



**Development of Waste Treatment Facility,  
comprising Reception and Recycling Hall;  
Mechanical Biological Treatment (MBT) Facility;  
Advanced Conversion Technology (ACT) Facility;  
Power Generation and Export Facility; Education  
and Office Accommodation; Landscaping and,  
Access.**

Sinfin Lane, Derby

**Resource Recovery Solutions (Derbyshire) Ltd**

Environmental Statement

Chapter 15:

Socio Economic

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## 15 Socio-Economic

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### 15.1 Introduction

- 15.1.1 This chapter identifies and assesses the likely socio-economic effects of the proposed development of a Waste Treatment Facility at Sinfin Lane, Derby.
- 15.1.2 The proposed development is located within the City of Derby within the relatively deprived ward of Sinfin, and will process the vast majority of Municipal Solid Waste arising within Derby and Derbyshire over a twenty-five year period at some 190,000 tonnes per annum. A full description of the development is set out in Chapter 4.
- 15.1.3 The site is located adjacent to the Rolls Royce Operation's in Sinfin which provides highly skilled and management jobs associated with manufacturing research and development.
- 15.1.4 This chapter considers the socio-economic effects of the development relating to employment generation, the economic multiplier effect, and the diversion of waste from landfill including the generation of renewable energy. Its scope and methodology have been agreed with Derby City Council.

### 15.2 Legislation and Planning Context

- 15.2.1 A detailed review of the development plan documents and planning context in relation to the development proposals is provided in Chapter 3.
- 15.2.2 This section summarises those policies that are directly relevant to socio-economic issues.

#### National Policy & Legislation

- 15.2.3 PPS1 sets out that amongst its key principles is to promote outcomes in which environmental, economic and social objectives are achieved over time.<sup>1</sup> In addition it sets out that the government is committed to promoting a strong, stable, and productive economy that aims to bring jobs and prosperity to all.<sup>2</sup>
- 15.2.4 PPS10 sets out that in identifying suitable sites for waste management facilities planning authorities should assess suitability against the cumulative effect of previous

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<sup>1</sup>PPS1, para 13

<sup>2</sup> PPS1, para 23

waste disposal facilities on the well being of the local community, including any significant adverse impacts on environmental quality, social cohesion and inclusion or economic potential.<sup>3</sup>

15.2.5 The Regional Vision of the East Midlands Regional Plan sets out that:

*“The East Midlands will be recognised as a Region with a high quality of life and strong healthy sustainable communities that thrives because of its vibrant economy, rich cultural and environmental diversity and the way it creatively addresses social inequalities, manages its resources and contributes to a safer, more inclusive society.”*

15.2.6 It goes on to set out that this will be achieved through, amongst other matters, the integration of:

- A vibrant and competitive economy with increased productivity characterised by high quality employment learning and skills, enterprising individuals, innovative businesses and improvements to physical infrastructure.
- Cohesive and diverse communities that empower and engage people, are safe and healthy, combat discrimination and disadvantage and provide hope and opportunities for all

15.2.7 The ERMP sets out the following Sub Regional Core Strategy:

*“The Three Cities Sub-area will be an area where the principles of sustainability are implemented through new development and regeneration. This will involve the significant strengthening of the complementary roles of the 3 Principal Urban Areas by providing new jobs, homes, services, community facilities and green and environmental infrastructure in and around them. The role of Sub-Regional Centres will be maintained through appropriate development, and the needs of other settlements requiring regeneration will be met in a sustainable way. Natural and cultural assets will be protected and enhanced.”*

### **15.3 Assessment Methodology**

15.3.1 There is currently no definitive guidance or regulation setting out the preferred methodology or content for assessing socio-economic effects as part of Environmental Impact Assessment. This Chapter provides a qualitative assessment of the potential impacts and has been prepared using specialist knowledge and professional experience gained through carrying out studies in respect of other projects. Although there are limitations with this approach, it has been adopted in the absence of definitive or perfect/universally accepted guidance, to ensure greater

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<sup>3</sup> PPS10, para 21

consistency with the methodologies of the other Chapters within the Environmental Statement.

15.3.2 The “Guidelines and Principles For Social impact Assessment 1994” have not been followed as although they identify a range of social issues that it may be appropriate to consider it does not advocate a methodology for assessment. Regard has been had to the range of social issues identified, but the focus of the study has been agreed through the scoping process to ensure that it responds to local circumstances.

15.3.3 The significance of effects will, therefore, be determined by the interaction of two factors:

- The value, importance or sensitivity of the receptor; and
- The magnitude, scale or severity of the effect or change.

