

**Leeds City Council Local Development Framework**

**Natural Resources and Waste Development Plan  
Document – Publication Document**

**Sustainability Appraisal Non-Technical Summary –  
Consultation Draft**

**September 2010**

**Leeds City Council Local Development Framework  
Natural Resources and Waste Development Plan Document – Publication Document  
Sustainability Appraisal Report**

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(Bengali):-

যদি আপনি ইংরেজীতে কথা বলতে না পারেন এবং এই দলিলটি বুঝতে পারার জন্য সাহায্যের দরকার হয়, তাহলে দয়া করে 0113 247 8092 এই নম্বরে ফোন করে আপনার ভাষাটির নাম বলুন। আমরা তখন আপনাকে লাইনে থাকতে বলে কোন দোভাষীর (ইন্টারপ্রিটার) সাথে যোগাযোগ করব।

(Chinese):-

凡不懂英語又須協助解釋這份資料者，請致電 0113 247 8092 並說明本身所需語言的名稱。當我們聯絡傳譯員時，請勿掛斷電話。

(Hindi):-

यदि आप इंग्लिश नहीं बोलते हैं और इस दस्तावेज़ को समझने में आपको मदद की ज़रूरत है, तो कृपया 0113 247 8092 पर फ़ोन करें और अपनी भाषा का नाम बताएँ। तब हम आपको होल्ड पर रखेंगे (आपको फ़ोन पर कुछ देर के लिए इंतज़ार करना होगा) और उस दौरान हम किसी इंटरप्रिटर (दुभाषिए) से संपर्क करेंगे।

(Punjabi):-

ਅਗਰ ਤੁਸੀਂ ਅੰਗਰੇਜ਼ੀ ਨਹੀਂ ਬੋਲਦੇ ਅਤੇ ਇਹ ਲੇਖ ਪੱਤਰ ਸਮਝਣ ਲਈ ਤੁਹਾਨੂੰ ਸਹਾਇਤਾ ਦੀ ਲੋੜ ਹੈ, ਤਾਂ ਕਿਰਪਾ ਕਰ ਕੇ 0113 247 8092 'ਤੇ ਟੈਲੀਫ਼ੋਨ ਕਰੋ ਅਤੇ ਅਪਣੀ ਭਾਸ਼ਾ ਦਾ ਨਾਮ ਦੱਸੋ। ਅਸੀਂ ਤੁਹਾਨੂੰ ਟੈਲੀਫ਼ੋਨ 'ਤੇ ਹੀ ਰਹਿਣ ਲਈ ਕਹਾਂ ਗੇ, ਜਦ ਤਕ ਅਸੀਂ ਦੁਭਾਸ਼ੀਏ (Interpreter) ਨਾਲ ਸੰਪਰਕ ਬਣਾਵਾਂ ਗੇ।

(Urdu):-

اگر آپ انگریزی نہیں بولتے ہیں اور آپ کو یہ دستاویز سمجھنے کیلئے مدد کی ضرورت ہے تو براہ مہربانی اس نمبر 0113 247 8092 پر فون کریں اور ہمیں اپنی زبان کا نام بتائیں۔ اس کے بعد ہم آپ کو لائن پر ہی انتظار کرنے کیلئے کہیں گے اور خود ترجمان (انٹریپرٹیر) سے رابطہ کریں گے۔

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## 1. INTRODUCTION

Leeds City Council is required to carry out a sustainability appraisal (SA) of its Natural Resources and Waste Development Plan Document (NRW DPD) which forms part of the Local Development Framework (LDF). This document is the Non-Technical Summary (NTS) of the SA Report.

The SA Report is the main consultation document and contains a more detailed description of the area(s) of Leeds affected by the NRW DPD and an assessment of potential effects. Proposed measures to mitigate and monitor environmental effects during the life of the Development Plan are also identified where appropriate.

The aim of this NTS is to aid the public in understanding what the possible effects of the DPD are likely to be if adopted by the Council.

### ***AVAILABILITY OF THE SA REPORT AND COMMENTS***

Comment on the SA and copies of the full SA Report can be obtained from:

**INSERT ADDRESS**

Copies of the SA Report have also been made available at the following locations:

**xxxxxxx**

### ***PURPOSE OF THE NATURAL RESOURCES AND WASTE DPD***

The NRW DPD is a part of the Leeds LDF. The purpose of the LDF document is to help guide development in the city whilst considering its effects on communities and the surrounding environment.

The emerging Core Strategy is the main document within the LDF which sets out a vision and overall strategy for Leeds. The NRW DPD has been developed in order to implement the Core Strategy and other documents which make up the LDF. The Council's strategy for the NRW DPD aims to protect or make more efficient use of the area's natural resources to support the economic, environmental and social welfare of Leeds.

