *14.5%*
- *Waste management capacity:* *26%*
- *Population in Urban Area:* *31%*

These areas are often rural and have lower resource demand and arisings than the settlements in the hierarchy, although they may have some agricultural waste arisings. Some waste management facilities exist in these areas but are relatively dispersed meaning that on the whole these areas have limited waste management capacity.

[52] South Worcestershire Joint Core Strategy Preferred Options (September 2008) para 5.6

60% of the waste management capacity in these areas is from waste management facilities located on current landfill sites and these facilities are limited to the life of the landfill. Other activities make use of disused agricultural land and buildings, mineral workings and disused airfields.

Options preferred by consultees and stakeholders during development of the Strategy were to focus development in urban locations throughout Worcestershire with justified minimal development in rural areas. This approach could be followed when directing new waste management development.

Waste arisings

In general, arisings in rural areas are lower than in the settlements in the hierarchy.

Onward treatment and end users

Some facilities exist in rural areas but these are relatively dispersed. The main rural waste activity is landfill, but other activities make use of disused agricultural land and buildings, mineral workings and disused airfields. These areas currently have limited waste management capacity and low levels of resource demand. New facilities may be appropriate should specific need arise.

Connectivity:

Connectivity to the strategic transport network will depend on the area, but in general the local road network will be able to support smaller increases in HGV movements than those on the strategic highway network.

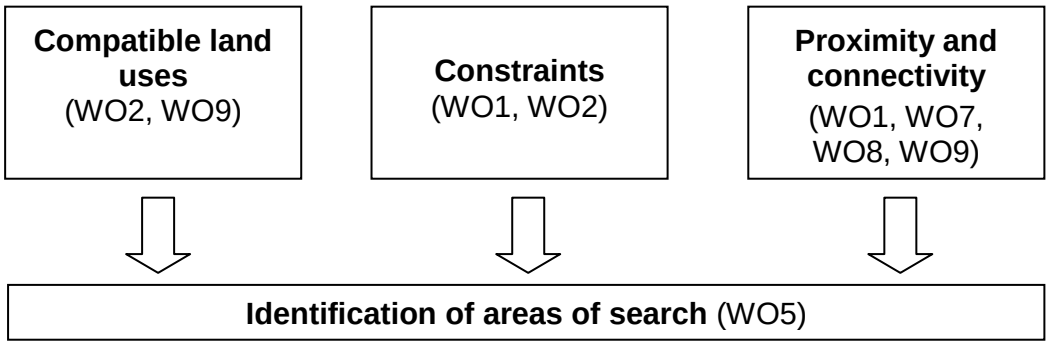
Annex A: Identifying areas of land that might be suitable for Waste Management Development: Method for Identifying Areas of Search for the First Draft Submission Consultation

This Annex sets out how the approach to identifying *areas of search* in the First Draft Submission consultation was developed.

Issues to be considered in identifying areas of search

In order to meet the objectives set out of the Waste Core Strategy as set out in First Draft Submission consultation there were many elements to consider. We identified three concepts that could be used to achieve our objectives and these formed the basis for identifying *areas of search*.

Figure 22: Key concepts for identifying areas of search and Waste Core Strategy objectives they contribute towards



There were several different approaches that could be taken when considering each of these elements. The approaches we considered are outlined below and our preferred method for each is identified.

Compatible land uses

RSS phase 2 revision policy W5 listed the following types of land as compatible for waste management development.

- Sites with current use rights (current planning permission) for waste management purposes;
- Active mineral workings or landfill sites (where operationally related to the permitted use and for a temporary period commensurate with the permitted use of the site);
- Previous or existing industrial land; or
- Contaminated or derelict employment land.
- Land within or adjoining a sewage treatment works; or
- Redundant agricultural or forestry buildings and their curtilage.

The Secretary of State has stated his intention to revoke the RSS and the proposed phase 2 revisions have not become policy, however this list of suitable land was developed through debate at the RTAB (Regional Technical Advisory Body), which includes local authority waste planners, waste collection and disposal officers, waste operators, Friends of the Earth, academic representation, the Environment Agency, Defra and GOWM and was found to be sound by the panel at the RSS Examination in Public (EiP). This method is entirely in accordance with government policy but does not consider the differing nature of waste management activities.

The compatible land uses listed in the proposed Phase 2 Revision of the West Midlands RSS will help to guide the identification of potentially suitable areas of land for more detailed consideration. Following the change of government in May 2010, the Secretary of State has expressed an intention to revoke Regional Spatial Strategies and this is a material planning consideration, however until they are revoked they remain part of the development plan. The evidence upon which the RSS and RSS phase 2 revision was based is still considered to be valid and the ideas in the proposed RSS revision reflect national policy. These categories have been subject to much discussion and stakeholder involvement during the development of the Phase 2 revision of the RSS and reflect the types of land that are have in the past been most suitable for waste management development in Worcestershire.

For these reasons we have not considered any further options at this stage.

However, it is acknowledged that this approach has some limitations. The term 'waste management facility' encompasses a broad range of operations which can be very different in nature and which can have different impacts on surrounding uses. PPS 10 states that the Waste Core Strategy should not be technology specific, however it is possible to categorise broad types of land use, where particular kinds of technology would be appropriate.

To reflect the comments received on the *Emerging Preferred Options* consultation, we identified three broad categories of facility. These take into account size and other characteristics of different types of waste management facility (see Table 9).

These are not precise terms. Facilities within the kinds of examples given may be very different in practice, some facilities combine several activities and we anticipate that new technologies will be developed which do not fit within the examples given. We are most concerned that our approach should not be over-

prescriptive. The categories chosen have been deliberately written in very broad terms.

Table 9. Broad categories of waste management facility

Description	Typical examples
Category 1	
These would include operations which are akin to industrial activities.	• Large scale anaerobic digestion • Material recovery facilities • Mechanical biological treatment Metal recycling and end of life vehicle facilities • Physical treatment • Thermal treatment • Waste transfer and bulking stations
Category 2	
The nature and scale of these developments can be less industrial and may be more in keeping with other locations.	• In-vessel composting • Small scale anaerobic digestion facilities • Small scale waste transfer activities taking place in redundant agricultural buildings • Windrow composting facilities
Category 3	
Some facilities may not fall into either category 1 or 2 and the proposed location would need to be considered on its own merits in relation to the proposed development.	• Landfill sites • Local recyclable collection points (such as "bottle banks" in car parks) • Waste water treatment facilities

There are two general approaches we could take to allocating land based on this categorisation:

a) Allocate land suitable for any category

In line with the approach taken in the proposed RSS phase 2 revision, the Strategy could identify *areas of search* that are suitable for any type of waste management facility.

Evaluation

This would be the most flexible option but it may be a false assumption as not all facilities would be suitable on the same types of land. For example landfill is unlikely to be suitable on industrial land.

b) Identify land for each individual category

This method would identify which of the compatible land types listed in the RSS would be suitable for each of the three categories.

Evaluation

This method would provide more certainty and be more proactive in directing the right types of development to the right places. It is possible that there may be some overlap with both category 1 and 2 facilities potentially

being suitable on some types of land, such as sites with current use rights and the approach would need to recognise this. One limitation of this approach is that we do not believe that it is possible to determine the capacity gap or land requirements for these three categories individually.

Preferred Approach: Option b) Identify land for each individual category

Option b takes account of the differing nature of waste management facilities and more fully reflects the concerns raised in the *Emerging Preferred Options* consultation. In order for this approach to be fully implemented, it would need to identify the types of land suitable for each category whilst acknowledging that some types of land may be suitable for more than one category. With this in mind, Table 10 has been developed.

Table 10 shows the types of existing land uses which might be compatible with category 1 and 2 facilities. The more diverse nature of category 3 facilities means that they require more specialised locations which need to be judged on case-by-case basis as proposals are brought forward. This may include land uses not included in the list of compatible land uses in the RSS, for example 'bring banks' may be most appropriate located alongside community facilities.

Table 10. Existing land uses compatible with category 1 and 2 facilities

	Category 1	Category 2	Category 3
Sites with current use rights for waste management purposes	✓	✓	?
Active mineral workings or landfill sites	✓	✓	?
Industrial land	✓	✓	?
Contaminated or derelict employment land	✓	✓	?
Land within or adjoining a sewage treatment works	×	✓	?
Redundant agricultural or forestry buildings or their curtilage	×	✓	?

Current use rights

Locations with existing use rights for waste management development are in principle suitable for such uses and are likely, subject to the scale, nature and setting of the existing and proposed facilities, to be able to accommodate further waste management development.

Evaluation

Category 1 and Category 2 proposals would be suitable in these areas. For category 3 proposals this would depend on the nature of the proposal.

Active mineral workings or landfill sites

These land uses are generally compatible with waste management development, in principle however active mineral workings and landfill sites have approved working plans and restoration schemes as part of their original permissions which may limit or preclude their use for waste management development. Due to their nature these activities have a finite life-span and are usually in open countryside and further waste management development on these sites is usually only justifiable when it complements the primary use of the site and is likely to be time-limited accordingly.

Evaluation
The majority of mineral workings and landfill sites are large-scale in nature and could often physically accommodate category 1 development. In general category 2 sites could also be accommodated on these sites. For category 3 proposals this would depend on the nature of the proposal.

The principle consideration for all three categories will be whether the proposal is operationally related to the existing permitted use and will be for a temporary period commensurate with the existing permitted use.

Industrial land

There are industrial estates in and around every main urban area in the county. Many waste management operations are akin to industrial activities and take place in industrial units. The county's industrial estates differ in size and nature with many being suitable for waste management facilities.

Evaluation
Category 1 includes operations which are akin to industrial activities and are therefore likely to be compatible with existing industrial uses. Category 2 operations are less industrial in nature but when carried out indoors are likely to be compatible with existing industrial uses. For category 3 proposals this would depend on the nature of the proposal.

Contaminated or derelict employment land

There are several hundred sites known to be affected by contamination in Worcestershire, It is likely that waste management operations could take place on this land, without being harmed by the contamination. In principle therefore waste management development and industrial activities are seen as a viable ways of re-using such land. This land is often low grade and can be suited to low value land-intensive waste management activities, as long as they would not adversely impact on the source, pathway or receptor to result in a contamination impact.

There are only two sites listed on the contaminated land register in the county, one of which has been remediated and one which is currently occupied. Remediation must be undertaken on any land on the contaminated land register before it is redeveloped.

Many waste management operations are akin to industrial activities and therefore it is likely that some derelict employment land will be suitable for waste management facilities.

Evaluation
Category 1 includes operations which are akin to industrial activities and are therefore likely to be compatible with contaminated or derelict employment land. Category 2 operations are less industrial in nature but it is likely that these activities can be carried out without being harmed by contamination. For category 3 proposals this would depend on the nature of the proposal.

Sewage treatment works

There are varying scales of sewage treatment works in Worcestershire, from large scale works managing waste water from entire towns to small scale works serving only a few dwellings. Many are in close proximity to sensitive receptors. Any development on these sites must be careful not to constrain any future expansion of sewage treatment works.

Evaluation
The industrial nature of category 1 facilities would not be suited to land within or adjoining a sewage treatment works. The scale of category 2 operations means they are less likely to constrain any future expansion of sewage treatment works. Many category 2 operations could also be complementary or similar in nature to the activities already undertaken at sewage treatment works. For category 3 proposals this would depend on the nature of the proposal.

Redundant agricultural or forestry buildings

The majority of Worcestershire is rural and with the changing nature of the rural economy it is likely that some redundant agricultural or forestry buildings and land will exist. Many of these will be served by infrastructure which would allow a waste management facility to be developed and this in turn would provide greater diversity in the rural economy and provide for local needs.

Evaluation
The industrial nature of category 1 facilities would not be suited to a rural location redundant agricultural or forestry buildings or land. The scale and nature of category 2 operations will generally be in keeping with rural areas. Some operations such as the processing of biodegradable waste will be akin to agricultural activities and other small scale facilities would be suitable inside redundant buildings. For category 3 proposals this would depend on the nature of the proposal.

Other considerations

Even though a location may be one of the listed compatible land uses, the infrastructure of these locations must be adequate to support a waste management facility. This would include adequate quality of buildings, internal access roads and other site infrastructure. These should be taken into account when identifying *areas of search*.

Constraints

To achieve objective WO2 it was essential that the Strategy included provision to protect and enhance the County's natural resources, environmental, social, cultural and economic assets, the character and amenity of the local area and the health and wellbeing of the local people.

We considered a variety of different features and characteristics and looked at whether they should be identified as primary constraints to development, secondary constraints to development, or whether they can be dealt with adequately through other policies in the development plan, as shown in Table 11. In general the identified primary constraints are matters of international and national importance and those features that contribute to the distinctive character of the county are considered to be secondary constraints.

Table 11. Assessment of potential constraints

Issue	Primary constraint	Secondary constraint	Other policies in the WCS	Other statutory regulation	Justification
Air Quality Management Areas			★		The main factor in Air Quality Management Areas in Worcestershire is road transport emissions. The intention of Air Quality Management Plans is to reduce emissions in these areas to an acceptable level and therefore they are likely to change during the lifetime of the Strategy. There is a diversity of types of waste management operations and most are unlikely to have significant impacts on air quality from onsite activity. Policies in the Waste Core Strategy can assess impacts as individual proposals are brought forward, this could include consideration of impacts from transport.
Ancient semi-natural woodland	★				PPS9 states that "Ancient woodland is a valuable biodiversity resource both for its diversity of species and for its longevity as woodland. Once lost it cannot be recreated." Planning permission that would result in its loss or deterioration should not be permitted unless the need for, and benefit of the development in that location would outweigh the loss of the woodland habitat. Therefore this has been listed as a primary constraint.
Areas of Outstanding Natural Beauty (AONBs)	★				The Malvern Hills and the Cotswolds AONB are partly within the County.

