

**Leeds Local Development Framework
Natural Resources and Waste Development Plan Document**

Consolidated (Submission & Post Submission Changes)

3rd September 2012

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(Bengali):-

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(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 ਕਹਾਂਗੇ, ਜਦ ਤਕ ਅਸੀਂ ਦੁਭਾਸ਼ੀਏ (Interpreter) ਨਾਲ ਸੰਪਰਕ ਬਣਾਵਾਂਗੇ।

(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 (انٹرپرائزر) سے رابطہ کریں گے۔

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1 INTRODUCTION

WHAT IS THIS DOCUMENT?

- 1.1 The Natural Resources and Waste Development Plan Document (NRWDPD) is one of several Development Plan Documents (DPD's) which make up the Leeds' Local Development Framework. This document sets out the Council's policies on the future use of Natural Resources and Waste for the plan period up to 2026. Local Development Frameworks replace the previous development plan system of Unitary Development Plans (UDP's) under the requirements of the Planning and Compulsory Purchase Act 2004. Sites which are affected by policies in this DPD are shown on a separate Proposals Map.
- 1.2 The Council's UDP was reviewed in 2006 and many of its policies are "saved". This means they are approved by the Government until they are replaced or superseded by policies in new plans such as this adopted NRWDPD. Some of the saved policies of the UDP have been replaced by new NRWDPD policies, and others deleted as they are no longer required.
- 1.3 This document provides policies for determining planning applications which have an effect on minerals, waste, energy, water or air and sets out how the planning system can help to achieve a more efficient use of natural resources. The policies of this DPD will:
- Ensure the responsible and efficient use of natural resources, such as prioritising the use of alternative minerals and measures to reduce the amount of water used in development;
 - Plan for managing future pressure on natural resources, for example, from climate change and housing growth. This includes policies which reduce flood risk, improve air quality and increase renewable energy provision;
 - Increase waste re-use, recycling, composting and residual waste treatment with energy recovery so that as little waste as possible is disposed of at landfill;
 - Provide sufficient land, which includes a range of suitable and sustainably located sites, to deliver new processes which manage waste as a valuable resource;
 - Encourage more use of those resources that don't run out, such as solar, hydro and wind energy; and encourage the production of Low Carbon Energy; and
 - Encourage the movement of freight by alternative means to road, including the transfer of minerals and related products by water.

THE PLAN AREA

- 1.4 The NRWDPD covers the whole administrative area covered by Leeds City Council as shown on the key characteristics diagram. This includes the main urban area of the City of Leeds and surrounding settlements. Where this document refers to 'Leeds' this means the whole area covered by the administrative boundary unless stated otherwise within the text.

DOCUMENTS WHICH MAKE UP THE NRWDPD

- 1.5 The NRWDPD comprises:
- This Publication document which includes background diagrams and supporting appendices;
 - The Map Book which sets out all the plans which are part of the NRWDPD;

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- Separate technical topic papers on Minerals, Energy and Waste. These link to other detailed evidence studies completed to support this document. They provide all the evidence to support the submission but will not be Adopted; and
- Sustainability Appraisal.

The diagram below shows the relationship between the Natural Resources and Waste DPD and other documents.

Figure 1.1: Relationship of NRWDPD with Other Policies



HOW THE DOCUMENT HAS BEEN PRODUCED

- 1.6 The NRWDPD has been informed through the following processes:

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Table 1.1: NRWDPD Process

Process	Outcome
Topic Papers	<p>The decisions taken and the way we reached the position in this plan are reported in three supporting topic papers covering waste, minerals and energy.</p> <ul style="list-style-type: none"> • The minerals topic paper seeks to explore the issues surrounding planning for minerals development and sets out the factors and issues that will shape how minerals policies for Leeds are to be developed. • The waste topic paper sets out the evidence on how the Council has determined the amount of waste which this DPD must plan for. It sets out how much waste should be re-used, recycled or composted or treated including energy recovery. It sets out how these have been interpreted into the land use requirements of this plan. • The energy topic paper summarises the key aspects of future energy generation and management that will inform and shape future planning policy development in Leeds.
Detailed Evidence	<p>The DPD is supported by other specific, local evidence where it was necessary to determine particular information through a bespoke study or analysis. These studies show how the facts and information that support the plan have been derived:</p> <ul style="list-style-type: none"> • Natural Resources Flow Analysis and Ecological Footprint: This analyses how resources are currently used in Leeds, how this compares to other areas and what could happen if the current situation continues into the future. • Safeguarded site database. This is a database containing what is known about the existing minerals and waste sites in Leeds and is used to determine which sites would be appropriate to safeguard. • Background Waste Research Report. This report undertakes waste projections for the DPD for all waste streams and what the requirements are forecast to be in terms of how much future waste will need to be recycled/composted and treated. It also sets out the operational and land use requirements of different waste management facilities. • The Leeds Wide Waste Site Selection Study and Update Addendum: This study has informed the allocation of strategic waste management sites in the DPD. It has also helped to identify which other areas are most suitable for other types of waste facilities. • Defining Municipal Waste Site Requirements (other than for Residual Waste Treatment): This identifies the types of waste management facilities which will be required to deliver greater re-use, composting and recycling for municipal waste during the plan period. • Yorkshire and Humber Regional Aggregate Working Party Annual Report 2008 and Aggregates Monitoring 2008: This survey is part of an annual programme that collects data on sales of aggregate minerals in the Yorkshire and Humber Region. • Local evidence from the Leeds Strategic Flood Risk Assessment November 2007, the Leeds Air Quality Review and Assessment 2010 and the Leeds Landscape Character Review 1994.

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Process	Outcome
	<ul style="list-style-type: none"> Map of Wind Speeds in Leeds and assessment of Contribution of Renewable Energy Technologies
<i>Issues and Alternative Options Report and Consultation¹</i>	A Leeds wide consultation exercise was undertaken at the start of the process in 2008. This included the public, local interest groups, hard to reach groups and formal stakeholders. This shaped the direction of the document through seeking views on 41 issues and options of how each could be addressed. Consultation processes and responses were recorded in a Consultation Report.
<i>Policy Position Report and Consultation Report including Policy Position Map Book²</i>	Following feedback from the Issues and Options, a further consultation exercise was undertaken to seek the views on the proposed policy position at this time. This included a map book to show the safeguarded sites and other proposed waste management areas including proposed strategic sites. A Consultation Report, dated May 2010, formally records the responses to this. This helped inform and shape the policies of this document.
<i>Sustainability Appraisal³</i>	Sustainability appraisal has been progressed in parallel with the development of the Plan to set out the social, environmental and economic effects of the policies. This process is reported in the Sustainability Appraisal Report.

¹ Leeds City Council, Issues and Alternative Options, 8 May – 19 June 2008

² Leeds City Council, Policy Position Report for Consultation October – January 2010

³ Sustainability Appraisal

LEGISLATIVE FRAMEWORK

- 1.7 There is a significant amount of legislation, planning policy and strategy documents which this DPD must take into account. This is summarised in the table below with further details set out in the topic papers and background evidence.

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Table 1.2: Summary of Legislative and Policy Framework⁴

Topic	European	National	Local
Minerals	None	National Planning Policy Guidance and Technical Guidance (March 2012)	Regional Aggregate Working Party Monitoring Report April 2008.
Waste	<p>Waste Framework Directive (2008/98/EC)</p> <p>Waste Framework Directive (2006/12/EC)</p> <p>Waste Framework Directive (75/442/EEC as amended by Directive 91/156/EEC)</p> <p>Landfill Directive (1999/31/EC)</p> <p>Hazardous Waste Directive (91/689/EEC)</p>	<p>PPS 10: Planning for Sustainable Waste Management, July 2005.</p> <p>National Waste Strategy for England, 2007.</p> <p>Consultation on National Waste Strategy, 2001.</p>	<p>Leeds Integrated Waste Strategy 2005 – 2035.</p> <p>Aire Valley Leeds Area Action Plan (AVLAAP) Preferred Options Summary, October 2007.</p>
Energy	Directive to Promote Electricity from Renewable Energy (2001/77/EC)	<p>National Planning Policy Guidance (March 2012)</p> <p>Planning and Energy Act, 2008.</p> <p>Building Regulations (particular Part L)</p> <p>Towards A Greener Future, Towards Zero Carbon Development, CLG, 2007</p>	Leeds LDF SPD – Building for Tomorrow Today – Sustainable Design and Construction:(Consultation Draft).
Natural Resources	<p>Water Framework Directive (2000/60/EC)</p> <p>Air Quality Framework Directive (96/62/EC)</p>	<p>National Planning Policy Guidance and Technical Guidance (March 2012)</p> <p>Air Quality Strategy, DEFRA 2007 and Low Emission Strategies Guidance, DEFRA 2010.</p>	<p>SPG22: Sustainable Urban Drainage, June 2004</p> <p>Leeds Strategic Flood Risk Assessment Nov. 2007</p> <p>City of Leeds (Metropolitan District) (No.1) Air Quality Management Order, 2010.</p>
All Topics	As above	<p>National Planning Policy Framework and Technical Guidance (2012)</p> <p>Climate Change Act 2008.</p> <p>Code for Sustainable Homes.</p> <p>Environmental Permitting Regulations (EPR) 2010</p>	<p>LDF Core Strategy.</p> <p>Vision for Leeds 2 2004 to 2020. Vision for Leeds 3 2011 to 2030</p> <p>‘Leeds 2050’ July 2007.</p> <p>The Yorkshire and Humber Plan 2008</p>

⁴ See Minerals, Energy and Waste Topic Papers for detailed references.

2 KEY CHARACTERISTICS AND SPATIAL VISION FOR LEEDS

- 2.1 The characteristics of Leeds which form the basis for this plan are set out below and shown on the key characteristics diagram and the minerals resource map.

THE PLAN AREA

- 2.2 Leeds is a metropolitan district of three quarters of a million people. It is dominated by the urban City of Leeds and has a number of important settlements such as Wetherby and Otley as well as many smaller communities. For ease, we refer to the whole area covered by Leeds City Council administration as “Leeds” within this document. The surrounding countryside is under pressure to meet the needs of a large urban population. For Leeds, the Natural Resources Flow Analysis shows that the ecological footprint is in line with other UK cities at 5.99 global hectares per capita which is way beyond the capacity of our planet to sustain⁵. Leeds consumes natural resources at a rate that is nearly double what is sustainable in the long term.
- 2.3 During the 1980s and 90s, Leeds experienced considerable growth within the finance and banking sector and along with the compact shopping area this helped create a strong city centre. Leeds is a regionally important City and because of this the travel to work area extends into most parts of Yorkshire. This means that a lot of people travel into Leeds for work, but do not necessarily live here.
- 2.4 The natural resources of Leeds have shaped the City. The City thrived and expanded rapidly during the industrial revolution, because the underlying geology provided the many minerals necessary for industry and construction. River valleys provided fertile land for agriculture with sheep farming leading to the development of the woollen industry. They also provided a source of water, transport and power. Smaller market towns developed along the River Wharfe in the north of the District and to the east the limestone plateau gave rise to a distinctive landscape characterised by villages built from the local limestone.

TRANSPORTATION NETWORK

- 2.5 The Leeds – Liverpool Canal and the Aire and Calder Navigation played a vital role in the development of Leeds. It meant that Leeds could transport the goods it produced by water and could reach the Trent Navigation, the canals of the Midlands, London and the South. Raw materials could be brought in from the Humber Ports and an inland dock was established. In more recent years, the decline of manufacturing industry and higher land values associated with residential development have meant that most of the wharves have been lost, which restricts the use of the canal for freight.
- 2.6 The rail network was of equal importance, supporting the movement of coal which meant that Leeds had an ample supply of coal at advantageous prices. This encouraged the growth of industries which thrived on coal such as chemical works, potteries, glassworks and cloth dyeing. The position of Leeds on a strategically central location on the rail network still makes it a desirable location for industries wanting to utilize the network for distribution although the majority of freight in and out of Leeds is now moved by road.

⁵ Leeds City Council, Natural Resources and Waste Development Plan Document – Policy Position, January 2010, p5

- 2.7 Leeds is well connected to the strategic road network with three key motorways M621, M62 and M1/A1.

MINERALS RESOURCES

- 2.8 Leeds contains resources of coal, sand and gravel, sandstone, limestone and various clays. These have been extensively worked in the past, but now tend to be more difficult to work or less commercially attractive. The distribution of economic minerals is shown on the minerals resource map.
- 2.9 There are no more active opencast coal sites in the District. Sand and gravel extraction is a constant, but with declining overall permitted reserves. Hard rock quarries still have significant reserves and building stone production is steady, having recovered in recent years, however output is small compared with aggregates. Total aggregate production is around 430,000 tonnes⁶ per year, however in order to meet demand Leeds has to import a lot of aggregates. There are two clay quarries and each contain large factories where some 80 million facing bricks are produced each year, making Leeds self-sufficient in bricks.

WASTE

- 2.10 A large industrialised, urban population inevitably produces a lot of waste and the regional role of Leeds increases the pressure on resources. The largest producer of waste is from construction, demolition and excavation (CD&E) activities followed by the commercial and industrial business sectors (C&I). Municipal solid waste (MSW), domestic waste collected by the Council is also a substantial proportion of the total waste stream⁷. Waste produced by agriculture and hazardous waste, which needs to be disposed of separately, are much smaller but important forms of waste. The Natural Resources Flow Analysis estimates that 5 tonnes of gross waste is produced per head of population in Leeds which is slightly lower than the UK average of 5.6 tonnes⁸.
- 2.11 Only municipal waste is collected by Leeds City Council, which includes that collected through 11 household waste sorting sites and 430 bring communal recycling points distributed around Leeds. Leeds currently recycles 31.25%⁹ of its municipal waste but the Leeds Integrated Waste Strategy (IWS) has a target to recycle 50%¹⁰. Most of the remaining waste is currently sent to landfill. For other waste streams information is more difficult to obtain but recycling rates are likely to be higher than for MSW although there is still significant potential to increase this¹¹.

NATURAL RESOURCES

- 2.12 Other important resources in the District include water, air and wind. The large majority of river water in Leeds is classed as good or fair quality. Contamination of the River Aire is due to surface water run off, effluent discharges, mine waters and industrial discharges, and pesticide contamination.
- 2.13 According to the Natural Resources Flow Analysis, gross water consumption in Leeds is 36% higher than the national average although it does not have a shortage of water which can be collected and

⁶ Leeds Annual Monitoring Programme 2009

⁷ See Waste Topic Paper for a formal definition of each waste stream.

⁸ Leeds City Council, Natural Resource Flow Analysis and Ecological Footprint, January 2008, p4.

⁹ Leeds City Council Final 2009/2010 Recycling Performance, Period 12 to 31st March 2010

¹⁰ Leeds City Council, Integrated Waste Strategy for Leeds 2005-2035, p18

¹¹ Based on information from DEFRA: www.defra.gov.uk

treated for drinking water supply. It is possible that climate change may lead to increased pressure on the water supply in the future¹².

- 2.14 Flooding is a major concern in Leeds. There are over 3,862 homes and 700 businesses at risk of flooding from the River Aire alone¹³. There are also substantial risks from surface water flooding. Communication networks, energy networks and other important infrastructure such as schools are vulnerable to disruption from flooding.
- 2.15 The rivers in Leeds generally do not have flow rates that would support large scale commercial hydropower but during the mediaeval period the Cistercian monks created a number of weirs on the rivers specifically for the purposes of increasing flow to generate water power.
- 2.16 The City of Leeds is generally low-lying and is therefore not particularly windy but there are some areas outside the main urban area where wind speeds at a height of 45 metres are above 6.5 m/sec¹⁴.
- 2.17 Air quality is generally good and has improved since coal-burning has ceased. Of the seven main air quality pollutants, Leeds only has any potential problem with levels of Nitrogen Dioxide (NO₂) and Particulates (PM₁₀)¹⁵. Road traffic is the greatest source of emissions for both of these. The Appendix shows the location of the Air Quality Management Areas in Leeds and the concentrations of NO₂ and PM₁₀. The District is served by the Leeds and Bradford International Airport. Unless air passenger numbers grow from the current 3 million per annum to beyond 5 million, the most immediate impact of the airport on air quality is the road traffic emissions which arise from car use due to limited public transport accessibility¹⁶.

¹² Leeds City Council, Natural Resource Flow Analysis and Ecological Footprint, January 2008

¹³ Figures provided by the Environment Agency in their consultation response, March 2010.

¹⁴ Leeds City Council, Policy Position Report Appendix, Figure 9, windspeeds, January 2010

¹⁵ City of Leeds (Metropolitan District) (No.1) Air Quality Management Order, 2010

¹⁶ Leeds City Council, Natural Resource Flow Analysis and Ecological Footprint, January 2008