This NRW DPD is supported by a Vision and Strategic Objectives. These are provided in the box below.

### **AN EFFICIENT USE OF NATURAL RESOURCES**

- The prudent use of natural resources is at the heart of the way things are done in Leeds.
- Ensure that sufficient supply for local, regional and national minerals demand is provided, but look to use secondary / re-cycled materials first.
- Avoid sterilising future mineral resources.
- Efficient use of previously developed land, especially contaminated land.
- Support better management of the water cycle and application of efficient uses of water.

### **A ZERO-WASTE, HIGH-RECYCLING SOCIETY**

- Reduce the level of waste produced.
- Maximise the reuse of waste.
- Maximise recycling and composting of waste where possible.
- Recover energy from waste.
- Provide sufficient management facilities in appropriate and accessible locations in order to minimise the amount of waste going to landfill.

### **A LOW CARBON ECONOMY**

- Identify opportunities for renewable energy generation and heat distribution.
- Promote sustainable movement of freight including minerals.
- Make better use of the water transportation network.

### **A HIGH LEVEL OF ENVIRONMENTAL PROTECTION**

- Ensure the protection of the quality of watercourses and other sources of water.

## **2. SUSTAINABILITY APPRAISAL**

### ***WHAT IS SA?***

The aim of Sustainability Appraisal (SA) is to make sure that plans are doing as much as they can to support the delivery of social, economic and environmental objectives at the same time. SA offers a systematic way for checking and improving plans as they are developed, identifying ways to maximise the benefits and minimise the negative effects.

SA also incorporates the requirements of the SEA Regulations. The Regulations' objective is "to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes, with a view to promoting sustainable development" (EC, 2001, Article 1).

For SA to be effective, it is important to fully integrate the process into the

development and implementation of the NRW DPD. This SA has aimed to influence all stages of the DPD preparation process to ensure that economic, social and environmental concerns have been fully considered and addressed throughout its development.

### ***SCOPING THE SA***

Before the start of the DPD, the scope (or extent) of the SA is agreed with the statutory environmental bodies – Natural England, English Heritage and the Environment Agency. A Scoping Report is published in order to agree the appraisal methodology and gather information needed to conduct SA. The Scoping Report must set the context of the DPD and SA within other plans and policies, and demonstrate an understanding of the baseline situation so to predict effects and identify sustainability key issues and problems.

The scoping stage for the DPD included the development of individual SA Objectives covering the significant sustainability issues for Leeds District. The SA Framework was developed by Leeds City Council in consultation with the statutory environmental bodies for all of the documents in the Leeds Local Development Framework, including the NRW DPD.

Consultation with the public and key stakeholders on our scoping results made sure that we had identified all of the significant issues. The result of this consultation was that no changes were required. We discuss the SA scoping consultation in Appendix D of the SA Report.

### ***SUSTAINABILITY OBJECTIVES***

The SA Framework sets out 22 objectives (under economic, social and environmental headings). For each of these there are decision-making criteria, indicators and targets to assist in the assessment of significant effects.

The full SA Framework is set out in Appendix E of the SA Report, however the SA Objectives and topics are provided in the table below which also identifies which objectives were taken forward or rejected for use within the assessment process.

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Green text = scoped into the SA of the NRW DPD

Blue, italic text = scoped out of the SA of the NRW DPD

Sustainability Section	SA Objectives
Economic	1. Maintain or improve good quality employment opportunities and reduce the disparities in the Leeds' labour market.
	2. Maintain or improve the conditions which have enabled business success, economic growth and investment.
Social	3. <i>Increase participation in education and life-long learning and reduce the disparity in participation and qualifications achieved across Leeds.</i>
	4. Improve conditions and services that engender good health and reduce disparities in health across Leeds.
	5. <i>Reduce overall rates of crime, and reduce the disparities in crime rates across Leeds.</i>
	6. Maintain and improve culture, leisure and recreational activities that are available to all.
	7. Improve the overall quality of housing and reduce the disparity in housing markets across Leeds
	8. Increase social inclusion and active community participation. (Cross-cutting with Objective 9 and 18, Greenspace)
	9. Increase community cohesion. (Cross-cutting with Objective 8 and 18, Greenspace)
Environmental	10. Increase the proportion of local needs that are met locally
	11. Reduce pollution levels. (Contaminated land is a cross-cutting objective with Material Assets)
	12. Maintain and enhance, restore or add to biodiversity or geological conservation interests.
	13. Reduce greenhouse gas emissions
	14. Improve Leeds' ability to manage extreme weather conditions including flood risk and climate change.
	15. Preserve and enhance the historic environment.
	16. Maintain and enhance landscape quality.
	17. Maintain and enhance the quality and distinctiveness of the built environment.
	18. Increase and enhance the quantity, quality and accessibility of greenspace.
	19. Make efficient use of energy and natural resources and promote sustainable design.
	20. Reduce the growth in waste generated and landfilled.
	21. Provide a transport network which maximises access, whilst minimising detrimental impacts.
22. Minimise the pressure on greenfield land by efficient land use patterns that make good use of derelict and previously used sites & promote balanced development.	