					Planning Policy Statement 7: Sustainable Development in Rural Areas states that: "Areas of Outstanding Natural Beauty (AONB) have been confirmed by the Government as having the highest status of protection in relation to landscape and scenic beauty. The conservation of the natural beauty of the landscape and countryside should therefore be given great weight in planning policies and development control decisions in these areas...Major developments should not take place in these designated areas, except in exceptional circumstances…Major development proposals should be demonstrated to be in the public interest before being allowed to proceed."
Conservation Areas	★				These are designated heritage assets. Once lost heritage assets cannot be replaced and their loss has a cultural, environmental, economic and social impact. In accordance with PPS5 substantial harm to or loss of designated heritage assets of the highest significance should be wholly exceptional.
Contaminated land				★	This is considered to be compatible land for waste management development. Remediation is dealt with through other statutory frameworks.
Flood Zone 3	★				Flood zone 3 has been allocated as a primary constraint and flood zone 2 as a secondary constraint. This follows the approach taken in PPS 25.
Flood Zone 2		★			
Green belt		★			Green belt is a national designation. However, it has been listed as a secondary constraint because waste management development may be possible without causing harm to the reasons for which the green belt was identified.
Land instability and risk of subsidence	-	-	-	-	Broad mapping of risk of subsidence has been undertaken in the County, however where a risk of subsidence is likely applicants will be expected to provide information detailed enough to be used in assessment of the suitability of a location for waste management development. We intend to develop policies in the WCS to consider this.
Listed buildings and their settings	★				There are over 6,800 Listed Buildings in Worcestershire. These are designated heritage assets. Once lost heritage assets cannot be replaced and their loss has a cultural, environmental, economic and social impact. In accordance with PPS5 substantial harm to or loss of designated heritage assets of the highest significance should be wholly exceptional.
Local Geological Sites		★			Local Geological Sites are non-statutory areas of local importance. They complement nationally and internationally designated geological sites and contribute towards the distinctive character of the county. They have therefore been identified as secondary

					constraints.
Local Nature Reserves		★			To qualify for Local Nature Reserve status, a site must be of importance for wildlife, geology, education or public enjoyment. They contribute to the distinctive character of the county and have therefore been identified as secondary constraints.
Mineral resources identified in the development plan as a preferred area or area of search for mineral working or related development		★			Mineral resources should not be sterilised by new development. However, this has been listed as a secondary constraint as waste management development is possible without causing harm to the reasons for which the feature was identified.
National Nature Reserves	★				These are exemplar Sites of Special Scientific Interest (SSSIs) and are afforded the same level of protection. (See SSSIs below)
Natura 2000 sites - a network of European designated sites for wildlife, consisting of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).	★			★	The most important sites for biodiversity are those identified through international conventions and European Directives. There are two SACs (European designated Special Areas of Conservation) in the county. They are established to protect natural habitats, rare and threatened species (other than birds) and habitats for these species. SACs are protected under international law, and are afforded a high degree of protection in the UK. Therefore they have been identified as a primary constraint. There are further sites within 15km of the county boundary. Provision to protect these will be set out in the policy framework for the WCS.
Ramsar sites	★				The most important sites for biodiversity are those identified through international conventions and European Directives. Ramsar sites are wetlands of international importance, designated under the Ramsar Convention. There are currently no Ramsar sites in Worcestershire but they have been identified as a primary constraint in case any are designated in future.
Registered Battlefields	★				These are designated heritage assets. Once lost heritage assets cannot be replaced and their loss has a cultural, environmental, economic and social impact. In accordance with PPS5 substantial harm to or loss of designated heritage assets of the highest significance should be wholly exceptional.
Registered Parks and Gardens	★				These are designated heritage assets. Once lost heritage assets cannot be replaced and their loss has a cultural, environmental, economic and social impact. In accordance with PPS5 substantial harm to or loss of designated heritage assets of the highest significance should be wholly exceptional.
Scheduled and other ancient monuments	★				There are 235 Scheduled Ancient Monuments in Worcestershire. These are legally protected

					and designated heritage assets and their preservation is given priority over other land uses. Once lost heritage assets cannot be replaced and their loss has a cultural, environmental, economic and social impact. In accordance with PPS5 substantial harm to or loss of designated heritage assets of the highest significance should be wholly exceptional.
Source Protection Zone 1	★				The Environment Agency has defined Source Protection Zones (SPZs) for groundwater sources such as wells, boreholes and springs used for public drinking water supply. These zones show the risk of contamination from any activities that might cause pollution in the area. The closer the activity, the greater the risk. SPZ 1 has been listed as a primary constraint as the EA will object to all proposals for waste management facilities within this zone. SPZ 2 and 3 are listed as secondary constraints in accordance with EA guidance.
Source Protection Zone 2 and 3		★			
Special Wildlife Sites		★			There are currently 459 Special Wildlife Sites in Worcestershire. These are the most important places for wildlife in the county outside of legally protected areas such as SSSIs. These sites contribute to the distinctive character of Worcestershire and have therefore been identified as secondary constraints.
Sites of Special Scientific Interest	★				SSSIs represent the best examples of our national wildlife habitats, geological features and landforms and have been identified by scientific survey as representing the highest conservation value. There are 111 SSSIs in the County. In accordance with PPS9, development should only be permitted where the benefits of the development, at this site, clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of SSSIs. SSSIs have been listed as a primary constraint, however other policies in the WCS include the need for impacts on SSSIs outside of the development site to be assessed.

Proximity and connectivity

In order to reduce waste miles and climate change emissions associated with transport, to enable communities to take responsibility for their own waste and to provide waste management services that support local businesses, sites should be close to waste arisings, onward treatment facilities and end-users. However proximity and connectivity go hand in hand. Whilst a site might be located physically close to arisings, onward treatment facilities or end users, without access to good quality transport links to connect sites, physical proximity has little relevance.

We have considered several alternatives for taking proximity and connectivity into account.

i. *Current arisings and resource demand by district*

Advantage West Midlands (AWM)[53] has identified commercial and industrial waste arisings for each Lower-level Super Output Area (LSOA)[54] in the West Midlands based on the industrial mix in each LSOA and the expected arisings from these activities.

This can be calculated at a district level and added to Municipal Waste arisings for each district to show the overall arisings per district (see Table 1). This broadly matches the pattern of distribution of current waste management capacity by District.

Table 12: Waste Arisings by District

District	C & I arisings	MSW arisings	Total arisings		Current distribution of capacity
			Total	%	
Bromsgrove	37,671	41,672	79,343	6.2	3.5%
Malvern Hills	36,751	24,102	60,853	4.8	3.4%
Redditch	142,770	28,940	171,710	13	13.3%
Worcester City	45,992	32,562	78,554	6.1	4.3%
Wychavon	384,781	44,686	429,467	33.5	35.9%
Wyre Forest	422,436	38,439	460,875	36	39.5%

We could make provision for the total amount of land needed by dividing it according to the distribution of arisings from each district, as shown in Table 2.

[53] West Midlands Landfill Diversion Strategy (AWM) 2009

[54] The smallest scale at which this information is available is by Lower-level Super Output Areas (LSOA) which are areas that roughly equate to 1,500 people and are used in collecting Census data.

Table 13: Hectares by District - based on current arisings

District	Distribution of waste arisings	Hectares for waste management development (by 2025/6) to the nearest 0.5Ha
Bromsgrove	6%	2.5 – 3.5
Malvern Hills	5%	2 – 3
Redditch	13%	5 – 7
Worcester City	6%	2.5 – 3.5
Wychavon	34%	14.5 – 19
Wyre Forest	36%	15 – 20

Note: amount of land required is 42.5-55.5ha, the above figures give a range of 41.5-56.0ha due to rounding.

Evaluation

It would be possible to use the distribution of waste arisings to derive the amount of land required in each district. However this approach does not consider proximity to urban areas, onward treatment facilities or end-users or any future growth in arisings. Nor does it give consideration to existing capacity. The proportion of waste capacity in Bromsgrove District, Worcester City and Malvern Hills is lower than the proportion of the arisings, whereas that in Wyre Forest and Wychavon is greater. This method does not make provision to consider this.

ii. Future growth by district

Future waste arisings from Commercial and Industrial waste could be estimated by considering future growth in employment land. The RSS phase 2 revisions proposed the following specific distribution of new employment land in the county.

28.1%	Worcester City
23.9%	Wychavon
17.7%	Redditch
11.5%	Wyre Forest
11.5%	Malvern Hills
7.3%	Bromsgrove.

These percentages were a useful indicator of where, at a sub regional level, most new development should take place and broadly where new arisings of Commercial and Industrial wastes were likely to be generated. The details of the location and timing of new employment land will be developed in more detail in District Council Local Development Documents. The nature of the businesses themselves and of the wastes likely to be produced is however dependent on development management decisions to be made in the future.

We could use this approach to divide the land requirements between each district, as shown in Table 3.

Table 14: Hectares by District - based on future growth

District	Distribution of employment land	Hectares for waste management development (by

		2025/6) to the nearest 0.5%
Worcester City	28.1%	12 – 15.5
Wychavon	23.9%	10 – 13
Redditch	17.7%	7.5 – 10
Wyre Forest	11.5%	5 – 6
Malvern Hills	11.5%	5 – 6
Bromsgrove	7.3%	3 – 4

Note: amount of land required is 42.5-55.5ha, the above figures give a range of 42.5-54.5ha due to rounding.

Evaluation

It would be possible to use the distribution of employment to derive the amount of land required in each district. However this approach does not consider existing arisings or current treatment capacity. It may be useful to fill any future capacity gap, however a capacity gap exists at present and this may not be the most suitable approach to addressing this. The fact that the coalition government has revoked the RSS also throws into question whether this scale and distribution of new development will take place.

iii. Current arisings by settlement

AWM has identified commercial and industrial waste arisings for each LSOA in the West Midlands based on the industrial mix in the LSOA and the expected arisings from these activities. These are shown for Worcestershire in Figure 6. Patterns of C&I waste arisings. These arisings are largely concentrated around the main settlements and it is believed that municipal waste arisings will also reflect this distribution, with 71% of the population of Worcestershire living in urban areas.

Evaluation

This is a useful indication of arisings and shows patterns across the county. However it is difficult to identify specific arisings in each settlement.

iv. Transport connections by settlement

Water and rail transport are more sustainable than road transport and therefore will be encouraged wherever possible. Potential opportunities for developing rail and water connections for waste movement exist, however these may not be immediately usable for such activities and there are only a limited number of sites where connections to these transport networks are possible.

In order to reduce waste miles by road, the WCS could use potential for connectivity to the water and rail network as a determining feature in site allocations.

Evaluation

Proximity to the rail or water network could facilitate new or re-established connections and contribute towards objective 7 (to reduce waste miles by road). However, multi-modal potential would usually be required with good connections to the strategic highway network in addition to connections to either rail or water. For example, it is unlikely that all movements of waste or other goods will be by water or rail and access will be needed for staff and

visitors and it is unlikely that all sources of arisings, onward treatment facilities or end users will be well connected by water or rail.

Neither the Local Transport Plan nor the current investment proposals for rail and water transport undertakers include any proposals to develop infrastructure which could serve waste facilities in Worcestershire.

In addition, this criterion does not take into account proximity to arisings, onward treatment facilities or end users.

v. *Geographic Hierarchy*

This could use the hierarchy set out in the Emerging Preferred Options consultation as a basis for determining the distribution of waste management facilities between settlements.

Evaluation
This method incorporates many of the factors considered in i-iv above. Deriving the exact land requirements for each settlement directly from this method would not be possible, however it could be possible to split the distribution between each level of the hierarchy and use this to inform the amount of land identified in each settlement.

vi. *Current arisings and resource demand by location*
Rather than considering the spatial distribution of waste management facilities, the proximity of specific locations could be considered. The data relating to arisings and resource demand by LSOA could be used to assess sites, with sites favoured in LSOAs with the highest levels of arisings and resource demand.

Evaluation
This would allow for detailed consideration of proximity but would not provide any overall direction for development and may make it more difficult to provide a strategic network of sites which supports the needs of the local economy. This approach would not be in accordance with PPS10.

vii. *Transport connections by location*
Rather than considering the spatial distribution of waste management facilities, the connectivity of specific locations could be considered. Each site could be assessed in terms of its access to water and rail transport and the strategic highway network.

Evaluation
This would allow for detailed consideration of connectivity but would not provide any overall direction for development and may make it more difficult to provide a strategic network of sites which supports the needs of the local economy. This approach would not be in accordance with PPS10.

Proximity to the rail or water network could facilitate new or re-established connections and contribute towards objective 7. However, multi-modal potential would usually be required with good connections to the strategic highway network in addition to connections to either rail or water. For

example, it is unlikely that all movements of waste or other goods will be by water or rail and access will be needed for staff and visitors and it is unlikely that all sources of arisings, onward treatment facilities or end users will be well connected by water or rail.

In addition, this criterion does not take into account proximity to arisings, onward treatment facilities or end users.

Preferred Approach: combination of options v) Geographic Hierarchy, vi) Arisings and resource demand by location, and vii) Transport by location

The preferred option was to assess each potential *area of search* in relation to arisings, resource demand and transport, but to use the geographic hierarchy developed as part of the First Draft Submission consultation to guide the pattern and distribution of new development.

This is discussed in detail in the main body of the document.

It was felt that these complimentary options would contribute to a rounded approach. They would allow for detailed consideration of proximity and connectivity of different scales, enabling a strategic network of sites to be provided to support each focus of arisings whilst considering the suitability of specific locality, in line with our general approach to undertake detailed assessments of locations and identify *areas of search*.

Identifying areas of search with regard to the geographic hierarchy forms part of the preferred method for several reasons:

- It balances considerations of proximity and connectivity, whereas most of the other possible methods only consider one aspect.
- It considers settlements rather than district boundaries:
    - This reflects patterns of arisings, onward treatment capacity and end-users in Worcestershire, which are largely concentrated around the main settlements rather than within district boundaries.
    - Proposed future growth will not naturally accord with district boundaries; for example, growth of Worcester and its expansion areas will not all be within Worcester City. This is recognised in the approach taken by Worcester City, Malvern Hills and Wychavon District Councils in their approach to the South Worcestershire Joint Core Strategy. Bromsgrove and Redditch are currently discussing similar cross boundary development of employment land.
- In practice, there are large industrial estates which serve but do not directly adjoin the main towns of the county. These sites are significant sources of arisings and, potentially, of future resource demand. There is a

tendency for industrial estates to be located along transport corridors between the main towns. Flexibility in considering settlement boundaries can allow for this to be taken into account.

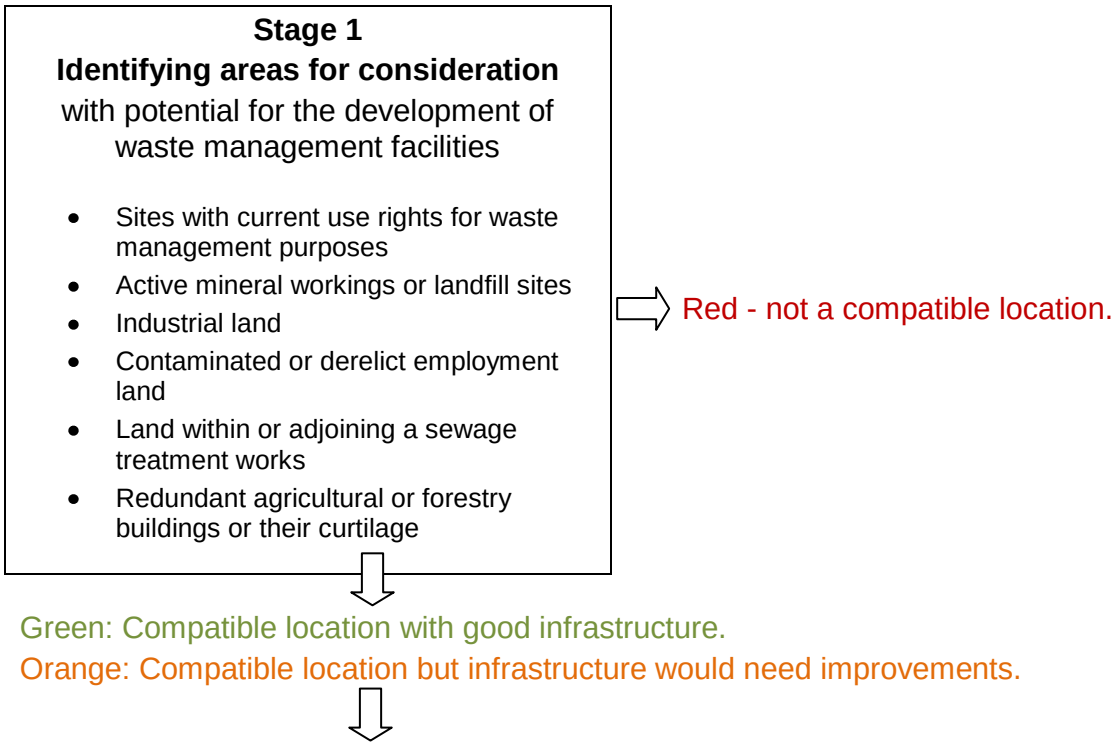
However this approach needed refining. One potential issue is that it does not allow for the distribution of the land required in each settlement to be derived from arisings or resource demand. The main body of the document sets out how an 'aspirational distribution' of areas of search was developed for each settlement in the hierarchy.