Figure 2.1: NRWDPD Key Characteristics Diagram

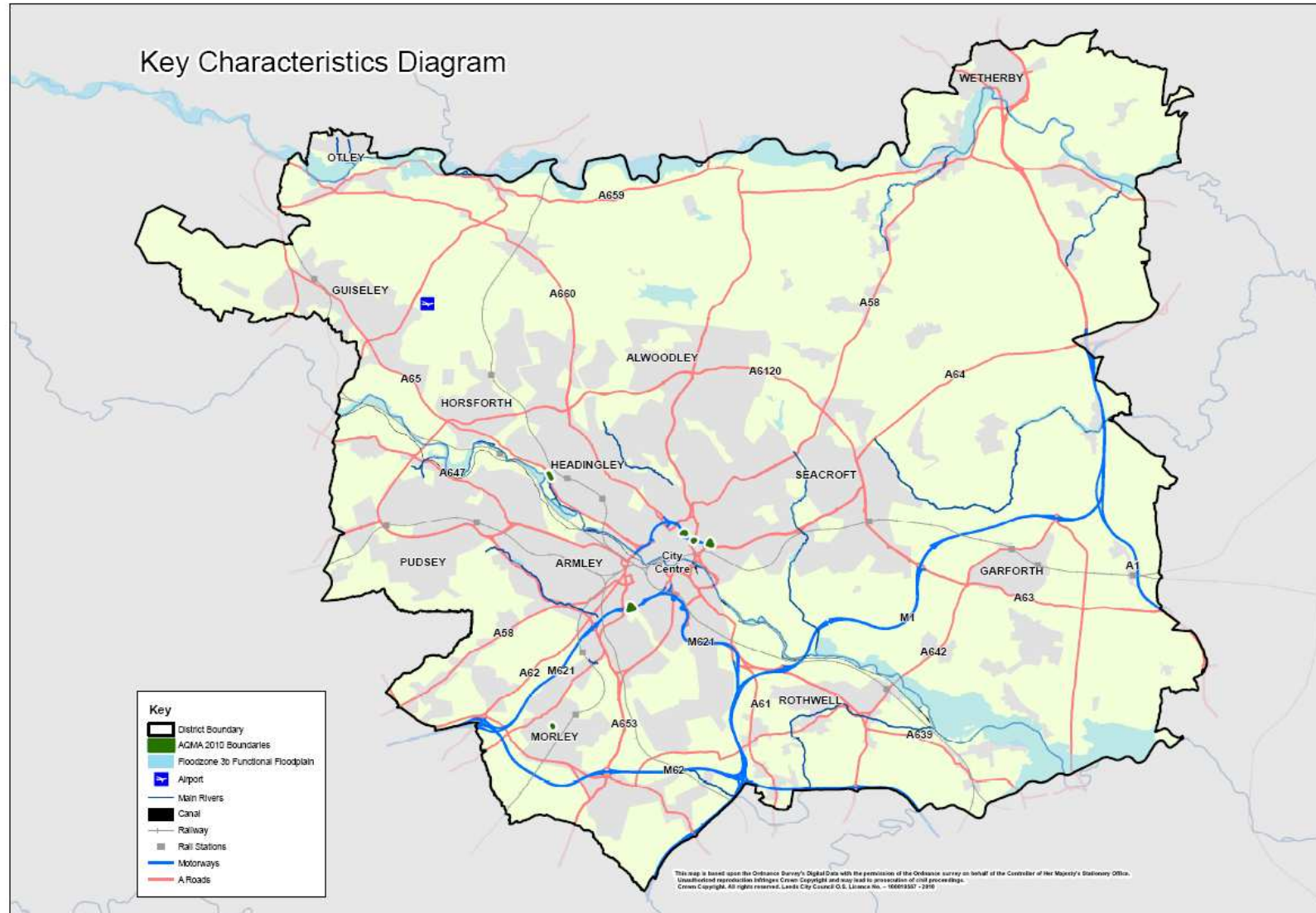
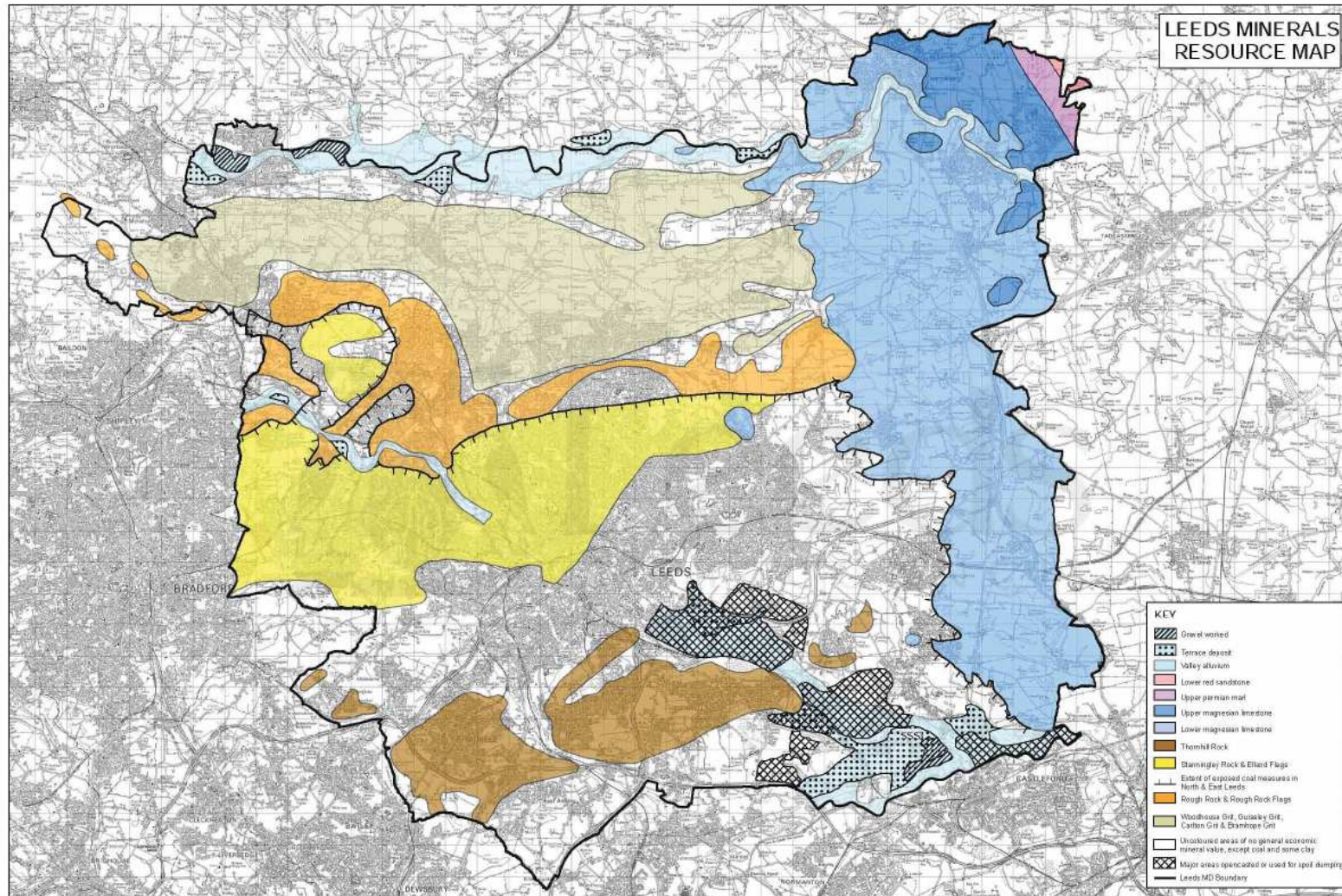


Figure 2.2: Minerals Resource Plan



THIS MAP (OR AN EXTRACT) IS AVAILABLE AT A LARGER SIZE
PRODUCED BY LEEDS CITY COUNCIL
This map is based upon Ordnance Survey material with the permission of the Ordnance survey on behalf of the Controller of Her Majesty's Stationery Office.
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Leeds City Council O.S. Licence No. - 100019667 - 2010. SCALE: NTS. O/S NO 5088 EPS. DATE 21/06/2010

SPATIAL VISION AND STRATEGIC OBJECTIVES

2.18 The spatial vision sets out where the Council wants Leeds to get to in the long term:

LEEDS LOCAL DEVELOPMENT FRAMEWORK SPATIAL VISION

For Leeds to be a distinctive, competitive, inclusive and successful City, for the benefit of its communities, now and in the future.

2.19 To make this vision more specific to the aims and topics of the NRWDPD and in response to consultation, this has been expanded so the four main principles and strategic objectives below underpin all the policies of the NRWDPD.

NRWDPD Vision and Strategic Objectives

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 sufficient contribution to supply for local and regional 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.
- Protect and increase the amount of tree cover.

A ZERO WASTE HIGH RECYCLING SOCIETY

- Support activities to reduce the level of waste produced.
- Maximise the reuse of waste.
- Maximise recycling and composting 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 and rail transportation networks
- Support the co-location of natural resource activities to minimise transportation impacts.

A HIGH LEVEL OF ENVIRONMENTAL PROTECTION

- Ensure the protection of the quality of watercourses and other sources of water.
- Ensure flood risk is managed, taking into account the effects of climate change
- Protect and enhance the environment including the District's heritage.

- 2.20 The key characteristics and natural resource flow analysis have shaped our spatial vision for the future by demonstrating where we need to take action to ensure resources are protected or used more efficiently.

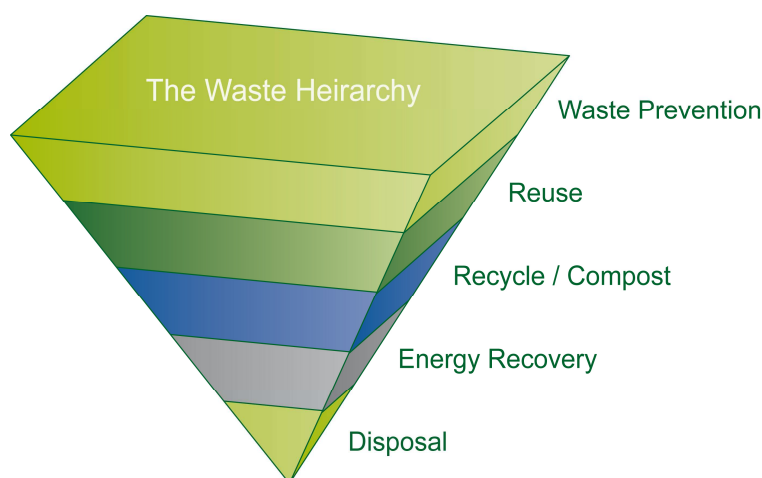
An Efficient Use of Natural Resources

- 2.21 The efficient use of natural resources should be at the heart of the way decisions are taken in Leeds. We want to ensure that the growth planned for in our LDF Core Strategy takes place in a way that respects and makes best use of our natural resources including land, minerals, energy and clean air and water.
- 2.22 We want to ensure that, where possible, we are able to use minerals produced from within the District rather than importing them from further away. Using local minerals for building adds to the local distinctiveness of Leeds and helps to keep its character as well as creating jobs locally.
- 2.23 The efficient use of resources also includes the efficient use of land and managing the water resource.

A Zero Waste High Recycling Society

- 2.24 The Integrated Waste Strategy for Leeds 2005-2035 (IWS) aims for Leeds to become a Zero Waste City. A Zero Waste society is defined by the Government¹⁷ as adopting a new attitude where business, industry and households treat waste as a valuable resource. This means planning for waste to be reduced in the first place then reused, composted or recycled and when this is not possible treated including energy recovery (see glossary definition). Disposal to landfill is the last option only when other alternatives are not feasible. Over a longer period of time the amount of waste sent to landfill will be reduced to the minimum.
- 2.25 The waste hierarchy¹⁸ is a 5-stage approach to achieving sustainable waste management where decisions are taken in accordance with the most sustainable option as shown by the triangle below. The NRWDPD policies will achieve the right balance between the different elements of this hierarchy.

Figure 2.3: The National Waste Hierarchy



¹⁷ www.defra.gov.uk/corporate/consult/waste-review

¹⁸ Defra, Waste Strategy Annual Progress Report 2008/2009, October 2009, p3 – www.defra.gov.uk

A Low Carbon Economy

- 2.26 This DPD encourages renewable energy and energy production from renewable sources. The Rivers Aire and Wharfe have the potential to supply small amounts of Hydro Power and a study of wind speeds has identified there may be some potential for wind energy in parts of Leeds. A major source of potential energy comes from diverting waste which is currently sent to landfill and recovering value from this so it can be used ("energy from waste").
- 2.27 The major issue of climate change is recognised throughout this document. Local authorities have a crucial role in tackling climate change and there is a need for up-to-date planning policies to help the Council contribute to meeting national policies for sustainable development and reducing greenhouse gas emissions such as carbon dioxide. Diversifying the energy supply to increase the contributions from renewable and Low Carbon Energy technologies are supported by this document.
- 2.28 This DPD encourages the use of the canal and rail systems for moving freight (including non-mineral freight) so as to reduce the amount of heavy goods vehicles on the roads and thereby reduce congestion and greenhouse gas emissions. The protection for wharves and rail sidings maximises the potential to bring marine-won sand and gravel into the sub-region and thereby reduce the reliance on land-won extraction.

A High Level of Environmental Protection

- 2.29 At a strategic level, actions to improve air quality are largely addressed in the Core Strategy through its overall locational policies. This DPD aims to support low emission strategies and ensure that new development does not make air quality worse. It also aims to ensure that longer term the City seeks to develop the electric charging infrastructure necessary to encourage people to choose to use electric vehicles.
- 2.30 The DPD aims to manage flood risk so as to reduce the risk and take account of climate change. This means that future growth will need to make space for water where appropriate and take measures to reduce the speed of surface water run off. This will also help us to improve water quality to meet the requirements of the Water Framework Directive which requires all rivers to meet 'good' status by 2015¹⁹. At the same time, climate change could mean pressure on water supply so the DPD supports water minimization measures. Additionally, the restoration of mineral sites in appropriate locations can be designed to help provide flood storage benefits.
- 2.31 This document also plans to protect environmentally sensitive areas of Leeds from harmful development, and to make sure that future development occurs in locations which are appropriate to its use. This document has a strong emphasis on environmental protection throughout and encourages the use of local stone to repair and maintain historic buildings. It gives added protection for trees and aims to ensure that any trees which are lost through development are replaced threefold.

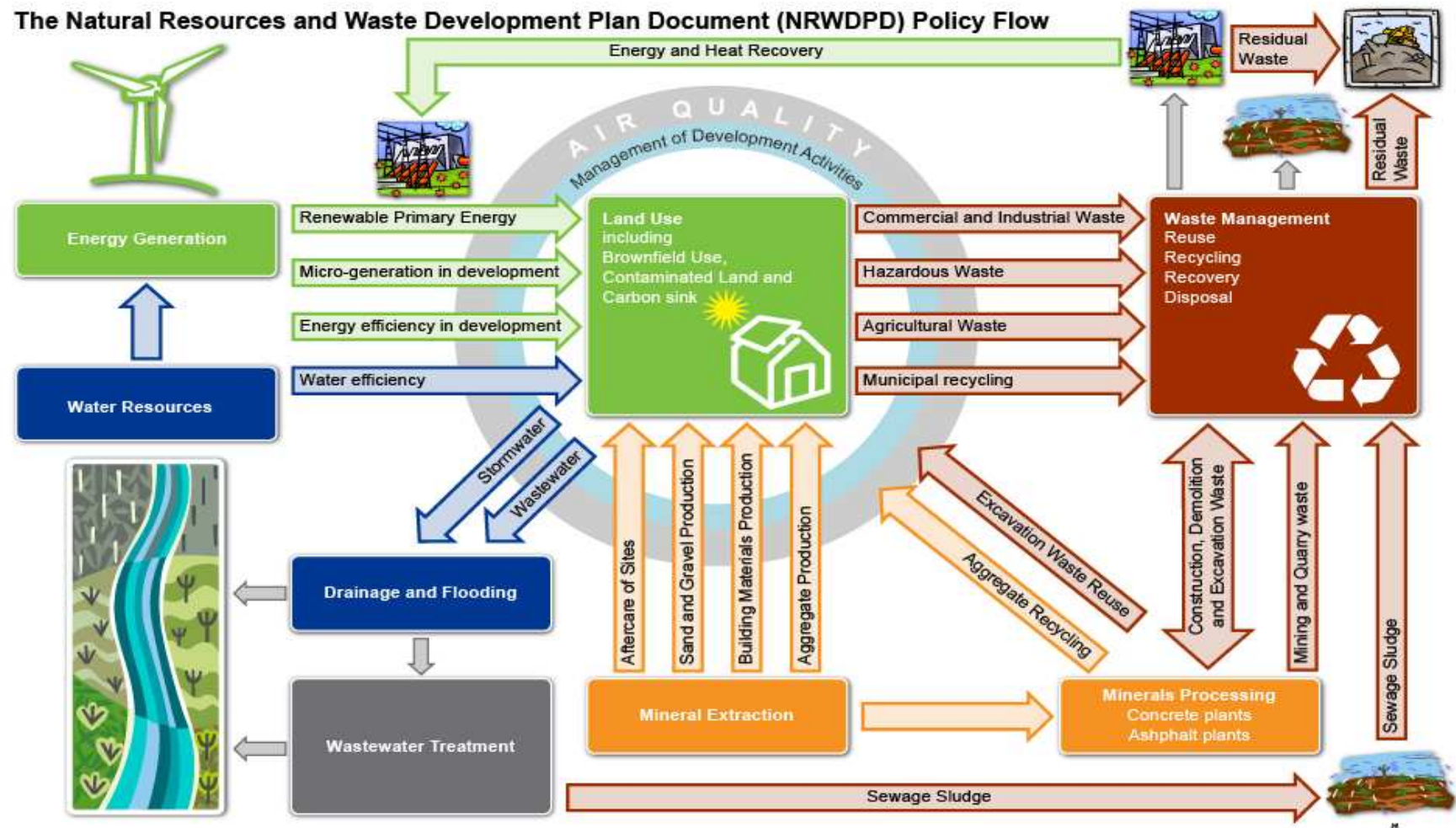
¹⁹ European Commission, Water Framework Directive, Water Note 2: Cleaning up Europe's Waters, March 2008, p1

THE NATURAL RESOURCES POLICY FLOW

- 2.32 New development does not impact on each part of the Vision in isolation. For example, a new house will require land, use aggregates and other materials as well as producing waste whilst it is being built. Once it is lived in, it will then consume energy and water (indirectly producing emissions and waste).
- 2.33 The way in which these policies interact with each other is shown in the diagram overleaf. Each arrow represents an issue on which a policy is presented in this document.

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Figure 2.4: The NRWDPD Policy Flow



- 2.34 To ensure that the positive sustainability aspects of the National Planning Policy Framework are embodied into this plan, the following Policy will be relevant to all development proposals.

GENERAL POLICY 1

When considering development proposals the Council will take a positive approach that reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework. It will always work proactively with applicants jointly to find solutions, and to secure development that improves the economic, social and environmental conditions of Leeds.

Planning applications that accord with the policies in this plan (and where relevant, with policies in neighbourhood plans) will be approved without delay, unless material considerations indicate otherwise.

Where there are no policies relevant to the application or relevant policies are out of date at the time of making the decision then the Council will grant planning permission unless material considerations indicate otherwise – taking into account whether:

Any adverse impacts of granting permission would significantly and demonstrably outweigh the benefits, when assessed against the policies in the National Planning Policy Framework taken as a whole; or specified policies in that Framework indicate that development should be restricted.

POLICY TOPIC AREAS

- 2.35 To deliver the vision and objectives, the NRWDPD is organised into four topic areas with the strategy and policies for each topic set out separately. These are;
- Minerals including the transportation of freight;
 - Waste in terms of how much waste must be planned for and how this will be managed;
 - Energy, including the provision for renewable energy, low carbon energy technologies and combined heat and power; and
 - Conserving, protecting and using other natural resources efficiently (water, land, air quality).
- 2.36 Within each topic area there is a hierarchy of intent within which the policies are driven by the vision and the interactions between each topic as shown on the Policy Flow:
- First we try to encourage the reduction in the use of a resource, or in the case of waste, prevent its production. This includes planning to use less energy sources and using existing resources more efficiently;
 - Then we look to reuse in the first instance, or recycle the resource into secondary re-usable materials rather than use new primary minerals or other resources. We also seek to make best re-use of existing assets and infrastructure;
 - We then plan to recover value from anything that cannot be re-used or recycled, such as cutting the use of non-renewable fossil fuels; and finally
 - Where we do require the use of new resources, or need to deal with waste that remains, we have planned for this to be provided in the Leeds District as far as possible.

2.37 The way in which this hierarchy is applied to each topic area is summarised in Table 2.1.

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Table 2.1: Of Hierarchy and Topic Policies

Hierarchy of Intent	Minerals	Waste	Energy	Natural Resources
Reduce	Code for Sustainable Homes (CSH) encourages the use of alternative building materials.	Foster an ethos of being less wasteful and support activities that reduce waste.	Energy efficiency in new development CSH	Water efficiency in new development Reduce surface water run-off Reduce flood risk Reduce air quality impacts Reduce land take.
Reuse	Safeguard mineral processing sites. Re-use of Construction Demolition & Excavation waste.	Safeguard existing Construction Demolition & Excavation (CD&E) facilities. Safeguard existing re-use facilities at Household Waste Sorting Sites.	Encourage provision of heat distribution infrastructure to allow reuse.	Encourage brownfield development. Remediation of contaminated land.
Recycle	Safeguard Aggregate recycling sites. Identify industrial estates with potential for new recycling sites.	Safeguard exist CD&E, Commercial and Industrial (C&I) and Municipal Solid Waste (MSW) facilities.		Greywater harvesting.
Recover	Recover coal from previously developed sites.	Energy recovery	Energy recovery. Wind turbines. Solar power.	Encourage additional trees for CO2 uptake and climate cooling
Plan for need	Identify Preferred Areas for mineral extraction. Sustainable new extraction. Site management. Restoration and aftercare.	Strategic Waste Management (WM) sites. Sustainable new WM sites Less need for landfill sites.	Encourage low carbon energy generation.	Protect water quality. Low emissions strategy. Alternative transport modes. Electric vehicle charging infrastructure.

3 MINERALS

OBJECTIVES FOR MINERALS

3.1 Minerals of economic value are essential to our quality of life. Their finite nature means that best use must be made of them. The National Planning Policy Framework requires the City Council to:

- Identify and include policies for mineral extraction and the use of secondary and recycled materials, define safeguarding areas and policies to extract economic minerals ahead of development and encourage the transport of minerals by rail and canal where feasible, and
- Set out criteria against which planning applications will be assessed with regard to the natural and historic environments and the effects on human health and to ensure the completed mineral workings are reclaimed and restored to a beneficial afteruse.

Within this context, the objectives of sustainable development for minerals planning are:-

- i) to conserve minerals as far as possible, whilst ensuring an adequate supply to meet the needs of society for minerals;
- ii) to minimise production of waste and to encourage efficient use of materials, including appropriate use of high quality materials, and recycling of wastes;
- iii) to encourage sensitive working practices during minerals extraction and wherever possible enhance the overall quality of the environment once extraction has ceased;
- iv) to protect areas of designated landscape or nature conservation from development, other than in exceptional circumstances where it has been demonstrated that development is in the public interest.

3.2 Minerals can be worked only where they are found. Their extraction is a temporary activity. Mineral extraction need not be inappropriate development: it need not conflict with the purposes of including land in Green Belts, provided that high environmental standards are maintained and that the site is well restored. Further guidance on development in the Green Belt is provided in section 9 of the National Planning Policy Framework.

3.3 As set out in paragraph 1.5, the Minerals Topic Paper provides a fundamental part of this plan. In Leeds, mineral production is limited to a small number of working sites. Production levels do not currently meet local consumption (with the exception of clay for brick making) due to both geographic constraints on production and the quality of the minerals produced. From the most up to date information available.²⁰, Leeds will continue to rely on the importation of some types of minerals for the foreseeable future.