15.3.4 The sensitivity of a receptor is determined by how sensitive a resource or group is to, and its ability to absorb an environmental effect or change.

15.3.5 The sensitivity of receptors will be defined as identified in Table 15.1 below:

Sensitivity	Description
Very High	Very high importance and rarity, international scale and very limited potential for substitution
High	High importance and rarity, national scale, and limited potential for substitution
Medium	High or Medium importance and rarity, regional scale, limited potential for substitution
Low	Low or medium importance and rarity, local scale.
Negligible	Very low importance and rarity, local scale

Table 15.1 Sensitivity Definitions

15.3.6 The sensitivity of receptors in respect of the amenity affects will be determined by the size of the population, and the proximity to the effect. For example, the further way from any change in socio-economic circumstances the receptor is, and the further away from the change, the less sensitive it will be to the environmental effect.

15.3.7 The magnitude of impact is the actual change taking place to the environment, and will be defined as identified in Table 15.2 below:

Magnitude of Impact	Typical criteria descriptors
Major	Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements (Adverse).
	Large scale or major improvement of resource quality; extensive restoration or enhancement; major improvement of attribute quality (Beneficial).
Moderate	Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements (Adverse).
	Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality (Beneficial).
Minor	Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements (Adverse).
	Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk of negative impact occurring (Beneficial).
Negligible	Very minor loss or detrimental alteration to one or more characteristics, features or elements (Adverse).
	Very minor benefit to or positive addition of one or more characteristics, features or elements (Beneficial).
No change	No loss or alteration of characteristics, features or elements; no observable impact in either direction.

Table 15.2 Definitions: Magnitude of Impacts

15.3.8 The significance of environmental effects will be defined as identified in Table 15.3 below:

Significance Category	Typical descriptors of effect
Very Large	Only adverse effects are normally assigned this level of significance. They represent key factors in the decision-making process. These effects are generally, but not exclusively, associated with sites or features of international, national or regional importance that are likely to suffer a most damaging impact and loss of resource integrity. However, a major change in a site or feature of local importance may also enter this category.
Large	These beneficial or adverse effects are considered to be very important considerations and are likely to be material in the decision-making process.
Moderate	These beneficial or adverse effects may be important, but are not likely to be key decision-making factors. The cumulative effects of such factors may influence decision-making if they lead to an increase in the overall adverse effect on a particular resource or receptor.
Slight	These beneficial or adverse effects may be raised as local factors. They are unlikely to be critical in the decision-making process, but are important in enhancing the subsequent design of the project.
Neutral	No effects or those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.

Table 15.3 Definitions: Significance of Effects

15.3.9 Significance of effect will therefore be determined as identified by Table 15.4 below:

		MAGNITUDE OF IMPACT (DEGREE OF CHANGE)				
		No Change	Negligible	Minor	Moderate	Major
ENVIRONMENTAL VALUE (SENSITIVITY)	Very High	Neutral	Slight	Moderate or Large	Large or Very Large	Very Large
	High	Neutral	Slight	Slight or Moderate	Moderate or Large	Large or Very Large
	Medium	Neutral	Neutral or Slight	Slight	Moderate	Moderate or Large
	Low	Neutral	Neutral or slight	Neutral or Slight	Slight	Slight or moderate
	Negligible	Neutral	Neutral	Neutral or Slight	Neutral or Slight	Slight

Table 13.4 Significance Determination

15.3.10 As it is difficult to quantify the significance of effects it relation to amenity impacts, a qualitative assessment based upon professional judgement will be made. Using this methodology, the greater the sensitivity of the receptor, and the greater the magnitude of impact, the more significant the effect will be.

15.3.11 The identification of socio-economic issues has been made though the application of professional judgement and experience, and has also been informed by engagement with the local community, in addition to that made through community consultation. Accordingly, the following socio-economic issues have been considered by the Assessment:

- Employment
- Landfill Diversion
- Provision of Education Centre

- Impact on Property Values
- Cumulative Impacts

15.3.12 Although, the community consultation identified other issues that were of concern, the issues have been considered in other chapters of the Environmental Statement, and as such are not assessed in this Chapter. In summary these issues were as follows:

- Transport and Access – Chapter 6
- Air Quality - Chapter 7
- Potential health impacts – Chapter 7
- Potential Odour – Chapter 7
- Contaminated Land – Chapter 11
- Potential Noise – Chapter 12
- Proximity to Local Residents – Chapter 13

## 15.4 Baseline Conditions

### Introduction

15.4.1 This section discusses the current condition of the social and economic environment indicators which are likely to be affected by the development or which provide the local context for the proposed development.