### 3. KEY ENVIRONMENTAL PROTECTION OBJECTIVES

The SA and DPD take account of social and environmental legislation and a wide range of other plans, policies and programmes. These contain legal requirements, policy objectives and specific requirements that need to be addressed through the DPD. Identifying and reviewing these documents is an important element of the SA process.

Some of the key international and national objectives identified by the SA are:

- Certain designated features are afforded protection by law. These include:
  - **Historic environment:** Scheduled Monuments, Conservation Areas, Listed Buildings and Registered Parks & Gardens (amongst others);
  - **Landscape:** Areas of Outstanding Natural Beauty; and
  - **Nature conservation:** Special Areas of Conservation, Special Protection Areas and Sites of Special Scientific Interest;
- Air Quality Management Areas must be created where pollution is too high, and actions must be laid down in order to address the problem;
- Climate change is the number one priority for improving the UK's environmental performance;
- The UK also wishes to enhance and improve the environment (whether designated or un-designated) wherever possible. This applies to numerous aspects of where we live, including recreation (such as public open space / greenspace), air quality, water quality, soils, geology, biodiversity, the historic environment and landscape; and
- Improving local economies, and equality and health across social groups and geographical areas are amongst the topic socio-economic objectives of the UK.

The full review of relevant plans and programmes can be found within Appendix C of the SA Report. It highlights a number of key characteristics and sustainability issues facing Leeds which have been taken into account when developing both the DPD and the SA.

### 4. KEY CHARACTERISTICS OF LEEDS

#### **INTRODUCTION**

In order to assess the sustainability of the NRW DPD, it is important to first of all understand the current state of Leeds' economic, social and natural environment. The baseline was established early in the SA process and agreed with the statutory consultees and other key stakeholders. It is the starting point from which the NRW DPD will be working to guide development, and has informed our assessment.

## ***ECONOMIC CHARACTERISTICS AND PROBLEMS***

Leeds is the largest centre of economic activity in the Yorkshire and Humber region and one of the UK's largest centres outside London for financial and business services. While the finance and business sector has been growing in recent years, the numbers of enterprises in the manufacturing and wholesale and retail sectors have fallen more rapidly in Leeds than in the region or nationally.

The service sector as a whole accounts for over 80 per cent of total employment whilst the public sector is also a major employer in Leeds.

The amount of productivity arising from primary industries such as agriculture, forestry, fishing, mining, energy and water which are more reliant on natural resources has decreased in recent years.

The labour market reflects the overall economic picture with a decrease in jobs within the fields of manufacturing, water and energy supply and a large increase in jobs within the service industries and the financial sector over recent years.

## ***SOCIAL CHARACTERISTICS AND PROBLEMS***

The population of Leeds was estimated to be approximately 720,000 as of 2004. This represents an increase from the 2001 census population figure. The majority of the population are middle-aged (between 30 and 44) which is average for England as a whole. In terms of ethnicity, over 90% of people are of "white" background; around 2% are of Indian origin and 2% of Pakistani background.

### Education, Skills & Training

Leeds has a wealth of education facilities, with the University of Leeds rated as one of the UK's top ten universities. There are around 300 schools, eight colleges of further education, two universities, one dental school and a large number of community and family learning centres. GCSE scores however continue to be below the national average with approximately 14% of 16 to 24 year olds with no formal qualifications.

### Human Health

The majority of people are considered in good health with approximately 10% in not good health. Poverty is the main cause of ill health in some neighbourhoods and communities and in some of the city's disadvantaged neighbourhoods; health is as poor as almost anywhere in the country. There is poorer take-up of services that help to prevent ill health in disadvantaged areas and among ethnic-minority groups.

Obesity amongst children in Leeds is similar to the picture nationally.

### Crime

Levels of crime in some areas, such as vehicle crime, domestic burglary, and robbery have fallen significantly in recent years (2003/04 data). However, the domestic burglary rate has remained twice the national average, violent crime has increased and crime over a 4-year period (from 2000/01 to 2003/04) increased.

### Leisure, Recreation and Tourism

Leeds City Council manages approximately 4,000 hectares of park and green space, including parks, public right of ways, cemeteries, trees, allotments, closed churchyards and floral displays. The region has seven major parks, a number of smaller community parks and playgrounds, and over 150 designated nature conservation sites across the city.

### Housing

The housing market in Leeds has changed dramatically in recent years, with a considerable gap emerging between wealthy areas and those identified as deprived. House prices have been rising faster than the national average, however housing affordability has become a major issue.