Final methodology for identifying areas of search

Having developed a preferred approach for dealing with each of the concepts outlined in Figure 22, we need to draw these together into a methodology for identifying *areas of search*. We have called this a 'traffic light' assessment and the stages undertaken are outlined in Figure 23 below.

At each stage of the 'traffic light' assessment, those locations identified as unsuitable (red) were discounted and those which are potentially suitable (green and orange) were taken forward for further consideration. Only locations classified as green in at least one category will be identified as *areas of search*.

Figure 23: Method for identifying *areas of search*



Stage 2

Assessment of constraints

including designated and non-designated areas and features

⇨ Red – Primary constraints

- Ancient semi-natural woodland
- Areas of Outstanding Natural Beauty (AONBs)
- Conservation Areas
- European or nationally designated nature conservation sites
  - Ramsar sites
  - Natura 2000 sites[55]
  - National Nature Reserves
  - SSSIs
- Flood Zone 3
- Listed Buildings
- Registered Battlefields
- Registered Parks and Gardens
- Scheduled and other ancient monuments and their settings
- Source Protection Zone 1

Green – no primary or secondary constraints

Orange – secondary constraints but no primary constraints

- Coal resource (potential hazard)
- Flood Zone 2
- Green Belt
- Local Geological Sites[56]
- Local Nature Reserves
- Mineral resources identified in the development plan as a preferred area for mineral working[57]
- Source Protection Zones 2 and 3
- Special Wildlife Sites

Stage 3

Assessment of connectivity

to the strategic transport network

Locations adjacent to railway networks or navigable waterways with supportive road links have been given preference due to the potential for multi-modal transport of waste to and from waste management facilities.

⇨ Red: Poor connectivity and no multimodal potential.

Green: Good transport/connectivity with multimodal potential.

Orange: Good transport/connectivity but no multimodal potential.

Stage 4

Assessment of proximity

to waste arisings, onward treatment facilities, end users

Locations in close proximity have been given preference. LSOA arisings and resources demand data can be used to demonstrate proximity but is not the only valid consideration.

To the appropriate level of the hierarchy

Stage 5

[55] Natura 2000 sites are a network of European designated sites for wildlife, consisting of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

[56] Formerly known as RIGS

[57] As identified by "saved" policy number 1 in the Hereford and Worcester Minerals Local Plan, April 1997, or any areas identified in future adopted policy.

Applying the methodology to identify areas of search

We have undertaken the five stages of the traffic light assessment to identify areas of search. Detail relating to each location assessed is set out in Appendix 1 to Annex A. Traffic light assessment. The following section outlines how we carried out this assessment.

Stage 1: Identifying areas for consideration

Desktop study

The first stage was to identify potential locations for assessment.

Sites with current use rights for waste management purposes
There are 93 waste management facilities[58] in Worcestershire. These were identified through the County Council's own records and records of licences and exemptions held by the Environment Agency.

These sites have not been assessed as potential areas of search as they are often discrete parcels of land and the identification of areas of search is not site specific. They could however be assessed using the methodology if they were to be brought forward.

Active mineral workings or landfill sites (where operationally related to the permitted use and for a temporary period commensurate with the permitted use of the site)
There are 18 permitted mineral workings and 11 permitted landfill sites[59] in Worcestershire. These have been identified using the council's own records of planning permissions and some sites have permission for both mineral workings and landfill.

All of these sites have been assessed through the traffic light assessment.

Industrial land
ERM was commissioned to identify potentially suitable industrial estates. They identified 148 sites by searching online business directories[60] [61] [62] [63] [64]

[58] As June 2009
[59] As June 2009
[60] http://yell.com/finds/Commercial-Property-Services/Industrial-and-Trading-Estates/UK/Worcestershire Accessed 25th February 2009
[61] http:///worcesterbusinesspark.com Accessed 25th February 2009
[62] http://www.saxonbusinesspark.co.uk Accessed 25th February 2009
[63] http://www.propertyfinder.com/uk/property/west+midlands/worcestershire/pershore/keytec+7+business+park Accessed 25th February 2009
[64] http://www.propertypilot.co.uk/cgi-bin/db2www.exe.n40home.d2w/report

as well as the Business and Property Search sections of the Worcestershire County Council Website. These were corroborated by the district councils.

This information was supplemented by local knowledge of County Council officers and once duplications within the lists were taken into account, this left 129 industrial estates which were assessed through the traffic light assessment.

Contaminated or derelict employment land

In Worcestershire there are two sites listed on the contaminated land register. There are several hundred sites known to be affected by contamination but, due to the diversity of land uses on these sites and varied significance of the contamination, it was not considered to be useful to identify these sites to inform the identification of areas of search. These sites have not been assessed but will be considered as they are brought forward.

30 areas of derelict land have been identified in the County[65] these areas are very diverse in nature and only those with a previous employment use would be appropriate

Land within or adjoining a sewage treatment works

Sewage treatment works were identified from information provided by Severn Trent Water ltd.

Sewage treatment capacity in Worcestershire has been identified as a concern over the period of the Waste Core Strategy. No District Council Core Strategies have been adopted in Worcestershire at the time of writing and therefore detailed areas of housing development have not therefore been identified. To ensure any future expansion of existing sewage treatment works is not constrained, these sites have not been considered further in the identification of areas of search for waste management development.[66]

Redundant agricultural or forestry buildings and their curtilage

No redundant agricultural or forestry buildings were identified in the preparation of the Waste Core Strategy due to the dispersed nature of agricultural activities in the County.

These sites have not been assessed but will be considered as they are brought forward.

173 locations were identified from these assessments. The planning status of these locations was considered. Where planning permissions expressly prevent waste management development on site or where temporary permissions exist for less than five years the location was not considered to be compatible and was therefore classified as red.

[65] National Land Use Database of Previously Developed Land returns 2008 (Category C - Vacant and derelict land and buildings)

[66] In Worcestershire, Severn Trent Water Ltd currently use anaerobic digestion in the management of 95% of the sewage sludge produced, and have not indicated the need for any further capacity for AD treatment. See Worcestershire Waste Core Strategy "*Waste water treatment infrastructure background document*" for more details.

Site visits

An assessment of the quality of buildings, internal access roads and other site infrastructure of each identified location has been undertaken.

ERM was commissioned to undertake preliminary site assessments and where relevant this was used to inform the traffic light assessment. However, additional locations identified by the council were visited as well as those sites screened out by ERM during a desk assessment.[67]

The following classifications have been used:

Green	Compatible location with good infrastructure.
Orange	Compatible location but infrastructure would need improvements.
Red	Not a compatible location.

During the site visits it was apparent that some locations were business centres or trade parks rather than industrial estates. These business centres and trade parks are not considered to be compatible locations and have therefore been classified as red.

Stage 2: Assessment of constraints

Desktop study

A desk-top assessment of all locations was undertaken to ascertain whether they were within any of the primary or secondary constraints identified. This was undertaken using GIS mapping software.

The following classifications have been used:

Green:	No primary or secondary constraints.
Orange:	Secondary constraints but no primary constraints.
Red:	Primary constraints.

For clarity, where a site is within both an area of secondary constraint and an area of primary constraint, the whole box in the traffic light assessment is categorised as red.

Stage 3: Assessment of connectivity

Site visit

During the site visits, transport connections for individual locations were assessed.

[67] Appendix 2 outlines any discrepancies between the two assessments.

Those adjacent to rail networks or navigable waterways and with supportive road links have been given preference due to the potential for multi-modal transport of waste to and from the waste management facility. It is, however, acknowledged that connections to those networks may not be viable in all cases at present.

Transport connectivity has informed the 'traffic light' assessment and has been categorised as follows:

Green:	Good transport/connectivity with multimodal potential.
Orange:	Good transport/connectivity but no multimodal potential.
Red:	Poor connectivity and no multimodal potential.

Locations with poor connectivity (red), for example where access roads are likely to be unsuitable for HGVs, have been categorised as red.

Stage 4: Assessment of Proximity

Desktop study

The AWM Landfill Diversion Strategy data was plotted to show C&I waste arisings per hectare and resource demand per hectare. The smallest scale at which this information is available is by Lower-level Super Output Areas (LSOA) which are areas that roughly equate to 1,500 people and are used in collecting Census data. Using GIS mapping's statistical analysis tools, this was split into seven geometric categories[68], these were numbered with category 7 representing the areas with the highest arisings and resource demand and category 1 representing the lowest.

The categories each location fell into were recorded, this information was used to order the locations within their division of the geographic hierarchy.

The AWM data has been used to indicate patterns of arisings and resource demand but it is recognised that this is not definitive and may vary for different types of wastes and proximity to specific waste streams, onward treatment facilities or end users may be more relevant to some proposals for waste management development[69]. Therefore, rather than categorising proximity as red, orange and green in the traffic light assessment, preference has been given sequentially to locations within the highest categories (7-3) for proximity to either waste arisings or resource demand. Where they help to meet a gap in the aspirational distribution and are otherwise suitable, locations within the lower categories (1-2) for proximity have also been taken forward for further consideration[70]. This includes locations in Worcester (5 locations), Bromsgrove (2 locations), Malvern (2 locations) and Tenbury (1 location).

[68] A geometric series is a pattern where a constant coefficient multiplies each value in the series.
[69] Where clearly justified, this can be used to inform the assessment of proximity when applying the methodology to proposals outside the areas of search.
[70] In practice, this means that areas of search have been identified at Weir Lane Industrial Estate, Venture Business Park and Tenbury Business Park in order to bring the actual distribution for Worcester and Tenbury Wells closer to the aspirational distribution.

Stage 5: Identification of areas of search

After undertaking the traffic light assessment of stages 1-4, 112 locations were found to be unsuitable for identification as *areas of search* because they were categorised as red during at least one stage of the assessment, 1 further site was found to be unsuitable because it was not categorised as green at any stage.

Only locations classified as green at least one category have been identified as *areas of search*. This totals 58 locations, as shown in Table 15.

Five of the areas of search were identified by ERM as being appropriate for facilities of strategic importance. These have been identified in Table 15 as locations which may be suitable for large-scale facilities.

Table 15. Areas of search

Level of the Hierarchy		Stage 1	Stage 2	Stage 3	Aspirational distribution	Percentage of actual total distribution
Worcester, Kidderminster and Redditch					**60%**	**58%**
Worcester and its expansion areas	1. Shire Business Park	★	★	★	20%	17%
	2. Berkeley Business Park	★	★	●		
	3. Great Western Business Park	★	●	★		
	4. Buckholt Business Centre	★	●	●		
	5. Warndon Business Park	★	●	●		
	6. Newtown Road Industrial Estate	★	★	●		
	7. Shrubhill Industrial Estate	★	★	●		
	8. Sherriff Street Industrial Estate	★	★	●		
	9. Diglis Industrial Estate	★	●	★		
	10. Venture Business Park	★	★	●		
	11. Weir Lane Industrial Estate	★	★	●		
	12. Ball Mill Top Business Centre	★	★	●		
	13. Top Barn Business Centre	★	★	●		
	14. Ball Mill Quarry Complex	★	●	●		
Kidderminster, Stourport and Bewdley	15. Hartlebury Trading Estate ♦	★	●	★	20%	27%
	16. Waresley Quarry	★	●	●		
	17. Gemini Business Park	★	★	●		
	18. Oldington Trading Estate	★	●	●		
	19. Birchen Coppice Trading Estate	★	●	●		
	20. Foley Business Park	●	★	●		
	21. Former Britsh Sugar Site[71]	★	●	●		
	22. Hoo Farm Industrial Estate	●	★	●		
	23. Foley Industrial Estate	●	★	★		
	24. Vale Industrial Estate	●	★	●		
	25. Greenhill Industrial Estate	★	●	●		
	26. Ikon Trading Estate	★	●	●		
	27. Blackstone Quarry	★	●	●		
Redditch	28. East Moons Moat	★	★	●	20%	14%

[71] The scale of facility that would be suitable on this site is uncertain and as the area of land suitable for industry is not yet clear: see *Wyre Forest Development Document Public Examination – Inspector's changes consultation 2010.*

Level of the Hierarchy		Stage 1	Stage 2	Stage 3	Aspirational distribution	Percentage of actual total distribution
	29. Park Farm Industrial Estate	★	●	●		
	30. Pipers Road Park Farm	★	●	●		
	31. Washford Industrial Estate	★	●	●		
	32. Kingfisher Enterprise Park	★	★	●		
	33. Lakeside Industrial Estate	★	●	●		
	34. Weights Farm Business Park	★	●	●		
	35. Ravensbank Business Park	★	●	●		
Bromsgrove, Droitwich and Malvern					**30%**	**29%**
Bromsgrove	36. Buntsford Hill Industrial Estate	★	●	●	10%	6%
	37. Buntsford Gate Business Park	★	●	●		
	38. Silver Birches Business Park	★	●	●		
	39. Bromsgrove Technology Park	★	●	●		
	40. Pinches Quarry	★	●	●		
	41. Stanley Evans Quarry	★	●	●		
Droitwich	42. Berry Hill Industrial Estate ♦	★	★	●	10%	16%
	43. Former Coal Yard, Union Lane	★	★	★		
	44. Stonebridge Cross Business Park	★	★	●		
	45. Hampton Lovett Industrial Estate ♦	★	★	●		
Malvern	46. Enigma Business Park	★	★	●	10%	8%
	47. Spring Lane Industrial Estate	★	★	●		
	48. Link Business Centre	★	★	●		
	49. Blackmore Business and Technology Park	★	★	●		
	50. Merebrook Industrial Estate	★	★	●		
Evesham and Pershore					**8%**	**11%**
Evesham	51. Vale Business Park ♦	★	★	●	4%	6%
	52. Four Pools Industrial Estate	●	★	●		
Pershore	53. Keytec7 Business Park ♦	★	★	●	4%	5%
	54. Racecourse Road Trading Estate	★	★	●		
	55. Pershore Trading Estate	★	★	●		
	56. Hill and Moor Landfill site	★	★	●		
Upton upon Severn and Tenbury Wells					**2%**	**1.5%**
Upton upon Severn	57. Upton upon Severn Industrial Estate	★	●	●	1%	0.5%
Tenbury Wells	58. Tenbury Business Park	★	★	●	1%	1%

Note: Figures rounded to the nearest 1%, with the exception of Upton upon Severn
♦ Denotes locations which may be suitable for large-scale facilities.
★ Locations rated as green at this stage of the traffic light assessment.
● Locations rated as orange at this stage of the traffic light assessment.

Full details of the traffic light assessment for all 170 locations can be seen in Appendix 1 to Annex A.

Appendix 1 to Annex A. Traffic light assessment

Compatible site:	Green	Compatible location with good infrastructure.
	Orange	Compatible location but infrastructure would need improvements.
	Red	Not a compatible location.
Constraints:	Green	No Primary or secondary constraints.
	Orange	Secondary constraints but no primary constraints.
	Red	Primary constraints.
Connectivity:	Green	Good transport/connectivity with multimodal potential.
	Orange	Good transport/connectivity but no multimodal potential.
	Red	Poor connectivity and no multimodal potential.

A column entitled "other" is included to record general observations, these are purely for information and do not form part of the "areas of search" assessment in general or the "traffic light assessment in particular"

Each stage of the traffic light assessment can consider several different elements which may individually score differently. In order for the traffic light assessment to be stringent, the lowest score takes priority. The table below indicates how this is applied.

		Element 1		
		Green	Orange	Red
Element 2	Green	Green	Orange	Red
	Orange	Orange	Orange	Red
	Red	Red	Red	Red

Rows highlighted in green were brought forward for the Publication Document.