15.4.2 The sensitive receptors to socio-economic effects are the populations of Sinfin Ward, Derby, Derbyshire, East Midlands, and England.

15.4.3 The sensitivity of the Sensitive Receptors identified are therefore determined as identified in Table 15.5 below:

Population	Sensitivity to Socio-economic change at the project site
Sinfin	Medium
Derby	Medium
Derbyshire	Low - Medium
East Midlands	Low
England	Negligible

Table 15.5 Sensitivity of Identified Receptors

15.4.4 The sensitivity of receptors to economic change is arrived at through subjective judgement on the basis of population size and proximity to the site. As such the greater the population and the further away from the site it is considered the less sensitive to socio economic change the populations will be.

### **Population**

15.4.5 The population of the City of Derby at the 2001 Census was 221,782 (108,240 Males/113,468 Females), of which 13,782 (6,673 Males/7,109 Females) resided in the Sinfin Ward.

### **Migration**

15.4.6 Figures for migration are taken from Table KS24 of the 2001 Census. Summary data are presented in Appendix 15.1. The data shows that whilst 8,890 people moved into the City, 7,715 moved out giving net migration of +1,175. This level of population movement is broadly similar to the regional and national data.

### **General Health and Limiting Long Term Illness**

15.4.7 Tables UV20 and UV22 show the 2001 Census data relating to these indicators. The data provided by the respondent is their own opinion and as such is subjective as it is not known whether or what proportion of exaggeration or underestimation factors in the data. Nonetheless, on aggregate these data should provide a reasonably accurate indication of the health of different geographical areas. The data should be read in the context of the data for economic activity and unemployment which are dealt with below.

15.4.8 For comparison purposes Appendix 15.2 presents data for the Sinfin, Derby, the East Midlands region and England. At the time of the Census in 2001, 69% of the population of England had good health, 22% fairly good health, and 9% not good health. The data for Sinfin (65%, 25%, and 10% respectively), Derby (66%, 25%, 10% respectively) and East Midlands (67%, 23%, 9% respectively) was broadly similar.

15.4.9 Similarly, the data shown in Appendix 15.3 shows that the number of people in Sinfin and Derby with a limiting Long Term Illness both at 19% was broadly similar to the regional (18%) and national (18% data).

### **Car Ownership**

15.4.10 Figures for car ownership are taken from table UV62 of the 2001 Census and presented in Appendix 15.4. The data shows that the percentage of households in Sinfin (40%) with no cars is 10% higher than Derby (30%), 16% higher than East Midlands (24%) and 14% higher than England (26%). Similarly, the percentage of households in Sinfin (13%) with 2 cars is 7% lower than Derby (20%), and significantly lower than East Midlands (25%) and England (24%).

15.4.11 The proportion of houses with 3 or 4 cars also shows similar disparities across the chosen areas.

15.4.12 Car ownership is an indicator of affluence and would indicate that both Sinfin (in particular) and Derby are relatively less affluent than the remainder of the region and nationally.

### **Industry**

15.4.13 Data for industry are drawn from table KS11A of 2001 Census and are presented in Appendix 15.5. The data shows that the proportion of people working in most sectors of the economy are relatively similar.

15.4.14 The most noticeable exception to this is the proportion of people working in financial intermediation with the percentage in Sinfin (1.51%) being significantly lower than Derby (2.74%) and East Midlands (3.07%) and England (4.8%).

15.4.15 Similarly, the proportion of people working in public administration in Sinfin (3.14%) and Derby (3.87%) is noticeably less than for the East Midlands (4.95%) and England (5.66%). The proportion of people in Sinfin working in education is also low (5.5%) as compared to Derby (7.87%), East Midlands (7.80%) and England (7.74%).

15.4.16 However, the proportion of people in Sinfin (25.10%), Derby (22.39%), and East Midlands (19.91%) working in manufacturing is significantly higher than England (14.83%). The proportion of people in Sinfin working in manufacturing is significantly higher reflecting the location of Rolls Royce and other companies in the immediate area.

### **Occupation**

15.4.17 Data on occupations is drawn from Table UV30 of the 2001 Census and is presented in Appendix 15.6. The extrapolated data shows that the proportion of people in Sinfin

employed in the occupations in Groups 1-4 was significantly low at 28% compared to Derby (48%), East Midlands (49%) and England (54%).

15.4.18 Surprisingly, considering the proportion of people working in manufacturing, the proportion of people working with skilled trade occupations was constant across the geographical areas at around 12%.