The composition of households in Leeds is changing with over half of all households comprised of 1 or 2 people, and changing household size has resulted in increasing demand. The council is seeking to build a greater proportion of affordable housing and to bring empty homes back into use. The number of people or households recognised as homeless is over 20% of the total for the Yorkshire and Humber region.

### Social Deprivation

Approximately 15,000 people in Leeds are in the 10% most deprived areas nationally. The Index of Deprivation 2000 showed that 12 of the 33 wards in Leeds were in the top 20% of deprived wards in England. This compares with 17% for the Yorkshire and Humber region as a whole. The most deprived wards are concentrated in the inner city.

## **ENVIRONMENTAL CHARACTERISTICS AND PROBLEMS**

### Transport and Accessibility

Leeds is experiencing continued growth in travel into the city with road traffic growing by 6.4% between 1995 and 2005. It is the only centre in West Yorkshire to have experienced a marked change in transport mode from 1998 to 2003 with a shift away from the use of the private car and towards the use of public transport, especially buses.

Leeds bus services connects local areas as well as linking into long distance services from the rest of West Yorkshire. The city has extensive rail services and is served by the electrified East Coast Main Line (ECML) route.

### Pollution Levels

#### *Air Quality*

Motor vehicles and industrial areas are the principal sources of NO<sub>x</sub> and PM<sub>10</sub> emissions in Leeds. Both of these pollutants have been linked to lung and other health conditions and it is thought that continued or frequent exposure to concentrations that are typically much higher than those normally found in the

ambient air may cause increased incidence of acute respiratory illness in children.

The Leeds City Council region has two identified Air Quality Management Areas (AQMAs), one for NO<sub>2</sub> and one for PM<sub>10</sub>, and both of these are related to emissions from road vehicle transport. These two AQMAs are subject to the Leeds Air Quality Action Plan in order to try to bring pollution within limits which are set by law.

#### *Water Quality*

A very large proportion of the local communities are situated close to main rivers (Aire and Wharfe) and/or their tributaries. The southeastern boundary of the district is adjacent to the River Calder, and Leeds also experiences flooding from this river.

There has been an improvement in water quality since 1990 mainly due to improved treatment of sewage and industrial waste. Continuing contamination of the Aire is due to surface water runoff, trade discharges, mine waters and industrial discharges and pesticides.

#### *Contaminated Land*

To-date, the total area of Leeds District for which data has been captured for analysis of contaminated land potential is approximately 20,000 hectares. Roughly 3,500 of the 20,000 hectares analysed to date has been subject to a potentially contaminating land use.

#### Biodiversity, Flora and Fauna

Leeds District contains 63 areas that are protected for their natural value. Amongst these, there is part of one internationally important site, the South Pennine Moors. It is designated as a Special Protection Area (SPA) under the European Birds Directive (Council Directive 79/409/EEC), and a Special Area of Conservation (SAC) under the Habitats Directive (Council Directive 92/43/EEC). It is also given the national designation of a Site of Special Scientific Interest (SSSI) (see Appendix A of the SA Report for a more detailed map of designated sites).

Additionally, Leeds contains a rich variety of habitats, and supports many different species that are not covered by conservation designations. Informal green spaces, derelict land and private gardens add immeasurably to the wealth of plant and animal species that the district supports. The Leeds Biodiversity Action Plan identifies eight habitats and six species requiring action plans.

#### Climate Change, Energy Consumption and Greenhouse Gases

Climate is a trans-boundary issue that is not measurable over the spatial scale of Leeds. However the impact that society as a whole has on the climate is influenced by the smaller-scale actions of individuals and communities such as all of those within Leeds. As such, the datasets selected reflect climatic data at a broad UK level to which Leeds contributes.

The UK Government has made a domestic commitment to reduce CO<sub>2</sub> emissions by 20% below 1990 levels by 2010, with a longer-term goal to reduce CO<sub>2</sub> emissions by some 60% by around 2050.

Changing weather patterns bring an increased risk of floods, and many areas of the Leeds City Council region are vulnerable (see the 'flood risk' section below).

### Flood Risk

The Environment Agency estimates that there are 1,500 homes and 500 businesses at 'significant' risk of river flooding within the district, and indeed parts of Leeds City Centre – the economic and commercial heart of not only the district, but the wider region – are estimated to have an alarming 1-in-20-year risk of flooding from the River Aire. More detailed maps showing the flood risk areas are presented in Appendix A.

### Historic Environment

Leeds has a variety of historic features. There are currently 12 Registered Historic Parks and Gardens, which collectively cover an area of 1,600 hectares. In addition to this, there are 57 Scheduled Monuments and a great number of Listed Buildings. The 2003 English Heritage 'at risk' register shows that the Yorkshire and Humber region has a higher proportion of Grade I and II buildings at risk than the national average (see Appendix A for a more detailed map).

