ECO-REGION NW

NORTH WEST KEY DEVELOPMENT TARGETS AND ENVIRONMENTAL SUSTAINABILITY INDICATORS

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Introduction

This paper aims to present key metrics for land-use, housing, and waste for the North West region. Quantitative data including, current measures, forecasts and targets from a series of regional strategies are used to set the stage for a broader discussion of an environmentally sustainable region.

North West Demographics

- 6.9 million people live in the North West, roughly one eighth of the UK's population, and a fiftieth of the European Community's
- Region as a whole is projected to experience a 1.2 percent decline in population between 1996 and 2021. Census 2001 data confirms that the decline is faster than originally forecast.
- A net migration from urban areas to semi-urban and suburban neighbourhoods continues.
- The percentage of elderly people in the population is expected to increase. Lancaster University's North West Regional Research Laboratory for the North West Regional Assembly forecasts that by 2021, 19 percent of the region's population will be aged 65 or over, and 2.2 percent will be over 85. In 1996, the percentages of +65s and +85s were 15.6 and 1.8 percent, respectively. The research also forecasts a 10.8 percent increase in the number of *Disability Living Allowance* claimants from 1996 to 2021. This raises serious questions regarding access to amenities for a growing proportion of the population.
- The number of households continues to rise, despite the decline in population. The projection is for an 8 percent increase in the number of households between 2001 and 2021. This equates to an average annual increase of 11,500 households across the region. Census 2001 suggest this forecast is somewhat high but not dramatically off-target.

North West Spatial Strategy

- The North West Metropolitan Area (NWMA) is to be the focus for new development, with priority being given to the city centres of Liverpool and Manchester, and the inner city areas surrounding them. The centre and inner areas of Birkenhead, St. Helens, Southport, Ashton-under-Lyne, Bolton, Bury, Oldham, Rochdale, Stockport and Wigan will also be targeted for development and regeneration.
- Additional development and improvements will be undertaken in Runcorn, Widnes, Ellesmere Port and Skelmersdale.
- To the north of NWMA development will be targeted in Blackpool, Blackburn, Burnley, Lancaster / Morecambe, Preston, Barrow-in-Furness and Carlisle.
- In the south redevelopment will be concentrated in Chester, Crewe, Macclesfield and Northwich.
- There is an emphasis on better quality in the housing stock, maximizing use of

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brownfield land for new housing, achieving lower levels of vacant dwellings and regenerating areas suffering from low-demand and market failure.

- Green Belts will be used to restrict development flowing out of the region's towns and cities.
- RSS 'summary' states "the highly urbanized nature of large areas of the North West gives rise to a very significant 'ecological footprint'.
- Calls for economy in the use of land and buildings, quality in new development, and maximum use of brownfields for new development
- Emphasizes the use of the 'Green Belt Policy' where urban sprawl is prevented by extensive areas of green belt in and around highly urbanized areas. The green belt: checks unrestricted urban sprawl of large built-up areas; prevents neighbouring towns from merging; safeguards countryside; preserves setting and special character of regions; and assists urban regeneration.
- Region includes the centres of Liverpool and Manchester and their surrounding conurbations; multi-centred structure; diverse and attractive rural areas to the north and south of the conurbations comprising more than 50 percent of the region.
- The positive management and re-use of the heavily urbanized areas of the North West represents a valuable opportunity for resource efficiency
- North West is part of the North European Trade Axis extending from Ireland to Poland and beyond. There is potential for the North West to improve its links with the rest of Europe and the UK and become a strategic counter-weight to the South East of England/Northern France/Northern Germany.
- RSS wants to help deliver compact urban neighbourhoods, and reduced need to travel; also wants to focus new development in the centre and surrounding areas of the two big cities Liverpool and Manchester/Salford
- RSS wants to: give priority to re-using existing buildings worthy of retention and suitable previously-developed land; conserve, enhance and use region's natural resources (landscapes, woodlands, built heritage, agricultural land, minerals, biodiversity, water and energy); and minimize and deal more effectively with the region's waste
- Buildings of very poor quality and little or no scope for re-use should be promptly removed to make way for new uses.
- New development must demonstrate good design quality; incorporate more efficient use of energy and materials, and more eco-friendly and adaptable buildings.
- RSS wants to encourage the provision of an appropriate range of sizes and types of housing to meet the needs of all members of society.
- RSS wants new housing to be built at a sufficiently high density so that the local population is of a size that can support good quality facilities and services.
- The RSS calls for a significant proportion of development and urban renaissance resources of the region to be focused on the North West Metropolitan Area, especially the regional poles (Liverpool and Manchester/Salford) and surrounding urban areas (Birkenhead, St. Helens, Southport, Ashton-under-Lyne, Bolton, Bury, Oldham, Rochdale, Stockport, Wigan)
- The existing 5 unitary authorities in Merseyside have European Structural Funds Objective 1 status, while much of Greater Manchester is covered by Objective 2 status.
- Older parts of Runcorn, Widnes, Ellesmere Port, Warrington and Skelmersdale should see wide-ranging regernation and environmental enhancement.
- To the north and south of the North West Metropolitan Area development will be concentrated in: [North] Blackpool, Blackburn, Burnley, Lancaster/Morecombe, Preston, Barrow-in-Furness, and Carlisle; and [South] Chester, Crewe, Macclesfield and Northwich.
- Future high demand for housing to the south of the NWMA (around western half of Wirral and Cheshire) should be resisted to encourage development in the NWMA. Provision of housing in this southern area should be based on

meeting the needs of the area's current population and its housing needs.