3.4 Policies in this DPD will be monitored in accordance with the monitoring framework in Section 7. Where targets are repeatedly not being met or environmental/sustainability problems come to light, this may lead to a review of the DPD and consideration of the sub-regional apportionment through the Yorkshire and Humber Regional Aggregates Working Party. Policy Minerals 14 will be subject to a five yearly review to allow sufficient time for businesses to respond to the opportunities created by this DPD. Towards the end of the Plan Period it is anticipated that marine-won aggregate will contribute towards supply.

²⁰ DCLG, Yorkshire and Humber Regional Aggregates Working Party, Annual Report 2008 and Aggregates Monitoring 2008, October 2009

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- 3.5 In order to meet the objectives set out in Chapter 2 and provide a steady supply of minerals whilst husbanding finite natural resources, the Council will seek to encourage greater use of recycled aggregates and the use of alternative building materials in order to reduce current levels of use of primary resources and safeguard them for the future.

Types of Minerals

3.6 The different types of minerals found in Leeds District are:

- Aggregates (sand and gravel and crushed rock);
- Stone;
- Clay; and
- Coal.

3.7 Aggregates, which also include crushed stone, play an important part in construction and are therefore essential to the growth of the District. Based on figures provided by the Yorkshire and Humber Regional Aggregates Working Party in 2008 ²¹ a sub – regional apportionment for West Yorkshire has been derived. This is 5.5 million tonnes of sand and gravel and 17.8 million tonnes of crushed rock for the period 2011 to 2016.. Leeds has derived its own targets for aggregate production. This is based on the amount of aggregate that Leeds generally consumes within the District. A more detailed explanation of how the targets have been derived can be found in the Minerals Topic Paper that accompanies this DPD.

3.8 In addition to producing primary aggregates there is a requirement for provision of alternative /recycled material. National guidelines set the figure at 60 million tonnes per annum for the period between 2003 and 2009 but this has now been increased by 9% to 65 million tonnes per annum for the remainder of the plan period ²². Operators are not required to provide returns for this so it is difficult to know how well Leeds is performing. Valuable resources may exist outside of an MSA and developers are encouraged to explore the potential for extraction prior to (and well in advance of) site development.

3.9 Where possible, recycled and or alternative materials should be used rather than exploit natural mineral resources. This is consistent with the objectives of this plan and supports the waste hierarchy.

MINERALS 1: PROVISION OF AGGREGATES

In conjunction with other West Yorkshire Metropolitan District Councils, the Council will encourage the recycling of materials and endeavour to maintain a landbank of permitted reserves of aggregate in accordance with the Sub-Regional Apportionment.

Leeds will aim to meet the following targets for aggregate provision:

Sand and gravel = 146,000 tonnes per annum

Crushed rock = 440,000 tonnes per annum.

MINERAL SAFEGUARDING AREAS

3.10 Where it is viable to do so, the Council will seek to ensure that the mineral resources listed in 3.6 are protected from developments that may prejudice their future extraction. There is insufficient information to know where very extensive deposits of sandstone and limestone are of a quality which would enable them to be viably worked. Reserves of clay are sufficient to support need well beyond the plan period. Therefore this DPD defines protected areas for coal and for sand and gravel only. These Mineral Safeguarding Areas (MSAs) are shown on the Proposals Map that accompanies this

²¹ DCLG, Yorkshire and Humber Regional Aggregates Working Party, Annual Report 2008 and Aggregates Monitoring 2008, October 2009

²² DCLG, National and Regional Guidelines for Aggregates Provision in England 2005 – 2020

DPD. The purposes of MSAs are to alert potential developers to the possible presence of economic minerals and to prevent the avoidable sterilisation of minerals which may be needed within the plan period and beyond. Valuable resources may exist outside of an MSA (refer to the Minerals Resources Map in figure 2.2) and developers are encouraged to explore the potential for extraction prior to (and well in advance of) site development.

- 3.11 The Sand and Gravel Mineral Safeguarding Area identifies the surviving alluvial deposits within the district in which the sand and gravel resource may be found amounts that could be viable to remove. Based on information in the British Geological Survey Technical Report WA/92/1, Leeds: A Geological Background for Planning and Development, the MSA excludes areas already worked, tributary areas which are very unlikely to contain significant amounts of sand and gravel, areas already worked primarily for surface coal and areas where the resource is overlain by a substantial depth of made ground, for example by deposited waste materials.
- 3.12 The sand and gravel resource is extensively overlain by existing development within the urban area but in site specific circumstances there may be occasions where it can be economically removed prior to, or as part of, the redevelopment of that land. The removal of sand and gravel from existing developed sites under 1 hectare in size and / or where reconstruction to original levels is necessary, is however considered by the council to be most unlikely to be viable. Extracting sand and gravel from sites less than 1.0 ha in area will incur high unit costs in relation to the deployment of suitable extractive equipment, the temporary storage of unsuitable material to be backfilled (which may have to be off site), the procurement of compressible material for infilling the workings, the testing of such materials for contamination, the placement and dynamic compaction of such material, supervision, load bearing tests and warranty costs in addition to environmental mitigation costs such as wheel and road cleaning. Additionally, the need to support adjoining land will mean that approx 20% of the land is unworkable. In most circumstances buildings cannot be erected which bridge worked and unworked boundaries. On small sites this would prevent much of the land being built upon. These factors - combined with the low value of the dug material, mean that the extraction of sand and gravel from small sites in urban Leeds under 1.0 ha where rebuilding is to take place will be uneconomic. This DPD makes adequate provision for the Leeds share of the West Yorkshire sub-regional apportionment for sand and gravel through an Area of Search and an Allocation. Any mineral resulting from prior removal at development sites is over and above the provision to meet the sub regional apportionment.
- 3.13 Coal is a valuable resource and has been extracted from a very diverse range of sites in Leeds. Therefore the full extent of the surface coal field in Leeds has been identified as the Coal Mineral Safeguarding Area. The MSA designation does not imply that planning permission for extraction will be granted within a particular area. The surface coal resource is extensively overlain by existing development and in site specific circumstances there may be occasions where it can be economically removed prior to, or as part of, the redevelopment of that land. Removal of coal from development sites can help prepare the site for development by removing problems of combustion and instability. In the case of surface coal present beneath undeveloped land national planning guidance makes a presumption against opencast coal mining, therefore this DPD does not allocate land for surface coal extraction.
- 3.14 The presence of a mineral safeguarding area does not mean that other development within an MSA is unacceptable. However the potential presence of an economic mineral is a material consideration. In rural areas development is controlled by green belt policy. In the

urban area the MSA does not preclude development from taking place but encourages developers to consider prior extraction of important minerals at the earliest possible stage in the development process. Planning applications will need to include sufficient information to demonstrate that applicants have considered prior extraction. Where an applicant is able to provide evidence that prior extraction of minerals is not viable the council does not expect the minerals to be extracted. Relevant factors may be the poor quality of the mineral, an insufficient quantity, physical constraints or where there are insurmountable risks associated with potential flooding. Proposals for prior extraction will be subject to environmental assessment and the criteria in MINERALS 10.

- 3.15 The policy requirement to consider prior extraction applies to all development sites over 1 hectare within the Sand and Gravel MSA and to all non-householder development within the Coal MSA. Examples of exceptions include applications for change of use, extensions, Conservation Area, Listed Building and Advertisement applications and any other proposals which do not include excavation of the ground. Temporary development is not generally considered to sterilize the resource.

MINERALS 2: MINERAL SAFEGUARDING AREAS (MSA) - SAND AND GRAVEL

Within the Sand and Gravel Minerals Safeguarding Areas shown on the Proposals Map, applications for development over 1 hectare in size must demonstrate that removal of the sand and gravel will take place prior to or during development unless:

1. it can be shown that it is not economically viable to do so (including effects on communities or the wider economy), or
2. it is not environmentally acceptable to do so, or
3. the need for the development outweighs the need to extract the sand and gravel, or
4. The sand and gravel will not be sterilised by the development.

MINERALS 3: MINERAL SAFEGUARDING AREAS – SURFACE COAL

DEVELOPMENT SITES

Within the Surface Coal Mineral Safeguarding Area shown on the Proposals Map applications for non-householder development must demonstrate that the opportunity to recover any coal present at the site has been considered. Coal present should be removed prior to or during development unless:

1. it can be shown that it is not economically viable to do so, or
2. it is not environmentally acceptable to do so, or
3. the need for the development outweighs the need to extract the coal, or
4. The coal will not be sterilised by the development.

NON-DEVELOPMENT SITES

Permission shall not be given for the working of surface coal deposits beneath undeveloped land which is not going to be developed for other uses, unless applicants are able to demonstrate the environmental acceptability of their proposal, that the highest operational standards will be met and that restoration will enhance landscape quality and biodiversity. Weight will be attached to schemes which provide local and/or community benefits avoid the sterilisation of mineral resources or facilitate other development which is in accordance with the development plan.

- 3.16 Existing mineral sites within Leeds are already subject to strict planning and environmental controls which are reviewed regularly. To minimize the environmental impact of mineral extraction and to reduce pressure for new workings by making the most of existing mineral workings, we propose to protect them as 'Safeguarded Sites'. This is in order to ensure that the impact of new minerals development is kept to a minimum and that provision can be made for predicted future demand.
- 3.17 The Council is proposing 'Preferred Areas' and 'Areas of Search' as the areas where we want to encourage the mineral operators to look for new extraction sites. We are proposing an Area of Search for sand and gravel, whilst protecting the high landscape quality areas in the Wharfe Valley. Preferred Areas for limestone are proposed in the east of the district. Areas of Search (AoS) are areas where resources are known to be. However, no exploration as to potential yield or quality of the resource has been undertaken and therefore these are not proven. The Council wishes to encourage such exploration to ensure its continued contribution to sub regional levels of provision of sand and gravel and has therefore identified areas where it is appropriate that this may take place. "Preferred Areas" are those areas where the resource is proven and evidence as to the nature and extent of deposit is available. The Council wishes to ensure that the resources are exploited in an efficient and timely manner.

PROVISION OF AGGREGATES (SAND, GRAVEL, CRUSHED ROCK)

- 3.18 The Council is required to provide a landbank, or stock, of planning permissions that will ensure that the contribution to regional provision can be met for a specified period in the future, however this is dependent on viable applications coming forward. Currently this landbank is set at 7 years²³. In West Yorkshire the current landbank for sand and gravel is well below this figure and is estimated to be in the region of only 1.1 years.²⁴
- 3.19 To ensure that minerals development will contribute to the level of provision required to meet the District's contribution to the sub-regional apportionment, the Council has identified areas within the wider MSA which it considers should be the first to be developed.
- 3.20 The site at Midgley Farm at Otley in the Wharfe Valley is known to have a proven resource of sand and gravel amounting to 1.6 million tonnes. This resource will be required during the plan period if Leeds is to meet the required level of aggregate provision and maintain a contribution to the sub regional landbank.
- 3.21 Sand and gravel resources are known to exist around Methley. The Council has identified the area as an Area of Search for sand and gravel. Some of the sand and gravel shown on the Mineral Resource Map is assumed to have been lost through former open cast coal mining and therefore this has not been included in the Area of Search.
- 3.22 The landbank for crushed rock in the West Yorkshire sub-region has sufficient capacity to satisfy estimates of demand for a period of 28.3 years. In Leeds production of crushed rock is expected to continue at the existing site at Howley Park where there are significant reserves likely to outlast the plan period and safeguarded under MINERALS 3 above.

²³ DCLG, Minerals Policy Statement 1: Minerals and Planning, November 2006, p15

²⁴ See Minerals Topic Paper

MINERALS 4: MINERAL EXTRACTION – SAND AND GRAVEL

AREA OF SEARCH

Proposals for the extraction of sand and gravel within the defined Area of Search at Methley (as shown on the Proposals Map), will be supported in principle for proven deposits in accordance with MINERALS 10.

ALLOCATION

Land at Midgely Farm, Otley is allocated for sand and gravel extraction.

- 3.23 There are aggregate deposits throughout the Wharfe Valley but the need for aggregate has to be balanced against specific concerns relating to the potential impact upon the environment. The high landscape quality of the Wharfe Valley and in particular the area of special landscape which lies to the east of Pool, is of fundamental importance and contributes to the distinctiveness of the district. An increase in aggregate production within the plan period could potentially have a harmful impact on the relatively natural landscape of the valley and road access is poor. This Plan makes sufficient provision for Leeds to meet its share of the sub-regional apportionment (as evidenced in the Minerals Topic Paper) and therefore the area east of Pool is not needed to meet the targets for Leeds.

MINERALS 5: LIMITING SAND AND GRAVEL EXTRACTION IN THE WHARFE VALLEY

It is unlikely that proposals for the extraction of sand and gravel within the area east of Pool in the Wharfe Valley will be supported.

STONE AND CLAY

- 3.24 The use of stone for new building work is mainly limited to the more rural parts of the Leeds area and this is often limited by cost. The types of stone to be found in the district are varied, with a gritty sandstone in the northern fringes of Leeds, Magnesian limestone along the eastern ridge and a fine- textured hard sandstone in the south of the district. The existing stone buildings which give the district a distinctive and varied character must also be maintained and it is essential that stone of the appropriate quality and appearance is available. Quarries that produce building stone also help to maintain provision of aggregate (crushed rock and sand).

MINERALS 6: PREFERRED AREAS – STONE AND CLAY EXTRACTION

The areas listed below are the Council's Preferred Areas for stone and clay extraction during the plan period:

- **Limestone: Highmoor Quarry extension, Bramham.**
- **Limestone: Hook Moor, Micklefield.**
- **Sandstone: Kings Road Quarry extension, Bramhope.**
- **Sandstone: Moor Top, Guiseley.**
- **Sandstone: Britannia Quarry extension, Morley.**
- **Sandstone and Clay: Howley Park.**

These sites are identified as Maps B4 in the Map Book

- 3.25 The buildings which give Leeds its distinctive character were often built with particular local stone which is no longer available as many small quarries have closed. Where repairs or refurbishment is needed it may be possible to supply stone from old quarries which have closed or from new sites where there are proven appropriate resources but a large quarry would not be acceptable in terms of the environment. Applications for small scale mineral development to meet this special need will be acceptable in principal providing they can satisfy MINERALS 7.

MINERALS 7: PROVISION OF STONE FOR REPAIRS AND REFURBISHMENT OF EXISTING BUILDINGS

Where repair or refurbishment of buildings requires local stone of an identical or special character which cannot be supplied from an existing approved quarry, consideration will be given to proposals for extraction operations of a limited scale and duration at former quarry sites to meet this specific need.

COAL

- 3.26 The impact of opencast coal mining is often considered to be environmentally unacceptable, however, fossil fuels will continue to be required in the future as an energy source or until such time as renewable energy sources are more fully developed. The NPPF identifies shallow and deep-mined coal as a mineral of local and national importance. Despite this, planning permission shall not be given for the extraction of coal unless the proposal is environmentally acceptable, or can be made so by planning conditions or obligations; or if not, it provides national, local or community benefits which clearly outweigh the likely impacts to justify the grant of planning permission.

MINERALS 8: SURFACE COAL AND DEVELOPMENT SITES

Within the Mineral Safeguarding Area for surface coal, as shown on the Proposals Map, applicants should consider the opportunity to recover any coal present at the site in their plans to develop the land or change its use. Applicants submitting major applications will need to demonstrate to the local planning authority that;

- any coal beneath the site is irrecoverable or of no economic value, or
- there is coal but it will not be sterilised by the development proposed, or
- there is coal but there is an overriding need for the development proposed, the economic value of which outweighs the value of extracting the coal.

In situations where none of the above applies applicants must show how the coal can be removed in an environmentally acceptable manner, taking account of detailed considerations listed in MINERALS 10.

- 3.27 Recent advice given by the Coal Authority suggests that small scale, short term recovery operations by opencast methods are possible on small sites within heavily developed areas. The Council wishes to maintain a flexible approach to the recovery of coal by surface working within the MSA for coal identified on the Proposals Map where this is possible. Therefore applicants proposing non-householder development on previously developed land within the coal MSA will need to demonstrate that they have considered the potential for prior extraction. Where proposals involve major development (See Glossary for definition of major development) applicants will need to demonstrate that the proposal can meet the criteria attached to MINERALS 10.

MINERALS 9: SURFACE COAL AND NON-DEVELOPMENT SITES

There will be a presumption against working of surface coal deposits beneath undeveloped land which is not going to be developed for other uses, unless applicants are able to demonstrate the environmental acceptability of their proposal, that the highest operational standards will be met and that restoration will enhance landscape quality and biodiversity. Weight will be attached to schemes which provide local and/or community benefits, avoid the sterilisation of mineral resources, address mining legacy issues or facilitate other development which is in accordance with the development plan.

MANAGING DEVELOPMENT

- 3.28 Extensions to existing quarries in Leeds are preferable to the opening of new quarries. Although it is considered unlikely that there will be a need for many new sites to meet the demands within the plan period, we need to be flexible enough to respond to changes or exceptions. Applications for both new extraction sites and extensions to existing sites will be subject to environmental screening processes and will need to demonstrate that they have addressed the environmental and social considerations set out in MINERALS 10.
- 3.29 Applicants for development of sites adjacent to safeguarded sites, allocations, preferred areas or the area of search will be expected to ensure that they have adequately considered the effect of mineral processes or wharf / rail related freight on the proposed land use.

MINERALS 10: APPLICATIONS FOR MINERAL DEVELOPMENT

Applicants will need to demonstrate that adequate consideration has been given to the following matters:

- Evidence of a proven deposit of mineral.
- Avoidance of or the reinstatement of the best and most versatile agricultural land.
- Duration of the development.
- The layout of operational areas e.g. plant yards and processing facilities.
- Effect on visual amenity.
- Effect on the natural and historic environment.
- Retention, treatment and maintenance of boundary features as appropriate.
- Environmental and amenity aspects such as noise, dust, litter, odour, vermin and gas emissions.
- Protection of controlled waters.
- Drainage and use of sustainable drainage.
- Stripping and conservation of soils.
- The adequacy of the local highway network and the safety of access and egress to the site and to other users of the highway including pedestrians.
- Routing and frequency of vehicle movements, together with hours of operation and timescales for delivery.
- Measures to prevent dirt being carried onto the public highway and private highways in public use beyond the site boundary.
- The use of alternatives to road transport where feasible.
- Hours of operation.
- Protection of public rights of way.
- Temporary and permanent landscape works including screening.
- Restoration and aftercare.
- Fairly and reasonably related community benefits where appropriate (to be delivered through s106 Planning Obligations).

SUSTAINABLE MINERAL SITE MANAGEMENT

- 3.30 As we move towards a reduction in the amount of waste we produce we will move away from landfilling former mineral sites to surrounding land levels and will need to consider different forms of restoration. This could include reshaping voids and back filling to lower levels to accommodate aquatic diversity, leisure uses, or other uses which could, in certain areas, help to mitigate potential flood risk. Consideration of site specific conditions, local characteristics and ongoing initiatives will play an important part in the restoration of minerals sites. Restoration of former mineral sites can offer excellent opportunities to create local nature reserves, improve local biodiversity, increase woodland planting or provide opportunities for planting crops for energy.

MINERALS 11: RESTORATION OF MINERAL SITES

Proposals for the restoration of former minerals sites must demonstrate that site-specific conditions together with local characteristics and initiatives have been fully reflected into the scheme. Proposals which can be shown to be feasible and will enhance the environmental quality and biodiversity of a particular area will be supported.

- 3.31 Restoration of former minerals sites can be a long process and will only be successful if a detailed programme of after care and maintenance is in place. Restoration plans involving after-uses, such as woodland planting and sites developed specifically for nature conservation, may require longer periods of time in which to become established. In order to ensure that such schemes are given every opportunity of success, developers will need to demonstrate that the duration of the maintenance and after care scheme is commensurate with the proposed scheme.

MINERALS 12: AFTERCARE OF RESTORED PROPOSALS

Proposals for aftercare and maintenance of restoration schemes must demonstrate that the duration of the scheme will be sufficient to ensure that the restoration will be successful. Following appraisal to measure progress of the scheme, an additional period of aftercare may be required to ensure the objectives of the aftercare scheme are satisfied.

MINERALS PROCESSING

- 3.32 Mineral-related activities such as facilities for concrete batching, asphalt plants and aggregate recycling facilities encourage recycling. Such facilities are usually located in older industrial areas and if they are lost to other uses then it may be very difficult to replace them in other locations.

MINERALS 13: SAFEGUARDING MINERALS PROCESSING SITES

The mineral processing sites shown on the Proposals Map are safeguarded to protect them against alternative uses unless it can be demonstrated that the site is no longer required to produce a supply of processed minerals.