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
1- Worcester and its expansion areas, Kidderminster area, Redditch						
Worcester and its expansion areas						
Shire Business Park, Wainwright Road, Worcester, WR4 9FA	Part of the larger Warndon business area. A well screened site with landscaping around individual units. A mixture of building types, some of which appear to be purpose built. Generally modern and well maintained. Surrounding uses: Industrial.	Industrial estate, site infrastructure in good condition.	None.	Business park is adjacent to canal network. Less than 2 miles via main roads to M5 junction 6.	Waste arisings:7, Resource demand:7	The site is well screened with large buildings. A waste site and a large site would fit within the context of the site.
Berkeley Business Park, Wainwright Road, Worcester	Part of the larger Warndon business area. A well screened and landscaped site with some industrial units and offices to the rear of the site. Surrounding uses: Industrial, residential on the other side of the main road.	Industrial estate, site infrastructure in good condition.	None.	Good road transport, less than 2 miles via main roads to M5 junction 6.	Waste arisings:7, Resource demand:7	The site is well screened. A small to medium scale waste facility would fit within the context of the site.

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
Great Western Business Park, Tolladine Road, Worcester, WR4 9PT	New business park. Only 1 unit occupied. All units are quite large, metal clad and 2 storeys high. A parcel of undeveloped land is also available adjacent to the railway line. Surrounding uses: Houses less than 20m away.	Industrial estate, site infrastructure in good condition.	Within 10m of a special wildlife site.	There is scope for railway sidings in phase 2 of the site. There is good access to the site suitable for HGVs and the site is approximately 3 miles from junction 6 of the M5.	Waste arisings:7, Resource demand:7	An indoor waste operation would fit within the context of the site. The units are large and could accommodate large scale operations.
Buckholt Business Centre, Buckholt Drive, Warndon, Worcester, WR4 9ND	Part of the larger Warndon business area. Smaller, older units. Metal buildings split into several units.	Industrial estate, site infrastructure in good condition. Tight site infrastructure is unlikely to be suitable for significant HGV units.	Within 10m of Special Wildlife Site	Business park is adjacent to canal network but has no wharfage. Less than 2 miles via main roads to M5 junction 6.	Waste arisings:7, Resource demand:7	A very small scale waste facility would fit within the context of the site.
Warndon Business Park,	Large site with a few purpose-built	Industrial estate, site	Within 10m of Special Wildlife	Business park is adjacent to	Waste arisings:7,	A waste facility would fit within the

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
Worcester WR4 9NE	industrial units. Most of which are individually owned. Surrounding uses: Other industrial estates, houses (less than 500m away)	infrastructure in good condition.	Site Flood zone 2 (most of site)	canal network but has no wharfage. Less than 2 miles via main roads to M5 junction 6.	Resource demand:7	context of the site.
Newtown Road Industrial Estate, Newtown Road, Worcester, WR5 1HA	A large site, with warehouse buildings and some offices to Perry rood walk side. Surrounding uses: Industrial uses, residential within 15m, Perry Wood.	Industrial estate, site infrastructure in good condition.	None. Adjacent to Ancient semi-natural woodland.	Railway line is adjacent to the site, but due to the site size and layout there is little potential for rail sidings. Good access to road network.	Waste arisings:6, Resource demand:6	A medium facility would fit within the context of the site.
Shrub Hill Industrial Estate Shrub Hill Road, Worcester WR4 9EE	Small site with a mix of old and new buildings. One part of the site is predominantly one storied brick buildings with small units. The other (and larger) part of the site is mostly	Industrial estate, site infrastructure in good condition. There is good access to the site, however due to parked	None.	Railway line is adjacent to the site, but due to the site size and layout and proximity to Shrub Hill station and the railway junction	Waste arisings:6, Resource demand:5	A small-medium waste facility would fit within the context of the largest part of the site.

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
	large warehouses, including some large brick structures. Surrounding uses: Other industrial areas, housing (with 500m), railway line.	cars access within the site is limited in the smaller part of the site.		there is little potential for rail sidings. The site is approximately 3 miles from junction 6 of the M5 (B4636).		
Sherriff Street Industrial Estate, Worcester, WR4 9AB	Reasonably large site with big metal clad units. Some brick units also exist on the site. Other uses include a cement batching plant and calor gas sales (HSE consultation area) Surrounding uses: Railway line and station, other industrial estates.	Industrial estate, site infrastructure in good condition.	None.	Railway line is adjacent to the site, but due to the site size and layout and proximity to Shrub Hill station and the railway junction there is little potential for rail sidings. The site is approximately 3 miles from junction 6 of the M5 (B4636). Access to the	Waste arisings:4, Resource demand:2	There are already some waste uses on the industrial estate and a small scale indoor waste facility would fit within the context of the estate.

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
				site is off Sherriff Street, which is suitable for HGVs.		
Diglis Industrial Estate, Trow Way, Worcester, WR5 3BX	Large industrial estate with a variety of uses. Part of the site has new houses; the other part houses large 2 storied metal warehouses and wholesale depots, etc. Uses include builders, tractor manufacturing timber etc. Surrounding uses: New house built on one edge of the site, river.	Industrial estate, site infrastructure in good condition.	Flood zone 2, Adjacent to historic battlefield	Adjacent to River Severn and docks. There is good access to the site suitable for HGVs and the site is approximately 3 miles from junction 7 of the M5.	Waste arisings:3, Resource demand:3	Residential units and recreation ground might be receptors if a waste facility is built. However, the site is very large and these receptors are at quite a distance from the centre of the site. A waste facility would fit within the context of the site.
Venture Business Park, Weir Lane, Bromwich Road Worcester, WR2 4BD	Small site with a mixture of uses. Buildings are mostly 2 Storied metal clad. Units are mostly small in size. Surrounding uses:	Industrial estate, site infrastructure in good condition.	None	Good access to site suitable for HGVs. Approximately 5 miles from M5 Junction 7 (A449/A4440).	Waste arisings:2, Resource demand:2	The site itself is too small but the larger parcel of undeveloped land (51,000 sq ft) is suitable for small-medium sized waste facilities.

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
	another industrial estate, houses (less than 50m away), golf range, swimming pool.					
Weir Lane Industrial Estate, Worcester WR2 4AY	Reasonably large site with a mixture of uses. Buildings are mostly 2 storied brick or metal clad. Main uses include light engineering, wholesale units and warehouses. Units are mostly large in size although some smaller units are also present. Surrounding uses: Another industrial estate, house (less than 50m away), Golf range, swimming pool	Industrial estate, site infrastructure in good condition.	Historic battlefield to south of site. Within the Riverside Conservation Area	Good access to site suitable for HGVs. Approximately 5 miles from M5 Junction 7 (A449/A4440).	Waste arisings:2, Resource demand:1	The site is quite large and a waste facility would fit with the context of the site
Ball Mill Top Business Centre, Worcester Road, Grimley, WR2	Small site with only 5-6 huge warehouses on it. Each warehouse has 3 units. The units	Industrial estate, site infrastructure in good condition.	None.	Good access off the A443. Suitable for HGVs.	Waste arisings:1, Resource demand:1	The site is well screened from the main road. It is also bunded and

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
6PD	themselves are not very large. Surrounding uses: houses overlooking the site, open fields.					is at a lower level. A waste small sized facility would fit within the context of the site.
Top Barn Business Park, Worcester Road, Holt Heath, Worcester, WR6 6NH	A large spacious site with a wide range of uses. Offices, farmshop, fishing lake and equestrian uses. Modern low-rise buildings.	Industrial estate, site infrastructure in good condition.	None.	Good road access from A443.	Waste arisings:1, Resource demand:1	Larger units at the rear of the site may be suitable for small scale waste management facilities, especially category 2 activities.
Ball Mill Quarry Complex, Grimley, Nr Worcester Grid ref: 382853, 259291	The complex covers a large area of land most of which has been extracted and restored back to agricultural use. Two areas remain that have planning consent for mineral extraction. They are referred to as Church Farm South	A permitted mineral site. Land adjacent to the plant area has a planning permission for the storage and processing of inert C&D waste material. The facility operated	Flood zone 2,	Existing quarry access onto the main A433.	Waste arisings:1, Resource demand:1	

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
	(which has not yet started) and Church Farm West (which has been started, but because of lack of sales is currently closed) Mineral extraction in both areas will be followed sequentially with the restoration of the land to agricultural use. Surrounding uses – agriculture and residential (Grimley village)	for about 12 to 18 months to process material to use on improving the quality of the restored land on part of the quarry. However it closed because of a shortage of suitable material.				
Worcester Trading Estate, Blackpole Road, Worcester WR3 8SG	Small estate subdivided into smaller units. Most buildings are brick clad and quite high. Uses include turbine manufacturing Surrounding uses:	Industrial estate, site infrastructure in good condition.	Small part of site in flood risk zone 3	Railway line is adjacent to the site, but due to the site size and layout there is little potential for rail sidings A449 is quite	Waste arisings:6, Resource demand:6	Though the estate is small, the buildings are quite big. A small waste facility would fit within the context of the site.

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
	Other industrial uses, retail park, houses (les than 500m away), railway line, business centre and petrol station.			busy as it serves many industrial areas but access is suitable for HGVs (A449/B4550) and site is less than 3 miles from M5 junction 6.		
Blackpole Trading Estate, Blackpole Road, Worcester, WR3 8SG	Large estate with mixed uses and buildings of different ages and types. Most of them are large warehouses which are either brick or metal clad. Surrounding uses: Cricket ground, other industrial estates, open land and railway line.	Industrial estate, site infrastructure in good condition.	A small part of the site is on Flood zone 3. Within 10m of Special Wildlife Site	Railway line crosses the site but it is at a higher level. There is however some potential for rail sidings. A449 is quite busy as it serves many industrial areas but access is suitable for HGVs (A449/B4550)	Waste arisings:6, Resource demand:6	A waste facility of any size would fit with the context of the site.

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
				and site is less than 3 miles from M5 junction 6.		
Clifton Quarry, Clifton, Nr Kempsey Grid ref: 384308, 246096	Operational mineral site, covers a large area of land much of which has been restored to agricultural use. At the northern end of the site a large lake is forming within the quarry void which will be left for nature conservation. Well screened site. Plant area is located within Arles Wood the centre of which has been cleared for this purpose. Surrounding uses – agriculture and residential (Clifton village).	Operational mineral site.	Flood zone 3.	There may be scope to transport material by barge on the River Severn Existing quarry access onto the A38.		The only suitable location for a waste management facility would be within the plant area. Because it is located within the wood the site is well screened and any facility would not be seen from the surrounding countryside. However, there would probably be no room for it because the current quarrying operations use all the space that is available.

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
Hylton Road Trading Estate, Worcester, WR2 5JS	A cluttered site with small metal units, some of which are in a poor state of repair. Surrounding uses: Derelict land, housing.	Industrial estate, site infrastructure in poor condition.	Flood zone 3.	Adequate road access to site.	Waste arisings:6, Resource demand:5	Any waste facility would need to replace existing buildings
Lowesmoor Wharf Estate, Worcester, WR1 2RS	A medium sized site with brick clad buildings, mainly offices and trade counters. Surrounding uses: Residential, shops, canal.	Industrial estate, sites mainly trade counters. Access to some areas of the site is tight and is unlikely to be suitable for HGVs.	In Conservation Area	Site adjacent to canal wharfage, Access via a busy shopping street which is parked both sides making access by HGVs difficult.	Waste arisings:7, Resource demand:7	The site is not suitable for waste development as the site is a trading estate with little industrial use.
Norton Business Park, Church Lane, Norton, Worcester, WR5 2PS	Very small site, approximately 3 small business/ trade units in converted outhouses Surrounding uses: Residential	Office/trade rather than industrial estate, not suitable for waste.	None.	Rail line runs to rear, close to Norton Junction but due to the size of the site a siding is unlikely. Road connection through	Waste arisings:1, Resource demand:5	Office/trade rather than industrial estate, not suitable for waste.

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
				residential area from one direction and over weight-limited bridge in other direction.		
Brookend Business Park, Brookend Lane, Kempsey, Worcester, WR5 3LF	Small site, tight with parking, converted agricultural buildings	Small business and office use, not industrial	None	Roads unsuitable for HGVs	Waste arisings:1, Resource demand:2	Uses on site include a spa, offices, agricultural
Northbrook Close, Gregory's Mill Street Worcester, WR3 8BP	Medium sized buildings/units. Good quality metal and brick clad buildings.	Industrial estate, site infrastructure in good condition.	None.	Estate is adjacent to canal network but has no wharfage. Road access to the site passes through residential areas, some of which have on street parking. Approximately 5 miles to both	Waste arisings:3, Resource demand:1	A waste facility could fit within the context of the site, however the estate is very close to residential areas and road access would limit HGV movements.

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
				junctions 6 and 7 of the M5.		
Gregory's Bank Industrial Estate, Gregory's Bank, Worcester, WR3 8AB	A small estate with small units and a large car park. Most buildings are brick clad one storied structures. Main uses include car repairs, windows and light engineering. Eastern wing of the site has large massive warehouses and large units. Surrounding uses: Houses on two sides of the estate (less than 20m), railway line	Industrial estate, site infrastructure in good condition.	Within 10m of a special wildlife site.	Estate is adjacent to canal network but has no wharfage. Road access to the site passes through residential areas, some of which have on street parking. Schools and football ground along the route. Approximately 5 miles to both junctions 6 and 7 of the M5.	Waste arisings:3, Resource demand:1	The estate is very close to residential areas. However, a waste facility would fit within the context of the eastern wing of the site. The site is not suitable for waste development as the owner's intention is to pursue housing on this site. This site would therefore not be deliverable.
Checketts Lane Trading Estate, Worcester, WR3 7JW	A small site with a mixture of buildings. Surrounding uses: Within 5m of	Office/trade counters rather than industrial estate, not suitable for	None.	Good road access, approximately 6 miles to junctions 6 of	Waste arisings:5, Resource demand:3	Office/trade rather than industrial estate, not suitable for waste.

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
	residential	waste.		the M5.		
Lowesmoor Trading Estate, St Martin's Gate Worcester, WR1 2SF	This site is currently being redeveloped for mixed use commercial and residential use.	The site is no longer an industrial estate.	In Conservation Area	Access from the main road is tight and may not be suitable for HGVs.	Waste arisings:7, Resource demand:7	The site is no longer an industrial estate.
Bransford Road Trading Estate, Worcester, WR2 4EU	A small site with small units, used as offices and mechanics. Surrounding uses: Within 5m of residential.	Office/trade counters rather than industrial estate, not suitable for waste.	In Conservation Area	Good road access but the turn onto the site is unlikely to be suitable for HGVs	Waste arisings:4, Resource demand:2	Office/trade rather than industrial estate, not suitable for waste.
Three Springs Trading Estate, Worcester, WR5 1BW	Small compact site with older 1 storey brick and metal clad buildings Surrounding uses: Residential	Industrial estate, site infrastructure in poor condition.	Within 10m of special wildlife site.	Road access to the site passes through residential areas, some of which have on street parking. Schools and football ground along the route. Access from the main road is tight and may not be suitable.	Waste arisings:6, Resource demand:5	The site is in a residential area. Due to transport constraints and site infrastructure the site would be unsuitable for a waste use.