- Much of North Cheshire will remain as green belt for the foreseeable future.
- Urban Potential Studies and information on the availability of land suggest that long-term development needs in Greater Manchester, Lancashire, and Cheshire can be met up to at least 2016 without needing to significantly encroach upon green belts.
- GDP / capita growth in the North West has not kept pace with that of the European Union or the UK as a whole. Merseyside is one of the poorest performers in terms of GDP. The NWDA's RES sets a target to raise the level of GDP / capita to within 92 percent of the UK average by 2006.
- The region's key industrial sectors, important because of their existing scale and contribution to the regional economy, include: chemicals, textiles, aerospace, mechanical and other engineering, energy, automotive, food and drink, and land-based industries (primary agriculture and forestry).
- Up and coming sectors include: environmental technologies, life science industries, medical equipment and technology, financial and professional services, tourism, computer software and related services, and creative industries (media, advertising and public relations).
- RSS states that, "development plans should anticipate the need for existing manufacturing establishments to modernize their plant and to adapt and diversify their operations, and to undertake improvements to plant in accordance with environmental legislation, as well as general environmental enhancement".
- Manufacturing sites should be within key transport corridors, Regeneration Priority Areas, or close to existing related plants.
- RSS states that the manufacturing industry, including the key and up and coming sectors, will continue to be an important part of the industrial and employment structure of the region.
- Development plans should ensure that warehousing and distribution developments are located so as to avoid unnecessary movement of goods by road, and to make best use of the region's rail network.
- The re-development and re-use of vacant sites and buildings within urban areas should be a priority.
- The regional target is that at least 70 percent of new dwellings, including conversions, constructed in the region from April 2002 should use previously-developed land and existing buildings in sustainable locations. It's recognized that the amount of previously-developed land and buildings varies from one part of the region to another. Local targets include: Liverpool and Manchester/Salford areas – on average at least 90 percent of new housing will be built on previously-developed land; in the remainder of Merseyside and Halton, on average at least 65 percent; in the rest of Greater Manchester and Warrington, on average at least 80 percent; in Cheshire at least 55 percent; in Cumbria, at least 50 percent; and in Lancashire, at least 65 percent.
- There is a national target for the re-use of previously-developed land and buildings for new housing, it is 60 percent.
- Between 1997 and 2000 an average of 61 percent of new development in the region (excluding conversions) was provided on previously-developed land. The RSS has set a target of 70 percent of new dwellings to be provided on previously-developed land.
- The RSS states that the NWDAs RES, sub-regional strategies, development plans and neighbourhood renewal and housing strategies should identify and implement measures through regeneration strategies in order to reduce regional vacancy levels in the existing housing stock to 3 percent.
- Houses should be cleared where they are: unfit, beyond economic repair, life expired and unsuitable for modern living, in areas of extremely low demand, and contributing negatively to a failed local housing market.
- Recent levels of clearance activity have been low and focused mainly on local authority housing, but activity must be stepped up to avert a major crisis in housing stock.

- Local authority estimates, based on recent clearance activity and the current availability of financial resources, anticipate that at least 74,900 dwellings may need to be cleared over the next 25 years at a cost of at least £2.5 billion.
- There are 2.9 million dwellings in the North West. Despite high levels of owner-occupation, renting from local authorities and registered social landlords is still widespread.
- There is a large stock of high-density (around 80-100 dwellings/ha) older terraced housing and pre/post-war local authority-built housing where physical and social problems are rife.
- Most of the existing stock will continue to meet the region's housing needs over the next 20 years, but failure to maintain and make most effective use of these dwellings would increase the number of empty properties, and lead to pressures for further land release.
- The spiral of decline is accentuated in areas with much higher vacancy levels than the regional average of 4.3 percent.
- Local planning authorities should minimize the amount of land needed for new housing by reducing vacancy rates to 3 percent in the existing dwelling stock, and 2 percent within the new stock.
- Government forecasts a growth of 248,000 households between 1996 and 2016. The RSS suggests a slightly higher forecast given economic growth rates, and household formation and migration rates.

Table 5.1 DISTRIBUTION OF REGIONAL HOUSING PROVISION (Annual Average Rates of Housing Provision)

Strategic Planning Authority	Annual Average Rate of Housing Provision Net of clearance
NW Metropolitan Area and Regional Poles and Inner Cities	
Manchester	1,350
Salford	530
Liverpool	1,110
Sub Total	2,990
Rest of Former Counties of Greater Manchester, Merseyside, Halton, Warrington	
Bolton	450
Bury	230
Oldham	270
Rochdale	240
Stockport	220
Tameside	370
Trafford	270
Wigan	410
Knowsley	230
St Helens	400
Sefton	350
Wirral	160
Halton	330
Warrington	380
Sub Total	4,310
Shire Counties	
Cheshire (excluding Halton and Warrington)	1,630
Cumbria and the Lake District	1,170
Lancashire (including Blackburn with Darwen and Blackpool)	2,690
Sub Total	5,490
North West Total	12,790