### Landscape

The urban environment includes not only built development in the form of houses, industry, shops, and transport infrastructure, but also open areas such as green spaces. Many of these areas have developed over time in a largely random fashion. They originate as a result of geography and topography (such as the river valleys), for historical reasons or as a result of the complex mechanisms of the development process.

Regionally, five broad landscape character areas have been identified; Leeds Coal Measures, Millstone Grit Plateau, Wharfedale, Eastern Limestone Belt and the Vale of York. They have been generated mainly from the geology, topography and the land uses that these have supported in the past and those that continue in the present.

### Material Assets, Natural Resources and Waste

#### *Material Assets*

Natural resource and waste related material assets in Leeds consist of mineral assets (such as mines and quarries), energy production infrastructure (including renewable energy), transport infrastructure (road network, rail network airports), recycling facilities and building stock (both housing and commercial).

#### *Natural Resources*

There are 14 quarries at present, and over half a million tonnes of aggregate are produced annually. Despite this, Leeds is still a net importer of aggregate. A number of sites formerly used for quarrying or coal mining have been restored to provide a beneficial use (e.g. for biodiversity and recreation).

Sandstone is one of the primary mineral resources in Leeds. Leeds has a number

of quarries supply stone blocks, sawn sandstone, sandstone and limestone aggregate, mortar sand and river sand. There is one existing opencast coal site at Ledston, although limestone and sandstone are extracted at the same site.

Further details of minerals and aggregate levels in Leeds can be found in the main SA Report.

#### *Waste*

For the very near future the majority of waste produced by the people of Leeds, and local commerce will continue to be landfilled. The tonnage of materials being recycled in Leeds however is increasing. This is mainly in response to a high tax on every tonne of waste that is sent to a landfill site and as a result of the positive response by society overall to managing waste more efficiently. The council is procuring a residual waste management facility to recover energy from waste that cannot be re-used, recycled or composted. However, three quarters of all waste is collected from homes, shops, offices, factories and building sites by the private sector and this will be a major focus for reducing the reliance on landfill.

#### Soils and Geology

Leeds District is covered by a large amount of urban land. The majority of the remaining land is classified Grade 2 or 3 agricultural land, with the notable exception of the area covered by the South Pennine Moors SPA, which is classified as Grade 4 and 5.

The Leeds City area integrates a series of 'green wedges' and river valleys, which penetrate the main urban area of Leeds and link inner urban areas to wider expanses of countryside and open land. Substantial tracts of the Leeds countryside/agricultural areas are designated as Green Belt. Green Belt policies are such that the development of open land is strictly controlled.

## **5. DEVELOPING THE NRW DPD**

The process of developing the NRW DPD involved the identification and consideration of different feasible ways, or options, for meeting the DPD's objectives. The SA has integrated into this process with the consideration of the potential sustainability effects of each option.

The options development process for the NRW DPD was called 'Issues and Alternative Options', as it included options for addressing each of the different issues that is (or could be) somehow covered by the NRW DPD. Table 5.1 in the main SA Report outlines the key themes presented in the Issues and Alternative Options document along with the issues considered for each theme. The assessment of these options was documented in an 'Initial Sustainability Appraisal' (ISA) report issued alongside the Issues and Alternative Options for comment.

### ***OPTIONS TAKEN FORWARD IN LIGHT OF THE SUSTAINABILITY EFFECTS***

A summary of the significant long-term effects predicted for each option, and the

reason for selecting the current policy in light of the assessed effects, is provided in Appendix F of the SA Report.

In many instances, a combination of policy options was taken forward including the SA preferred option. There were only two cases where the SA preferred option was not selected in full or part (i.e. combination of the preferred option with other option(s)). This was due to either views from the public, policy constraints or the viability of the option.

Constraints identified during the assessment of potential sustainability effects included a number of limitations on the range and type of information available in addition to the need to rely on assumptions about development and policy implementation in some instances.

The full assessment, including short- and medium-term effects predicted, can be found in the Initial Sustainability Report with a summary provided below.

### ***MINERALS SAFEGUARDING***

This NRW DPD includes Minerals Safeguarding Areas (MSAs). The key effect of MSAs is to increase the likelihood of useful minerals being extracted prior to development.

MSAs do not assist in increasing the rate of mineral working overall (i.e. for immediate export to other parts of the country or world). Rather, they ensure that local sources can be more fully utilised before local demand becomes dependent upon more distant sources of minerals. Table 5.6 in the SA Report provides a summary of sustainability effects associated with employing MSAs.

The preferred option is to include Minerals Safeguarding Areas, as it is a national policy requirement and they are solely beneficial to planning processes and overall sustainability.