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
Worcester Trade Park, Sheriff Street, Worcester, WR4 9AB	Trade counters, fitness centre and car wash.	Trade counters and leisure use, not an industrial estate	None.	The site is approximately 3 miles from junction 6 of the M5 (B4636). Access to the site is off Sherriff Street, which is suitable for HGVs.	Waste arisings:6, Resource demand:6	This not an industrial estate and is not likely to be suitable for waste facilities.
Gas holder site, Medway Road, Worcester		Derelict land but not a former employment or industrial use.				
Ex fruit and veg market, Hylton Road, Worcester		Derelict land with former employment or industrial use.	Flood zone 3			
Former Westside snooker club, Hylton Road, Worcester		Derelict land but not a former employment or industrial use.				
Area 7 Industrial Estate, Woodbury Lane, Norton, Worcester	Large industrial units with some areas of derelict land, some units are currently used for waste management	Industrial estate, site infrastructure in good condition. All roads within the estate are	None, SSSI within 300m	Railway line runs adjacent to site boundary Access off the B4084, good		A waste facility would fit within the context of the site

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
		suitable for HGVs.		links to M5		
Kidderminster Area (Kidderminster, Stourport & Bewdley)						
Hartlebury Trading Estate, Hartlebury, Kidderminster, DY10 4JB	A very large trading estate, with numerous large mixed use warehouses. Some divided into smaller units. Surrounding uses: Waresley landfill site adjacent to the east.	Industrial estate, site infrastructure in good condition. All roads within the estate are suitable for HGVs.	Within 300m of a SAM, Greenbelt	Railway line runs adjacent to western boundary. Access off the A449. Good links to M5	Waste arisings:2, Resource demand:7	Already a site with several large warehouses. The site is also adjacent to a landfill site, so waste uses exist in the area. A waste facility of any size would fit within the context of the site.
Waresley, Nr. Hartlebury Grid ref: 385906, 270174	Mineral extraction and landfilling/restoration are being undertaken concurrently. The approved restoration plan is for the void to be infilled and restored to agricultural use. The landfill operations have closed and transferred to Hartlebury Quarry.	Permitted mineral site and landfill site.	Green belt	Access to site through the Trading Estate. Shares an access with Waresley Brickworks.	Waste arisings:2, Resource demand:7	

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
	When Hartlebury is infilled then landfill operations will recommence at Waresley. Surrounding uses: residential, Hartlebury Industrial Estate and New House Farm Quarry					
Gemini Business Park, Stourport Road, Kidderminster, DY11 7QL	A fairly small gated site. Very large buildings present. Very busy in terms of the number of parked cars and containers. Weighbridge present. Surrounding uses: Industrial, Sewage works to the east.	Industrial estate, site infrastructure in good condition.	None.	Access off the A4451 which links Kidderminster and Stourport.	Waste arisings:5, Resource demand:6	Already some waste use on site, further waste uses would fit within the context of the site, however space and availability could be an issue.
Oldington Trading Estate, Stourport Road, Kidderminster, DY11 7QP	A large industrial/ trading estate with several large single storey buildings. Number of automotive businesses. One main	Industrial estate, site infrastructure in good condition.	Source protection zone 3	Access from the A451 from two points. Both suitable for HGV.	Waste arisings:5, Resource demand:6	Some fairly large buildings already occupying the estate. Good screening is also available. A

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
	road leading through the site. Large area adjacent has been demolished. Other uses include house (to the west) and industrial uses (to the east).					medium sized waste facility would fit within the context of the site.
Birchen Coppice Trading Estate, Walter Nash Road, Kidderminster, DY11 7PT	An older industrial estate with a mixture of building types and sizes.	Industrial estate, site infrastructure in good condition.	<10m from SWS SPZ3	Good access to site suitable for HGVs.	Waste arisings:5, Resource demand:6	There are a mix of units on site, some of which maybe suitable for waste management development, and others which would not. Existing buildings or vacant plots on site could be suitable for medium-large scale facilities.
Foley Business Park, Foley Grove, Kidderminster, DY11 7PT	A mixture of buildings, some appear to be purpose built. There are some large buildings split into several units.	Industrial estate, site infrastructure in good condition. Parking along internal roads	None	Access off the A4451 which links Kidderminster and Stourport.	Waste arisings:5, Resource demand:6	The estate is set a short distance back from the road and is well screened. A medium scale

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
	Surrounding uses: Industrial, Forge Recycling to the south.	may limit HGV movement.				waste facility would fit within the context of the site. There are some empty units and undeveloped plots which could be suitable for larger facilities.
Former British sugar site, Stourport Road, Kidderminster.		Derelict land with former employment or industrial use.	Flood zone 2 (Wyre Forest SFRA identifies as FZ1)	Good connection to road network	Waste arisings:5, Resource demand:5	A large derelict site. Allocated as employment land in the local plan. A waste facility could be developed in the context of this site.
Hoo Farm Industrial Estate, Worcester Road, Kidderminster, DY11 7RA	A large and fairly old industrial estate with mixed uses buildings of varying sizes and ages. Some office based premises present but also warehousing. Surrounding uses: Easter Park to the	Industrial estate, site infrastructure in good condition. Parked cars line parts of the roads but site is still suitable of HGVs	Public footpath in South West Corner	Access off (newly built) roundabout on the A449. Suitable for HGVs	Waste arisings:4, Resource demand:5	The site is an established estate with a number of buildings present. It is not overlooked by housing. A small sized waste facility would fit within the context of the site but would have to

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
	east, Industrial areas, housing					be located away from the offices on the complex and residential areas adjacent to the site.
Foley Industrial Estate, Lisle Avenue, Kidderminster, DY11 7DH	An older site with small brick clad units. Surrounding uses: Residential uses at site entrance, former British Sugar site.	Industrial estate, site infrastructure in good condition. Good HGV access to some units but other parts of the site are too compact for HGVs to manoeuvre. Low wires across the site.	None.	Adjacent to the Severn Valley Heritage Railway. Access from A451 via Lisle Avenue.	Waste arisings:3, Resource demand:4	The estate may be suitable for a small facility, but access around the site may be a limitation.
Vale Industrial Estate Stourport Road, Kidderminster, DY11 7QU	A small estate with few business present. An operational factory occupies most of the area. One large warehouse is split into 3-5 units. Open space	Industrial estate, site infrastructure in good condition, but movements of HGVs may be limited.	None.	Private access road onto the A451 which links Kidderminster and Stourport.	Waste arisings:3, Resource demand:4	The site is already highly industrial and well screened from the road. A waste facility would fit within the context of the site.

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
	to the north appears to be from fairly recent demolition of a factory. Surround uses: housing to the east.					
Greenhill Industrial Estate, Birmingham Road, Kidderminster, DY10 2RN	A small site with some office use near to the entrance and more industrial uses at the rear of the site. Surrounding uses: Residential uses less than 10m, Kidderminster trade park (trade counters and mechanics) along entrance road.	Industrial estate, site infrastructure in good condition.	Source protection zone 3.	Good road access from the A456.	Waste arisings:4, Resource demand:2	Existing units on the site could accommodate a small-medium sized facility with minimal impact.
Ikon Trading Estate, Droitwich Road, Nr Hartlebury, DY10 4EU	A medium sized industrial estate in terms of the number of building present. One main route leads through the site. Buildings present are bricks/concrete and	Industrial estate, site infrastructure in good condition.	Greenbelt	Access via the A442. This is a fairly narrow road but a number of HGVs were witnessed along the road.	Waste arisings:1, Resource demand:4	The estate is set a short distance back from the road and mature trees and hedging provide good screening. A small scale waste facility

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
	are quite large, some comprised of smaller units. Surrounding uses: Predominantly rural/agricultural land, houses opposite site entrance.					would fit within the context of the site, although proximity to housing may be a consideration.
Blackstone Quarry, Lickhill Quarry Complex, Stourport on Severn Grid ref: 379514, 273419	Well screened site. Sand extraction ceased some years ago now an operational landfill site associated with the restoration of the quarry. Surrounding uses: agriculture and residential.	Mineral site now undergoing restoration by landfilling. Part of the Lickhill Quarry complex already has a waste transfer station operating in the former plant area. Residue waste arising from this facility is tipped at Blackstone Quarry.	Green Belt.	Access via quarry haul road from Bewdley Road North (B4195).	Waste arisings:3, Resource demand:4	A condition of the planning permission for the WTS stipulates that the facility is to cease operations on the cessation of the infilling of Blackstone Quarry.
Stoney Lane	A sprawling industrial	Industrial estate,	Adjacent to the	Parts of the site	Waste	The units on site

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
Industrial Estate, Red Sands Road, Kidderminster, DY10 2LG	estate, with some old large buildings, some of which are in a poor state of repair. Surrounding uses: Residential less than 10m away, Royal Mail Depot and Retail Park	site, infrastructure in good condition.	conservation area.	are close to the canal with some wharfage potential. By road units are accessed individually from Stoney Lane / Clensmore Street. These roads are narrow with parked car restricting HGV access to some parts of the site.	arisings:5, Resource demand:5	could accommodate a small or large waste management facility, however access to the site is likely to limit HGV movements.
Easter Park, Worcester Road, Kidderminster, DY11 7AR	A newly built/modern site with a handful of medium sized metal warehouse type units. Surrounding uses: Rural/agricultural and industrial	Several units are still vacant this appears to be trade rather than an industrial site.	None	Adjacent to rail line Access off (newly built) roundabout on the A449. Suitable for HGVs.	Waste arisings:1, Resource demand:1	The site is not yet fully occupied. A small to medium scale facility would fit within the existing buildings.
Finepoint Business Park,	A large modern site with 4 very large	Industrial estate, site	Source Protection zone	Access via the A451 onto	Waste arisings:2,	The site is surrounded by

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
Kidderminster, DY11 7FB	warehouses present. One has a single user but others are divided into smaller units. Surrounding uses: Trading estate and industrial areas.	infrastructure in good condition.	3.	Walter Nash Road East. Suitable for HGVs.	Resource demand:2	established industrial estates. A medium to large size facility would fit within the context of the site.
Cursley Distribution Park, Cursley Lane, Near Kidderminster, DY10 4DU	Hanger-style medium to large sized breeze block buildings consisting of single units. Surrounding uses: agricultural/rural	Industrial estate, infrastructure in good condition.	Green belt	Access from Curslow Lane off A442. Both of which are suitable for HGVs.	Waste arisings:1, Resource demand:2	A waste management facility could fit within the context of the site.
Spennells Trading Estate, Spennells Valley Road, Kidderminster, DY10 1XS	A mixture of medium sized units, some with office use, others light industrial. Surrounding uses:	Industrial estate, site infrastructure in good condition.	Flood zone 3.	Good road access.	Waste arisings:5, Resource demand:2	The site would be suitable for a small scale waste management facility.
Wilden Industrial Estate Wilden Lane, Stourport-on-Severn DY13 9JY	A well screened site with modern metal and brick clad units of varying sizes. Some empty plots on the site.	Industrial estate, site infrastructure in good condition.	Part of site in flood zone 3.	Well connected to road infrastructure, but there is a low bridge along the main route	Waste arisings:2, Resource demand:3	The site is already highly industrial and well screened from the road. A waste facility would fit within the

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
	Surrounding uses: Residential, with a school in the vicinity.			to the site.		context of the site.
Churchfields Business Park, Churchfields, Kidderminster, DY10 2JL	A well laid out site with a mixture of small and large units. The majority of the buildings are c.1900 with some new additions. Surrounding uses: Residential, District Council offices, car parking.	Industrial estate, site infrastructure in adequate condition. Height limit of 4.6 meter due to overhead services crossing site.	Part of site in source protection zone 2.	Road access to the site passes through residential areas and is narrow in places. Access to the site is tight, but some individual units can be access directly from the road.	Waste arisings:3, Resource demand:1	The site is relatively enclosed and the impact of a small waste management facility would be minimal.
Hoobrook Industrial Estate, Worcester Road, Kidderminster, DY10 1HY	An older industrial estate with a mixture of small units and outdoor uses. Vehicle sales and repair, waste uses and builders merchants. Surrounding uses: Mc Donalds, Petrol Station, road	Industrial estate, site infrastructure in adequate condition. Some parking along access roads, constraining the movement of HGVs.	Part of site in flood zone 3.	Good access from A449.	Waste arisings:5, Resource demand:5	There are currently several waste uses on site and further small to medium scale waste uses would have minimal visual impact, however existing infrastructure may be a limitation.

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
Meadow Mill Industrial Estate, Dixon Street, Kidderminster, DY10 1HH	A small industrial estate, consisting of small "workshop" buildings. Light industrial uses, mechanics and a children's play centre. Surrounding uses: Supermarket, other industrial.	Industrial estate, site infrastructure in adequate condition.	Flood zone 3 (part of site), flood zone 2 (all of site). Within 10m of SSSI, Source protection zone 2	Narrow road access through town centre.	Waste arisings:7, Resource demand:7	A waste facility would not be appropriate on this site.
Firs industrial Estate, Oldington Road, Kidderminster, DY11 7QN	A large older industrial estate. Lots of buildings of mixed uses, sizes and ages.	Industrial Estate. Two main roads within the site. Road No.1 is fairly narrow and has a steep incline with no suitable turning circle for HGV. Road No.2 is wider and suitable for HGVs but it mostly serves smaller units.	Within 100m of SSSI.	Access via Oldington Road off A451 (which links Kidderminster and Stourport). Oldington road is quite narrow and already very busy	Waste arisings:5, Resource demand:6	A small to medium sized waste facility would fit within the context of the site, but access is less than ideal.

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
Green Street Business Area, Green Street, Kidderminster, DY10 1NJ			Flood zone 3 (part of site), flood zone 2 (all of site) Source protection zone 2		Waste arisings:7, Resource demand:7	
Harriers Trade Centre, Stadium Close, Kidderminster, DY10 1NJ	A small site consisting of pre-fabricated units with asbestos roofs. Some large metal containers at edge of site. Surrounding uses: Residential within 5m, adjacent to Severn Valley Heritage Railway, access past football ground.	Industrial Estate. Site Infrastructure and buildings in poor condition.	Source protection zone 2	Access from A448 via Ray Mercer Way	Waste arisings:7, Resource demand:7	The site is very open and any new development could have a visual impact on adjacent residential development and the Severn Valley Railway.
Woodside Business Park, Beach Hay, Bayton, Kidderminster, DY14 9NE	A very small site with 'barn conversion' type units. Surrounding uses: Residential at site entrance, agricultural/rural uses	Industrial estate, site. Sign at site entrance states "No HGVs"	None.	Rural roads unlikely to be suitable for heavy HGV movements.	Waste arisings:1, Resource demand:3	The site and access are unlikely to be suitable for a waste facility.

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
	surrounding site.					
Park Street Industrial Estate, Kidderminster, DY11 6TN	A cluster of three medium sized brick clad units all accessed directly from Park Street. Surrounding uses: Residential	Industrial estate, site. Limited access for HGVs.	Source Protection zone 2.	Road access to the site passes through residential areas, some of which are narrow and have on street parking.	Waste arisings:3, Resource demand:1	The estate is et along an otherwise residential road. Indoor operations would not have any greater visual impact than existing uses, but the area would not easily accommodate increase in HGV movements.
Crossley Trading Estate, Mill Street, Kidderminster, DY11 6XP	Retail park with large supermarket, electrical and home stores.	Retail park not industrial estate.	In flood zone 3.	Good access from Ring road. Suitable for HGVs	Waste arisings:7, Resource demand:6	Retail park not suitable for waste use.
Sandy Lane Industrial Estate Off Worcester Road, Stourport-on-Severn	A very large industrial estate with several large premises but also smaller units within warehouses. The site is well established and looks to have expanded	Industrial estate, site infrastructure in good condition.	Part of site in flood zone 3, most of site in flood zone 2. Within 100m of Special wildlife site.	Accessed off the A4025. Same access road used to reach the Marina and caravan park.	Waste arisings:4, Resource demand:5	Already a very large sprawling industrial estate. Some of the industrial units are set back off the A4025. The site is suitable for a

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
	over time. Mostly single storey buildings present. Surrounding uses: Marina, Caravan Park, other industrial areas, houses restaurant.					medium to large sized facility but its proximity to housing may be a consideration
Chadwick Bank Industrial Estate, Worcester Road, Stourport-on-Severn, DY13 9QZ	A small site consisting of metal nissan huts, main uses are vehicle repair. Surrounding uses: Residential and agricultural/rural.	Industrial Estate. Site Infrastructure and buildings in poor condition.	Greenbelt.	Access of the A4025.	Waste arisings:1, Resource demand:1	A small estate. Existing units are in a poor state of repair and there is no space for new units to be developed.
Riverside Business Park, Hartlebury Road, Stourport.	A small site with poor access from a busy traffic island. Surrounding uses: Residential	Industrial Estate. Site Infrastructure and buildings in poor condition.	Flood zone 3, within 10m of a Special Wildlife Site,	Access from traffic island difficult and unlikely to be suitable for HGV movements.	Waste arisings:2, Resource demand:3	A small estate. Existing units are in a poor state of repair and there is no space for new units to be developed.
Bewdley Business Park, Long Bank, Bewdley, DY12	Site not found.	Site not found.	Site not found.	Site not found.	Site not found.	Site not found.