- Housing provision figures take account of RSS' Core Development Principles and Spatial Development Framework which call for 25 percent of new housing provision in the conurbation cores and 60 percent within the North West Metropolitan Area.
- Provision figures also include Government's 1996-based population and household projections; regional economic forecasts outlined in the RES 2000; and the way in which households occupy dwellings, including the demand for and location of different types, size and tenure and the age and condition of the existing housing stock; and the housing land supply and development plan allocations already committed within the region.
- Annual provision rates should apply from April 2002 to 2006
- The RSS suggests that local plans and UDPs could reasonably develop long-term plans using these rates.
- The North West Regional Housing Need and Demand Research indicated an approximate growth in households in the rented sector, based on continuation of

current patterns of tenure. This may translate into higher demand for affordable housing, unless the economic situation of households improves.

- Roughly 80 percent of the North West land area is agricultural:
  - Dairy and arable farming dominate in Cheshire
  - Beef and sheep farming in upland areas of Lancashire and Cumbria
  - Arable farming and horticulture in South West Lancashire
  - The North West contains 7.1 percent of agricultural land in Grades 1 and 2 and 30.8 percent Grade 3 against England figures of 16.1 percent and 43.6 percent, respectively (Grades 1, 2 and 3a soles are the best and most versatile for agricultural purposes).
- Soils in the North West vary:
  - Rural lowlands of Cumbria and Cheshire and Lancashire plains, there are clay loam soils over boulder clays, sandy loams over alluvium, or sands and gravels and silty soils over coastal sediments
  - Rural uplands of the Penines and Lake District have peat or shallow, nutrient-poor soils on the moorlands and heavy clay soils on the lower slopes
- In 1997 roughly 17,400 farm businesses existed employing 44,600 people; by 1999 this figure had dropped to 42,000
- Forestry enterprises and renewable energy developments, such as biomass and short rotation coppice, can help to diversity the economic base and provide an energy source for local industry or community projects; biomass projects can be put toward regional targets for renewable energy
- RSS states that, “The North West of England is a major emitter of carbon dioxide and other GHGs and must play a full part in meeting Government targets for the reduction of such emissions. Over the last century the region has warmed by nearly 0.5 degree Celsius, summer rainfall has decreased by up to 20 percent and sea levels have risen. The climate in the North West has continued to change with increased temperatures likely, more winter rainfall, higher wind speeds and wave heights, and a greater incidence of storms.
- Landscapes most likely to be impacted by climate change up to 2080 are coastal zones and rural uplands
- Development plans should give priority to areas specially designated at the international or national level. (e.g. Lake District National Park, Heritage Coast and other areas of Outstanding Natural Beauty.
- Key challenge is to restore abandoned mines and quarries in the region.

Table 8.1 **Distribution of Conservation Areas, Listed Buildings and Scheduled Monuments by County**

County	Conservation Areas	Listed Building Entries*	Scheduled Monuments	Historic Parks and Gardens	Battlefields
Greater Manchester	202	3777	45	28	–
Merseyside	97	3012	37	22	–
Cheshire	200	5618	244	24	2
Cumbria	104	7536	832	19	1
Lancashire	175	5426	138	34	–

- Roughly a third of England’s sand dunes are found in the North West; Roughly 20 percent of the English total are situated along the Sefton coast.
- Target for woodland: increase regional tree cover by 10 percent (approx 1,000 ha per annum) by 2010 and at least 15 percent by 2020.
- Current tree cover in the North West is 6 percent, one of the lowest levels in England; within the region the figure ranges from 8 percent in the uplands of Cumbria to just over 4 percent in the plains of Lancashire and Cheshire, and between 2 and 3 percent in the conurbations.
- RSS flags development risk as issue and calls for building design utilizing ‘soft engineering’ structures such as swales, detention ponds, infiltration basins, and porous surfaces as alternatives to conventional drainage systems to minimize climate change-induced flooding, and environmental damage caused by uncontrolled surface run-off.
- Appropriate provision of a range of minerals in the region should be supplied. This should reflect:
  - region’s abundant reserves of salt, silica sand, gypsum and peat;
  - need to maintain land banks of permitted reserves of certain minerals

including materials for the cement industry
    - the contribution that substitute, secondary or recycled sources, or imports from outside the region, should make to overall mineral provision.
- Development plans should,
    - subject to the necessary information being available (cop out!!), identify and safeguard mineral resources to ensure that appropriate levels of current and future supplies can be maintained and indicate where future land-based extraction would or would not be appropriate.
    - Identify in broad terms the preferred after-use of extraction sites.
    - Identify, safeguard and encourage opportunities for the transportation of minerals by pipeline, rail or water, including the maintenance of existing wharves and railhead facilities and the provision of new ones and of facilities for on-shore processing and distribution of hydrocarbons.
    - Include policies to safeguard mineral resources from other forms of development.
- Government policy promotes the general conservation of minerals while ensuring an adequate supply is available to meet needs. As mineral resources are not distributed evenly across the country, some areas may make provision for larger amounts of certain minerals than its own needs justify. The North West is important national source of salt, silica sand, gypsum and peat, as well as having significant reserves of building stone, clay, shale and coal, and aggregates.
- There is a cement manufacturing plant at Clitheroe.
- It's important that the highest quality minerals are reserved for applications that require such grades. This will promote increased use of secondary and recycled materials, which may be of lesser quality.
- Development plans should encourage exploitation of minerals that might otherwise be sterilized b subsequent surface development, as far as this is practical.
- Mineral Planning Guidance Note 6 sets out regional apportionment of land-won aggregate requirements to 2006.