### **Economic Activity**

15.4.19 Data regarding economic activity has been taken from Table UV28 of the 2001 Census and is shown at Appendix 15.7. The extrapolated data shows that the level of economically active people whilst broadly similar across the geographical areas, is slightly lower in Sinfin (64%) and Derby (65%), compared to both East Midlands and England (67%).

15.4.20 However, the level of retired persons (25%) in Sinfin is significantly lower in Sinfin than Derby (40%), East Midlands ((43%) and England (40%), whereas the number of permanently sick/disabled people in Sinfin (22%) is significantly higher than Derby (16%), East Midlands (16%), England (16%).

### **Unemployment**

15.4.21 The latest available figures for the number of claimants of Job Seekers Allowance are provided by the Department of Work and Pensions for February 2008 and are presented in Appendix 15.8. These show that the percentage of people claiming Job Seekers Allowance in Sinfin was 4.2% compared with 2.7% in Derby UA and 2.1% in Great Britain.

### **Hidden Unemployment**

15.4.22 Research by Sheffield Hallam University in June 2002 (Hidden Unemployment in the East Midlands) shows estimates for real and hidden unemployment in the region and is set out at Appendix 15.9.

15.4.23 Its key statistical findings included the following:

- The real level of unemployment in the region in January 2002 was nearly three times higher than the claimant count - 188,000 compared to 65,000
- The largest group of unemployed are those on sickness benefits. These include large numbers of men and women with health problems but who could have been expected to have been in a fully employed economy

15.4.24 The study showed that the real unemployment level in Derby was 10.45 % compared with the actual claimant count of 4.5%.

### **Qualifications**

15.4.25 Data for Qualifications are taken from the 2001 Census Table UV24 and are set out at Appendix 15.10. Levels 1 and 2 represent GCSE or equivalent, Level 3 represent A-Level, and level 4 and 5 represent Degree level and above. The relatively small level of people with level 3 qualifications is reflective of the fact that many young people have taken A-levels then go on to higher education.

15.4.26 At the time of the Census, the proportion of the Sinfin population to possess no qualifications at 40% was considerably higher than the prevailing levels nationally (29%), and regionally (31%) and compared to the rest of Derby (31%).

15.4.27 The proportion of the Sinfin population to possess Degree Level qualifications at 10% was also considerably less than the national (20%), and regional (17%) levels and compared to the rest of Derby (18%).

15.4.28 The proportion of the Sinfin population to have attained GCSE level qualifications compared well with the other geographical areas.

### **Socio-economic classification**

15.4.29 Figures for the socio-economic classifications have been extrapolated from Table UV31 of the 2001 Census, and are set out at Appendix 15.11. The figures show that the proportion of the Sinfin population falling within the Higher Managerial and Professional Occupations at 4% was significantly less than the national level (9%) with the regional level (7%) and the level for Derby (7%).

15.4.30 Similarly, the proportion of the Sinfin population falling within the Lower Managerial and Professional Occupations at 11% was considerably less than the national level (19%), to the region (17%) and the level for Derby (16%).

15.4.31 In addition, the proportion of the Sinfin population falling within the Semi-routine Occupations at 17% was considerably higher than the national level (12%) to the regional level (12%) and compared to the level for Derby (13%).

15.4.32 Similarly, the proportion of the Sinfin population falling within the Routine Occupations at 16% was considerably higher than the national level (9%) and the regional level (12%) and the level for Derby (10%).

### Travel to Work

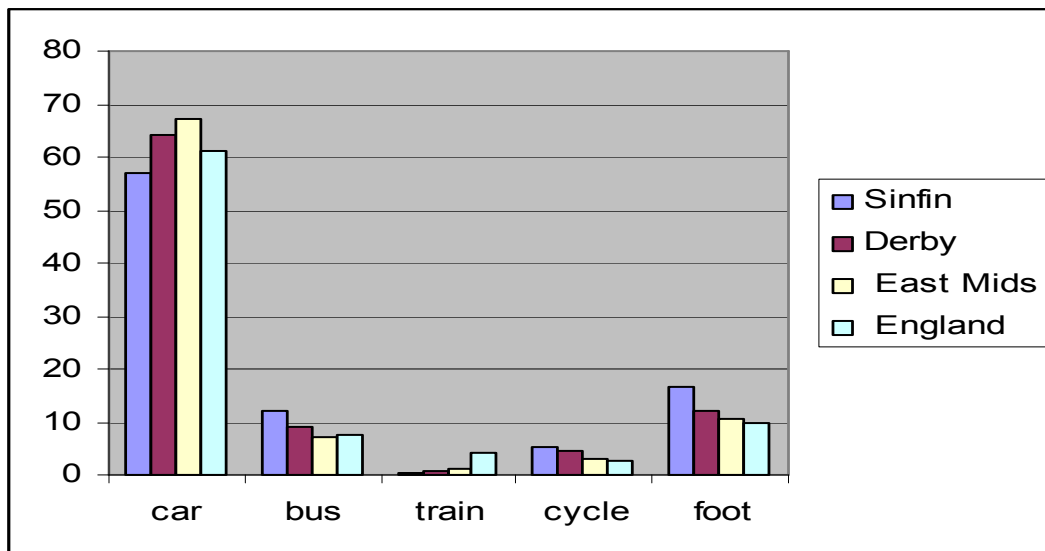
15.4.33 Data for travel to work information has been taken from the 2001 Census table KS15 and extrapolated from table UV35, and are set out at Appendix 15.13.