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
2UJ						
Lax Lane Craft Centre, Lax Lane, Bewdley, DY12 2DZ	Brick building fronting onto the road. Surrounding use: town centre uses, residential and offices.	Craft centre rather than industrial Estate.	Flood zone 3, Conservation Area	Access through town centre, very narrow roads unsuitable for HGVs	Waste arisings:1, Resource demand:2	
Hartlebury Quarry, Hartlebury Grid ref: 385520, 271050	The void is now being infilled and the land will be restored to agricultural use. Surrounding uses: agriculture, brickworks and clay stockpile area, restored landfill site.	Clay reserve worked out. Now an operational landfill site – life expectancy 10 years.	Green belt	Poor access through Hartlebury village to the A449.		
Summerway Landfill, Wilden Lane, Stourport-on-Severn, Worcs, DY10 9JP	A landfill site with associated crushing and screening of C&D waste. Surrounding uses:	Permitted waste site. Operating on temporary permission to allow an alternative site to be found.	Within 100m SSSI, Greenbelt			Operating on temporary permission to allow an alternative site to be found.
New House Farm, Walton Road,	The site is located in the open countryside. Extraction operations		Green belt	The only access to the site is via Walton Lane		

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
Nr. Hartlebury Grid ref: 386520, 271050	began in 2005, but currently in abeyance because of a lack of demand for bricks caused by the current recession. Restoration of the resultant void to create a lake. Surrounding uses: agriculture.			which is very narrow and unsuitable for HGVs.		
Former rock works, Park Lane, Kidderminster		Derelict land with former employment or industrial use. Allocated in Local Plan for housing				
Crossley estate, Carpet trades Way, Kidderminster		Derelict land but not a former employment or industrial use.				
Sandy lane industrial estate, Sandy Lane, Stourport on		Derelict land but not a former employment or industrial use.				

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
Severn						
Site of Franche road garage, Franche Road, Fair Field, Kidderminster		Derelict land but not a former employment or industrial use.				
Redditch						
East Moons Moat, Redditch, B98 0RE	A large industrial estate with numerous buildings of mixed size and use. Access from Palmers Road is predominantly tree lined with several office based premises. Access via Oxleasow Road is more industrial. Surrounding uses: Industrial	Industrial estate, site infrastructure in good condition.	SAM within 100m	Access from Alders Drive leading to the A4023. Access is suitable for HGVs. The industrial estate is approximately 5 miles from M42 Junction 3	Waste arisings:7, Resource demand:6	The area is industrial. Palmers Road is lined with mature trees. The site is suitable for a medium sized waste facility.
Park Farm Industrial Estate, Redditch B98 7SN	A sizeable industrial estate with many large warehouses present. Some brick/metal buildings and several metal warehouses.	Industrial estate, site infrastructure in good condition.	Part of site in Flood Zone 2.	Crossgate and Howard roads both lead off Forge Drive, which leads to the A435.	Waste arisings:6, Resource demand:7	The estate has numerous large warehouses present, as well as HWRC and skip hire. Some of the warehouses along

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
	Businesses include a HWRC and skip hire firm. Surrounding uses: Arrow Valley Park, housing to the west.			The industrial estate is approximately 7 miles from M42 Junction 3		the western boundary have chimneys presnt. The site is suitable for a medium to large sized waste facility.
Piper Road Park Farm Industrial Estate, Redditch B98 0HU	A smaller site dominated by a few larger warehouses, although there are smaller units present. Most buildings are a mixture of brick and metal. Surrounding uses: Arrow Valley Park, further industrial areas, Sports Centre	Industrial estate, site infrastructure in good condition. Pipers road leads through the site and several parked cars present along the road, nevertheless it is suitable for HGV.	Part of site in Flood Zone 2.	Good access to A435. The industrial estate is approximately 7 miles from M42 Junction 3	Waste arisings:6, Resource demand:7	The site already has some large warehouses present and would be suitable for medium-large sized waste facilities.
Washford Industrial Estate, Heming Road, B98 0DH	The fairly large site is predominantly industrial and well established with mixed use buildings of various sizes. Red brick two storey	Industrial estate, site infrastructure in good condition. Heming road leads through	Part of site in Flood Zone 2.	Good access to A435. The industrial estate is approximately 7 miles from M42	Waste arisings:6, Resource demand:7	Mature trees line much of the site boundary. A small sized waste facility would fit well with the context of the site, but would

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
	offices and brick/metal industrial units. Surrounding uses: Agricultural land, Arrow Valley Park, housing	the site and is suitable for HGV.		Junction 3		have to be located away from the offices which are mostly grouped in smaller roads off the main Heming road.
Kingfisher Enterprise Park, Arthur Street Redditch, B98 8LG	Large industrial estate with mostly one and two storey buildings present. Surrounding uses: Highly industrial area but does have some residential houses overlooking the site in the north west corner.	Industrial estate, site infrastructure in good condition. Arthur Road loops through the estate. It is suitable for HGV	None	Arthur Road leads off Holloway Drive off the A4189 Warwick Highway. The industrial estate is approximately 7 miles from M42 Junction 3	Waste arisings:6, Resource demand:6	This established industrial area has no screening for the adjacent residential area. The site is suitable for small waste facilities but its proximity to residential areas may be a consideration.
Lakeside Industrial Estate, New Meadow Road, Redditch, B98 8YW	Large tall well screened modern units. Some offices, engineering mechanics and distribution. Surrounding uses:	Industrial estate, site infrastructure in good condition.	Flood zone 2.	Arthur Road leads off Holloway Drive off the A4189 Warwick Highway. The industrial	Waste arisings:6, Resource demand:6	A medium to large facility would fit well within the context of the site, if existing buildings were utilised. There are no empty plots on

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
	Industrial			estate is approximately 7 miles from M42 Junction 3		the site.
Weights Farm Business Park, Weights Lane, Redditch, B97 6RG	Mixed units, with uses including landfill, skip hire, offices, snack bar, mechanics and carpets. Surrounding uses: Residential at site entrance, agricultural/rural.	Industrial estate, site infrastructure in adequate condition.	Greenbelt	Access off the A441 suitable for HGVs	Waste arisings:1, Resource demand:4	Waste uses already exist on site and further uses could be accommodated with minimal impact.
Ravensbank Business Park, Junction 3, M42, Redditch, B98 9EX	Large newly built/modern business park with smart appearance. Very large metal warehouses. Surrounding uses: Industrial	Industrial estate, site infrastructure in good condition.	Greenbelt	Located at M42 Junction 3.	Waste arisings:1, Resource demand:5	
Land occupied by derelict factory near Redditch Station	Derelict factory	Site identified as gateway site in Redditch Local Plan, As such it would be		Adjacent to railway line but likely to be too close to station for sidings to be		Site identified as gateway site in Redditch Local Plan, As such it would be

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
Assessed in response to First Draft Submission Consultation		inappropriate for Waste Management Facilities.		developed.		inappropriate for Waste Management Facilities.
Imex Spaces Business Centre, Oxleasow Road, Redditch, B98 0RE	Very large metal warehouses comprising of smaller units. Large areas of tarmac. Surrounding uses: Housing to the south, other industrial estates to the north.	Industrial estate, site infrastructure in good condition.	Part of site in flood zone 3.	Oxleasow Road Links to the A4023. The access is good and is suitable for HGV. The industrial estate is approximately 5 miles from M42 Junction 3	Waste arisings:7, Resource demand:6	The site and adjacent area have a number of very large warehouses present. Mature trees along the southern boundary offer some screening. The site is suitable for a small sized waste facility but proximity to housing may be a consideration.
Moons Moat North Industrial Estates, Redditch, B98 9HE	A sprawling industrial estate with several areas of different use and different sized buildings. Surrounding uses: Other Industrial areas	Industrial estate, site infrastructure in good condition. The site has several roads leading through	Part of site in flood zone 3.	All internal roads have good access to the A4023. The industrial estate is approximately 5	Waste arisings:7, Resource demand:6	The site is an established industrial area. A waste facility would fit within the context of the site, with parts of the site suitable for a

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
		i75t. Cole meadow, Eagle and Merse Roads are all suitable for HGV.		miles from M42 Junction 3 and 8 miles M42 Junction 2.		medium sized facility.
The Redditch Business centre, Edward Street, Redditch, B97 6HA	Older buildings, which front onto the road. Many are disused but would be more suitable for office/workshop type developments. Surrounding uses: Residential with 10 metres, primary school near to site.	Industrial estate, site, but little site infrastructure and buildings would be would be more suitable for office/workshop type developments.	None.	Access is through a residential area and off a one-way street.	Waste arisings:3, Resource demand:3	It is unlikely that a waste facility would fit within the context of the site.
Enfield Industrial Estate, Redditch, B97 6BG	Mix size and type of buildings but generally medium to large sized 2 storey brick clad units. There are some offices, mechanics, trade counters, and a cemex plant.	Industrial estate, site infrastructure in good condition.	Flood zone 2 and 3 (part of site).	Access via B4184 from A441. Suitable for HGVs.	Waste arisings:7, Resource demand:7	A small-medium scale indoor facility would fit well within the context of the site.

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
	Surrounding uses: Residential					
Hunt End Industrial Estate, Redditch, B97 5XP	A well screened site. Large 2 storey buildings split into several units, with enclosed yard areas to the front of each building. Mainly warehousing and engineering. Surrounding uses: Residential	Industrial estate, site infrastructure in good condition.	Flood zone 3 (part of site),but watercourse appears to have been culverted.	Good access suitable for HGVs.	Waste arisings:2, Resource demand:1	
Manorside Industrial Estate, North Moons Road, Redditch B98 9HD	A well screened medium sized industrial estate. Large buildings split into 8-10 smaller units. Surrounding uses: Industrial.	Industrial estate, site infrastructure in good condition	Flood Zone 3 (part of site).	Good access suitable for HGVs.	Waste arisings:5, Resource demand:5	The site could accommodate a small – medium scale waste management facility.
South Moons Moat, Padgets Lane, B98 0RD	A well screened medium sized industrial estate. Large buildings split into 8-10 smaller units. Pedestrian	Industrial estate, site infrastructure in good condition	Flood Zone 3 (most of site).	Good access suitable for HGVs.	Waste arisings:3, Resource demand:4	The site could accommodate a small – medium scale waste management facility.

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
	access is to the front of the building and HGV access to the rear. Surrounding uses: Residential and industrial.					
Abbey Trading Centre, Alvechurch Highway, Redditch, B97 6RF	Trading estate with a supermarket and DIY stores.	The site is no longer an industrial estate.	None.	Good access suitable for HGVs.	Waste arisings:4, Resource demand:6	The site is no longer an industrial estate.
Gas works, Windsor Road, Enfield, Redditch		Derelict land but not a former employment or industrial use.				
Rear of 1 to 11, Auxerre Avenue, Greenlands, Redditch		Derelict land but not a former employment or industrial use.				
Sewage works, Blaze Land, Hunt End, Redditch		Derelict land but not a former employment or industrial use.				
Sewage works, Pumphouse lane,		Derelict land but not a former				

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
Webheath, Redditch		employment or industrial use.				
Adj crossgate depot, Crossgate Road, Park Farm North, Redditch		Derelict land but not a former employment or industrial use.				
Land at Woolaston road, Park Farm North, Redditch		Derelict land but not a former employment or industrial use.				
Land off Portway, Beoley, Redditch		Derelict land but not a former employment or industrial use.				
3- Bromsgrove, Droitwich and Malvern						
Bromsgrove						
Buntsford Hill Industrial Estate, Buntsford Park Road, B60 3DX	A large site with numerous large metal warehouses present. Surrounding use: further industrial areas.	Industrial estate, site infrastructure in good condition.	SPZ2	Access via Sherwood and Buntsford Park roads off the A38. This junction is a small and very busy roundabout. The industrial estate is	Waste arisings:2, Resource demand:7	The immediate area is predominantly industrial. There is some good screening provided by the number of mature trees lining the roads in the area. A medium to large sized waste facility

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
				approximately 5 miles from M5 Junction 5.		would fit within the context of the site.
Buntsford Gate Business Park, Stoke Heath, Bromsgrove, B60 4JE	Business park, offices at front of site, car sales and empty plots at rear. Surrounding uses: Industrial, agricultural, Avoncroft museum to west (well screened)	Business park, empty plots could be developed for waste use. Good site infrastructure.	Part of site in Source Protection Zone 2.	Good road access from A38.	Waste arisings:2, Resource demand:7	Residential use on other side of A38 is a significant distance from currently empty plots. Could accommodate medium to large facility.
Silver Birches Business Park, Aston Road, Bromsgrove, B60 3EU And *Basepoint Business Park*	Not clear which part of large industrial area is officially 'Silver Birches', merging with Sugarbrook, Aston Fields, Bromsgrove Technology Park, Basepoint Business Park. This area is extensive, with a mix of office and warehouse/industrial unites. Larger units are mainly brick and metal clad 2 storey buildings.	Part of a larger industrial area, good site infrastructure.	SPZ2	Access off A38, generally good site roads.	Waste arisings:5, Resource demand:5	Medium waste facility would fit within the context.