Table 8.2 **Sub-regional Apportionment of Aggregates in the North West 1992–2006 (million tonnes)**

	Sand and Gravel	Crushed Rock
Cheshire	37.4	6.0
Cumbria	15.5	68.8
Lancashire	11.0	88.8
Merseyside/Greater Manchester	6.6	25.2
Total	70.5	188.8

- "Aggregates – sand and gravel, crushed rock and a range of secondary materials used for construction purposes – are the most widely used minerals found within the region. Although adequate and steady supply is necessary to maintain economic growth and quality of life, this must be carefully balanced against the environmental implications of mining aggregates. Over provision of aggregates might be a disincentive to industry to use secondary or recycled minerals."
- The region is a large user of aggregates, but relies heavily on imports of material from other regions. MPG6 sets out current Government advice on planning for aggregates from 1992 to 2006. MPG6 identifies a need for 175 million tonnes of aggregate materials to be provided from primary land sources within the region (excluding Cumbria), with an additional 265 million tonnes from other sources, including imports from outside the region, marine-dredged sources and secondary or recycled materials.
- In order to maximize the role that secondary and recycled sources of aggregates play in meeting the region's mineral requirements:
    - The NWRA will develop better systems to monitor the use of secondary and recycled aggregates in construction projects.
    - The NWRA will work with the construction industry to achieve a target of 20 percent of construction aggregates to be from secondary or recycled sources by 2010 and 25 percent by 2021.
    - Work with Las and developers to incorporate temporary materials recycling facilities on the sites of major demolition or construction projects.
    - Identify in development plans, sites or criteria for the provision of permanent

recycling plants for construction and demolition waste in appropriate locations.

- MPG6 target for the reducing the proportion of aggregates from primary land-won sources to 74 percent by 2001 and 68 percent by 2006.
- In 1989 it was estimated that roughly 10 percent of national supply came from secondary sources of aggregates. MPG6 assumes that 90 million tonnes – just over 20 percent – of the 442 million tonnes of aggregates required in the NW between 1992 and 2006 will come from secondary and recycled sources.
- The Regional Aggregates Working Party will take into account the potential supply of marine dredged aggregate in contributing toward overall regional aggregate needs.
- Marine dredged sand a gravel is targeted to reach 1.6 percent of the region's demand for aggregates by 2006, an average of 467,000 tonnes a year, against a national average of 7 percent. In 1997 only 284,000 tonnes were landed in the region, against permitted licences for the extraction of 680,000 tonnes.
- Development plans should:
  - Ensure that development minimizes energy use through careful and imaginative location, design and construction techniques.
  - Positively encourage the use of energy efficient technologies and energy from renewable sources in major new developments
- The Government has proposed that 5 percent of UK electricity requirements should be met from renewable sources by the end of 2003, and 10 percent by 2010, subject to the cost to consumers being acceptable (uh huh).
- Significant opportunities exist for wind energy in Cumbria and Lancashire, both on- and off-shore. Active solar technology, including PVs, will be significant. EfW may also be important, (note: that much of the content of the waste stream that would feed EfW facilities is from non-renewable material, so it should not be regarded as a renewable energy source,) as will be CHP.
- Rural locations may benefit from small-scale biomass facilities, and energy crops.
- Roughly one quarter of the UK's derelict land is in the region.
- The Environment Agency has identified a Zone of Industrial Pollution Sources (ZIPS) covering the industrialized area from Ellesmere Port to Manchester.
- The region suffers from some of the poorest surface water quality in England and Wales due to farming practices, industrial discharges, sewerage and sewage treatment infrastructure.
- Some 13 percent of the region's watercourses, mainly in the Mersey Basin, are classified as 'poor' or 'bad'. *** need to check this figure against new data.
- RSS states, "Because of the rapidly diminishing landfill capacity in the region, WDAs should work with stakeholders to significantly reduce the volume of biodegradable waste sent to landfill, in accordance with the national waste strategy and the requirements of the EU Landfill Directive.
- Regional waste management should reflect the following principles:
  - The waste hierarchy includes:
    - Waste minimization
    - Re-use
    - Recycling
    - Composting and energy recovery, where recycling and composting options are not appropriate.
  - Disposal through 'landraising' should be discouraged and regarded as a last resort; ****what is landraising?
  - Regional self-sufficiency principle: most waste should be treated or disposed of within the region in which it is produced.
  - Proximity principle: waste should generally be managed as near as possible to its place of production, to minimize the environmental impact of transporting waste.
- Roughly 19 million tonnes of solid household, commercial and industrial waste is produced each year in the region.
- Various measures encourage diversion of waste from landfill:
  - Landfill tax