### ***AREAS OF SEARCH***

A key issue in the development of the NRW DPD has been where it is appropriate to identify 'Areas of Search'. The sustainability impact that any Area of Search would have is primarily economic. However, there can be secondary benefits through considering the associated issues. This provides for increased planning of potential development proposals with regard to the environment. Table 5.6 in the SA Report summarises the impacts.

Areas of Search do not increase the likelihood that applications for development will be approved, nor do they decrease the likelihood that applications outside of these Areas of Search will be rejected. It is still up to individual applicants to make their case, and up to the Council to decide whether or not the application is acceptable and beneficial to communities.

The NRW DPD identifies minerals Areas of Search in order to achieve both economic and environmental benefits. The Council is in the process of mapping constraints which relate to wind farm proposals, however this is an ongoing project and will take time to implement fully. Therefore, wind farm Areas of Search have not

been included as part of this DPD. The potential for future inclusion in the LDF is subject to ongoing review and if included would be part of a process separate to this DPD.

### ***MINERALS AND WASTE SAFEGUARDED SITES***

It was concluded as a result of the ISA and consultation that existing minerals and waste sites would need to be safeguarded in order to meet the NRW DPD's objectives, including ensuring a sufficient supply of minerals and providing sufficient waste management capacity. Given that safeguarding represents a continuation of an existing land use or permission, it was not required that the SA assess these sites. However, an assessment was made elsewhere during DPD development of the suitability of sites to be carried forward. This used criteria including 'transport and access', 'complaints and nuisance', flood risk and environmental amenity. One-hundred-and-one sites have been safeguarded, and these can be found in the Council's Map Book: **XXXXXXXXXXXXX**.

### ***WASTE MANAGEMENT STRATEGIC SITES***

Eight potential waste management strategic sites were identified from a long list of possible sites (identified to meet the needs of major residual waste treatments including energy recovery) and during consultation. A summary of the assessment of the long-term impacts is provided in Table 5.5 of the main SA Report.

The sites which, by assessment against the SA Framework, were considered potentially the 'most sustainable' with reasonable mitigation were:

- 18 Surplus Land South of Pontefract Lane Owned By Yorkshire Water and Possible Extensions to LCC Owned Land,
- 19 Land within Knostrop Sewage Water Treatment Works,
- 21 Former Skelton Grange Power Station Site, and
- 25 Former Wholesale Markets Site, Cross Green Industrial Estate.

Following consultation with the landowners of site 18 and the final assessment of the future waste needs of the City, Options 19, 21 and 25 were taken forward as the preferred options for strategic sites.

## **6. SUMMARY OF LIKELY SIGNIFICANT EFFECTS OF THE DPD**

Likely significant effects were identified through the SA assessment and these are summarised in Table 19.1 of the SA Report. Where significant negative effects and uncertainties were identified, the potential for mitigation to avoid or minimise negative effects and reduce uncertainties were considered. Monitoring was also recommended in order to detect unforeseen effects, and check that the effects are occurring as predicted or expected. The following paragraphs summarise the potential effects per topic.



## ***ECONOMY AND EMPLOYMENT***

The DPD is expected to lead to a number of positive effects on the economy of Leeds. The policies of the DPD can sustain and create opportunities for companies and organisations working in the industries of managing minerals, waste, green infrastructure and landscaping, as well as creating and managing renewable energy. The proportion of the Leeds economy in terms of employment numbers, numbers of businesses, and overall capital value supported by natural resource-related and waste-related industries is likely to be higher in the future than it would otherwise be without the policies of the NRW DPD in place.

A reduction in unemployment (or at least provide an opportunity to do so) is expected as is an increase average earnings through more high-skilled jobs involved with sustainability-related technologies. In addition, the promotion of renewable energy by the NRW DPD policies can also create and increase markets for biofuels, which in turn can help to diversify the rural economy.

## ***HUMAN HEALTH***

The NRW DPD is expected to have a number of positive effects on human health in the long term, but no significant effect on indicators in the short and medium term.

## ***LEISURE, RECREATION AND TOURISM***

In the long term, as minerals and waste developments which fall under this policy are brought into afteruse, it is possible that certain sites will be reclaimed as culture, recreation or leisure facilities. Low certainty of assessment reflects the possibility that no sites select culture, recreation or leisure facilities as an afteruse, as it depends upon what is appropriate to the site and inevitably the choice of the site owner.

## ***HOUSING***

The policies of the NRW DPD and Core Strategy acting in combination should lead to an increase in housing of a high quality and of a mix of tenures appropriate to the needs of Leeds' residents. The NRW DPD policy to support aggregates recycling will also help to ensure that more minerals are available towards the end of the Core Strategy plan period than would otherwise be available, and thus it could help deliver more affordable housing.