MOVEMENT OF MINERALS AND OTHER FREIGHT

- 3.33 Leeds will still need to import aggregates, so to minimise road use we need to improve the opportunity for the movement of freight by canal and rail. We propose to do this by safeguarding suitable sites for canal and rail-based freight purposes to ensure that they are protected from pressure for other uses and to encourage further investment in the canal and rail infrastructure. This will also help ensure we have sufficient sites for concrete batching and asphalt operations and that they are located in the industrial south-east of the District where their impact on the environment and housing is minimal. Supporting industries in this way helps to ensure their future survival by enabling them to operate more efficiently. Historically, Leeds had a strong basis in manufacturing and whilst the local economy has focused more recently on finance and law, by supporting manufacturing industry it helps to promote a strong, diverse economy.
- 3.34 During the plan period there will be more pressure on the rail network with an expected growth of between 50 and 70% in passenger numbers. This means that some existing railway land at Holbeck is needed for stabling and moving trains around to free up capacity in the main Leeds City Interchange. Aggregate currently comes from Skipton and Derbyshire, road stone from South Wales and coal from Scotland. The main focus for further rail freight infrastructure is between Holbeck and Stourton. A minimum of 775 metres in length is needed for a fully functioning rail siding.
- 3.35 There is potential for greater use of the canal for freight movements but this has to be balanced with the pressure for leisure and recreation. Safeguarding sites means that planning permission will not be

granted for permanent uses which would prejudice the use of the canal for freight. British Waterways advise that freight activities take on average two years to implement and so to avoid sites being left vacant, temporary employment uses will be considered.

MINERALS 14: TRANSPORT MODES

- 1. The Council supports in principle the creation of new sites for the development of non – road infrastructure associated with natural resource and waste facilities .**
- 2. Existing rail sidings and wharves are safeguarded to protect them from other development that would prejudice their long term availability for rail or canal freight. These sites are shown on the Proposals Map.**
- 3. The site at Skelton Grange Road, Stourton is suitable for provision of a new canal wharf and the site at Bridgewater Road South is suitable for provision of new rail sidings and may be suitable for a canal wharf.. These sites are shown on the Proposals Map. These sites are allocated for employment activities which can utilise movements of freight by rail or canal. Temporary uses which do not utilise rail or canal freight will also be accepted providing they do not prejudice the long term use of rail or canal for freight. Proposals are expected to incorporate suitable landscaping to protect views from nearby residential properties and the river/canal.**
- 4. The Hunslet to Stourton rail line is identified as an area of search for an intermodal freight facility.**
- 5. The Skelton Grange rail spur, which provides rail access to the former power station site at Skelton Grange, is safeguarded to preserve the future opportunity for rail freight.**

3.36 There are limited opportunities for rail and wharf facilities in Leeds and it is important that the sites identified in this plan have every opportunity to develop and flourish for these uses. Nevertheless the Council recognises that land should not be sterilised indefinitely if there is no reasonable prospect of the sites being used for such purposes. It is therefore necessary to strike a balance between the policy objectives and making effective, efficient and sustainable use of land. To this end the Council will therefore undertake a review of the policy as part of its Authority Monitoring Report in the first such Report prepared after a period of 5yrs from the date of adoption. Given that there are only limited opportunities available it should not be assumed that lack of interest in the preceding 5 years will automatically result in the removal of the safeguarding policy from any or all of the sites in question. The Report will need to consider a range of issues including how circumstances have changed since adoption and forecasts of how the economy might change in light of sustainability issues. This will include the issue of viability and in this respect the redevelopment of safeguarded or proposed wharves/ rail sidings for other land uses will only be considered where it can be demonstrated that the wharf / rail siding is not likely to become viable or capable of being made viable for freight handling, or in the case of safeguarded wharves/ rail sidings where an adequate replacement wharf/ rail siding has been provided.

The following factors will be taken into account when considering viability:

- site size, shape, navigational access, road access, rail access (where possible), planning history, environmental impact and surrounding land use context, including existing uses, extant planning permissions and development plan allocations;
- geographical location, in terms of proximity and connections to existing and potential market areas and other freight-handling sites;

- the existing and potential contribution the site can make towards reducing road based freight movements;
- demand for the use of the site for waterborne/ rail-based freight having regard to marketing and other evidence.

3.37 Applications for alternative uses on a safeguarded or allocated wharf or rail siding will be considered in terms of their benefits weighted against the loss of the non-road freight opportunity using the following criteria based policy.

MINERALS 15: CRITERIA FOR ASSESSING ALTERNATIVE DEVELOPMENT ON PROTECTED WHARVES AND RAIL SIDINGS

Canal wharves and rail sidings are protected from other development unless the applicant can demonstrate compliance with the following criteria:

1. The development would not sterilise the longer term potential of the site for wharf or rail siding use, or
2. the applicant is able to demonstrate that in the case of a safeguarded wharf/rail siding that an adequate replacement wharf/rail siding has been provided or
3. The applicant is able to demonstrate that there are no suitable alternative sites for the proposed development, and
4. A sufficient supply of sites will remain in the district, readily available and of at least the same functional capability (including proximity to relevant economic centres), so as not to prejudice the objective of encouraging a shift from road freight, and
5. The applicant is able to conclusively demonstrate, including current and forecasted marketing evidence, that the site is unlikely to ever be appropriate for use as a freight interchange.

4 WASTE

MANAGING WASTE AS A RESOURCE

- 4.1 The way in which waste is managed is undergoing a rapid period of change. European Directives, particularly on landfill, electrical waste and end of life vehicles has already led to significant changes in the way waste is managed in the UK²⁵. The Coalition Government is currently undertaking a review of National Waste Policy contained in the Waste Strategy for England 2007²⁶. This review will not alter the fundamental objective of reducing disposal to landfill to an absolute minimum, but will look at how changes can be made more rapidly and efficiently. In Leeds, this means we need to plan for a major reduction in landfill and a significant increase in more efficient forms of waste management capacity.
- 4.2 In drawing up this plan, the Waste Topic Paper provides a fundamental source of evidence and forms part of the plan. As set out in Section 2, the vision and objectives of this plan match those of the City Council's Integrated Waste Strategy. This means future decisions will be based on applying the waste hierarchy and achieving Zero Waste.

FUTURE WASTE NEEDS

- 4.3 To achieve the waste vision and objectives it is necessary to understand how much future waste needs to be managed. The table below sets out the future waste arisings in Leeds (tonnes per annum) and the anticipated change during the plan period. This is based on specific projections of future wastes arisings for Leeds as contained in the Background Waste Research Report and the Leeds Wasteflow Model.
- 4.4 Future waste arisings have been provided till 2026 in Table 4.1. These are based on projections till 2021 that have been extrapolated to 2026. A further detailed explanation of this can be found in the Waste Topic Paper. On a practicable level, the longer into the future projections are undertaken the more potential there is for inaccuracies and National Planning Guidance only requires Local Planning Authorities to plan for waste uses ten years into the future. Furthermore, new facilities are generally constructed with some spare capacity to allow for fluctuations in throughputs during their operational life.

²⁵ See Waste Topic Paper

²⁶ www.defra.gov.uk/environment/waste/strategy/strategy07

Table 4.1 Future Waste Management Needs in Leeds till 2026 (tonnes per annum)²⁷

Waste Stream	Current Arisings	Arisings at 2026		Change Over the Plan Period (DPD projection – Current Arisings)
		(Projection undertaken for the RSS)	DPD Projection	
Municipal Waste (MSW)	342,725	(424,000)	383,976	+41,251
Commercial and Industrial (C&I)	975,364	1,245,000	1,212,000	+236,636
Construction, Demolition and Excavation (CD&E)	1,405,000	n/a	1,556,000	+151,000
Hazardous Waste (HW)	92,974	n/a	103,026	+10,052
TOTAL	2,816,063	n/a	3,255,002	+438,939

- 4.5 Table 4.1 shows that overall the amount of waste arisings will increase by approximately 440,000 tonnes per annum over the plan period. The largest waste stream is CD&E, followed by C&I and then MSW. This increase is not a direct result of people producing more waste but is a consequence of economic growth and changes in household formation.

Cross Boundary Waste Movements

- 4.6 The management of waste operates across borders and within a commercial market and as a consequence some wastes which occur within Leeds are dealt with in other areas. The close proximity of major settlements within West Yorkshire and its urban nature means waste is transported between different local authority areas in this sub-region. The Leeds waste market also operates closely with North Yorkshire.
- 4.7 It is realistic to expect waste generated within the City will continue to be transported to other areas, particularly where there is substantial capacity at an existing facility or where an un-implemented planning permission for a new facility is already in place. This also works in the opposite direction. For example, Leeds is a net importer of liquid hazardous waste and also has an end of life vehicles processor, which imports vehicles from all over the north of England. Both Peckfield and Skelton Grange Landfill sites accept waste from both North and West Yorkshire.
- 4.8 Calderdale, Kirklees, Wakefield, North Yorkshire and Bradford Councils have been consulted to identify strategic facilities where waste is being transported to. The recycling and composting facilities likely to be accepting waste from Leeds are located at Esholt in Bradford (sewage sludge and Green Waste) and in North Yorkshire at Great Heck Biomass and Wood Fuel Processing Plant, The Maltings Composting Site at South Milford and Selby Energy Park (Biomass and Anaerobic Digestion). There is also a specialist electrical waste processor serving the north of England based in Kirklees. There are two outstanding planning permissions for commercial energy and resource recovery facilities in Bradford and an un-used allocation for the same uses in North Yorkshire. Other facilities to serve both

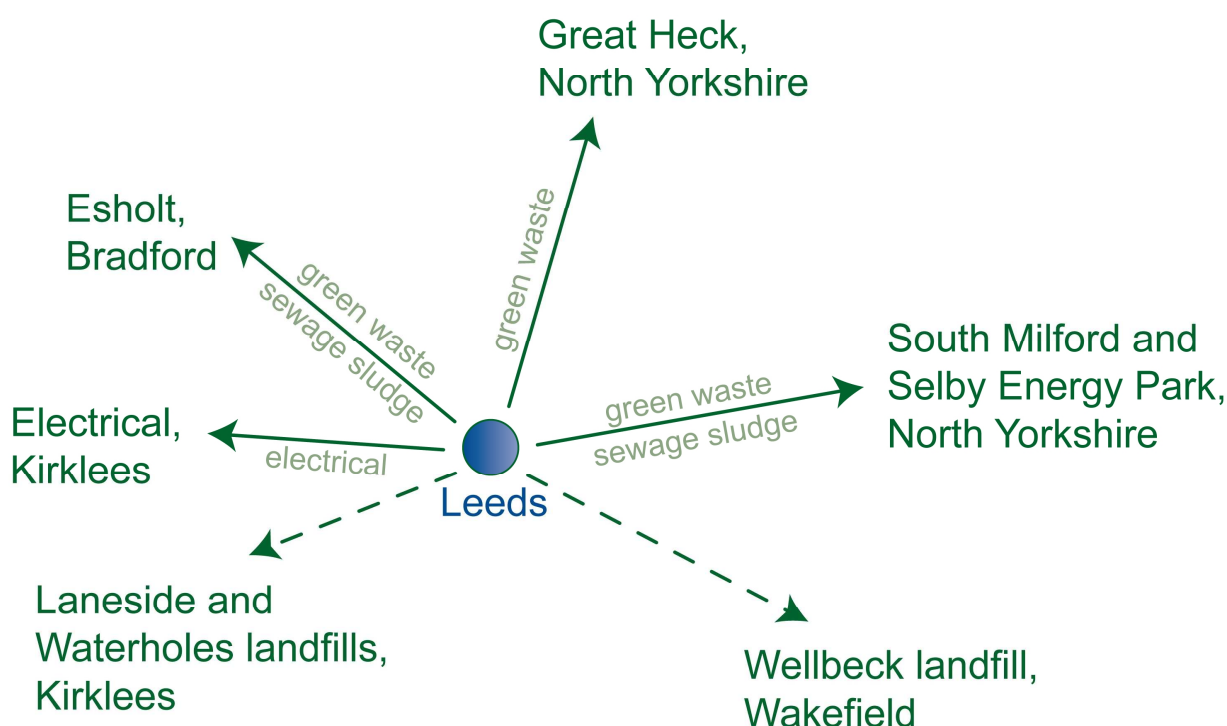
²⁷ See Background Waste Research Report and Waste Topic Paper which refers to the Leeds Waste Flow Model which updates the earlier projection.

a regional and national market are being proposed in many parts of the Country and it is possible that an operator may propose such a facility in West Yorkshire during the plan period²⁸.

- 4.9 The major landfill sites in the rest of West Yorkshire outside Leeds are Wellbeck in Wakefield with new permissions likely to be activated at Laneside and Waterholes Quarry landfill sites in Kirklees.

Figure 4.1: Cross Boundary Waste Movements Out of Leeds

Cross Boundary Waste Movements Out of Leeds



PLANNING FOR SELF SUFFICIENCY

- 4.10 Although realistically waste will continue to be exported outside Leeds, as the major City in the sub-region the position of this DPD is that Leeds will plan to meet its own needs so it is not reliant on potential capacity elsewhere. At present, Leeds is heavily reliant on two major landfill sites at Skelton Grange and Peckfield for its waste management provision. With a declining amount of waste disposed through landfill new facilities higher up the waste hierarchy will be required. Achieving 'Self Sufficiency' is shown by the Sustainability Appraisal as the most sustainable option.
- 4.11 WASTE 1 plans to manage our fair share of waste without relying on exporting waste to other areas.

WASTE 1: SELF SUFFICIENCY FOR FUTURE WASTE MANAGEMENT IN LEEDS

Proposals which meet the future capacity requirements of waste arisings to achieve self sufficiency and demonstrate they support the waste hierarchy will be supported at safeguarded waste management sites shown on the Proposals Map and locations for new waste management facilities set out in WASTE 3.

²⁸ See Waste Topic Paper for a more detailed breakdown of waste management facilities in adjoining areas.

MEETING FUTURE WASTE MANAGEMENT NEEDS

Waste Prevention

- 4.12 The Government review of National Waste Policy is looking at ways in which reducing waste can be better achieved²⁹. A primary focus for the IWS was to reverse the historically high growth in waste. This objective has been met as the growth in waste arisings from households has already been eliminated. The principal mechanism in which the LDF can be used to reduce waste is through the design and construction of new developments, particularly through the implementation of Site Waste Management Plans which were introduced in 2008 for all construction projects with a value over £300,000³⁰. The emerging Core Strategy (post publication stage at the time of writing) requires all development to provide sufficient space for the sorting, recycling and separation of waste both during and after construction. The Council is producing a Supplementary Planning Document called Building for Tomorrow Today 'Sustainable Design and Construction' which sets out how waste can be minimised when designing and constructing new developments.

Additional Re-use, Recycling and Composting

- 4.13 Table 4.2 (and illustrated in the figures below) indicates the existing re-use, recycling, composting and waste treatment capacity in Leeds for each waste stream during the plan period. It shows if existing permissions for new facilities (particularly Materials Recovery Facilities) are implemented during the plan period then this capacity will increase.
- 4.14 The additional capacity required to meet the needs of the plan (as shown in table 4.1), is based on achieving the following re-use, recycling and composting targets which our evidence has shown are achievable in Leeds during the plan period:³¹:
- 50% for MSW;
 - 70% for C&I; and
 - 70 - 85% for CD&E.
- 4.15 Although Leeds already has a reasonable level of recycling capacity, it is not sufficient to meet the objectives of WASTE 1 and the targets set out above. This is borne out by waste site monitoring undertaken by the council which indicates that many waste management operators appear to be struggling to accommodate their activities within the boundaries of their sites and within the limitations of their planning permissions. Furthermore, operators in the CD&E sector may be struggling to find suitable sites to either replace existing operations or to expand. To help achieve targets for recycling of CD&E waste, Leeds has signed up to a national scheme to reduce construction waste (the 2012 Construction Commitment). This commitment applies to any construction contractors the Council uses or when new Council building contracts are awarded.
- 4.16 The capacity for C&I is distorted as there is a major vehicle recycling facility at Knowsthorpe Way which serves a much wider catchment than Leeds. It is unlikely that the City has enough capacity for

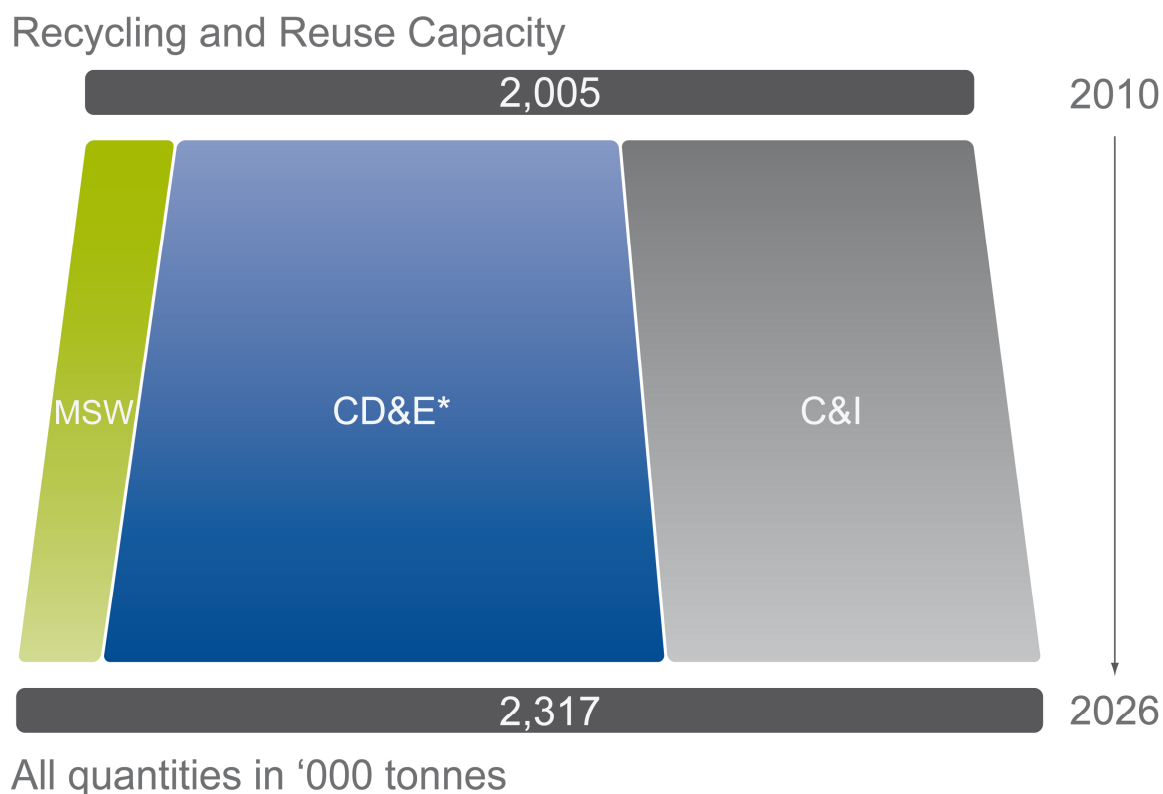
²⁹ This will not be published until Spring 2011: <http://www.defra.gov.uk/corporate/consult/waste-review/index.htm>

³⁰ Site Waste Management plans were introduced on the 6th April 2008. For full details of the requirements see The Site Waste Management Plans Regulations 2008, Section 6

³¹ See the Waste Topic Paper for the evidence to support these re-use, recycling and composting targets and a more detailed breakdown of existing capacity.

C&I to meet the aims of self sufficiency and the shortfall in re-use, recycling and composting capacity is probably around 200,000 tonnes per annum.