  - EC's landfill Directive which imposes challenging mandatory reductions on the landfilling of biodegradable municipal waste
  - Requirements for the pre-treatment of waste and prohibition of landfilling of certain hazardous waste, liquid waste and tires, and co-disposal practices.
- Region needs for development of centralized recycling facilities, bio-treatment through composting and anaerobic digestion, and energy recovery from waste facilities using environmentally friendly technologies.
- Additional landfill capacity should only be required where preferred alternatives do not meet the overall capacity requirement. And, siting of landfills should be such that it meets the needs of those parts of the region where alternatives are not viable.
- The region currently disposes of much of its urban waste in rural landfills.
- Recycling levels for household waste are around 6 percent for the region as a whole.
- Provisional estimates of C&D waste are around 35 percent.
- The following waste management options have been assessed in line with their potential to achieve Landfill Directive targets for municipal waste diversion:
  - Increased recycling alone
  - Bio-treatment of green waste by composting, using civic amenity sites or home composting, coupled with increased recycling
  - Centralized bio-treatment via a materials-recycling facility (MRF) coupled with increased recycling
  - Energy from waste (EfW) introduced region-wide, coupled with increased recycling
  - EfW introduced in the main urban areas, coupled with increased recycling throughout the region.
  - Intensive recycling with bio-treatment in urban areas and composting / anaerobic digestion in rural areas
  - EfW in the Mersey Belt and centralized bio-treatment in remaining sub-regional areas coupled with increased recycling
  - Minimal EfW in main urban areas, centralized bio-treatment and increased recycling.
- New waste management facilities should, where possible, be accessible by rail or by water, with existing wharves and railheads protected.

North West Economic Strategy

- Under the RES, there is a drive to improve the competitiveness and productivity of businesses.
- Contains a target for 70 percent of new housing to be built on previously developed land by 2008.

North West Housing Strategy

- Strategy recognizes importance of nesting itself within the objectives laid out in the regional economic and spatial strategies, as well as *Action for Sustainability.*
- Sustainable development is at the heart of the housing strategy.
- Restricting greenfield development and promoting brownfield development in urban areas is key.
- Birmingham University's Centre for Urban and Regional Studies (CURS) has completed a study of the North West's M62 Corridor and, another study that looks at the entire region. The latter was prepared for the North West Housing Forum in 2003.
- There are roughly 3 million dwellings in the North West. The tenure profile resembles the national situation.
- *Owner occupation* is somewhat higher (69%) than the national average, as is *social renting* (20%). *Private renting* is slightly lower (11%) than the national average.
- The English House Conditions Survey indicates that roughly 36 percent of homes are do not meet the 'Decent Homes' standard. The national average is 33.5%.
- The North West has the highest housing unfitness levels in the country (8.5% in 2002).
- On average the region has seen 18,000 housing units built annually between 1998 and 2002. The Regional Planning Guidance contains a target average provision rate of 12,790 dwellings per year. This figure is net of any replacement of demolished homes.

- The number of private sector demolitions (625 per year between 1997 and 2001) are the highest in the country. Local authority demolitions average 2,400 per year over the same period.
- The North West has the highest proportion of empty property in England (4.5 % of the stock across all tenure types). This equates to over 130,000 in 2002.
- Local authorities in the North West estimate that 40 percent of England's low-demand properties are in the region; almost 440,000 or 14.7 percent of the region's homes.
- The Government's Neighbourhood Renewal Fund (NRF)has designated 88 *areas* across the country that require investment to improve the health of communities. Twenty-one of these eighty-eight areas are in the North West. The North West thus has more NRF areas than any other region.
- Housing strategy recognizes links between the principles of sustainability and housing. These include energy efficiency, innovative design of homes, and providing affordable warmth. A further link is made to the quality of design and architecture.
- The strategy encourages mentions environmentally aware methods of construction and makes the claim that the benefits of such methods include improved housing quality, and enhancements to the speed and cost of construction.
- The Housing Corporation is committed to delivering 25 percent of their programmes using *modern methods of construction*, although these are not defined explicitly.
- The strategy also highlights the potential benefits of intelligent design and the benefits that this can have on the ability of new or remodelled homes to respond to changing user needs.
- The Housing Board encourage the adoption of 'Lifetime Homes' standards in both new-build and renovation projects. These homes allow for 'aging-in-place'; something that will become more and more relevant in the North West as the proportion of elderly people in the region increases.
- The North West has the largest concentrations of low-demand housing areas in the country. Some of the extreme cases of low-demand are found in parts of Greater Manchester, Lancashire and Merseyside. Areas of low-demand fuel the decentralization trend as more and more people move from urban cores to high-demand suburban and semi-urban/rural housing markets.
- There are nine Market Renewal Pathfinder areas in England. Four of these areas are located in the North West: East Lancashire (Blackburn, Burnley, Hyndburn, Pendle and Rossendale); Manchester and Salford; Merseyside (Liverpool, Sefton, and Wirral); and Oldham and Rochdale.
- Report by Birmingham University's CURS estimates that 1,038,000 households in the region are at risk from changing demand. This equates to 37 percent of the region's homes. The local authority estimate of properties in low demand in 2002 was 438,000.
- To avoid the negative effects of low demand the Housing Board will direct *housing pot* resources to the remodelling or demolition of obsolete housing stock; repair and renovation of housing stock with a long-term viable future; and construction of new and replacement housing. Adoption of *Lifetime Homes* and *New Tools* will be encouraged.
- North West Regional Intelligence Unit is conducting research into housing and migration issues. The research will look at the links between the low- and high-demand areas and the impacts of developments in one on the other.
- The physical state of homes in the region is a concern. Pre-1919 terraced homes are often in particularly poor condition. A large proportion of this housing stock is nearing the end of its useful life. Moreover, they are often occupied by people who are unable (because of age or low income) to afford or undertake essential repairs or improvements.[1]

[1] Low indoor temperatures are associated with greater incidence of heart attacks and strokes, and cold and damp can cause a number of respiratory diseases.