15.4.34 The data shows that the average distance travelled to work by Sinfin residents is 9.3 kilometres similar to that for Derby (10.3km) residents. In addition, the majority of residents of Sinfin residents (62%) travel less than 5km to work which is similar to the level for Derby (56%).

### Modes of Travel to Work

15.4.35 Data on this topic is taken from 2001 Census Table KS15 and is presented at Appendix 15.12. The data shows that the proportion of Sinfin residents who travel to work by car at 57% is significantly lower than that for Derby (64%) the region (67%), and to a lesser extent England (61%).

15.4.36 Conversely, the proportion of Sinfin residents that travel by non-car modes such as bus, bicycle and foot is relatively high compared to the other geographical areas. This is shown in the graph below:



### Earnings

15.4.37 Data relating to earnings is taken from the ONS Annual Survey of Hours and Earnings in 2008, and is presented in Appendix 15.14. The data set provided is for residents of Derby, East Midlands and Great Britain.

15.4.38 The following are the most significant points:

- Earnings for Derby are lower than the national average but slightly higher than the regional average
- This is also the case for male and female workers
- Male workers in Derby earn more than Female Workers. This corresponds with the data for Great Britain.
- Female workers in Derby earn noticeably more compared to Regional average than Male workers where the difference is less.

### **Job Density**

15.4.39 Data relating to Job Densities is taken from the Office of National Statistics, and is presented in Appendix 15.15. The data set provided is for Derby, East Midlands and Great Britain.

15.4.40 Job density represents the ratio of total jobs compared with the working population. The figures are less than one, as the denominator is the working age population which includes a significant number of people who are not economically active.

15.4.41 The figure for Derby (0.93) shows a slightly higher Job Density than both the regional (0.81) and National (0.88) figures. This shows the importance of Derby in the Regional economy.

### **Indices of Multiple Deprivation**

15.4.42 The Indices of Multiple Deprivation (IMD) published in 2007 are primarily based on the 2001 Census Data and are intended to provide a concise summary of the extent of deprivation in the 350 or so local authority districts and unitary authorities in England. They are based on seven domains including income, employment, access to housing and other services, and incidence of crime.

15.4.43 In the overall weighting greater emphasis is given to income and employment. In the ranking 1 is the most deprived and 350 the least deprived. Derby is ranked 69 and as such is not within the 10% most deprived districts in England. Derbyshire is ranked 95 out of 150 County councils and as such is not within the 10% most deprived Counties. However, the Sinfin Ward has 8 Lower Super Output Areas (LSOA's) of which 5 are within the 10% most deprived LSOA's in England, and 6 are within the 10% most deprived LSOA's in Derbyshire.

### Summary of Baseline Conditions

15.4.44 The baseline conditions show that the socio-economic characteristics of the study area are broadly similar for Derby, Derbyshire, East Midlands and England/Great Britain, but that the socio economic conditions of Sinfin are generally less favourable. In particular Sinfin:

- Although similar in terms of people who consider that they have good health, and population with limiting long term illness, has higher than average population not economically active through sickness/disability.
- Has Low levels of car ownership
- Has Lower proportion of population (along with Derby and the Region) than that works in the tertiary sector, but higher proportion within manufacturing.
- Has a Low proportion of population with Degree level qualifications and high proportion with no qualifications

15.4.45 These indicators are reflected in the wards standing in the Indices of Multiple Deprivation.

### Limitations

15.4.46 The main limitations of the baseline surveys are that they are based upon the 2001 Census Data and are therefore 8 years out of date. Information on many of the topics which the census covers is not updated between the Censuses. It is not clear therefore whether the social and economic conditions revealed by the analysis above have changed significantly. However, insofar as the availability of more recent data (for example on unemployment) would enable firm conclusions to be drawn, it is concluded that the baseline conditions will not have fundamentally changed in the intervening period

## 15.5 Identification and Evaluation of Key Impacts

15.5.1 As is nearly always the case for major developments for which EIA is required, impacts are considered at both the construction and the operational stages. In this particular case, the principal social and economic impacts at both stages consist of the employment likely to be generated. These are considered in turn.