Figure 4.2: Existing Re-Use, Recycling and Composting Capacity in Leeds including unimplemented planning permission (tonnes per annum)³²



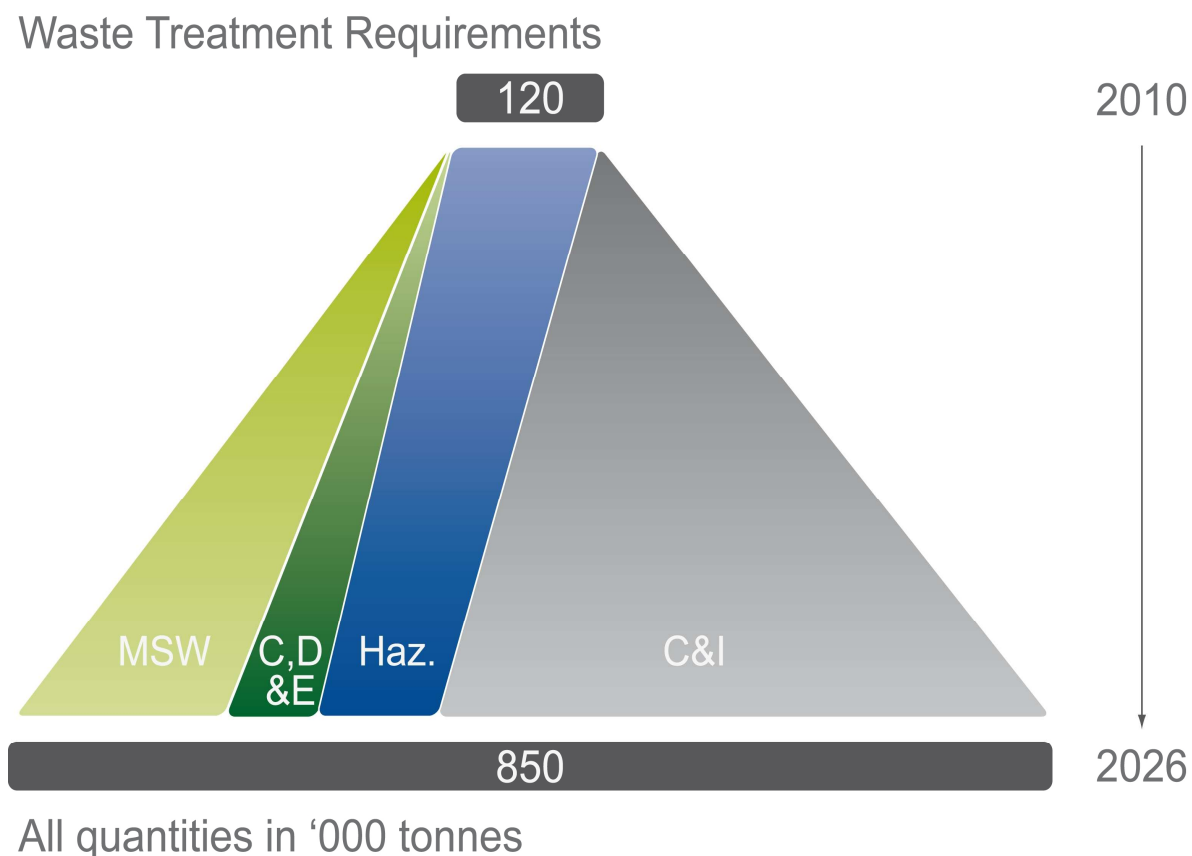
* Current CD&E capacity uncertain, but approximation made.

Additional Residual Waste Treatment with Energy Recovery (see glossary definition).

- 4.17 Leeds has no significant residual treatment capacity, except for Hazardous Waste, and new provision is planned for in this DPD. Up to 730,000 tonnes of additional residual waste treatment capacity to support all waste streams may be required to meet the needs of the City.

³² See Background Waste Research Report and Waste Topic Paper which refers to the Leeds Waste Flow Model which updates the earlier projection.

Figure 4.3: Potential Future Waste Treatment Requirements in Leeds (tonnes per annum)



Treatment of Hazardous Waste

- 4.18 Whilst some solid hazardous waste is exported out of the district, overall Leeds is a net importer of hazardous waste. Liquid hazardous waste arising in the district and beyond is treated at the White Rose Environmental Clinical Waste Incinerator and WRG Effluent Treatment Plant. These are important facilities for the treatment of hazardous waste and are safeguarded in this DPD. The Waste Strategy for England 2007 says that as well as seeking to reduce the amount of hazardous waste there is a need for additional treatment facilities and infrastructure for hazardous waste to assist in meeting changes brought about by the Landfill Directive. There is scope for further hazardous waste treatment in Leeds, such as soil-washing or bio-remediation and this could be accommodated on any of the strategic waste sites or industrial estates that are identified as suitable for waste treatment facilities. The Council will encourage the provision of hazardous waste treatment facilities in preference to disposal at landfill sites. As a last resort solid new hazardous waste cells could potentially be provided at Swillington and Howley Park landfill sites, which are also safeguarded

Reducing the Reliance on Landfill

- 4.19 There is enough remaining capacity both at active landfill sites and those with outstanding permission to meet the ever declining need over the plan period and beyond³³. If this situation changed for any reason, then other capacity close by in West Yorkshire could meet any remaining needs.

³³ See the Waste Topic Paper for a breakdown of future landfill provision and potential requirements during the plan period.

**Leeds Local Development Framework
Natural Resources and Waste Development Plan Document**

Table 4.2 Future Recycling and Composting Waste Requirements (tonnes per annum)³⁴

	Waste Stream			
	MSW	C&I	CD&E	Hazardous
Current Re-use, Recycling and Composting Target Capacity (Including Outstanding Planning Permissions)	199k	650-850k	Unknown	Not possible under law.
Total Plan Requirements to Provide Self Sufficiency and Meet Re-Use, Recycling and Compost Target	192k	850k	1,089 – 1,275k	0 k
Plan Requirements	(+) 7k	(-) 50k – (+) 200k	Accurate calculation can't be provided.	0 k

Future Waste Treatment and Recovery Requirements (tonnes per annum)

	Waste Stream			
	MSW	C&I	CD&E	Hazardous
Current Treatment and Energy Recovery Capacity (including Outstanding Planning Permissions)	0	0	0	120k
Total Plan Requirements to Provide Residual Waste Treatment	135-175k	350k - 500k	75k (this a notional assumption of 5% of the total waste stream but is unknown)	103k
Plan Requirements	(-) 135-175k	(-) 350k – 500k	(-) 75k	(+)17k

³⁴ see waste topic paper for a more detailed breakdown of the assumptions

SPATIAL STRATEGY

- 4.20 The Leeds wide site selection study, safeguarded sites assessment and sustainability appraisal provides the evidence to support the spatial strategy to maintain existing waste management capacity and to plan for new capacity.

Safeguarding Existing Waste Management Sites

- 4.21 To achieve self sufficiency it is important that existing capacity within Leeds is maintained. WASTE 2 safeguards over 100 existing waste management sites as indicated in the Map Book. The Policy will also allow for the expansion or refurbishment of existing facilities at the Safeguarded sites where it is appropriate to do so.

WASTE 2: SAFEGUARDING EXISTING WASTE MANAGEMENT CAPACITY

Existing waste management sites shown on the Proposals Map are safeguarded for continued use during the plan period.

Increases in capacity or other improvements at these sites will be acceptable provided that the requirements of WASTE 9 are demonstrated.

Applications for change of use must demonstrate that there is either no longer a need to retain the site for waste management purposes or there is an overriding case for the proposed development that outweighs the need to retain the site for waste management purposes.

Planning for Additional Capacity

- 4.22 The Government has produced guidance on the operational and location requirements of different waste management facilities³⁵ and this is reflected in the Background Waste Research Report and Waste Topic Paper. The Waste Topic Paper has estimated that to meet the capacity gap, at the lower range the NRWDPD will require approximately 8.5ha of land and at the upper range this could be up to 19ha. This wide range demonstrates how difficult it is to forecast how future capacity requirements translate into the total land requirement to meet the future waste management needs³⁶.
- 4.23 A range of sites will be required to provide the flexibility to support the different site footprints and locational requirements of various waste management processes. Some waste management operations are highly technical or can take place completely within buildings, whereas others take place in the open air and require larger site areas. Modern waste management facilities are now well designed in terms of aesthetics and minimising impacts.
- 4.24 Taking into account the figures in tables 4.1 and 4.2 and the need for flexibility to enable more sophisticated waste management solutions to be developed in Leeds, the DPD Strategy is set out below:

³⁵ ODPM, Planning for Waste Management Facilities, A Research Study, 2004

³⁶ See Waste Topic Paper

Table 4.3: Meeting the Waste Capacity Gap

	Capacity Gap	How the gap will be met	DPD Policy Response
MSW	The main issue is maintaining and increasing the capacity of recycling facilities and planning for a new Residual Waste Treatment Facility.	<p>A review of Household Waste Sites has been undertaken. This will increase overall capacity to 100,000 tpa.</p> <p>New bring sites will be encouraged around the City.</p> <p>A major Residual Waste Treatment Facility will be operational by 2015.</p> <p>An Anaerobic or In-Vessel Composting facility may also be required for organic wastes.</p> <p>The Councils Waste Solutions Programme³⁷ is delivering the major changes required to meet increased recycling and composting and reductions in landfill.</p>	<p>HWSS are safeguarded under policy WASTE 2. This allows for the refurbishment and enhancement of these sites where this has not already taken place.</p> <p>New locations are identified under policy WASTE 5 where existing buildings can be converted for recycling and sorting and where the construction of new waste management facilities will be favoured.</p> <p>A specific strategic site allocated under policy WASTE 6 will be suitable for a Residual Waste Treatment Facility.</p>
C&I	<p>The main gap is to provide enough space to enable an increase in the storage and segregation of co-mingled wastes.</p> <p>New Residual Waste Treatment Facilities will also be required.</p>	<p>Further commercial waste recycling operations will be required. This may range from skip operators to waste segregation halls and waste processing systems.</p> <p>The plan needs to provide flexibility to enable more sophisticated methods of waste management operations to be implemented.</p> <p>At least one Residual Waste Treatment facility will be required to deal with residual wastes with current landfill provision declining rapidly over the plan period.</p> <p>An energy recovery facility may also be required for organic wastes.</p>	<p>New locations are identified under policy WASTE 5 where existing buildings can be converted for recycling and sorting and where the construction of new waste management facilities will be favoured.</p> <p>A Residual Waste Treatment Facility will be supported on one of the strategic sites under policy WASTE 6 (subject to satisfying the detailed criteria in WASTE 9).</p>
CD&E	There are currently around 8 aggregate recycling sites in	It is very difficult to identify the capacity gap, not least because a significant part of	The development of at least one additional site may be required during the plan period and

³⁷ See Leeds City Council Website: www.leeds.gov.uk Waste Solution Programme

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Natural Resources and Waste Development Plan Document**

	Capacity Gap	How the gap will be met	DPD Policy Response
	Leeds but it is known that some of these sites may shut although replacement permissions may be sought by the current operators.	these operations take place directly on site during construction. However, at least one additional site is likely to be required to ensure there is sufficient capacity.	WASTE 7 enables this.
Hazardous Waste	Leeds has sufficient overall capacity but certain types of waste are been transported outside the City.	Preferred locations for the deposit of solid hazardous wastes to be identified.	WASTE 10 sets out where new hazardous waste cells for solid waste will be located.
Other Wastes	Agricultural waste	No specific gaps identified but there is a need to consider composting to support agricultural activity.	

- 4.25 Leeds currently has no residual waste treatment facilities and this type of activity will be critical to the delivery of DPD objectives. These types of facilities have very specific operational needs and in many cases will include energy recovery. (see glossary definition). They are best located in areas which are already industrial in nature and as they serve the whole of Leeds they require very good access to the transport network. Strategic facilities might also provide more than one waste management process at a single location. As these types of facility are critical to the delivery of the DPD and require very specific locations, they are referred to as strategic waste management facilities.
- 4.26 Recycling and composting activities tend to be both smaller scale and less complicated in terms of the processes they use. Therefore, although they still require suitable sites there is greater flexibility in terms of where they can be located. Communities and businesses may also wish to develop very small scale waste facilities which meet their own needs.
- 4.27 This comprehensive network of strategic facilities and other types of smaller facilities will meet the future needs of Leeds. WASTE 3 sets out the hierarchy of sites to meet these needs. This strategy takes into account the cumulative impacts, sustainability and environmental capacity of the City as set out in the Sustainability Appraisal. As Leeds is a large regional City producing a significant amount of waste, the objective of self sufficiency means that we have to provide additional capacity to meet this objective especially in terms of waste treatment and energy recovery (see glossary definition). The spatial strategy in WASTE 3 seeks to minimise environmental impacts and provide a sustainable strategy for waste by promoting a network of locations across Leeds which have good access, meet local needs and are all previously developed land. However, the strategic sites which will provide new major waste treatment and recovery facilities which serve the whole City are all located in the Aire Valley to the east of the City. This location offers the best strategic and sustainable opportunities for locating waste treatment facilities because of its excellent strategic access, predominant industrial use and potential for links with existing energy uses, including grid connection. Although this area can meet the needs of Leeds within the environmental limits of the area, taking into account any cumulative impacts, wider regional facilities which may import further waste into the City, could exceed such limits and are therefore not supported by WASTE 6.

WASTE 3: A CITY WIDE NETWORK OF WASTE MANAGEMENT SITES AND FACILITIES

A network of waste management sites will be developed in accordance with the following principles:

1. Industrial estates suitable for new recycling, sorting, transfer and small scale treatment and recovery processes such as Anaerobic Digestion and In-Vessel Composting.
2. Strategic waste management sites to meet the needs of major residual waste treatment including energy recovery.
3. A specific allocated site to provide further additional capacity, in particular, to support the Construction, Demolition and Excavation sector.
4. Applications for temporary waste facilities will be considered on their planning merits but where possible such activities should take place at locations which are in accordance with points 1 – 3 above.

LOCATIONS FOR NEW WASTE MANAGEMENT FACILITIES

- 4.28 The development of new waste facilities has in the past proved more of a problem than other similar employment processes because waste facilities are not automatically an industrial use under land use class orders B2. Although changing the use of an existing building from industrial development to waste processing uses will often require planning permission, waste uses will be considered as having similar impacts to industrial development when applications are being considered. This also means that the principle of new waste uses within existing industrial areas is also accepted for the same reasons.
- 4.29 Waste uses are employment generators and therefore contribute towards providing sufficient employment land.

WASTE 4: WASTE MANAGEMENT FACILITIES - PERMANENT USES

All proposals for permanent waste management facilities will be treated as an industrial use of land. Policies which apply to the acceptability of industrial development shall apply equally in such cases.

- 4.30 The preferred locations for waste management facilities identified in WASTE 3, item 1, are existing industrial areas. In accordance with National Planning Policy on waste management they are considered to be the most suitable location for new waste management processes in Leeds. Under WASTE 5 specific sites within these broad industrial locations will be considered to be suitable in principle for these uses.

WASTE 5: WASTE USES WITHIN EXISTING INDUSTRIAL AREAS

The following existing industrial areas shown on the Proposals Map will be treated as preferred locations where new waste management facilities, as defined in Policy WASTE 3, item 1 will be supported.

- Far Royds, Wortley
- Ashfield Industrial Estate, Wortley
- Cross Green Industrial Estate including land within Knostrop Waste Water Treatment Works
- Grangefield Industrial Estate, Stanningley
- Limewood Industrial Estate, Seacroft
- Thorp Arch

Proposals in other areas will also be considered provided that it can be demonstrated they are industrial in nature and that all the tests set out in WASTE 9 are met.

- 4.31 Following the completion of a district wide site selection study, three strategic waste management sites have been allocated, which are located within the Aire Valley to the south east of the City. These sites best fit the site selection criteria set out in PPS10 for all forms of waste arising. The Aire Valley has extensive areas in industrial use, together with major areas occupied by current and former utilities infrastructure and has good transportation connections. The three strategic waste management sites are all on previously developed land within the area.
- 4.32 With regard to the sites identified, Skelton Grange is a former power station and Knostrop is a waste water treatment works, part of which is available and suitable for a strategic waste management use. The final site is a former Wholesale Market which has been vacant for a number of years. The combined area of the three strategic sites is 38.65 hectares of land.
- 4.33 A City Council procurement process for a residual municipal solid waste (MSW) treatment facility has been running in parallel with the preparation of the NRWDPD. As part of this process, two of the three strategic waste management sites are being considered as possible locations for the residual MSW treatment facility. However, in planning for overall waste needs, it is important that the remaining sites are allocated as part of an overall waste strategy, as a basis for meeting future capacity requirements. In the event that it can be demonstrated that the sites are no longer required for strategic waste management purposes, it will be acceptable to use these areas for other employment uses subject to the following policy:

WASTE 6: STRATEGIC WASTE MANAGEMENT SITES

The sites identified on the Proposals Map and described below are allocated as strategic waste management sites suitable for major residual waste treatment, including Energy Recovery, and for the co-location of other supporting facilities where it can be shown these are ancillary to the main operation:

- Former Skelton Grange Power Station Site.
- Land within Knostrop Waste Water Treatment Works.
- Former Wholesale Markets Site, Cross Green Industrial Estate.

Other non waste management uses, including employment, will only be acceptable on these sites if it can be demonstrated that the site is no longer required to meet the strategic waste management needs of the Council's area. Any application for a Strategic Waste Management facility should be accompanied by a Travel Plan and a Transport Assessment which considers the impact on the Strategic Road Network.

- 4.34 In addition to the above, a specific need has been identified for an additional site to provide for any potential shortfall in processing and recycling capacity for CD&E operations. The site at Cinder Oven Bridge has good road connections and a potential wharf connection. Additionally it is heavily contaminated which limits its suitability for other uses.

WASTE 7: WASTE ALLOCATION

The site at Cinder Oven Bridge, shown on the Proposals Map, is allocated for waste management purposes to meet the need for Construction, Demolition and Excavation waste operations.

Use of the site is reserved for Construction, Demolition and Excavation waste only, unless it can be demonstrated that it is no longer required to meet the need referred to above.

- 4.35 Waste management proposals will be favoured on safeguarded sites and all the other specific locations identified. Proposals outside these locations will only be accepted if the circumstances identified in WASTE 8 can be demonstrated.

WASTE 8: WASTE PROPOSALS AT OTHER LOCATIONS

Waste proposals at locations other than those identified in Policies WASTE 2, 5, 6 and 7 will need to demonstrate:

- **The preferred locations in this DPD are not appropriate or available.**
- **There is a specific local need for the facility.**
- **The site meets the requirements of WASTE 9.**

The small scale composting of green waste in the Green Belt will be acceptable where it can be demonstrated that very special circumstances apply. Relevant considerations are the scale, proximity to existing agricultural buildings and the destination of the compost product.

ASSESSING THE IMPACT OF NEW WASTE MANAGEMENT FACILITIES

- 4.36 The spatial strategy has identified suitable locations where the principle of waste management uses will be accepted by the Council. Before allowing any proposals for all forms of Waste Management Uses, the Council will require all applicants to demonstrate that they have met the criteria set out in WASTE 9:

WASTE 9: WASTE MANAGEMENT FACILITIES - POTENTIAL ISSUES AND IMPACTS

Applications for waste management purposes must demonstrate that the following potential impacts of the planned development have been addressed in a manner so as to make them acceptable to the Council:

1. Duration of the development.
2. The layout of the site and buildings.
3. Visual and other amenity. Recycling operations for waste such as paper, plastic, rags, glass etc. should take place inside a building, including the storage of product awaiting treatment or despatch. Storage of scrap vehicles should not exceed the height of perimeter fencing or screening.
4. Treatment of boundary features and new screening as appropriate
5. Environmental and amenity aspects such as noise, dust, litter, odour, vermin and gas emissions.
6. Protection of controlled waters.
7. Drainage and use of sustainable drainage.
8. Effect on the natural and historic environment.
9. Design of built and natural features.
10. Restoration and aftercare where appropriate.
11. Measures to prevent dirt being carried onto the public highway and private highways in public use beyond the site boundary. The site entrance apron and site access road should be hard surfaced in tarmac or concrete for a minimum distance of 30 metres or to a point beyond any weighbridge whichever is the longer. Site roads and entrance areas must not drain onto the public highway.
12. The use of alternatives to road transport where feasible
13. The adequacy of the highway network and the safety of access and egress to the site and to other users of the highway including pedestrians
14. Routing and frequency of vehicle movements, together with hours of operation and timescales for delivery.
15. Hours of operation.
16. Protection of public rights of way.
17. Fairly and reasonably related community benefits where appropriate (to be delivered through s106 Planning Obligations).

REDUCED LANDFILL PROVISION

- 4.37 With greatly improved reuse, recycling, organic waste treatment and recovery, by the end of the plan period the amount of waste disposed at landfill should be reduced significantly. The remaining need can be met at existing operational sites within Leeds or through sites which have outstanding planning permission for landfill operations. If for any reason the need for further landfill capacity did arise during the plan period, then it could be provided within existing former quarry sites within Leeds or at existing operational landfill elsewhere within West Yorkshire. Therefore it is not necessary to identify any new locations for landfill in the District. WASTE 10 plans for this reduced amount of landfill provision³⁸.