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
Bromsgrove Technology Park, Aston Road, B60 3EX	Large site but undeveloped at present. One large steel frame currently under construction. Surrounding uses: Newly built residential area, other business parks and Severn Waste Recycling Centre. Railway runs adjacent to south eastern boundary.	Industrial estate, site infrastructure in good condition. Roads within the site are newly built and suitable for HGVs.	SPZ2	Access via Sherwood and Astons Roads, Off the A38. This junction is a small and very busy roundabout. The industrial estate is approximately 5 miles from M5 Junction 5.	Waste arisings:5, Resource demand:5	The western boundary is in close proximity to new housing. However a small sized waste facility would fit within the context of the site.
Pinches /Chadwich Mill Farm, Wildmoor Lane, Nr Bromsgrove Grid ref: 396649, 275374	A dormant quarry that has been worked in three phases. Phases 1 and 2 have been infilled and restored to agricultural use. Phase 3 is the only remaining quarry void. It is located on the top of a hill. The void cannot be seen from	A permitted quarry. Planning permission allows for mineral extraction, infilling and ancillary crushing and screening of inert waste material.	Source Protection Zone II, Green belt.	Access via A491 to M5 junction 4.	Waste arisings:2, Resource demand:1	

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
	the surrounding area but haul routes and filling operations are likely to be. Surrounding uses: Agriculture, motorway and highways maintenance depot.	Consent will expire at the end of November 2019.				
Stanley Evans Quarry, Sandy Lane, nr Bromsgrove Grid ref: 395003, 276292	Well screened with trees and hedgerows on the west and south boundaries of the site. Surrounding uses: Agricultural, residential development, operational landfill site and the A491.	Operational mineral site that is adjacent to an operational landfill site. In September 2007 consent was granted for a wood chipping and windrow composting facility within the quarry area. Permission has not yet been implemented and will expire in September	Green belt, Source protection zone II	Access via A491 to M5 junction 4.	Waste arisings:2, Resource demand:1	

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
		2010. Biffa has submitted an application for extension of time.				
Metal and Ores Industrial Estate, 91A Hanbury Road, Stoke Prior, B60 4JZ	"Smart" office buildings at front of site, more industrial/warehouse to rear and waste use in place at back of site. Surrounding uses: opposite pub, access past residential but over 100m from waste-suitable part of site.	Industrial estate, good site infrastructure	Most of site in Flood zone 3.	Rail and Water run adjacent to the site some wharfage. Road access and site roads good but bridge restriction of 3.9m height	Waste arisings:2, Resource demand:7	Pylons at rear of site.
Saxon Business Park, Hanbury Road, Stoke Prior, B60 4AE	Medium sized predominantly office based business park, which lies adjacent to several other business parks. There are some warehouses with more industrial uses.	Industrial estate, site infrastructure in good condition.	Part of site in Flood Zone 3. Within 100m of Special Wildlife Site, Greenbelt.	Access off the B4091, which links to the A38 (suitable for HGVs) The industrial estate is approximately 4	Waste arisings:2, Resource demand:7	There are already several medium to large warehouses present. A small to medium sized waste facility would fit within the context of the site.

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
	Surrounding uses: Business park of similar appearance, rural/agricultural.			miles from M5 Junction 5.		Several very large electricity pylons run across the site (roughly north to south). These would need to be considered.
Harris Industrial Estate Business Park, Hanbury Road, Stoke Prior, B60 4AA	Medium sized predominantly office based business park which lies adjacent to similar business park/industrial areas. There are some warehouses with more industrial uses. Surrounding uses: Business park, rural/agricultural land, canal along northern boundary.	Industrial estate, site infrastructure in good condition.	Part of site in Flood Zone 3, Green belt	Access off the B4091, which links to the A38. Suitable for HGVs. The industrial estate is approximately 3 miles from M42 Junction 1.	Waste arisings:2, Resource demand:7	There are already several medium to large warehouses present. The site is suitable for a small to medium sized waste facility.
Aston Fields Industrial Estate Sugarbrook Road, B60 3DR	A sprawling industrial estate over a hilly area with no clearly defined boundary with the surrounding residential area.	Industrial estate, site infrastructure in good condition.	Flood Zone 3 (part of site).	Accessed off the A38. Suitable for HGVs.	Waste arisings:5, Resource demand:5	The estate is spread over a fairly hilly area meaning that some areas of the estate are more

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
	Mostly single storey buildings/warehouses. Surrounding uses: A large estate which is in close proximity to residential housing to the north.					visible than others. However a medium to lage sized waste facility would fit within the context of the site. Close proximity to housing may be a consideration.
Hobden Hall Industrial Estate, Shaw lane, B60 4DU	Small site. Agricultural diversification with small business/light industrial use in former farm buildings.	Small business/very light industry, not industrial estate. Site access in poor condition.	In the greenbelt	Narrow access track unsuitable for HGVs, tarmacked but in bad condition. Access is between houses.	Waste arisings:1, Resource demand:4	In open countryside, not screened. Access between residential buildings and through Stoke Prior village. Waste use not compatible.
Sanders Road Industrial Estate, Bromsgrove, B61 7DG	Small site. Single storey brick and metal clad units. Site is very small and parking constrains movement.	Light industrial use, site infrastructure not suitable for waste use.	Part of site in Flood zone 3, most of site in flood zone 2. Source protection zone 2.	Access from B4091, busy and fairly narrow for the volume of traffic, past residential and site access is past residential. Not	Waste arisings:5, Resource demand:5	Waste use not compatible.

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
				suitable for HGV.		
Bromsgrove Business Centre	High street – town centre. Surrounding uses: High street retail.	High street not industrial estate.		Access through town centre, unsuitable for HGVs	Waste arisings:5, Resource demand:5	Waste use not suitable in this location.
Shaw Lane Industrial Estate, 152 Shaw Lane, B60 4ED	Small site. Single storey brick built small units, asbestos roofs. Surrounding uses: adjacent to Stoke Prior village, agriculture. Less than 20m from residential.	Industrial estate, infrastructure not suitable for waste and site too small for HGVs (approx 6m between unit fronts)	Approximately half of site including access roads in Flood zone 3. In the greenbelt.	Road access through Stoke Prior village to North and constrained by low rail bridges to South. Rail line approx 100m to South but close to junction.	Waste arisings:1, Resource demand:4	Other uses on site include: auto refinishing, dental laboratory, joinery, engineering and meat (processing or storage?)

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
Proposed extension to Chadwich Lane Quarry, Chadwich Lane, Madeley, Nr Bromsgrove Grid ref: 395565, 276870	The site is located in the open countryside.	A permitted quarry. Work has not yet started on site. A condition of the planning permission expressly forbids the treatment and processing of any waste materials on the site.	SSSI, Special Wildlife Site, Local geological site, Source Protection Zone II, Green belt.	Access is off Money Lane and the site does not experience the same access issues as the existing Chadwich Lane Quarry. J4 of the M5 is 1.5kms to the east.		Any waste management facility would have to be located within the quarry void and be operated in conjunction with infilling operations.
Chadwich Lane Quarry, Chadwich Lane, Madeley, Nr Bromsgrove Grid ref: 395565, 276870	The site is located in open countryside on the side of a hill. Now that infilling and restoration operations have reached the level of the surrounding ground the site is visible from the surrounding countryside.	An operational quarry. The quarry is coming towards the end of its productive life. It is likely to infilled and restored to agricultural use within the next 2 to 3 years.	SSSI, Special Wildlife Site, Local geological site, Source Protection Zone II, Green belt.	Poor access to the site via country lanes (Bonfire Hill and Chadwich Lane). The majority of complaints about this quarry have been about the number and speed of HGVs		Planning permission has been refused on appeal for the operation of a crusher on the site to produce secondary aggregate. As operations at the site will be coming to an end

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
				travelling to and from the quarry.		soon it would not be appropriate to locate a waste management facility here.
Land at Hanbury road, Stoke Prior, Bromsgrove		Derelict land with former employment or industrial use.	Flood zone 3			
Land at Junction of willow road and crabtree lane, Bromsgrove	A grassed area in a residential estate.	Derelict land but not a former employment or industrial use.	Source protection zone 3			
Land off Station road, Blackwell, Bromsgrove		Derelict land but not a former employment or industrial use.				
Land adjacent 7 School Drive, Bromsgrove		Derelict land but not a former employment or industrial use.				
Wildmoor Quarry, Sandy Lane, Bromsgrove Grid Ref: 395037, 275913	Well screened site because of the surrounding topography, hedgerows and trees. There is a mixture of uses on this site,	Operational mineral site that is coming to the end of its productive life. Already has two	Green belt, Source protection zone II	Access via A491 to M5 junction 4.		Planning permission for mineral extraction and the restoration of the quarry floor to agricultural use, nature

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
	including vehicle sales and maintenance, motor cycle scrambling and a waste transfer station. Surrounding uses: Agricultural, residential, A491.	separate planning permissions, one to operate a waste transfer station and the other for a wood storage and chipping facility on part of the floor of the quarry, both of which expire in December 2012.				conservation and a fishing lake. No restoration has yet taken place. A few years ago a planning permission was sought for an extension to the quarry and the construction and operation of a large waste management facility that would have been located on the quarry floor. This application was withdrawn because the officer's report recommended refusal.
Droitwich						
Berry Hill Industrial Estate,	Massive site with mostly huge	Industrial estate, site	None.	Good access, suitable for HGV	Waste arisings:7,	The site is quite well screened.

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
Droitwich, WR9 9AU	manufacturing and distribution units. The site is relatively open with large metal warehouses and some smaller brick structures. Some small units exist as well. Surrounding uses: Open fields, residences (less than 100m away)	infrastructure in good condition. Within the site there is a one way system in place to facilitate the heavy on street parking.		usage.	Resource demand:7	Offices are located near the residences whereas bigger units are at the north of the site, away from the houses. The site is suitable for a waste facility of any size.
Coal yard, Near Droitwich Grid ref: 389500,263561	A small tarmac site, currently with no buildings. Surrounding uses: Industrial, road and rail, boxing club on adjacent site.	Derelict land with former employment or industrial use.	None	Adjacent to rail and canal with multimodal potential. Good connection to road network.	Waste arisings:7, Resource demand:6	The site is small but would be adequate for a small facility.
Stonebridge Cross Business Park, Point on Way, Hampton Lovett, Droitwich, Worcester, WR9	A brand new business park with a few large metal clad units, some warehouses and some modern offices.	Industrial estate, site infrastructure in good condition.	None.	Excellent access into the site off Point on Way. Suitable for HGVs	Waste arisings:2, Resource demand:7	The site is suitable for a medium sized waste facility, however it might be better to locate them away

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
0LW	Surrounding uses: fields and other industrial estates.					from the offices.
Hampton Lovett Industrial Estate, Hampton Lovett, Droitwich, WR9 0QG	Large site with mixed uses including offices, warehouses, light engineering. The units are both small and large. Surrounding uses: Open land, Coppice, Plantation.	Industrial estate, site infrastructure in good condition.	None.	Good access suitable for HGV usage.	Waste arisings:2, Resource demand:7	Due to the size of the estate and its units, a waste facility would fit within the context of the site. The site would be suitable for a facility of any size provided the right space is available.
North Street Industrial Estate, Droitwich, WR9 8JB	A medium sized site with a mixture of small industrial and office units and trade counters. Surrounding uses: less than 5m to residential.	Industrial estate, with some offices and trade counters. Access to some parts of the site may be limited.	None.	The site is adjacent to railway and train station but due to the size of the site, connections to rail are unlikely to be practical. Road access is from a one-way street with some	Waste arisings:6, Resource demand:3	Very open site in a residential area, although it is set back from the road. A small waste management facility within existing buildings is unlikely to have a significant visual impact; however

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
				on street parking.		operations may be limited by little outdoor yard space.
Rushock Trading Estate, Droitwich Road, Rushock, WR9 0NR	A fairly large estate with gated entrance. Mostly large warehouses which comprise of smaller units, some undeveloped spaces and a small area of office based premises (adjacent to the entrance). Surrounding uses: Rural/agricultural land. Residential.	Industrial estate, site infrastructure in good condition. Roads within the site are suitable for HGV access.	Greenbelt,	Access via the A442. A fairly narrow road but a number of HGVs witnessed along the road (several industrial estates along this road).	Waste arisings:1, Resource demand:2	Some very large warehouses already present on the site. Hedges/trees provide good screening from the road. Some operations built slightly lower than ground level. A small to medium sized waste facility would fit within the context of this site.
Malvern						
Enigma Business Park, Grovewood Road, Malvern, WR14 1XZ	Large site with large metal clad units. The site is modern and spacious and has mostly 2 storied buildings. Surrounding uses:	Industrial estate, site infrastructure in good condition.	None.	Good access road (Townsend Way). Suitable for HGVs	Waste arisings:6, Resource demand:7	The site is suitable for a medium-large sized waste facility. Electricity lines running over the site, but they are

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
	Other industrial estates.					of sufficient height. The quality of the site needs protecting.
Spring Lane Industrial Estate, Malvern, WR14 1AL	Large site with a mixture of old and new units. Some concrete warehouses exist on site and so do office buildings. The buildings vary in size. Surrounding uses: Industrial estates, houses less than 20m away, electricity sub station.	Industrial estate, site infrastructure in good condition.	None.	Good access road which is reasonably busy. Suitable for HGVs.	Waste arisings:6, Resource demand:7	The site is very close to housing. However a small to medium sized waste facility would fit within the context of the site.
Link Business Centre, Bond House, Link Way, Howsell Road, Malvern, WR14 1UQ	Reasonably large business centre with mixed uses including plastics, ironmongery, takeaways and warehouses. Mostly 2 storied metal clad structures with smaller units.	Industrial estate, site infrastructure in good condition.	None.	Good access. Suitable for HGVs.	Waste arisings:3, Resource demand:1	The site is surrounded by housing, however it is a large site and a small sized waste facility would fit within the context of the site.

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
	Surrounding uses: Housing (less than 10m on three sides), railway line to the east.					
Blackmore Business and Technology Park, Blackmore Park Road, Great Malvern	This site is still under development. It appears that this will include 4 phases. The first phase consists of medium sized buildings split into several units. The later stages, yet to be constructed will include of larger buildings. Surrounding uses: rural/agricultural, caravan storage	Industrial land in good condition with good site infrastructure.	None.	Good access. Suitable for HGVs.	Waste arisings:1, Resource demand:2	The site is suitable for a medium-large sized waste facility either in existing or planned phases of the development.
Merebrook Industrial Estate, Hanley Road, Welland, Malvern, WR13 6NP	Small site with mostly brick clad commercial and office buildings. Some wood working warehouses are located in the rear of the site.	Industrial estate, site infrastructure in good condition.	None.	Good access (off hanley Road). Suitable for HGVs	Waste arisings:1, Resource demand:2	Very open site, although it is set back from the road. Well screened in parts but visible from Blackmore Park

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
	Surrounding uses: Residential units (within 1 km) fields, farm buildings.					Road and houses nearby. The site is suitable for a small sized waste facility. However , they would have to be at the rear of the site.
Sixways Industrial Estate, Barnards Green, Malvern, WR14 3NB	Small site, mainly brick clad 2-storey buildings. Mix of shop, engineering and offices. Surrounding uses: residential, shopping area and old people's home. Sports field to south.	Industrial estate.	None.	One way system at Barnards Green too tight for HGVs, through busy shopping area. Site infrastructure and access unsuitable for HGV. No potential for rail/water.	Waste arisings:4, Resource demand:3	Industrial estate but only light industry, waste use would not fit within the context. Close to residential areas and old people's home. Access unsuitable.
Hanley Workshops, Hanley Road	Small rural site, single storey brick buildings with corrugated roof. Surrounding uses: Agriculture	Light industrial use.	None.	Good road access but internal site too tight for HGVs due to onsite parking.	Waste arisings: 2, Resource demand: 1	Waste use unlikely to fit within the context.
Howsell Road	Small site with small	Industrial estate.	None.	Adjacent to rail	Waste	The site is close to

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
Industrial Estate, Howsell Road, Malvern	metal and brick buildings, corrugated roofs. Mix of uses includes carpet showroom, vehicle repair and engineering. Tight turn and steep at entrance. Surrounding uses: Link business centre, housing	Site infrastructure in poor condition.		but no room for sidings. Road network suitable for HGVs but site infrastructure not.	arisings:3, Resource demand:1	housing and <15m from conservation area (Malvern Trinity). Site is very small, entrance is tight and steep and road in poor repair.
Cygnet Business Centre, Hanley Swan	Small rural business centre, converted agricultural buildings and sympathetic new build. Small units, tight access. Surrounding uses: agricultural, close proximity to residential (Hanley Swan village)	Business centre, office not industry	None	Good road access but tight access to site.	Waste arisings: 2, Resource demand: 1	Business uses in keeping with agricultural surroundings, adjacent to residential area. Waste use unlikely to fit within the context and site access constrained.
Frobisher Business Park, Leigh Sinton Rd,	Business park being developed alongside housing estate.	Use as business park not industrial estate	None	Access through large housing estate. Access	Waste arisings: 2, Resource demand: 1	No industrial buildings on site. Site not suitable