### Employment Generation: Construction Phase

15.5.2 One of the key issues raised by the construction phase of infrastructure projects is the extent to which main contractors and sub-contractors attempt to use local labour

or that from outside. Normally this is a combination of the two with imported labour more likely to consist of workers with specialist skills, and locally sourced labour consisting of unskilled and semi-skilled labour.

15.5.3 Construction workers, especially those with specialist skills are known to travel significant distances every day to sites for which the construction period may be no more than a few months. A catchment area for labour of ninety minutes travel time is considered to represent the potential labour market. In this case, the catchment area would include the whole of the east and west midlands, as far north as Leeds and as far south as Milton Keynes (using RAC Route Finder as guidance).

15.5.4 Given the numbers of skilled people employed in the construction industry in Derby 2,720 and the East Midlands 68,381, it is considered very unlikely that the number of workers required for the proposed development whatever the skill level required would place any pressure upon the construction labour market. It is, therefore, considered that the capacity of the construction labour market would be able to absorb the impact without difficulty.

15.5.5 It is estimated that up to 100 people will be required during the construction phase. An employment change of this scale is assessed as being of minor benefit.

15.5.6 The significance of the environmental effects for the socio-economic impacts of employment during the construction phase is therefore assessed as identified in Table 15.6 below:

Sensitivity of Receptor				
Magnitude of Impact		Sinfin Medium	Derby Medium	East Midlands Low
	Minor		Slight Beneficial	Slight Beneficial

Table 15.6 Significance of Effect for Employment during Remediation and Construction Phase

15.5.7 In determining the above significance of effects, judgement was used to determine which option was relevant in respect to the effect on East Midlands. It was determined that the significance of effect was Slight rather than Neutral on the basis that there would be some change to the environment rather than none.

#### Employment Generation: Operational Phase

15.5.8 It is estimated that the proposed development will create 38 jobs in the operational phase. Many of these jobs would need particular management and technical skills to ensure the efficient and safe operation of the plant.

15.5.9 However, such skills need not be acquired in the waste industry or in a plant of this nature; suitable personnel could be recruited from industries with similar characteristics. Notwithstanding the clear need for people with appropriate skills, it seems likely that the required labour could be identified without difficulty in the immediate area and from within the City itself. This is especially so given the high proportion of manufacturing jobs in the City and Sinfin and the average distance that people already travel to work.

15.5.10 The underlying baseline conditions for Sinfin show that the proportion of people employed in Manufacturing is higher than that for Derby, and the East Midlands, as well as nationally. Derby also has a higher than average proportion of the population employed in manufacturing. As unemployment rates for both receptors are broadly average, it is anticipated that a large proportion of the operational jobs will be met by people within them.

15.5.11 In terms of magnitude of impact, it is considered that a change of this scale would be minor beneficial.

15.5.12 The significance of the environmental effects for the socio-economic impacts of employment during the operational phase is therefore assessed as identified in Table 15.7 below:

Sensitivity of Receptor				
Magnitude of Impact		Sinfin Medium	Derby Medium	East Midlands Low
	Minor		Slight Beneficial	Slight Beneficial

Table 15.7 Significance of Effect for Employment during Operational Phase

15.5.13 In determining the above significance of effects judgement was used to determine which option was relevant in respect to the effect on the East Midlands. It was determined that the significance of effect was Slight rather than Neutral on the basis that there would be some change to the socio-economic environment rather than none.

#### **Other Socio-Economic Effects**

15.5.14 In addition, to employment effects there are a number of other socio-economic impacts that are likely to occur as a consequence of the proposed development.

#### **Multiplier Effect**

15.5.15 It is widely recognised that an increase in employment is also likely to lead to an increase in spending in an area which in turn leads to more spending and becomes an upwards spiral. In this respect, the magnitude of effect for both the construction and operational phases is likely to be similar for Sinfin and Derby which is assessed as minor. For East Midlands based on the population size and relationship with the site this is assessed as Negligible.