³⁸ See Waste Topic Paper

WASTE 10: LANDFILL

If it is demonstrated that there is a proven need for additional landfill capacity because all other options are not suitable or feasible, this will be provided at existing or former quarry sites shown as Maps C4 and C5.

If all these quarry sites are unavailable, landraising, using inert materials only, may be considered providing there is no unsatisfied need within 10km for inert materials to infill any quarry or void area to secure the restoration of those areas.

Swillington and Howley Park landfill sites have capacity for provision for Solid Hazardous Waste during the plan period.

4.38 If further landfill permissions are required they will be subject to the following policies:

WASTE 11: WASTE DISPOSAL: LANDFILL AND LANDRAISING SITES

Final gradients at landfill and landraising sites which incorporate slopes steeper than those characteristic of the locality or steeper than 1 vertical to 3 horizontal will not be acceptable.

In addition landfill and landraising developments should include acceptable measures to:

- Strip, conserve and replace topsoil and subsoil.
- Utilise any available soil forming materials.
- Phase site restoration, including interim restoration where possible.
- Restore the site including maximising opportunities for habitat diversification.
- Provide for 5 years of aftercare.

Where a landfill site may generate gas then measures will be required to collect and use the gas. Collection and generating systems must be installed in a visually acceptable manner and so as not to interfere with the management and use of the land upon restoration and during aftercare.

5 ENERGY

OBJECTIVES FOR ENERGY

- 5.1 As set out in paragraph 1.5 the Energy Topic Paper provides a fundamental part of this plan. Energy is encountered in many forms. In terms of our everyday energy use, as related to planning policy, the main considerations are heat (typically for space heating and hot water) and electricity (also referred to as power).
- 5.2 There are two dimensions to energy that planning policy can influence – demand (also called consumption) and supply (also called production). It is finding the right balance between the energy consumption and production that will help support a sustainable society, economy and environment.
- 5.3 In terms of the supply of energy, heat is typically produced locally, and electricity is typically generated centrally, and supplied to local use through the national grid and local high and low voltage networks. It is clear that in the short to medium term fossil fuels will continue to be used as a primary energy source and National energy policy is aimed at reducing the carbon burden of the UK energy supply, and increasing the resilience of UK energy infrastructure.
- 5.4 We therefore need to plan for energy in order to:
- Reduce our contribution to human influenced climate change (by reducing greenhouse gas emissions such as carbon dioxide);
 - Safeguard the security and diversity of the energy supply; and
 - Diversify the choice of energy sources.
- 5.5 To do this we must plan to:
- Reduce the amount of energy used by reducing energy demands from development;
 - Reduce carbon production in energy generation;
 - Enable and promote local solutions, such as heat energy distribution; and
 - Safeguard future opportunities for flexibility in energy generation technology.
- 5.6 Similar to the commonly recognised waste hierarchy, successful energy planning follows a hierarchy of actions:
- Avoid energy use – change design to eliminate unnecessary use;
 - Reduce energy use – using technology to improve energy efficiency;
 - Replace energy sources – use renewable, low carbon energy generation; and
 - Exploit non-sustainable energy sources – using e.g. Combined Heat and Power.

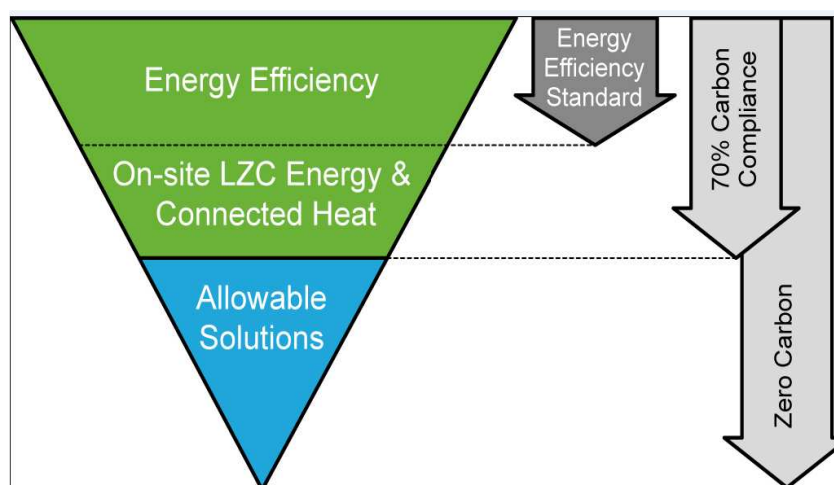
AVOIDING ENERGY USE AND ENERGY EFFICIENCY

- 5.7 To deliver the objectives of the LDF including this NRWDPD, it is important to support the efficient use of energy in new development. Emerging Core Strategy policies for energy aim to reduce energy demand and will support sustainable construction methods to increase energy efficiency in new development by an earlier date than is required by Part L of the Building Regulations The draft

Sustainable Design and Construction SPD also sets out the way in which these objectives can be implemented.

- 5.8 To deliver this strategy, energy efficiency standards for building design will be increased under the Building Regulations, with the performance 'gap' that cannot be achieved through further energy efficiency gains being delivered through a flexible combination of on- and off-site generation options (the latter is referred to as allowable solutions). To enable these changes to occur, it is important that the planning system makes sure new developments are designed to improve energy efficiency and achieve carbon reduction at the outset. The mechanisms for achieving this are set out below.

Figure 5.1: Proposed Zero Carbon Hierarchy (Building a Greener Future³⁹)



³⁹ CLG, Building a Greener Future, Towards Zero Carbon Development, July 2007

SUPPORTING LOW CARBON ENERGY GENERATION

- 5.9 National planning policy sets a context for a rapid transition towards renewable and low-carbon energy generation⁴⁰. Linked to this, the revoked RSS set a target for Leeds to produce at least 75MW of installed grid-connected renewable energy capacity by 2021. While the RSS is no longer applicable as a driver, the evidence and studies which were carried out to establish this target are still valid. Leeds has retained this target to significantly increase low carbon energy from the current 11MW of existing renewable energy provision⁴¹ to 75MW by 2021.
- 5.10 Renewable and Low Carbon energy generation takes many forms, all of which will have different relationships with the local environment⁴². This will affect the specifics of how the planning system relates to the different renewable and low carbon technologies and schemes need to be well designed, reflect local circumstances and demonstrate how any negative environmental, social and economic impacts have been avoided or minimised through careful site selection, design and other measures. Low carbon electricity generation can be linked to heat generation through combined heat and power, or through specific power technologies such as wind, hydro and solar photovoltaic generation.
- 5.11 Indicative contributions of how the Council will deliver the 75MW energy target (mostly power) from low carbon renewable sources are shown in Table 5.1. As each technology has different development needs, their needs are considered individually in the commentary although covered by a technology neutral policy where possible.

⁴⁰ See PPS 22 and the Planning and Energy Act 2008.

⁴¹ See the Energy Topic Paper for a detailed breakdown of existing renewable energy provision.

⁴² This includes Wind Energy, Hydro Power, Energy from Waste, Biomass, Organic Waste Treatment, Solar and Photovoltaics, Landfill Gas and Ground Source Heating.

Table 5.1: Estimated Installed and Potential Grid Connected Renewable Energy Generation Capacity (MW) for the Leeds district⁴³

	Current Production Levels (MW) 2010	Potential Contribution (MW) 2021	Comments
Landfill Gas	12	12	Takes account of permissions for Peckfield and Skelton Grange, however these will reduce post 2021 with reductions in landfill.
Wind Power	0	20	Based on an estimate of 10 large scale turbines or equivalent.
Micro-generation Including solar power, heat pumps	0	10	Allowing for half of future house development to have solar PV installations.
Energy from Waste	0	35	Based on known potential for plants to be brought forward
Hydro-power	0	2	Based on known multiple, small-scale potential developments
Energy from biomass	0	2	Based on potential for a plant using organic waste (e.g. food, green waste)
Total	12	81	

Large-scale Wind Power Generation

- 5.12 Large-scale installed grid-connected onshore wind energy development can significantly contribute to meeting Leeds' (and the UK's) renewable energy targets. We have defined large scale as that requiring a Screening Opinion on the need for EIA from the planning authority under The Town and Country Planning (Environmental Impact Assessment) (England & Wales) Regulations 1999 (Statutory Instrument 1999 No. 293). Research suggests that micro and small scale wind can be viable, but there are some basic limitations which severely limit the power generation potential of such technologies⁴⁴. Smaller-scale wind energy development is covered by micro-generation below.
- 5.13 Some of the windiest parts of Leeds fall within nationally or locally recognised designations (Sites of Special Scientific Interest, Scheduled Monuments, Conservation Areas, Listed Buildings, Registered Historic Battlefields and Registered Parks and Gardens) and planning permission for wind energy development will be granted where it can be demonstrated that the objectives of a nationally or locally important designation will not be significantly compromised⁴⁵. In Green Belt locations applications for energy are classed as inappropriate and will need to demonstrate very special circumstances.
- 5.14 Where a scheme is being proposed in an area with another proposed, consented or operational scheme (including those that may be close by but fall within another adjoining administrative boundary), a cumulative assessment should be carried out to determine the overall effect on issues such as landscape character, visual amenity and nature conservation interests.

⁴³ The Energy Topic Paper refers to a number of detailed evidence studies which set out the contribution from each source.

⁴⁴ Energy Waste Topic Paper

⁴⁵ Wind speed map in the Appendix

- 5.15 ENERGY 1 sets out the considerations which the Council will take into account when considering new applications for large-scale wind development.

ENERGY 1: LARGE SCALE WIND ENERGY GENERATION

Under the Habitats Regulations, wind energy generation will not be accepted if it negatively effects bird populations or other nature conservation objectives of the North and South Pennine Moors Special Protection Areas.

In other areas, the acceptability of wind energy development will be judged on whether its benefits can be shown to outweigh any significant impacts on:

- 1. The character and appearance of the landscape or townscape;**
- 2. The living and working conditions of occupants of nearby property by reason of visual impact, noise, shadow flicker or reflected light;**
- 3. Any nationally important designation, including their visual amenity and setting;**
- 4. Areas of ecological importance;**
- 5. Potential for cumulative effects with other existing or proposed wind energy;**
- 6. Transport infrastructure and highway safety;**
- 7. Civilian and military aeronautical radar services or the operation of aerodromes and their protected surfaces; and,**
- 8. Telecommunications and television reception.**

In addition proposals shall provide for reinstatement of the site through the removal of the facilities should it cease to be operational or upon decommissioning.

In assessing proposals against the requirements of this policy, full account will be taken of proposed mitigating measures.

Small Scale and Micro-generation

- 5.16 Micro-generation of low carbon energy is supported by a number of Government policies and financial incentives in the form of the Feed In Tariff and proposed Renewable Heat Incentive⁴⁶.
- 5.17 Small scale low carbon energy generation is that which is less than utility scale (large power stations, hydro or wind schemes). This can be very suitable for industries, campus locations or on a community development level.
- 5.18 Micro-generation is defined as, 'the production of energy on a small scale from a low carbon source'.⁴⁷ Biomass boilers, ground and air source heat pumps, solar power, hydro-generation, and wind turbines up to 50kW have the potential to make a valuable contribution to Leeds renewable energy targets and requirements and are discussed in the Topic Paper supporting this document. Small-scale domestic micro generation technologies, such as biomass, CHP, solar and ground source heat pumps do not require planning permission under Part 40 of the General Permitted Development Order but some others, such as micro wind energy, do require permission. There are also circumstances where planning permission may still be required on domestic properties, for example where it is a listed building and where other exceptions outlined in the GDPO are not met. The coalition Government is

⁴⁶ www.rhincentive.co.uk

⁴⁷ Local Government Yorkshire and Humber Renewable Energy Toolkit (2009)

set to relax further the types and scale of technologies where planning permission will not be required subject to further legislation being passed⁴⁸.

- 5.19 When planning permission for micro-generation is necessary, proposals will be supported subject to ENERGY 2.

Small scale and Micro-generation Criteria

ENERGY 2: MICRO-GENERATION DEVELOPMENT

Where micro-generation development requires planning permission, the Council will encourage proposals for technologies that are acceptable in terms of their impact on:

- 1. Landscape.**
- 2. Visual amenity.**
- 3. Noise.**
- 4. Safety.**
- 5. Ecology.**
- 6. Conservation of the built environment.**

Cumulative effects of development will also be considered.

Energy Recovery from Waste

- 5.20 Leeds City Council is working to reduce the amount of waste produced and to fulfil the vision of the IWS for a zero waste city. Modern waste treatment facilities reduce disposal to landfill, promote energy recovery (see glossary definition) and represent a significant contribution to meeting our renewable energy target.
- 5.21 Although the common perception of recovering energy from waste is incineration, there is a range of technologies available, including Anaerobic Digestion (AD), Pyrolysis and Energy from Waste (thermal treatment). Different waste sources - food waste, garden waste, municipal solid waste, commercial waste – lend themselves to different and appropriate technologies. These waste treatments can generate both heat and power, and make a significant contribution to carbon reductions: not only from low carbon energy generation, but by reducing the greenhouse gas impact of landfilling.
- 5.22 Sites for new waste management technologies to contribute to this objective are provided under the policies of the waste section. ENERGY 3 supports the principle of using waste as a resource to recover heat and power.

Combined Heat and Power (CHP) and Heat Distribution Networks

- 5.23 CHP, also known as cogeneration, is the production of heat and power at the same time. Conventional power stations typically emit the heat created as a by-product of electricity generation into the natural

⁴⁸ See the planning portal.gov.uk for updates on the most recent guidance on micro-generation as the planning rules are likely to change during the plan period.

environment through cooling towers and up chimneys. CHP captures the by-product heat for domestic or industrial heating purposes, either very close to the plant, or as hot water for district heating. Systems should be led by heat demand to make most efficient use of fuel and a year round heat load can be ensured by using heat energy to provide cooling (in a similar way to a fridge) which is known as trigeneration, or Combined Cooling Heat and Power (CCHP).

ENERGY 3: HEAT AND POWER ENERGY RECOVERY

Proposals for low carbon energy recovery methods, including Combined Heat and Power applications, and supporting infrastructure will be supported in principle. The proposals must demonstrate that:

- **The facility has the potential to connect to an outlet for any energy produced;**
- **The development has addressed as a minimum the potential environmental impacts listed in WASTE 9; and**
- **New proposals for Energy Recovery from Waste should demonstrate the potential to contribute towards CHP.**

5.24 Using heat that would otherwise be wasted to facilitate community or district heating (potentially housing and/or commercial or industrial uses including utilities providers) is an efficient use of energy, contributes to reducing CO₂ emissions, and can support the development of low-carbon homes where the density and style is suitable. Heat distribution networks deliver heat from a central generation source to a district via hot water or steam. They can utilise heat from local industry or can be linked to power generation technology such as CHP. It is the Council's aim to build upon existing research, mapping of significant heat sources (such as existing CHP) and heat users (such as hospitals) and to develop this further to produce a mapped assessment to define the most appropriate locations for District Heating Networks.

5.25 Mapping the opportunities for implementing district energy networks across Leeds will allow stakeholders to consider options and plan to achieve a more integrated energy network. This exercise is supported through the NRWDPD. It will require significant consultation with the private sector to identify existing and potential opportunities. This objective is supported by ENERGY 4.

ENERGY 4: HEAT DISTRIBUTION INFRASTRUCTURE

The promotion of heat distribution infrastructure will be supported providing that the following are undertaken and are satisfactory:

- **An assessment of environmental effects;**
- **An assessment of heat source(s) and heat use.**

OTHER ENERGY INFRASTRUCTURE

5.26 Although energy demand management and decentralised energy opportunities can reduce the reliance on grid supplies, conventional grid supplies of both gas and electricity will continue to be the

main ways in which energy is conveyed to us. Therefore it is important that development takes due regard of energy (and more broadly utility) infrastructure requirements such as gas supply pipes, high voltage supplies and sub-stations. Given the increasing expectations on smart metering and smart grid supply, provision should be made for associated energy for more effective control of energy distribution through electronic monitoring and management.

- 5.27 The Council will take opportunities to work with other companies, agencies / local authorities, including adjacent ones, to address all aspects of energy demand and supply, with an ambition to implement the energy hierarchy. The Council is currently exploring the formation of a strategic body ('Energy Leeds') that will encourage all major new developments to investigate the potential for renewable energy technologies. This body will employ delivery vehicles such as Energy Service Companies (ESCo's) which are tailored to meet the needs of specific projects or initiatives in order to deliver low carbon projects.

6 NATURAL RESOURCES

AIR QUALITY

OBJECTIVES FOR AIR QUALITY

AIR QUALITY

- 6.1 Clean air is a vital natural resource. The Air Quality Strategy (DEFRA 2007) sets out health based national standards and objectives for eight specific pollutants within the UK and we have to demonstrate how we expect to achieve these. All development, through construction, operation and decommissioning can impact on air quality and it is therefore appropriate for Planning policies to address this issue.
- 6.2 Improving air quality means tackling carbon emissions and other air pollutants together. Within Leeds, housing and transport are the major sources of carbon emissions that currently average 6.44 tonnes per person per year (3.8 for housing and 2.64 for transport). These levels are below the English national average of 6.54 tonnes of carbon per person per year. On average, every gallon of petrol used produces 10.4 kg of carbon dioxide and every gallon of diesel produces 12.2 kg of carbon dioxide. Carbon dioxide emissions are a major cause of climate change and air pollutants cause harm to our health and the environment.
- 6.3 Whilst air quality across the city is generally good, there are six small Air Quality Management Areas (AQMAs) where the national air quality objective for annual nitrogen dioxide is not achieved. These are shown in the Appendix which accompanies this document. Emissions from road traffic are a significant cause in all of these. All local authorities are required to work towards achieving the national air quality objectives and Leeds has produced an Air Quality Action Plan to indicate the actions we intend to take to address air quality. This includes controlling emissions, limiting the impact of any proposals and locating development appropriately. These actions are necessary all over the District and not just in those areas where air quality is poor so that we reduce peoples' exposure to pollutants that have a serious effect on health.

AIR QUALITY MANAGEMENT

- 6.4 The Core Strategy aims to reduce the need for people to travel through the appropriate location of development and also aims to ensure that new development is energy efficient. However, there are other specific actions we can take to help to improve air quality.
- 6.5 No single available option will address the problem but through the Air Quality Action Plan, the Council presented a series of actions to reduce air pollution concentrations. The Air Quality Actions which are of most relevance to spatial planning include promotion of public transport, cycling and walking, integrated transport systems (such as park and ride), requirements for travel plans and section 106 contributions for public transport improvements, planning for biofuels and associated infrastructure and the creation of Low Emission Zones where appropriate.
- 6.6 As a result of sharing ideas and knowledge, the 'Delivering Cleaner Air' Beacon Authorities produced a Low Emission Strategies document (DEFRA, January 2010). The City Council is currently participating as part of a national Low Emission Strategies partnership group, in developing a series of

low emissions projects (with funding support from DEFRA). Within this context, a key project is to develop a Low Emission Strategy Supplementary Planning Document (SPD) template, for use by local authorities to address issues associated with Air Quality and development proposals. At a Leeds level, it is currently anticipated that the SPD will contain guidance on emission assessments and Low Emission Strategy mitigation measures including low emission vehicle technologies and their availability (including the provision of electric vehicle charging points as part of development proposals). Many of these measures are also encouraged by other current planning guidance (e.g. the Public Transport Contributions SPD) and local initiatives including the use of bio fuels.

AIR 1 THE MANAGEMENT OF AIR QUALITY THROUGH DEVELOPMENT

All applications for major development will be required to incorporate low emission measures to ensure that the overall impact of proposals on air quality (including unpleasant odours) is mitigated.

WATER

OBJECTIVES FOR WATER RESOURCES

- 6.7 Although water is not a scarce resource in the Leeds area, uncertainties caused by climate change mean that it needs to be used much more carefully in the future. The Council recognises the need to reduce demand for treated clean water and more efficient use of water will both reduce wastewater quantities and also help prevent reductions in water quality and risks for public health. There are also targets for improving water quality set by Government which need to be met (the Water Framework Directive).
- 6.8 The Rivers Aire and Wharfe and their tributaries are a dominant feature of the Leeds area as shown in the key characteristics diagram. This means that there is potential disruption to life for a large proportion of the population due to flood risk. The south-eastern boundary of the District is adjacent to the River Calder and Leeds also experiences flooding from this River. The Environment Agency estimates that there are 3,862 homes and 700 businesses at risk of flooding from the River Aire alone in the Leeds District. Leeds City Centre is the economic and commercial heart of not only the District, but the wider region and parts of it have a 5% risk of being flooded from the River Aire. The Core Strategy sets the strategic framework for planning for flood risk, but it is an important issue, particularly in adapting to climate change and has been significantly expanded upon in this DPD.
- 6.9 In recent years Leeds has also experienced problems created by surface water flooding. Smaller watercourses and drains are far more susceptible than the larger river systems to flash flooding as a result of localised intense rainfall. With changing climate patterns it is expected that storms of this nature will become increasingly common, potentially increasing the risk posed to properties situated in close proximity to local streams.