The NRW DPD includes policies on improving energy efficiency, which is part of ensuring that housing is affordable for Leeds residents. In the long term, the cost of energy will likely increase as the fossil fuel supply declines, and therefore renewable energy is expected to reduce fuel poverty against this future baseline and become a more affordable means of supplying energy.

## ***SOCIAL INCLUSION AND COHESION***

Promoting development on brownfield land may help maintain already high levels of brownfield redevelopment. The overall effect of the NRW DPD policies should be

negligible (positive, but not significantly).

The NRW DPD policy on protecting and enhancing woodland, trees and shrubs is considered likely have a significant minor positive effect on the quality of greenspace in the long term, in combination with the Core Strategy and Greenspace Strategy policies and actions.

It is possible that certain minerals and waste sites will be reclaimed as public amenities, such as culture, recreation or leisure facilities. This would lead to a long-term minor benefit.

### ***MEETING LOCAL NEEDS LOCALLY***

The amount of new development on brownfield land and development density is already higher than the established targets. There is therefore not expected to have a significant effect on the pattern of future development and associated access to services.

The provision of local minerals will be sustained in the short and medium term through the NRW DPD. In addition locations for aggregates recycling will be established, which supports a variety of local businesses, whether associated with minerals or construction. Other local and regional industries will benefit from increasing Leeds' self-sufficiency through use of local resources.

The waste management strategic sites are located in close proximity to the city centre and with good transport links to the rest of Leeds. As such, they will provide a significant contribution towards managing locally generated waste locally.

### ***AIR, WATER & CONTAMINATED LAND***

There are potential temporary, short and medium term cumulative negative impacts of the NRW DPD policies on air and water quality (and to a lesser extent on land). Activities associated with the construction of the various projects is considered to have, at worst, a minor negative effect after project-level mitigation is implemented

Prioritising previously developed land could sustain brownfield land development at a high level and also the potential for remediation of any contaminated land on these sites. This is considered a minor positive effect in the long term.

The NRW DPD is assumed to lead to a decrease in emissions against the future baseline and reduced pollution risk. This in turn can lead lower pollution levels to air, water or land in the long term.

Brownfield land is generally concentrated in the main urban area of Leeds. Considering the NRW DPD brownfield land policy with housing and employment targets set by the Core Strategy, leads to positive effects. Co-location of waste facilities is also expected to reduce the transport of waste against the future baseline, which can reduce air pollution. Policy for moving away from reliance on both landfill and fossil fuels, should in turn lead to reduced potential for pollution issues.

NRW DPD policies, supported by the Core Strategy as well as project-level regulation will ensure that EfW facilities are constructed or operated in a way that causes no significant harm to people or the environment. Possible cumulative effects of various projects with potential pollution sources should be taken into account when considering planning applications and when development is proposed.

The NRW DPD policies on the water environment include for such measures as Sustainable Urban Drainage Systems (SUDS) and increased attenuation on previously developed sites.

### ***BIODIVERSITY, FLORA & FAUNA***

Temporary short to medium term cumulative negative impacts on local habitats and species are predicted due to various potential construction projects occurring within the next 10 to 20 years (including housing and transport). With project-level mitigation anticipated, the worst-case scenario is of a minor negative effect.

Also in the short to medium term, the NRW DPD policy on enhancing woodland, trees and shrubs can have positive effects to wildlife corridors in combination with other green space and infrastructure projects. A gradual, increasingly positive effect from renewable energy provision is expected.

In the long term, several policies are expected to lead to major positive effects to locally important nature conservation on a global scale (if not regionally or nationally important sites; it is not possible to determine without detailed research). It is assumed that, given the regulations and policies that apply to the project level, the potential negative effects of specific sites and projects will be minimised..

Development on brownfield land could affect the ecological interest of brownfield sites however several policies within the LDF Core Strategy Preferred Approach document propose to implement consideration of potential biodiversity impacts for both designated and undesignated habitats.

### ***CLIMATIC FACTORS***

In the short and medium term, construction activities will contribute to greenhouse gas emissions. It has therefore been predicted that a slight, temporary negative effect would occur. However, the combination of policy areas on local management of waste, supporting continued local sourcing of minerals and future aggregate recycling, transport efficiencies, water and energy efficiency will greatly reduce greenhouse gas emissions for all sectors into the long term, a major positive effect.

The co-location of waste management facilities and the renewable energy targets will have a significant positive effect in the medium term as developments become operational, leading to major positive once all sites are operational.

Improved drainage will reduce runoff rates, and in the long term, make a significant contribution towards adapting to any extreme rainfall events in the future.