- The Government aims to take 80,000 vulnerable households in the private sector, and make them 'decent' by 2006. To this figure a further 130,000 will be added by 2010. A wide range of financial help tools will be made available for the improvement of privately owned homes, including loans.
- The Housing Corporation has a policy that housing associations should repair and modernize their stock in areas of continuing demand ahead of subsidizing new housing or non-core activities.
- The Housing Corporation has targets for off-site house manufacturing.
- The s*ingle housing pot* for the North West is £243 million for 2004/05 and £249.5 million for 2005/06.
- According to the NWDA, there is a forecast shortage of skilled labour in construction and related trades. The region's development aspirations will be threatened if this skills shortage is not addressed.
- ODPM wants to achieve a better balance between housing availability and the demand for housing in all regions while protecting valuable countryside around towns and cities in the greenbelt.
- ODPM wants to bring all social housing into decent condition by 2010, with the majority of this improvement occurring in deprived areas.
- DEFRA wants to reduce fuel poverty among vulnerable households by improving energy efficiency of 600,000 homes between 2001 and 2004.

North West Transport Strategy

- The RTS should: enhance the Trans-European Networks (TENs); deliver effective multi-modal solutions to the conveyance of goods, people and services, especially at major hubs; provide more efficient transport interchanges; provide attractive gateways and transport corridors; allow for the use of new technology to enhance travel; provide high quality public transport in urban and rural areas; encourage environmentally friendly modes of transport (walking, cycling, canals, etc)
- Major new development must be located where access to public transport exists or can be created.
- Priorities of strategy: high quality public transport, investment in key transport corridors, and gateways and interchanges.
- Manchester airport is the region's largest airport and the third largest in the UK. Making better use of existing facilities and exploring the potential for off-site facilities is important given the location of the airport within the Green Belt.
- The region has 9 active ports, of which the Port of Liverpool is by far the most dominant.
- Port-related traffic can impact on congestion and environmental quality on approach routes to ports. Demand is growing for warehousing, light industrial and storage/transit facilities at the ports themselves, and for quicker more reliable transit times for port-bound traffic.
- Rail and road links to most regional ports are poor, and when combined with competition from ports in neighbouring regions, is likely to restrain future growth. Improved access is vital to future economic competitiveness.
- Small amounts of freight are carried by inland waterways such as the Weaver Navigation. RSS suggests there is "little scope for inland waterways and navigable rivers to play a strategic role in the internal transportation of goods in the region."
- The Strategic Rail Authority and freight transport companies should assist the transfer of freight from road to rail through the provision of new, strategically located, inter-modal interchanges to serve the region.
- Road haulage accounts for 96 percent of all goods moved in the region, but is becoming increasingly affected by congestion on the region's highway network.
- The rail network has potential to move a greater volume of freight, however, the potential for growth is constrained by network capacity and financial limits.
- Loading gauge enhancements, when combined with the latest development in wagon technology, offer significant

potential for the development of the inter-modal freight business.
- Highway authorities in the region should seek to achieve a minimum target of a 40 percent reduction in the number of people killed or seriously injured in road accidents by 2010, compared to the average for 1994 to 1998. Also, a minimum target of a 50 percent reduction in the number of children killed or seriously injured should be met by regional highway authorities.