15.5.16 Accordingly, the significance of environmental effects for the socio-economic impacts of economic multiplier effect during the operational phase is assessed as identified in Table 15.8 below:

Sensitivity of Receptor				
Magnitude of Impact		Sinfin Medium	Derby Medium	East Midlands Low
	Minor		Slight Beneficial	Slight Beneficial

Table 15.8 Significance of Effect for Economic Multiplier

15.5.17 Again, in determining the above significance of effects, judgement was used to determine which option was relevant in respect to the effect on East Midlands. It was determined that the significance of effect was Slight rather than Neutral on the basis that there would be some change to the socio-economic environment rather than none.

**Landfill Diversion**

15.5.18 An indirect benefit of operations such as that proposed that derive energy from waste is that by doing so they divert waste up the Waste Hierarchy and away from Landfill. In the case of the proposed development this will result in the diversion of 190,000 tonnes of residual waste per annum from landfill. This is significant in that under the Landfill Trading Allowance Scheme the Council would be charged for each tonne above the LATS Target that is landfilled. The LATS charges change overtime but based upon the current LATS regime the proposed scheme is estimated to save the Council, and therefore the population, approximately a significant sum of money over the twenty-five year life span of the development.

15.5.19 This benefit of course has to be considered with respect to the construction cost of the development.

15.5.20 In addition to this, the costs of landfilling the waste both in financial and environmental terms, which are widely regarded as unacceptable have to be factored into this analysis.

15.5.21 Furthermore, the proposed development will also produce heat and power that will not only be used by the development itself, but will be exported from the site to the Grid in the form of electricity, and potentially to neighbouring land use in the form of Combined Heat and Power. This has to be seen as a particular environmental benefit as it would negate the equivalent amount of energy being produced by non-renewable sources. Although, it is hard to quantify, this will have a Net benefit in terms of socio-economic effect.

15.5.22 Overall, the socio-economic benefit associated with landfill diversion at the scale proposed is considered to be moderate for Derby and Derbyshire as they benefit both from landfill diversion of waste arising from their population and the generation of renewable energy, and minor for East Midlands given that it would only benefit from the generation of renewable energy.

15.5.23 Accordingly, the significance of environmental effects is assessed as identified in Table 15.9 below:

Sensitivity of Receptor				
		Derby Medium	Derbyshire Medium	East Midlands Low
Magnitude of Impact	Minor	N/A	N/A	Slight Beneficial
	Moderate	Moderate Beneficial	Moderate Beneficial	N/A

Table 15.9 Significance of Effect for Landfill Diversion

15.5.24 In assessing the significance of effect it was determined that the sensitivity of Derbyshire in this case would be Medium as opposed to Low given the importance of managing its waste is high rather than low in socio-economic terms.

15.5.25 Further, in determining the significance of effect for the East Midlands it was determined that the significance of effect was Slight rather than Neutral on the basis that there would be some change to the environment rather than none.

#### Education and Visitor Centre

15.5.26 A further benefit associated with the proposed development is the provision of the Education and Visitor Centre. The Education and Visitor Centre will benefit the community through education in relation to waste management, and more generally in respect to sustainable development. Together with other initiatives in relation to sustainable waste management, the outcome should be a more informed population that ultimately manages its own waste in more sustainable manner on an individual/family basis. This is particularly relevant to the inspiration of school children who will be targeted by the Education and Visitor Centre, with the ultimate outcome been significant improvements in sustainable waste management in future generations.

15.5.27 Overall, the education will principally serve the population of the Catchment Area i.e. Derby and Derbyshire where the magnitude of the impact will be greatest, but will also be available to the Region. However, as other parts of the Region are anticipated to provide their own facilities through the delivery of waste management solutions to their own waste arising's, the magnitude of impact is likely to be less.

15.5.28 The magnitude of impact is, therefore, considered to be Minor for Derby and Derbyshire, and Negligible for East Midlands.

15.5.29 Accordingly, the significance of effects associated with the provision of the Education and Visitor Centre are therefore assessed as identified in Table 15.10 below:

Sensitivity of Receptor				
		Derby Medium	Derbyshire Medium	East Midlands Low
Magnitude of Impact	Negligible	N/A	N/A	Slight Beneficial
	Minor	Slight Beneficial	Slight Beneficial	N/A

Table 15.10 Significance of Effect for Education Centre Provision

15.5.30 In determining the significance of effect for the East Midlands it was determined that the significance of effect was Slight rather than Neutral on the basis that there would be some change to the environment rather than none.