WATER EFFICIENCY

- 6.10 The Natural Resources Flow Analysis found that overall water consumption within Leeds is higher than average. Increased water efficiency should therefore be encouraged. This issue is largely dealt with in the Core Strategy through the policy requirement to meet higher standards of the Code for Sustainable Homes and BREEAM. Further detailed information on ways to ensure water efficiency and water quality improvements is found in the Council's Sustainable Design and Construction Supplementary Planning Document 2010. Additionally, developers are encouraged to refer to the Environment Agency's Water Resources Strategy which sets out how water resources should be managed to 2050 and identifies areas where action is required.

WATER 1: WATER EFFICIENCY

All new developments should include measures to improve their overall water efficiency where appropriate. This will be achieved through a mixture of measures to use less treated water and reduce wastewater such as:

- **Sustainable urban drainage systems,**
- **Rainwater collection and storage,**
- **Grey water recycling and storage systems, and**
- **More absorbent surfaces for water drainage.**

PROTECTION OF WATER QUALITY

- 6.11 Local authorities must address any targets for water quality improvements as required by the Water Framework Directive (2000). This covers both surface and groundwater sources and the Environment Agency are responsible for classifying and monitoring the quality of these water sources. Research has shown that by considering the water management infrastructure (eg. sewers, drains, pumping stations, ditches, infiltration systems and swales) as an integral part of the design a better effect on water quality is achieved ⁴⁹.

WATER 2: PROTECTION OF WATER QUALITY

Development within areas adjacent to sensitive water bodies, such as rivers, streams, canal, lakes and ponds, must demonstrate control of quality of surface water runoff for the lifetime of the development and during construction.

For major developments the water management infrastructure should be considered as an integral part of the urban and landscape design.

MAKING AND PROTECTING SPACE FOR FLOODING

- 6.12 Leeds has produced a Strategic Flood Risk Assessment (SFRA) which defines the four flood zones:
- zone 1 is areas of low flood probability;
 - zone 2 is areas of medium flood probability;
 - zone 3a is areas of high flood probability; and
 - zone 3b is the functional floodplain.
- 6.13 This pattern of flood risk zoning is an important input to frame policies and is shown on Figure 3 in the Appendix.
- 6.14 The functional flood plain is primarily associated with the Rivers Aire and Wharfe and their tributaries, is defined in the Leeds SFRA and is shown on Figure 3 in the Appendix. It is land where water flows, or is stored in times of flood from an event with at least a 5% probability of occurring (1 in 20 years or more frequently). It may be reserved by the Council to preserve this flood storage function and this means that development is not permitted unless it is water compatible or else essential infrastructure, which satisfies the NPPF Exception Test (allowing water compatible uses such as flood control infrastructure, amenity open space and marinas / docks and wharves).

WATER 3: FUNCTIONAL FLOOD PLAIN

Development will not be permitted in the areas shown as functional floodplain in the Leeds SFRA unless it is water compatible or essential infrastructure and satisfies the Exemption Test.

⁴⁹ Water Sensitive Urban Design – Results and Principles, Prof. Heike Langenbach, Dipl.-Ing. Jochen Eckart and Dipl.-Ing. Gerko Schröder, University of Hamburg, 2008.

- 6.15 Zone 3a is classed as having a high probability of flood risk. In Leeds it has been sub-divided into zone 3ai and 3aii as shown on the Leeds SFRA. Land which is situated in flood zone 3aii has the same probability of flooding as land which is in the zone 3b functional floodplain (i.e. a 5% chance of flooding in any one year). The difference is that the zone 3b land is largely open and undeveloped and therefore can provide storage space for flood water in times of flood, however the land in zone 3aii is largely developed and therefore the whole of the site cannot be reserved for storage space of flood water. The fact is that flood water is likely to go there.
- 6.16 It is important to make space for flood water. Although land, which is in zone 3a, can be redeveloped over the plan period (subject to passing the NPPF Sequential and Exception Tests), it helps manage the flood risk better if some space can be provided within the site to accommodate some of the flood storage. The Leeds SFRA shows that there is a considerable amount of land within the District, which falls within zone 3a. This represents a serious potential flooding problem in Leeds. For this reason, when sites in zone 3a are being considered for redevelopment, the whole of the site should not be regarded as the developable area. There should be no net increase in the building footprint or changes in ground levels, or else compensatory storage volume should be provided. Where the sequential test is required, the developer is advised to agree the extent of the area of search with the Local Planning Authority. There are often opportunities to agree an area of search based on specifically defined areas such as regeneration areas, town centre boundaries or walking distance from the Leeds rail station.
- 6.17 The proportion of compensatory storage space that is required will be guided by the detailed Flood Risk Assessment which should be submitted alongside the planning application and which will also reveal flood issues, such as flow routes, which will need to be accommodated in the development. It is likely that more space for water will be required in zone 3aii than zone 3ai because of the greater flood risk. Most development is required to provide a proportion of open space and this requirement can be combined with the requirement to accommodate space for water. Where there are any flood risk issues associated with the development a Flood Risk Assessment will always be required.

WATER 4: DEVELOPMENT IN FLOOD RISK AREAS

All developments are required to consider the effect of the proposed development on flood risk, both on-site and off-site the detail of which should be commensurate with the scale and impact of the development. Within zones 2 and 3a proposals must:

- **Pass the Sequential Test and if necessary the Exceptions Test as required by THE NPPF.**
- **Make space within the site for storage of flood water, the extent of which to be determined by the Flood Risk Assessment.**
- **Must not create an increase in flood risk elsewhere.**

MANAGING THE RISK FROM FLOODING

- 6.18 The City Council is working in partnership with the Environment Agency to provide protection from flooding from the River Aire in the form of the Leeds Flood Alleviation Scheme. Additionally the Leeds SFRA identifies a small number of existing formal and informal raised flood defences which give localised protection against river flooding. The area behind the defence would be inundated with water

should the defence fail during a flood, potentially posing a risk to people who are present at the time. These areas are defined as Zones of Rapid Inundation and are shown on Figure 3 in the Appendix.

- 6.19 National guidance (NPPF AND Technical Guidance), advises that ‘flood resistance and resilience measures should not be used to justify development in inappropriate locations’. Within this overall context, the Council considers it essential that the potential risk of defence failure is addressed in any planning applications for development within the Zones of Rapid Inundation.
- 6.20 There is always a residual risk that defences might fail, either by over-topping or breach. This residual risk depends on the height of the defences and the nature (construction) of the defence and therefore it varies for each Zone of Rapid Inundation within Leeds. These are a very small number of locations as shown in the Leeds SFRA. The policy towards Zones of Rapid Inundation is provided below:

WATER 5: ZONES OF RAPID INUNDATION

Where there is currently no built development within a Zone of Rapid Inundation then it should be regarded as if it were functional floodplain and there will be a presumption against anything other than water compatible uses or essential infrastructure.

Where development already exists in a Zone of Rapid Inundation, applications for development will only be permitted where it can be demonstrated that residual risk of flooding is reduced to an acceptable level. A detailed breach analysis is required as part of the Flood Risk Assessment for applications in these areas. The NPPF sequential and exception tests must also be passed.

- 6.21 It is important that for all development, consideration is given to flood risk. A Flood Risk Assessment should be provided for all sites. This needs to be commensurate with the degree of potential flood risk to the site and the potential impact of the development on flood risk to others. Where it is clear that there is unlikely to be any flood risk to the site and no possibility of impact on others, then a simple statement to that effect may be all that is required:

WATER 6: FLOOD RISK ASSESSMENTS

All applications for new development will be required to consider flood risk, commensurate with the scale and impact of the development. Where, in the opinion of the Local Planning Authority (LPA), there is the possibility of any flood risk to the site, or the potential for flood risk impact on other sites, a Flood Risk Assessment is required.

The LPA is unlikely to support the development unless the Flood Risk Assessment demonstrates the following:

- **No increase in flooding on-site and elsewhere will result from the new development. The implications of climate change must be taken into account (these are predicted in the Technical Guidance to the NPPF, Para. 11, Table 4).**
- **There is less than a 3.33% chance of site flooding in any one year.**
- **There is less than a 1% chance of any premises on the site flooding in any one year, after allowing for the effects of climate change, and**
- **For flows beyond the 1% flood design event it is demonstrated that there are no unreasonable adverse impacts off site, after allowing for the effects of climate change.**
- **Safe access and egress**

Developer contributions may be required for improvement works to ensure that the drainage infrastructure can cope with the capacity required to support the new development.

- 6.22 Local flooding is not just associated with rivers but occurs throughout built up areas (Figure B, Leeds SFRA). There is considerable flood risk associated with the finite capacity of culverts, drains and minor watercourses to accommodate locally intense rainfall and this is described in Appendix A of the SFRA. There is often little warning of this type of flooding compared with the flooding on the rivers Aire and Wharfe, where the Environment Agency has sufficient time to issue flood warnings.
- 6.23 Development increases the volume and speed of surface water run-off. The Technical Guidance to the NPPF, emphasises the need to consider the potential to increase flood risk elsewhere through the addition of hard surfaces and the effect of new development upon surface water runoff, whilst taking into account climate change.
- 6.24 Flooding is already a problem throughout the district and this is expected to worsen with climate change, therefore the Council is introducing a requirement for a 30% reduction in peak run off rates for sites that have previously been developed. The 30% reduction reflects a consensus view amongst Council drainage officers, the Environment Agency and the sewerage undertaker about what is “reasonably practicable”. Additionally, the Council has already been successfully applying this standard to development since May 2007 thus demonstrating that it is a feasible and viable requirement.
- 6.25 There is flexibility in terms of how to achieve the 30% reduction and there are a number of ways of doing this including the use of green roofs, planting, rain-water harvesting, permeable surfacing and Sustainable Urban Drainage Schemes (such as attenuation tanks below ground and ponds above ground). The Council has provided Supplementary Planning Guidance (SPG22: Sustainable Urban Drainage, June 2004) to assist with sustainable drainage schemes. The 30% reduction is based on the existing peak rate of discharge from the site prior to redevelopment, where that site is already connected to the drainage infrastructure. Applications for development are expected to comply with the Council’s Minimum Development Control Standards for Flood Risk which are updated regularly and found on the Council’s website.

WATER 7: SURFACE WATER RUN-OFF

All developments are required to ensure no increase in the rate of surface water run-off to the existing formal drainage system. Development will be expected to incorporate sustainable drainage techniques wherever possible.

- **On previously developed sites peak flow rates must be reduced by at least 30%**
- **On sites which have not previously been connected to the drainage infrastructure, or watercourse, surface water run off rates will not exceed the ‘greenfield’ run-off rate (i.e. the rate at which water flows over land which has not previously been developed).**

- 6.26 Since the publication of the Issues and Alternative Options report, the General Permitted Development Rights Order has been reviewed which sets out what works can be undertaken without the need to apply for planning permission. Planning permission is now required to lay impermeable driveways or other impermeable surfacing between a building and the highway. The Council considers that this advice is also appropriate to all extensive areas of hard standing. Where hard surfaces are to be constructed on land between a wall forming the principal (front) elevation of the dwelling and the highway, alternatives to impermeable surfacing must be considered first and it will be necessary to

demonstrate why these are not feasible before planning approval will be considered for impermeable surfacing.

- 6.27 The Surface Water Management Plans may be used to help the Council to identify where Permitted Development rights may be removed during the plan period.
- 6.28 Leeds is an important city in the region and must provide for the functions of a regional city. This includes the need to provide large surfaced areas such as events spaces and surface car parks. These large surfaced areas contribute significantly to flash flooding and therefore it is prudent to encourage them to be constructed from permeable materials, which help to manage flood risk better. Permeable materials should be the starting choice unless there are sound reasons why impermeable surfacing should be accepted.

LAND

OBJECTIVES FOR LAND USE

- 6.29 Land is a finite resource and national policy requires that land is used in the most efficient manner. For example, the use of greenfield land (land not previously developed) is discouraged and the reuse of contaminated and previously-developed (brownfield) land is encouraged. Higher densities of development are also required. This approach reduces land-take for development and fosters undeveloped land as a natural resource. The Core Strategy contains policies that restrain development from taking place within the greenbelt, in areas of important landscapes, in areas of nature conservation and biodiversity, and on agricultural land of the best quality.
- 6.30 This Plan deals with additional land-use policies to minimise the land-take for development by prioritising the use of previously developed land and also deals with some of the ways of reducing the impacts of climate change and pollution that may be caused by developing contaminated land.

LAND DEVELOPMENT

- 6.31 National and regional policy sets overall targets for how much development is to be located on brownfield sites. Leeds has exceeded these targets in recent years. The emerging Core Strategy will set targets for the use of brownfield land in Leeds and for achieving higher densities of development.
- 6.32 The co-location of natural resource and waste activities on the same sites can be beneficial in reducing landtake for these operations (e.g. mineral aggregate recycling) and will be supported by the Council.

CONTAMINATED LAND

- 6.33 There are barriers to the development of land contaminated either by previous development activity, or by natural contamination such as the financial implications of restoring land quality.
- 6.34 All councils are required to ensure that applications to develop actual or potentially contaminated land provide sufficient information to establish whether a risk exists or will be created to people, ecological systems, buildings or controlled water when the land is developed. When Leeds grants planning permission developers will be required by condition to implement measures to ensure an unacceptable risk is not created.

- 6.35 The NPPF emphasises the need to deliver sustainable development and within this context, the need for planning policies and decisions to encourage the effective use of land by re-using land that has been previously developed (provided it is not of a high environmental value). The use of previously developed land is a key focus of the emerging Core Strategy, which sets a target of 65% (for the first 5 years). Not all previously developed land is contaminated and indeed, some contaminated land is undeveloped land, but by supporting development on contaminated land, the aim of developing on brownfield land is more likely to be deliverable.

Land 1 – Contaminated Land

The City Council supports the principle of development of previously developed land in preference to greenfield sites. To ensure the risk created by actual and potential contamination is addressed, developers are required to include information regarding the status of the site in terms of contamination with their planning application. The Council will then assist applicants in the development process to identify an appropriate remediation solution, where necessary, prior to the development being brought into use.

TREE PLANTING

- 6.36 Trees are a key natural resource with many positive attributes. Tree planting assists with combating climate change, creating habitats, offering landscape / townscape enhancements, and providing recreational benefits. The Core Strategy seeks to increase tree planting and so strengthen green infrastructure. For these reasons, tree planting is an important part of the Council's environmental and design policies and strategies.
- 6.37 Tree planting can be on existing and proposed greenspace; as part of initial screening and restoration of mineral workings; alongside transport corridors, and as part of regeneration schemes, and landscape transition zones to adjacent open land. Design of such planting will need to take account of the landscape character and opportunities for enhancing and improving links in Green Infrastructure.
- 6.38 Inevitably there may also be occasional circumstances where removal of existing trees has to be considered, in which case suitable mitigation measures will need to be agreed.

Land 2: Development and Trees

Development should conserve trees wherever possible and also introduce new tree planting as part of creating high quality living and working environments and enhancing the public realm.

Where removal of existing trees is agreed in order to facilitate approved development, suitable tree replacement should be provided on a minimum three for one replacement to loss. Such planting will normally be expected to be on site, as part of an overall landscape scheme.

Where in certain circumstances on-site planting cannot be achieved, for example due to lack of suitable space in City Centre locations, off-site planting will be sought, or where the lack of suitable opportunity for this exists, an agreed financial contribution will be required for tree planting elsewhere.

Planting design and specification should in all cases meet the current best practice.

7 IMPLEMENTATION AND MONITORING

- 7.1 The Planning and Compulsory Purchase Act 2004 requires Local Planning Authorities to carry out annual assessment of the extent to which policies in local development documents are being implemented. Developing a monitoring system is a key means of assessing the effectiveness of the NRWDPD and to determine whether or not strategic aims and objectives are being delivered. This will enable timely and effective responses to be made if delivery is not being achieved in line with the agreed strategy.
- 7.2 The objectives of the NRWDPD will ultimately be implemented through the granting of planning permissions in accordance with the governments National Planning Policy Statements, Minerals Policy Statement and the policies of the NRWDPD and any other policies in the LDF. The policies within this NRWDPD are the key mechanism for implementation. Other activities will also affect the delivery of the NRWDPD including the operation of other policies, the work of other agencies, the behaviour of the general public and the actions of industry.
- 7.3 *'Monitoring is essential to establish what is happening now, what may happen in the future and then compare these trends against existing policies and targets to determine what needs to be done'*⁵⁰. Monitoring is twofold as it needs to consider both the beneficial and any unforeseen adverse effects of implementation. It measures the actual significant effects of implementing the NRWDPD policies and then assesses the contribution they make towards achieving the strategic objectives. In addition monitoring highlights unforeseen adverse effects and the need to undertake counteractive measures. The approach taken to monitoring must be objective and target led, as well as focus on significant effects. It should involve measuring the performance of the plan against indicators to establish a link between implementation and the significant effects being monitored.
- 7.4 The Planning and Compulsory Purchase Act 2004 requires the production of an Annual Monitoring Report (AMR) for the Development Plan to be submitted to the Secretary of State. The implementation of the NRWDPD will be kept under review using the key performance indicators set out in Table 7.1 and reported in the Annual Monitoring Report.
- 7.5 The following table sets out the monitoring framework for the NRWDPD and identifies for each policy:
- The indicators for measuring whether a policy is successful or not;
 - The monitoring targets for each policy;
 - Who is responsible for delivering the objectives of each policy; and
 - A point which will trigger a review of a policy if it is not having the anticipated impact.
- .

⁵⁰ DCLG, Local Development Framework Monitoring: A Good Practice Guide, March 2005, paragraph 1.1

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Table 7.1 – NRWDPD Monitoring Framework

Policy	Key Performance Indicators	Target	Implementation Partners	Trigger point for correction/mitigation measures
Minerals				
Minerals 1: Provision Of Aggregates	Amount of aggregate produced in line with the plan period provision in the NRWDPD.	Target for 146,000 tonnes per annum of sand and gravel extraction from the Leeds District. Target for 440,000 tonnes per annum of crushed rock from the Leeds District.	Minerals Industry Regional Aggregates Working Party Leeds City Council	Provision undershoots by 25% over five years of the plan period
Minerals 2: Mineral Safeguarding Areas (MSA)	Key resources in MSAs safeguarded or extracted prior to development.	No significant development that would otherwise sterilise resources allowed in MSAs except where prior extraction has taken place.	Leeds City Council Development Industry Minerals Industry	No specific trigger point
Minerals 3: Safeguarding Existing Mineral Extraction Sites	Facilities for minerals processing are safeguarded from development of non minerals related uses.	No loss of minerals facilities to an alternative use unless provision made or no need for particular facility proved.	Leeds City Council Development Industry Minerals Industry	More than two approved proposals over a two year period result in a loss of minerals processing (with no alternative provision made)
Minerals 4: Mineral Preferred Areas – Sand and Gravel and Crushed Rock	Approved proposals for exploration and extraction of sand and gravel and crushed rock located within the preferred areas.	No proposals for exploration and extraction of sand and gravel and crushed rock are located outside of the preferred areas.	Leeds City Council Development Industry Minerals Industry	More than two approved proposals over a two year period are located outside of the preferred areas.
Minerals 5: Sand And Gravel Production In The Wharfe Valley	Approved proposals for the extraction of sand and gravel are not located to the east of Pool.	No extraction of sand and gravel located to the east of pool in the Wharfe Valley.	Leeds City Council Development Industry Minerals Industry	A proposal is permitted within The Wharfe Valley.