## ***HISTORIC ENVIRONMENT***

Increasing pressure on redeveloping brownfield sites near historic features could have a positive or negative effect, depending upon the existing use of the site and the design of the development. Short- and medium-term effects of constructing developments could potentially be negative on the historic environment. With innovative design and/or other mitigation, a net positive effect could be obtained.

In the long term, a reduction in reliance on landfill and/or new mineral extraction (through aggregate recycling) will reduce pressure on historic features. This will likely reduce the potential for negative effects on their integrity or setting. This minor positive effect is assessed against the future baseline of reliance on landfill and continued demand for minerals.

## ***LANDSCAPE***

There are potential short and medium term negative impacts on the landscape as a result of construction activities. This is particularly the case when considering the potential cumulative effects of many types of development in combination to historic buildings or landscapes. With innovative design and/or other mitigation, a net positive effect could be obtained. In the long term, a reduction in reliance on landfill and/or new mineral extraction will reduce pressure on landscapes, and so leads to minor positive effects. However, there remains a potential negative impact of strategic waste site development in the Aire Valley. There is therefore a need for innovative, 'best practice' design in order to mitigate any potential impacts.

## ***MATERIAL ASSETS***

Construction of development under the Core Strategy and NRW DPD policies, will improve average water and energy efficiency of Leeds. There should be significant minor positive effects in the medium term which will increase in the long term in order to meet targets.

A reduction in waste to landfill through waste management developments should promote re-use, recovery and recycling of waste leading to major positive effects in the long term.

Construction activities could increase road congestion leading to temporary minor negative effects. However, in the long term, the policies on development locations and densities will likely reduce traffic against the future baseline, leading to a minor positive effect. Also, transport of waste and minerals by alternative modes to roads is encouraged which can lead to a significant positive effect in the long term.

Policy on protecting and enhancing woodland, trees and shrubs is considered likely to lead to a significant minor positive effect on the quality of greenspace in the long term, in combination with the Core Strategy and Greenspace Strategy policies and actions.

## ***SOILS AND GEOLOGY***

In the short and medium term, there are potential temporary, cumulative negative

impacts of construction activities on greenfield land. Even with a high brownfield land target, at least some greenfield land will likely be used. Continued prioritisation of brownfield land development could help to sustain it at a high level, which is considered a minor positive effect in the long term.

The provision of renewable energy provides an increasingly positive effect. This is achieved through reducing reliance on non-renewable natural resources and decreasing the pressure on greenfield land and the fossil fuel lifecycle overall. In the long term, policies on sustainable waste management and renewable energy are expected to lead to major positive effects to protecting natural resources. The recycling of aggregate would also make a significant contribution to preserving greenfield land and making more efficient use of land in the long term.

## **7. SA RECOMMENDATIONS**

### ***MITIGATION***

The NRW DPD has been developed alongside this Sustainability Appraisal. Therefore, mitigation recommended by the SA has already been incorporated into the DPD. The SA identifies no further mitigation recommendations for the DPD.

However, there are actions which can be taken at the project level which can improve the sustainability performance of the DPD. While the NRW DPD's strategic sites have been selected as a result of their potential to avoid negative effects, this SA expects that certain realistic mitigation measures will be put in place. This includes appropriate research / studies in order to support design, such as air pollution dispersion modelling if needed, and landscape and historic setting analysis, amongst other environmental considerations.

Chapter 19 of the SA Report sets out the SA recommendations for the project level sites along with other recommendations relating to implementation of the NRW DPD.

### ***SA MONITORING***

The SA Framework of Appendix E within the SA Report includes a number of indicators which would serve as suitable monitoring of the effects of the NRW DPD.

Leeds already has a valuable assessment of the impact of natural resource consumption on areas outside of its boundaries by way of its ecological and carbon footprint. It could be valuable, however, to have a more direct assessment of the impact of energy consumption, and perhaps also minerals consumption, on a global scale – economically, socially and environmentally. This would provide more detailed understanding of the impacts of sourcing energy and minerals differently / locally.

The following new way of monitoring the environment should be noted:

Water environment/quality: the Water Framework Directive is now in effect, and aims to achieve 'good' ecological status of surface water bodies, and 'good'

chemical and quantitative status of groundwater, by 2015.

## **8. CONCLUSION**

The NRW DPD aims to protect or make more efficient use of the area's natural resources to support the economic, environmental and social welfare of the city and surrounding area and to reduce the adverse effects of climate change.

The SA indicates that the DPD should have long-term benefits, particularly in relation to effects on the economy and employment within Leeds, housing opportunities, material assets and the ability to manage the adverse effects of climate change. These also have associated short and medium term benefits predicted.

No further mitigation measures for the DPD are recommended. This is because the DPD has been developed alongside the SA and therefore mitigation has already been incorporated where appropriate. Project-level mitigation has however been provided for other areas of planning and development along with other recommendations and opportunities.