North West Waste Strategy

- Period of rapid and radical change; driven by EU legislation, government targets and need to reduce dependence on landfill
- Strategy emphasizes need to de-couple growth from waste arisings
- Regional arisings growing year on year leading to increasing environmental and social costs
- Waste Disposal Authorities (WDA) beginning to develop Municipal Waste Management Strategies (MWMS); being done in conjunction with Waste Collection Authorities (WCA)
- North West Regional Assembly required to produce Regional Waste Strategy to assist local authorities, businesses, waste management industry, households, etc
- NWRA responsible for overseeing the implementation of WMS, the RPG and the RSS
- North West has traditionally been reliant on landfills as main method of disposal; perpetuated through abundance of old mineral sites that represent voids in need of filling at a very cheap cost
- Co-disposal (special and non-hazardous waste mixed together) has been tradition but this practice ended in 2004; all sites must now be designated as either 'inert' (non-hazardous), or 'hazardous'
- Waste management is two-tier; district / borough councils (WCAs) collect waste, while county councils (WDAs) provide waste disposal services; some local authorities are 'unitary' with respect to waste management and carry out both functions
- 1997 / 1998 North West generated almost 20 million tonnes of commercial/industrial, construction and demolition waste
- Waste minimization, reuse and recycling is familiar to paper, metal and distribution sectors in particular, while other sectors remain largely ignorant of these practices
- As private contractors are employed by industry to handle waste, data collection is difficult to coordinate; this makes it difficult to forecast arisings, and hence needed treatment capacity, over time
- EU Landfill Directive: 75% of 1995 levels by 2010; 50% of 1995 levels by 2013; 35% of 1995 levels by 2020
- Other EU Directives: End-of-Life Vehicles (ELV); Waste Electrical and Electronic Equipment (WEEE); Ozone Depleting Substances Regulations (Waste Fridges and Freezers); Packaging and Packaging Waste Directive; Directive on Incineration of Waste; Biowaste Directive
- England and Wales Waste Strategy 2000 targets: recover value from 40% of MSW by 2005; recover value from 45% of MSW by 2010; recover value from 67% of MSW by 2015; including to: recycle and/or compost 25% of HHW by 2005; recycle and/or compost HHW by 2010; recycle and/or compost HHW by 2015
- In 2002 government suggested increasing recycling/composting target to 45% of HHW by 2015; the Municipal Waste Recycling Bill suggested that a target of 50% by 2010 is appropriate
- The commercial/industrial waste target in WS2000 is to reduce arisings sent to landfill to 85% of 1998 levels by 2005/06
- Las must prepare Municipal Waste Management Strategies taking into account WS2000 targets and principles
- LAs that achieve a recycling/composting rate of <5% of MSW in 1998/99 must increase this to at least 10% for 2003/04 and 18% by 2005/06
- LAs that achieve a recycling/composting rate between 5 – 15% in 1998/99 must double this rate for 2003/04 and treble it in 2005/06
- Other LAs must recycle or compost at least one third of MSW in 2003/04
- Waste and Emissions Trading Bill (when adopted as legislation) will allow WDAs to

trade 'permits' based on amount of waste they send to landfill

- If North West fails to achieve the Landfill Directive targets, a series of heavy fines (up to £180 million per year) from the EU to the UK Government, will be levied. These would be passed on to households and business through Council taxes waste management charges.
- Businesses will suffer from increased costs
- In 1997/98 the North West generated: 23.6 million tonnes of controlled waste comprising: 3.6 million tonnes of MSW; 3.1 million tonnes of commercial waste; 6.7 million tonnes of industrial waste; and 10.2 million tonnes of C&D waste.
- In 2000/01 roughly 10 million tonnes of all waste types was deposited in landfills in the region. Roughly 90 percent of all MSW was disposed in landfills in this period.
- The region has roughly 5-6 years of capacity remaining at current rates of disposal.
- MSW arisings continue to grow at roughly 3 percent per annum
- The North West recycled only 8.9 percent of HHW in 2001/02.
- The North West Regional Technical Advisory Board (NWRTAB) foresee two likely scenarios to achieve waste targets based on assumed waste arisings growth rate of 3 percent/annum.
- Two scenarios include increased recycling through kerbside collection; increased composting of biodegradable waste; new energy recovery facilities; continued disposal of residues in landfills

Table 1. *Number of facilities required to meet statutory targets under NWRTAB scenarios no. 7 & 8 (numbers are averages of both scenarios put together)*

Sub Regional Area	No. of Composting Facilities Required	No. of MRFs Required	No. of EfW Facilities Required	Residual Landfill Capacity Required
Cheshire	5	4.5	1	5,404
Cumbria	3.5	3	1	3,794
Greater Manchester	14	15	4.5	21,403
Lancashire	11	7	1.5	11,016
Merseyside	7	8	2	9,891
Warrington & Halton	1.5	2	1	2,350
North West Total	42	40	11	53,859

- Table 1 figures are based on assumed facility sizes: composting facility capacity @ 20,000 tonnes/annum; material recovery facility (MRF) @ 50,000 tonnes/annum; energy from waste (EfW) @ 200,000 tonnes/annum; landfill capacity x 1,000 m^3
- This means that a significant number of facilities are needed to meet targets
- At 3 percent annual growth in waste arisings, the amount of waste generated in the North West will double in the 20 years
- WMS encourages manufacturers to reduce packaging but provides no incentives to do so
- WMS sets target for the annual growth rate in waste arisings: 2% by end of 2006
- WS2000 has target of 33 percent recycling/composting by 2015; Municipal Waste Recycling Bill suggests this should be 50 percent by 2010
- The North West Waste Strategy includes the following targets: recycle and/or compost 25% HHW by 2005; recycle and/or compost 35% of HHW by 2010; 45% HHW by 2015; 55% HHW by 2020
- Achieving Landfill Directive diversion targets will be harder than achieving national targets, and will likely require reliance on EfW facilities
- There is currently one municipal waste incinerator in the North West
- Regional targets with respect to recovering energy from waste include: recover value from 40% of MSW by 2005; 45% of MSW by 2010; recover value from 67% of MSW by 2015
- There will be continued reliance on landfills in the region, and an ultimate need for additional capacity; between 24

– 34% of MSW will continue to be landfilled with 28% of commercial wastes; the NW has 5-6 years of landfill capacity at current levels of disposal, but requires an additional 50 million m^3 of capacity over the period to 2020.