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Policy	Key Performance Indicators	Target	Implementation Partners	Trigger point for correction/mitigation measures
Minerals 6: Preferred Areas – Stone And Clay Extraction	Approved proposals for stone and clay extraction are located within the preferred areas.	1. Highmoor, Bramham – 960,000 tonnes. 2. Hook Moor, Micklefield – 8.8 million tonnes . 3. Kings Road, Bramhope – 2.16 tonnes 4. Moor Top, Guiseley – 500,000 tonnes 5. Britannia Quarry, Morley – 960,000 tonnes. 6. Howley Park, Morley – 2.4 million tonnes of clay. Sandstone several million tonnes.	Leeds City Council Development Industry Minerals industry	More than two approved proposals over a two year period are located outside of the preferred areas.
Minerals 7: Provision of Stone For Repairs and Refurbishment of Existing Buildings	Consideration of extraction operations of a limited scale and duration at a specific quarry to meet specific need.	In all applications where a specific need for local stone has been demonstrated consideration is given to the scale and location of extraction methods.	Development Industry Leeds City Council	No specific trigger point required
Minerals 8: Surface Coal And Previously Developed Land	Proposals for redevelopment of land demonstrate that consideration has been given to prior extraction.	Where coal is located on previously developed land prior extraction takes place.	Leeds City Council Coal Producers	No specific trigger point
Minerals 9: Surface Coal And Undeveloped Land	Proposals demonstrate accordance with policy criteria.	Where development takes prevention of sterilisation and community benefits.	LCC Coal Producer	No specific trigger points
Minerals 10: Applications for Mineral Extraction	Approved proposals meet criteria.	All approvals meet the criteria.	Minerals Industry	No specific trigger points required.
Minerals 11: Restoration of Mineral Extraction Sites	There is an agreement on restoration for all minerals schemes granted planning permission.	A restoration scheme has been agreed in all instances.	Minerals Industry Leeds City Council – development control monitoring	No specific requirements
Minerals 12: Aftercare of Restored Proposals	There is an agreement on aftercare for all minerals schemes granted planning permission.	An aftercare scheme has been agreed in all instances.	Minerals Industry Leeds City Council	No specific trigger points.

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Policy	Key Performance Indicators	Target	Implementation Partners	Trigger point for correction/mitigation measures
Minerals 13: Safeguarding Minerals Processing Sites	Mineral processing sites are safeguarded from development of non minerals related uses.	No loss of minerals processing sites to an alternative use.	Leeds City Council Development Industry Minerals Industry	More than two approved proposals over a two year period result in a loss of minerals processing sites.
Minerals 14: Transport Modes	Wharves and sidings are used for freight purposes.	Diversion of freight from road to rail and canal.	British Waterways Network Rail Canal Boat Operators Association	No specific trigger points.
Waste				
Waste 1: Self Sufficiency for Future Waste Management in Leeds	Existing and new capacity meets annual provision figures.	Waste Targets till 2026 Municipal Waste 383,976 C&I 1,212,000 CD&E 1,556,000 Hazardous Waste 103,026 TOTAL 3,255,002	Waste Industry Leeds City Council Environment Agency DEFRA	Review of waste planning permissions granted over each five year period of the plan.
Waste 2: Safeguarding Existing Waste Management Capacity	Facilities for waste processing are safeguarded from development of non waste related uses.	No loss of waste facilities to an alternative use unless provision made or no need for particular facility proved.	Leeds City Council Development Industry Waste Industry	More than two approved proposals over a two year period result in a loss of m of safeguarded waste management sites (with no demonstration that there is no longer a need or the change of use outweighs the need for waste management)
Waste 3: A City Wide Network of Waste Management Sites and Facilities:	Develop a city wide network of sites in line with the Core Strategy.	A network of sites is developed and meets the criteria.	Leeds City Council Waste Industry	Review of waste planning permissions over a five year period of the plan.
Waste 4: Waste Management	Proposals for waste facilities are	All approved proposals reflect	Leeds City Council	Review of waste planning

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Policy	Key Performance Indicators	Target	Implementation Partners	Trigger point for correction/mitigation measures
Facilities - Permanent Uses	treated as an industrial use of land and have regard for manufacturing and distribution policies.	manufacturing and distribution policies.	Waste Industry	permissions over a five year period of the plan.
Waste 5: Waste Uses Within Existing Industrial Areas	Approved proposals for new waste management facilities are located within existing industrial areas.	Waste uses are located on appropriate sites.	Leeds City Council Development Industry Waste Industry	Review of waste planning permissions over a five year period of the plan.
Waste 6: Strategic Waste Management Sites	Approved proposals for major new waste management facilities are located on the identified strategic waste management sites.	Sufficient sites are available to support provision of strategic facilities.	Leeds City Council Development Industry Waste Industry	Review of waste planning permissions over a five year period of the plan.
Waste 7: Additional Waste Management Sites	Approved proposals for recycling, composting and segregation operations are located on the additional waste management sites.	Sufficient sites are available to support provision of recycling, composting and segregation proposals.	Leeds City Council Development Industry Waste Industry	Review of waste planning permissions over a five year period of the plan.
Waste 8: Waste Proposals at other Locations	Approved waste proposals are situated on the sites identified in policies 5, 6 and 7.	No waste proposals approved at sites other than those identified in policies 5, 6 and 7.	Leeds City Council Development Industry Waste Industry	More than two approved proposals over a two year period are located outside of the identified sites
Waste 9: Waste Management Facilities - Potential Issues and Impacts	Approved proposals meet criteria	All approvals meet the criteria.	Waste Industry	No specific trigger points
Waste 10: Planned Reduction in Landfill	Approved proposals for additional landfill capacity that have demonstrated there is a proven need are located at existing or former quarry sites.	No additional landfill capacity above that already with extant permission.	Leeds City Council Development Industry Waste Industry	More than two approved proposals for additional landfill capacity over a two year period are located outside of existing or former quarry sites.
Waste 11: Waste Disposal - Landfill And Landraising Sites	Number of planning permissions for landfill and landraising.	No additional landfill capacity above that already with extant permission.	Leeds City Council	More than two approved proposals for additional

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Policy	Key Performance Indicators	Target	Implementation Partners	Trigger point for correction/mitigation measures
			Development Industry Waste Industry	landfill capacity over a two year period are located outside of existing or former quarry sites.
Energy				
Energy 1: Wind Energy	Evidence of energy contribution and other benefits outweighing any significant impacts.	All approvals have provided evidence of how energy contribution and other benefits outweigh any significant impacts. To produce 20 MW of grid connected wind energy by 2026.	Leeds City Council Development Industry Energy Industry	More than two refusals over a two year period are based on a lack of evidence to support wind energy.
Energy 2: Micro-Generation Development	Approved applications for micro-generation development meet criteria.	All approvals meet the criteria. To produce 10 MW of grid connected energy by 2026.	Leeds City Council Development Industry Energy Industry	No specific trigger points required.
Energy 3: Heat And Power Recovery	Submission of CHP applications.	CHP applications approved for current and future development. To produce 35 MW of grid connected energy by 2026.	Leeds City Council Development Industry Energy Industry	Review of CHP planning permissions over a five year period of the plan.
Energy 4: Heat Distribution Infrastructure	Approved applications for heat distribution infrastructure meet the criteria.	All approvals for such schemes meet the criteria.	Leeds City Council Development Industry Energy Industry	No specific trigger point.
Water				
Water 1: Water Efficiency	Approved applications for new developments include measures to improve water efficiency and meet the criteria.	All approvals meet the criteria and improve overall water efficiency.	Leeds City Council Development Industry Environment Agency	More than two refusals over a two year period based on a lack of evidence of how the proposal has improved water efficiency.
Water 2: Protection Of Water	The water quality of sensitive water	All approvals have considered water	Leeds City Council	Review of planning

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Policy	Key Performance Indicators	Target	Implementation Partners	Trigger point for correction/mitigation measures
Quality	bodies is protected and applications are refused on grounds of water pollution.	quality and ensured that sensitive bodies are protected.	Development Industry Environment Agency	permissions where water quality has been affected, over a five year period of the plan.
Water 3: Functional Flood Plain	Applications for new development or a change of use are refused if they are located in the functional flood plain.	All approvals for development or a change of use are located outside of the functional flood plain.	Leeds City Council Development Industry Environment Agency	Review of planning permissions where the site is situated in the functional flood plain, over a five year period of the plan.
Water 4: Development In Flood Risk Areas	Applications are refused where flood risk has not been considered and the criteria has not been met.	All approvals meet the criteria and minimise flood risk.	Leeds City Council Development Industry Environment Agency	Review of planning permissions where flood risk has been identified, over a five year period of the plan.
Water 5: Zones Of Rapid Inundation		No increase in number of developments affected by residual flood risk.		
Water 6: Flood Risk Assessments	Approved applications for new developments have considered flood risk and where there is a risk of flooding have submitted a flood risk assessment. Applications are refused on grounds of not submitting a flood risk assessment.	All approvals have considered flood risk and submitted a flood risk assessment where necessary.	Leeds City Council Development Industry Environment Agency	Review of planning permissions where flood risk has been identified, over a five year period of the plan.
Water 7: Surface Water Run-Off	The rate of surface water run-off is not increased through new developments and applications are refused on grounds of increased surface run-off.	All approvals ensure that the rate of surface water does not increase and all criteria are met.	Leeds City Council Development Industry Environment Agency	Review of planning permissions where surface water has increased, over a five year period of the plan.
Air Quality				
Air 1: Low Emissions Strategies	Approved applications for new development have considered low emissions measures.	Reduction in nitrogen dioxide and particulates measured.	Leeds City Council Development Industry	Review of planning permissions where air quality has been affected, over a five year period of

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Policy	Key Performance Indicators	Target	Implementation Partners	Trigger point for correction/mitigation measures
				the plan.
Land				
Land 2: Contaminated Land	Percentage of major site applications for the redevelopment of sites with proven contamination.	Remediation of contaminated land.	Leeds City Council Developers	
Land 2: Development and Trees	Approved proposals protect existing tree cover and propose additional planting	Increases in tree cover.	Leeds City Council Developers	Review of planning permissions where tree cover has not been considered/protected, over a five year period of the plan.

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List of Saved UDP Policies to be Replaced by this DPD

- 7.6 The following saved policies from the Leeds Unitary Development Plan (Revised) 2006 are replaced by policies in this Natural Resources and Waste Development Plan Document:

N45, N46, N46A, N46B, GM4, GM4A, EM9, N47, WM1, WM2, WM3, WM4, WM5, WM6, WM7, WM8, WM9, WM10, WM11, WM13, WM14, WM15, WM16, WM17, WM18, N54, N38A, N38B, N39A

8 GLOSSARY of TERMS AND LIST OF ABBREVIATIONS

GLOSSARY

Term	Definition
Aftercare	The treatment of land for a period (usually five years) following restoration to bring the land to the required standard so that it is fit for its agreed after-use.
After-use	The use (nominally for agriculture, forestry or amenity) that land is put to once restored following mineral working
Aggregates	Materials such as sand and gravel and crushed rock used in the construction industry for purposes such as concrete and roadstone.
Agricultural Waste	Waste from premises used for agriculture within the meaning of the Agriculture Act 1947.
Ancient Woodland	An area of woodland which has had a continuous history of tree cover since at least 1600.
Apportionment	The County's share of Regional aggregate provision
Aquifer	A water bearing geological formation.
Area of Search	A broad area within which some mineral extraction may be acceptable subject to detailed consideration.
Biodiversity Action Plan (BAP)	A strategy for conserving, restoring, enhancing and creating habitats of importance.
Commercial and Industrial Waste (C&I) Waste	Broadly, <i>commercial waste</i> is classified as waste arising from wholesalers, catering establishments, shops and offices (in both the public and private sectors) while <i>industrial waste</i> is waste arising from factories and industrial plants. Neither of these categories includes consideration of wastes from the construction, demolition and excavation sectors.
Composting (Aerobic Digestion)	A biological process in which biodegradable wastes such as garden and kitchen wastes are decomposed in the presence of air by the action of micro-organisms (for example bacteria and fungi).
Construction and Demolition and Excavation Waste	Construction and demolition waste (C&D waste) includes hard C&D and excavation waste materials as separately defined in this glossary. These waste materials arise as a direct result of: <ul style="list-style-type: none"> § the total or partial demolition of buildings and/or civil engineering infrastructure; or § the construction of buildings and/or civil engineering infrastructure.
Development Plan	Statutory documents produced under the Planning Acts that set out the planning policies and proposals for the operational development and use of land. Decisions on planning applications

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	must conform to the development plan, unless material considerations indicate otherwise.
Development Plan Document (DPD)	A term introduced by the Planning and Compulsory Purchase Act 2004. DPDs are part of the Local Development Framework for an area. The Council is required to produce the following DPDs to guide future land use and other spatial planning matters: A Core Strategy, site specific allocations of land or thematic policies, a proposals map, and area action plans (where needed). Together the DPDs form the statutory development plan.
Energy Recovery	The production of energy in the form of electricity, heat and/or gas through the biological or thermal treatment of waste in a controlled environment.
Environment Agency	Regulatory Authority formed in 1996, combining the functions of the former National Rivers Authority, Waste Regulation Authorities and Her Majesty's Inspectorate of Pollution.
Excavation waste	Includes both clean and contaminated waste soil, stone and rocks arising from land levelling, civil works and/or general foundations.
Fluvial	The term fluvial refers to rivers, river waters or any plants and animals that inhabit them
Groundwater	Water within soil, sediments or rocks below the ground surface. Water contained within underground strata is referred to as an aquifer
Hazardous Waste	Specifically defined in European law as those wastes featuring on a list - the European Waste Catalogue (EWC), drawn up by the European Commission because they possess one or more of the hazardous properties set out in the Hazardous Waste Directive
Impermeable	An impermeable surface is one which does not allow the passage of water through it and which water therefore will run off
Inert waste	Waste that does not undergo any significant physical, chemical or biological, transformations.
Landbank	A stock of mineral reserves with planning permission for their winning and working.
Local Development Framework (LDF)	A term introduced by the Planning and Compulsory Purchase Act 2004, the LDF comprises a suite of documents, which together guide future development for a local area. In addition to DPDs, the LDF must contain a Local Development Scheme (which sets out the timetable for completing each document), a Statement of Community Involvement (which sets out how the Council will involve local people and stakeholders in decision-making on planning matters), and an Annual Monitoring Report. Additionally, Supplementary Planning Documents can be prepared to provide additional detail on areas of planning policy not contained in DPDs.
Landfill and Landraise	Two main ways of disposing of waste to land. Landfill is when a large hole, usually an old quarry is filled up with waste whereas land raise operations place waste on top of existing land levels thus raising the height of the land.
Major Development Mineral Consultation Area	An area identified in order to ensure consultation between the

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	relevant LPA and the Mineral Planning Authority before certain non-mineral planning applications made within the area are determined.
Mineral Planning Authority (MPA)	An organisation with statutory planning powers relating to minerals development
Municipal Waste (MSW)	Municipal waste includes household waste and any other wastes collected by waste collection authorities (or their agents) such as municipal parks and gardens waste, beach cleansing waste, commercial or industrial waste and waste resulting from the clearance of fly-tipped materials.
National Planning Policy Framework (NPPF)	The NPPF sets out the Government's planning policies for England and how these are expected to be applied.
Opencast Working	A form of surface mining to win minerals.
Permeable	A permeable surface is any surface which will allow the passage of water through it; for example gravel is permeable, while tarmac is not. Different surfaces have differing levels of permeability and when saturated, water will run off permeable surfaces.
Permitted Development Rights	Rights to carry out certain limited forms of development without the need to make an application for planning permission, as granted under the terms of the Town and Country Planning (General Permitted Development) Order 1995.
Planning Conditions	Conditions attached to a planning permission for the purpose of regulating and controlling the development.
Primary Aggregates	Naturally occurring sand, gravel and crushed rock used for construction purposes.
Reclamation of mineral workings	The combined processes of Restoration and Aftercare following completion of mineral working.
Recycled Aggregates	Aggregates produced from recycled construction waste such as crushed concrete, planings from road surfacing etc.
Restoration	Operations designed to return an area to an acceptable environmental state, whether for the resumption of the former land use or for a new use following mineral working. Involves the reinstatement of land by contouring, the spreading of soils or soil making materials etc.
Saved Policies	As part of the local planning context, the City Council's Unitary Development Plan (UDP, which was adopted in August 2001, was followed by a selective UDP review (adopted in July 2006). Under the Local Development Framework transitional arrangements, policies in the UDP are 'saved' for an initial period of 3 years or until they are replaced by LDF policies and documents. See the link below for further details. http://www.leeds.gov.uk/page.aspx?pageidentifier=6e8fe6ea-41bb-4840-b9df-efe98b3a4e65
Scheduled Ancient Monuments	Nationally important monuments and archaeological areas that are

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	protected under the Ancient Monuments and Archaeological Areas Act 1979.
Secondary Aggregates	By-product wastes e.g. power station ash and colliery spoil that can be used for low-grade aggregate purposes, either solely or mixed when mixed with primary aggregates.
Sites of Special Scientific Interest (SSSIs)	Sites that are notified and protected under the Wildlife and Countryside Act 1981 on account of their flora, fauna, geological or physiographical features.
Special Area of Conservation (SAC)	An SSSI considered being of international importance designated under the EC Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora.
Statement of Community Involvement (SCI)	A document that sets out the planning authority's intended consultation strategy for different elements of the planning process. This is a requirement brought in by the Planning and Compulsory Purchase Act 2004.
Sterilisation	When a change of use or the development of land prevents possible mineral exploitation in the foreseeable future.
Strategic Environmental Assessment (SEA)	An evaluation process for assessing the environmental impacts of plans and programmes. SEA is a statutory requirement introduced through an EU Directive.
Supplementary Planning Document (SPD)	A document that expands on policies set out in a DPD or provides additional detail.
Sustainability Appraisal (SA)	An evaluation process for assessing the environmental, social, economic and other sustainability effects of plans and programmes. SA is a statutory requirement introduced by the 2004 Planning Act.
Thermal Treatment (Incineration)	The burning of waste at high temperatures. This reduces its volume by turning it to ashes and also generates heat, which may be used to generate electricity. Some industrial processes co-incinerate (mix waste with conventional fuels) to produce energy. Thermal Recovery facilities use waste to generate heat/electricity and are also known as Energy from Waste plants (EfW).
Waste Transfer Stations (WTS)	Facilities for receiving and "bulking up" waste before its onward journey for treatment, recycling or disposal elsewhere. They are used to transfer waste from smaller road vehicles to vehicles with greater capacity or trains /barges, thus reducing the related traffic.
Yorkshire and Humber	A regional body comprising of representatives from local authorities and other economic, environmental and social organisations. Responsible for preparing the Regional Spatial Strategy before its abolition in July 2010.

LIST OF ABBREVIATIONS

AAP	Area Action Plans
AMR	Authority Monitoring Report
AQMA	Air Quality Management Area
BAT	Best Available Techniques
BAP	Biodiversity Action Plan
BGS	British Geological Survey
BMW	Biodegradable Municipal Waste
C,D&E	Construction, Demolition and Excavation Waste
CHP	Combined Heat and Power
C&I Waste	Commercial and Industrial Waste
CNG	Compressed Natural Gas
DCLG	Department for Communities and Local Government
DPD	Development Plan Document
DPH	Dwellings Per Hectare
EF	Ecological Footprint
ELV	End of Life Vehicles
GDP	Gross Domestic Product
IAO	Issues and Alternative Options Paper
IWS	Integrated Waste Strategy
LATS	Landfill Allowance Trading Scheme
LCC	Leeds City Council
LDD's	Local Development Documents
LDF	Local Development Framework
LNR	Local Nature Reserve
LPG	Liquefied Petroleum Gas
MPA	Mineral Planning Authority
MPG	Minerals Policy Guidance
MPS	Minerals Planning Statements

**Leeds Local Development Framework
Natural Resources and Waste Development Plan Document**

MSA	Mineral Safeguarding Areas
MSW	Municipal Waste
NPPF	National Planning Policy Framework
NRFA	Natural Resource Flow Analysis
NRWDPD	Natural Resources and Waste Development Plan Document
PPC	Pollution Prevention Control
REAP	Resource and Energy Analysis Programme
RPB	Regional Planning Bodies
RSS	Regional Spatial Strategy
RTAB	Regional Technical Advisory Body
SAMs	Scheduled Ancient Monuments
SSSIs	Sites of Special Scientific Interest
SAC	Special Area of Conservation
SCI	Statement of Community Involvement
SEA	Strategic Environmental Assessment
SFRA	Strategic Flood Risk Assessment
SPD	Supplementary Planning Document
SA	Sustainability Appraisal
UDP	Unitary Development Plan
WDA	Waste Disposal Authority
WEEE	Waste Electrical and Electronic Equipment Directive