**Issues Identified through Consultation**

15.5.31 In addition to the above socio-economic issues which are identified through professional judgement and experience, additional issues are identified through the consultation process, as set out in the Stakeholder Engagement Report at Appendix 15.17. In summary these are:

- Air Quality
- Contaminated Land
- Potential health impacts
- Potential Impact on Property Values
- Potential Noise
- Potential Odour
- Proximity to Local Resident
- Transport and Access

15.5.32 However, of these additional socio-economic issues identified through consultation all but have already been addressed elsewhere with in the Environmental Statement. The residual is that of Impact on Property Values.

**Impact on Property Values**

15.5.33 The impact on property prices is difficult to assess given the limited number of dwellings in the immediate area, and the actual environmental impact of the proposed development in comparison to the perception as indentified through the stakeholder engagement. Ultimately, the value of property is determined through market supply and demand. Therefore, given that the actual likely impact of the development on the environment, despite community perceptions, there is no evidence that would suggest that property values would be adversely affected. It is therefore assessed that there will be No Change to property values.

15.5.34 Accordingly, the significance of effects associated with the Impact on Property Prices are therefore assessed as identified in Table 15.11 below:

Sensitivity of Receptor			
		Sinfin Medium	Derby Medium
	No Change	Neutral	Neutral

15.5.35 The significance of effects for Sinfin is assessed as being Slight rather than Neutral on the basis that it is assumed that there will be some impact rather than none. However, this should be regarded as the worse case outcome.

**Cumulative Impacts**

15.5.36 PPS10 identifies that the cumulative impacts of other waste management facilities on the community should be taken into account. In the case of the proposed

development another waste management proposal has extent permission on Victoria Road, close to the site. Table 15.11 below shows details of this permission.

Development	Planning Permission Ref.
Timber Resource Recovery Unit, Victoria Rd	02/08/00261

Table 15.11 Cumulative Impacts

15.5.37 The above permission was determined in the absence of an Environmental Statement and without otherwise identifying any socio-economic impacts. However, for the purposes of this assessment it is considered that the impacts will be similar to that of the proposed development given the sensitivity of receptors and magnitude of effects.

15.5.38 Accordingly, it is considered that together the significance of the effects of the proposed development as identified above, will remain unaltered as the combined scale will not alter the magnitude of impact.

## 15.6 Mitigation

15.6.1 It is concluded from the previous section that there are likely to be no adverse effects on the environment in socio-economic terms that will require mitigation.

## 15.7 Residual Impact

15.7.1 The residual socio-economic impacts related to employment generation, economic multiplier effect, and landfill diversion that are associated with the proposal are likely to range between Slight Beneficial and Moderate Beneficial significance effect.

15.7.2 The range of residual impacts and their significance upon environment are summarised in table 15.10 below:

Phase	Nature of Impact	Magnitude of Impact (Range)	Significance of Effect (Range)
Operation	Employment Generation	Minor	Slight Beneficial
Remediation/ Construction	Employment Generation	Minor	Slight Beneficial
Operation	Economic Multiplier	Minor	Slight Beneficial
Operation	Landfill Diversion	Minor to Moderate	Slight to Moderate Beneficial
Operation	Education Centre	Negligible to Minor	Slight Beneficial
Operation	Impact on Property Values	No change to Negligible	Neutral

Table 15.10 Summary of Residual Impacts

## 15.8 Conclusions

15.7.1 The socio –economic impacts of the proposed development have been assessed in accordance with a methodology that identifies the likely significance of effects on the environment, in a manner that is broadly consistent with the approach of this Environmental Statement. In the absence of an appropriate assessment of socio-economic changes the assessment is based on professional judgement and experience.

15.7.2 This assessment has identified the socio-economic baseline through a review of the statistical information available through sources such census data. The identification of socio-economic issues relating to the development has been informed through community consultation.

15.7.3 It is concluded that the proposed development will have beneficial effects on the socio-economic structures of the Catchment Area and the Region and as such, there is no requirement for any mitigation measures.

## 15.8 References

- Design Manual for Roads and Bridges, August 2008, The Highways Agency and Others.
- Office of National Statistics population census 2001
- Office of National Statistics migration census 2001
- Office of National Statistics general health 2001
- Office of National Statistics car ownership census 2001
- Office of National Statistics industry census 2001
- Office of National Statistics economic activity 2001
- Office of National Statistics unemployment 2001
- Office of National Statistics socio economic census 2001
- Office of National Statistics qualifications census 2001
- Office of National Statistics mode of travel to work census 2001
- Office of National Statistics earnings census 2001
- Office of National Statistics job density census 2001
- Communities Local Government Indices of Multiple Deprivation 2004
- Hidden employment. Sheffield Hallam University