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
Malvern, WR14 1BX	Planning permission for B1 b and c. General industrial (and therefore waste use) not acceptable. Surrounding uses: large business adjoins the site. Nearby office, commercial, research buildings. Housing estate will be <20m to N and opposite.			roads through Leigh Sinton good but through Malvern very poor.		for waste use.
Malvern Science and Technology Park, Geraldine Road, Malvern, WR14 3SZ	Large, very modern metal, glass and wood clad buildings. Office and high-tech development. Surrounding uses: entrance adjacent to Chase High School and through residential area.	Mainly office and research use, not industrial estate but site infrastructure in good condition.	None.	Good access but adjacent to school entrance.	Waste arisings:4, Resource demand:3	A technological use may fit within the context but more traditional waste sorting/processing may not. Site appeared to be fully developed. Sensitive receptor of school within 50m.
Willow End Business Park,	Rural site. Brick/metal building, 2 storey,	Employment land but office	None.	Good access. Suitable for	Waste arisings:1,	Business centre, office use not

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
Blackmore Park Road, Welland, Malvern, WR13 6NN	office use. Surrounding uses: agriculture, residential	not industry.		HGVs.	Resource demand:1	industrial. A waste use would not fit within the context.
Seaford court, Worcester Road, Malvern Link		Derelict land but not a former employment or industrial use.				
Land adjacent railway line, Howsell Road, Malvern Link		Derelict land but not a former employment or industrial use.				
4 – Evesham and Stourport-on-Severn						
Evesham						
Vale Business Park, Evesham WR11 1TD	Very large site with mixed uses. Lots of businesses, warehouses and offices are located on site.	Industrial estate, site infrastructure in good condition.	None.	Excellent access into the site, suitable for HGVs.	Waste arisings:3, Resource demand:5	The site is very large with large units. It is suitable for waste facilities of any size, however it would be more appropriate to locate them near to the warehouses rather than the offices.
Four Pools Industrial Estate,	Small industrial estate with a mix of uses.	Industrial estate, site.	None.	Good access suitable for	Waste arisings:4,	Housing is located very closed to the

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
Evesham, WR11 1XJ	Buildings are mostly 1-2 storied, clad with brick or metal. Surrounding uses: Housing and a retail estate.	A lot of cars use the access road within the site and this access might need improving.		HGVs.	Resource demand:5	site. However a small waste facility would fit within the context of the site.
Bennetts Hill Business Park, The Grove, Long Hyde Road, South Littleton, Evesham, WR11 8TB	Mostly 1-1½ storey buildings, mixed construction types, warehouse/modern agricultural buildings. Large concrete area used for parking, not used as yards for units. Surrounding uses: Agricultural, residential at entrance	Light industrial use, reasonable site infrastructure.	Within 10m of Special Wildlife Site.	Roads suitable for HGV	Waste arisings:1, Resource demand:1	Other units on site include market gardening/produce (storage?) (also carpets, car sales, electrical uses). Waste may not be suitable alongside produce? Site may be suitable for small unit if indoors
Blackminster Business Park, Blackminster, Evesham, WR11 7RE	Trade units in converted farm buildings	Trade units, not industrial	Flood zone 3 (part of site), Flood zone 2 (part of site), within 10m of Special Wildlife Site,	Roads suitable for HGVs. Adjacent to rail (and level crossing)	Waste arisings:1, Resource demand:2	
Bond Industrial	Small units in small	Commercial and		Road access ok		

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
Estate, Wickhamford, Evesham, WR11	industrial estate Surrounding uses: residential, agriculture, entrance opposite Dogs' Trust	office use rather than industrial estate, site too small for HGV, no turning space.		but site entrance is tight and between residential buildings, not suitable for HGV.		
Green Gables Business Centre, Kings Road, Evesham, WR11 3GX	Small metal buildings, asbestos roofs, units only as wide as garage door. Other units on site include a hand car wash, garage, motorbikes, tiles. Surrounding uses: adjacent to childrens nursery, residential area, Evesham Marina	Trade and very light industry, not an industrial estate.	Flood zone 3 (part of site).	Adjacent to marina on River Avon. Adjacent to railway line. Road access poor, through residential area with speed bumps, fairly tight turn into site.	Waste arisings:1, Resource demand:1	Extremely small units, not suitable for waste use.
Land adj Fairwater House, Waterside, Evesham		Derelict land but not a former employment or industrial use.				
Land rear of Oat street and Cowl		Derelict land but not a former				

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
street, Evesham		employment or industrial use.				
Pershore						
Keytec 7 Business Park, Goodwood Road, Pershore, WR10 2JN	Large and modern site with huge 2 storied metal clad industrial units. Surrounding uses: Other industrial estates, open fields, high school.	Industrial estate, site infrastructure in good condition.	None.	Good access suitable for HGVs.	Waste arisings:2, Resource demand:6	The estate is very large with large units. It is suitable for a waste facility of any size.
Racecourse Road Trading Estate, Pershore, WR10 2DL	Medium sized estate with mostly 1-2 storey metal clad units for warehousing and storage uses. Individual units are quite sizeable. Surrounding uses: Other industrial estates.	Industrial estate, site infrastructure in good condition.	None.	Good access suitable for HGVs.	Waste arisings:2, Resource demand:6	There are large warehouses on the site. The site is suitable for small-medium sized waste facilities.
Pershore Trading Estate, Pershore, WR10 2DD	Medium sized estate with 1 storey brick clad units. Individual units are small.	Industrial estate, site infrastructure in good condition.	None.	Good access. Suitable for HGVs	Waste arisings:2, Resource demand:6	A small waste facility would fit within the context of the site.

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
	Surrounding uses: Other industrial estates, Supermarket, high school, veterinary surgery.					
Hill and Moor, Throckmorton Road, Lower Moor, Nr Pershore, Worcestershire, WR10 2PW	Landfill site with associated waste transfer, household recycling centre and composting operations. Part of site restored. Surrounding uses: rural/agricultural and Throckmorton Airfield.	Existing landfill site, partially restored	None.	Good access. Suitable for HGVs	Waste arisings:4, Resource demand:2	There are already several waste management operations on site. There is some potential for further operations to take place.
Throckmorton Landfill Site Pershore, Worcestershire, WR10 2PW.	Former landfill site Surrounding uses: rural/agricultural and	Former landfill site operated by Defra. Defra has informed the council that this site will not be used for commercial operations.	None.	Good access. Suitable for HGVs		Defra has informed the council that this site will not be used for commercial operations.
Land to the rear of High Street, Pershore		Derelict land but not a former employment or				

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
		industrial use.				
Tenbury Wells						
Tenbury Business Park, Bromyard Road, Tenbury Wells, WR15 8FA	A well screened modern estate with medium and large buildings, some split into smaller units. A highway depot on site uses some outdoor areas. There appear to be some empty plots. Surrounding uses: Agricultural/rural.	Industrial estate, site infrastructure in good condition.	None.	Access through the town centre and past a school, but roads are suitable for HGVs.	Waste arisings:1, Resource demand:2	A small to medium sized facility would fit within the context of the site. There appear to be some empty plots.
Upton-upon-Severn						
Upton upon Severn Industrial Estate, Minge Lane, Upton upon Severn, WR8 0LX	Mix of buildings, 2-storey (3-storey silos in one part), some empty plots. Surrounding uses: adjacent to residential, church	Industrial estate, infrastructure in good condition.	Part of site in flood zone 3. Within 100m of listed building.	Within Upton, access just off A4104	Waste arisings:3, Resource demand:3	S-M facility would be in keeping.
Upton Business Centre, Welland Road, Upton-upon-Severn,	"Warehouse" type split into units. Some outdoor activities, digger storage.	Industrial estate, good infrastructure	None	Good access on A4104	Waste arisings:1, Resource demand:2	Other uses onsite, engineering, garden furnishings, digger

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
Worcester, WR8 0SW	Surrounding uses: rural/agricultural					storage. Adjacent to Severn Trent Pumping Station. Waste facility would fit within context
Ripple, Nr. Tewkesbury Grid Ref: 387102, 237018	Operational. Planning permission for mineral extraction and restoration of the land to a lake. Working in conjunction with the RSPB on implementing the approved restoration plan. Surrounding uses: Agriculture and River Severn	Operational mineral site.	Flood zone 3	Adjacent to the River Severn. Already has wharf facilities provided to allow barges to tie up to deliver sand to the plant for processing. Access to the site is via narrow country lanes. A condition of the planning consent stipulates that all extracted material shall be		

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
				removed from the site by barge. No materials whatsoever are allowed to be taken by road.		
Ryall House Farm, *Nr. Upton on Severn* Grid Ref: 386735, 239618	The site is located in the open countryside of south Worcestershire. Quarrying finished some 15 years ago. Infilling of the void is complete and now undergoing restoration to return the land to agricultural use (BMVL). Once the soils in the storage bunds are removed for use in the restoration of the land the site will be very open. Surrounding uses: Agriculture, and River	Worked Mineral site. Currently undergoing restoration.	None.	Good access via quarry entrance onto the A38. Adjacent to the River Severn. Already has wharf facilities provided to allow barges to tie up to deliver sand to the plant for processing.		Given that the site is in a very open location, any waste management facility located here could have a significant impact on the visual amenity of the area

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
	Severn.					
Saxons Lode, Ryall House Farm Quarry Nr Upton on Severn Grid Ref: 386677, 239334	The old mineral working is located in the open countryside of south Worcestershire. Once the soils in the storage bunds are removed for use in the restoration of the land the site will be very open. Surrounding uses: Agriculture and River Severn	Worked Mineral site. The site is awaiting restoration.		The site is part of Ryall House Farm which already has wharf facilities provided to allow barges to tie up to deliver sand to the plant for processing. Good access via quarry entrance onto the A38.		The site has been awaiting restoration for some years now. Wildlife has taken over which include a European protected species and species that are rare in Worcestershire.
6 – Rural areas						
Bruff Business Centre, Bushbank, Longley Green, Suckley, WR6 5DR	Very small well screened business centre with one or two units. Brick, corrugated iron/asbestos buildings Surrounding uses: houses less then 10m	Business centre not industrial estate – office and commercial, very light industrial. Site infrastructure in good condition. No more than 2	In AONB.	Rural roads unsuitable for HGV. Steep turn into site. 4 miles to A4103	Waste arisings:1, Resource demand:1	

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
	away. Rural/agricultural.	HGVs could park on site.				
Elgar Business Centre, Hallow, Near Worcester, WR2 6NJ	A small estate with office use. Surrounding uses: Residential at site access, agricultural/rural	Office use only on site.	None.	Rural roads unsuitable for HGVs	Waste arisings:1, Resource demand:1	Office use only on site.
Maylite Trading Estate, Berrow Green Road, Martley, Worcester, WR6 6LR	Fairly well screened site consisting of a large building complex (1/2 ha+) plus 12 separate units in 2 blocks. Predominantly offices small workshops and very light industrial. Buildings on very good condition and well maintained. Surrounding uses: Pupil referral unit, residential (300m) and haulage depot.	Industrial estate, site with office and light industrial use. infrastructure in good condition.	None.	Site on B4197 to Martley, A44 at least 2.5 miles away.	Waste arisings:1, Resource demand:2 Situated in "other area" so not suitable	There are some vacant plots on site would only be suitable for a very small unit.
Mill Pool Farm Industrial Estate	This is a small estate with mainly metal clad	Industrial estate, site. Buildings	None.	Access from A443, although	Waste arisings:1,	

Site Name	Site description	Compatible land	Constraint	Connectivity	Proximity	Other
Main Road, Hallow, Worcester, WR2 6LS	buildings, some Nissan huts.	and site infrastructure unlikely to be adequate for a waste use.		the turn may be a little tight.	Resource demand:1	
Stockwood Business Park, Stockwood Business Centre, Stockwood, Redditch, B96 6SX	A small estate with Barn conversion style units. Mainly used for Offices, with Classic car restoration. Surrounding uses: Rural/agricultural land.	Industrial estate, site, unsuitable for HGVs	None	Access via rural roads, unlikely to be suitable for heavy HGV movements.	Waste arisings:1, Resource demand:2	A waste management facility is unlikely to fit well within the context of this site, with unit size and access being significant factors.
Broadway Quarry, Fish Hill, Broadway Grid Ref: 411789, 236320	Hard rock quarry located on the top of the Cotswold escarpment within the Cotswold AONB. Surrounding uses: agriculture, Broadway Tower Country Park, Fish Hill picnic site, A44.	Mineral site. Now at the end of its operational life.	Cotswold AONB, Source Protection zone II	Access via A44.		

Distances to motorway junctions calculated using google maps route finder.

Appendix 2 to Annex A. Inconsistencies between ERM and WCC officer site assessments

ERM was commission to undertake a preliminary assessment of industrial estates. This was used to inform the traffic light assessment undertaken by Worcestershire County Council. There are some inconsistencies between the two assessments, flagged up in the table below.

Location	Reason
Aston Fields Industrial Estate	ERM found the site to be suitable, but WCC traffic light assessment found the locations to be unsuitable as it is partially in Flood Zone 3.
Berkeley Business Park	Site not assessed by ERM.
Birchen Coppice trading Estate	Difference of interpretation: ruled out by ERM on the grounds of size and setting. Considered by WCC to be comparable to other suitable locations.
Blackpole Trading Estate	ERM found the site to be suitable, but WCC traffic light assessment found the locations to be unsuitable as it is partially in Flood Zone 3.
Buckholt Business centre	Subdivision of what ERM had treated as one site, treated as part of Warndon Business Park.
Finepoint Business Park	Site not assessed by ERM.
Firs Industrial Estate	Site not assessed by ERM.
Foley Industrial Estate	Difference of interpretation: Ruled out by ERM. WCC considered the ERM assessment was inconsistent with analysis of other locations.
Harris Business Park	Site not assessed by ERM.
Harris Business Park	ERM found the site to be suitable, but WCC traffic light assessment found the locations to be unsuitable as it is partially in Flood Zone 3.
Hunt End Industrial Estate	ERM found the site to be suitable, but WCC traffic light assessment found the locations to be unsuitable as it is partially in Flood Zone 3.
Imex Spaces Business Centre	ERM found the site to be suitable, but WCC traffic light assessment found the locations to be unsuitable as it is partially in Flood Zone 3.
Lakeside Industrial Estate	WCC analysed a different, larger site than ERM's assessment that the site would be unsuitable "due to the size of the units present"
Moons Moat North Industrial Estate	ERM found the site to be suitable, but WCC traffic light assessment found the locations to be unsuitable as it is

	partially in Flood Zone 3.
Rushock Trading Estate	Site not assessed by ERM.
Sandy Lane Industrial Estate	ERM found the site to be suitable, but WCC traffic light assessment found the locations to be unsuitable as it is partially in Flood Zone 3.
Saxon Business Park	ERM found the site to be suitable, but WCC traffic light assessment found the locations to be unsuitable as it is partially in Flood Zone 3.
Shire Business Park	Difference of interpretation: ruled out by ERM on the grounds that "it is in private ownership". WCC did not consider this as part of the traffic light assessment.
Shrub Hill Industrial Estate	Site not assessed by ERM.
Tenbury Business Park	Site not assessed by ERM.
Upton upon Severn	Site not assessed by ERM.
Weights Farm Business Park	Difference of interpretation: WCC considered the ERM assessment was inconsistent with analysis of other locations.
Worcester Trading Estate	ERM found the site to be suitable, but WCC traffic light assessment found the locations to be unsuitable as it is partially in Flood Zone 3.

The Former Kays Warehouse was also identified by ERM but has since been given planning permission for housing.