- In 2000 the region landfilled roughly 325,000 tonnes of special waste and this figure is expected to double with the reclassification of waste as hazardous
- The Environment Agency expects number of hazardous waste facilities to go from 21 in 2003 to 3 in 2004; this may result in a shortfall in capacity of roughly 500,000 tonnes each year from 2004
- Region divided into several administrative sub-regions including: Cumbria, Lancashire, Cheshire; Greater Manchester, Merseyside and Mid-Mersey (Warrington and Halton boroughs)
- The existence of brownfield sites in urban environments may make it possible to locate certain waste facilities like material recovery, transfer facilities and RDF plants.
- The Regional WS recommends that WDAs take responsibility for the management and disposal of their municipal waste arisings wherever possible in their own administrative areas.
- If mechanical/biological treatment (MBT) and refuse derived fuel (RDF) technologies are utilized in order to meet targets for reducing waste growth, increasing recycling/composting, recovering value from waste, and providing landfill capacity, then the number and type of waste facilities could change from Table 1.

Table 2. If mechanical/biological treatment (MBT) and refuse derived fuel (RDF) technologies are utilized

Sub Regional Area	No. of Composting Facilities Required	No. of MBT Plants	No. of MRFs	No. of RDF Plants	Residual Landfill Requirement
Cheshire	4	3	2	3	5,302
Cumbria	2	2	1	2	3,632
Greater Manchester	12	12	6	14	23,095
Lancashire	8	5	3	7	10,829
Merseyside	8	6	3	7	11,372
Warrington & Halton	2	1	1	2	2,467
North West Total	36	29	16	35	56,697

- Table 2 includes following assumptions: composting @20,000 tonnes/annum; MBT @ 60,000 tonnes/annum; MRFs @ 50,000 tonnes/annum; RDF plants burning 40,000 tonnes/annum; landfill capacity x 1,000 m^3
- Some commercial / industrial waste will be handled by facilities that also deal with MSW, but there will be need for some new facilities that only handle commercial / industrial wastes

MRF Facilities	Thermal Facilities	Annual Landfill Requirement
23	3	3,900

Table 3. Draft regional waste strategy commercial and industrial waste capacity per annum

Composting facilities	MRF Facilities	Thermal Facilities	Annual Landfill Requirement
0	1,150,000 tonnes	600,000 tonnes	3,900,000 m^3

Assumes: MRFs @ 50,000 tonnes/annum; thermal treatment facilities @ 200,000 tonnes/annum; landfill capacity x 1,000 m^3/annum

- Regional WS states, "For many companies this means providing links between manufacturers where one's waste product is another's raw material, or education about the costs of waste production and disposal.
- Composting not considered to be feasible for most elements of the commercial waste stream by the NWRTAB.
- NWRTAB suggested that up to 35 percent of all commercial / industrial wastes could be recycled by 2012, mostly through MRFs.
- NWRTAB suggests that to achieve the WS2000 targets, 38 percent of the general waste stream (from these

sectors) could be treated by thermal recovery by 2020.

- Regional WS states, "Commercial / industrial waste streams will, in the future, retain dependency on landfill as a means of disposal, both for hazardous and non-hazardous wastes." This will result in 3.9 million m^3 of landfill capacity being needed per annum.
- Regional waste strategy aims for following with respect to commercial / industrial waste: achieve and retain 0% growth in amount of wastes produced through 2020, without compromising economic viability of the region; recycling 35 percent of all C&I waste by 2020; recover value (including recycling) from at least 70 percent of all C&I wastes by 2020; provide sufficient treatment and landfill capacity for these waste streams up to 2020 – approximately 4 million m^3/annum
- Facilities for the treatment of C&I waste should be sited as close to the source of the waste as possible in order to satisfy the proximity principle and ensure that volumes of waste are not transported around the region or exported from it.
- In 1998/99 the region produced about 10.2 million tonnes of C&D waste. Of this, 3.2 million tonnes was recycled as aggregate, 1.2 million tonnes was reused at sites exempt from waste management control and 2.1 million tonnes was disposed at landfill sites. The general conclusion is that roughly 80% of C&D waste is being put to beneficial use.
- The Regional Waste Strategy encourages the use of recycled C&D waste in construction projects and also encourages developers and contractors to specify these materials wherever possible in the construction process.
- RWS aims to link to the National Waste Awareness Initiative
- Enworks has a waste minimization module "Rethink Waste".
- New waste management technologies are important to the North West in terms of the potential for job creation. If existing engineering and manufacturing industries can be engaged to look at the development of these types of processing technologies the economy of region would benefit.
- A review of the WS2000 is expected in 2005. Likely that targets will be tightened.
- There is a recognition of the expected ascendancy of linkages between the waste management sector and reprocessing/manufacturing sectors in the future. This essentially requires the planning of waste/reprocessing parks, however, nothing like it exists in the North West at present.

Environmental Sustainability Index

North West Environmental Sustainability Indicators

Headline Indicators	Sub-Headline Indicators
Waste arisings in the NW	• Municipal waste
	• C&I waste and other waste streams
Waste management practices in the NW	• Municipal waste
	• C&I waste and other waste streams
	• Municipal waste recycling and composting rates
Waste management facilities in the NW	• Number and type of facilities
	• Capacity of facilities
	• Number and type of facilities exempted from licensing controls
Waste management planning and policy	• Number and type of planning applications made and determined
	• Status of MWMS
	• Development plan policies and allocations

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