

**CITY OF YORK LOCAL PLAN
MINERALS AND WASTE JOINT
PLAN**

**WASTE AND MINERALS
TECHNICAL PAPER**

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1. INTRODUCTION

1.1 Purpose of Technical Paper

1.1.1 This technical paper is one of a series of papers that are being prepared to provide the evidence base for the City of York Local Plan and the Minerals and Waste Joint Plan. An initial Technical Paper was published in May 2013. The information has now been updated to include the findings of the various specialist studies that have subsequently been carried out. It summarises information on waste and minerals that is available at this stage. The key sources of this information are the following reports.

Waste

- Report of the Director of Commercial Services, Director of Resources and Deputy Chief Executive to Council's Executive. Waste Management Strategy 2002-2020 reviewed and amended. 9 November 2004.
- Report of the Director of Neighbourhood Services to Council Executive. Waste Management Strategy 2008-2014. 23 September 2008.
- York and North Yorkshire Waste Partnership. Let's Talk Less Rubbish. Headline Strategy. A Municipal Waste Management Strategy for the City of York and North Yorkshire 2006-2026. June 2006.
- Defra. Government review of waste Policy in England. 2011
- Resources and Urban Vision. Waste Arisings and Capacity Requirements Interim Report. October 2013
- Resources and Urban Vision. Waste Arisings and Capacity requirements Final report. October 2013
- Resources and Urban Vision. Waste Arisings and Capacity Requirements Addendum Report May 2015
- Yorkshire and Humber Waste Planning Authorities. Yorkshire and Humber Waste Position Statement July 2014
- Defra. Waste Management Plan for England, December 2013
- CLG. National Planning Policy for Waste. October 2014

Minerals

- British Geological Survey. Yorkshire and the Humber Region: Sand and gravel resources and environmental assets. 2005.
- British Geological Survey. Mineral resource Information in Support of National, Regional and Local Planning: North Yorkshire (comprising North Yorkshire, Yorkshire Dales, North York Moors and City of York). 2006
- Land Use Consultants for Yorkshire and Humberside Regional Assembly. Phase 2 Sand and Gravel Study for Yorkshire and Humber appraisal of environmental options. November 2007.
- British Geological Survey. West Yorkshire sand and gravel resources. Investigating the potential for an increased sub-regional apportionment. 2009.
- CLG. National and regional guidelines for aggregates provision in England 2005-2020. June 2009.
- CLG. National Planning Policy Framework. February 2012

- North Yorkshire County Council, City of York Council, Yorkshire Dales National Park Authority and North York Moors National Park Authority. Local Aggregate Assessment for the North Yorkshire Sub-region. January 2013.
- British Geological Survey. Mineral safeguarding areas for the City of York. 2013
- The Coal Authority. Coal Bed Methane Licensing Maps. June 2010.
- British Geological Survey. City of York sand and gravel assessment. 2013.
- URS. Marine Aggregates Study. January 2014.
- North Yorkshire County Council, City of York Council, Yorkshire Dales National Park Authority and North York Moors National Park Authority. Local Aggregate Assessment for the North Yorkshire Sub-region. First review. February 2015.

1.1.2 In addition there have been various reports prepared by officers of the three Authorities to support the preparation of the Joint Plan that can be found in the Evidence Base section of the Joint Plan web site at www.northyorks.gov.uk/mwevidence

1.1.3 Evidence gathering to support the Local Plans is an ongoing process and further evidence is likely to become available as the Local Plans progress through subsequent stages.

1.1.4 It is also recognised that waste management and minerals planning should be considered alongside other spatial planning matters such as transport, housing, the economy and employment and the built and natural environment. Waste and minerals can make a positive contribution towards sustainable development and the development of sustainable communities. They also have impacts for communities and the natural and built environment. It is important to recognise therefore that there are strong linkages between this technical paper and other evidence base studies that underpin and support the Local Plans. These studies can be found on the City of York Council and North Yorkshire County Council's web sites.

1.2 Current Position of the Local Plans

1.2.1 The approach that City of York is taking in relation to waste and minerals is to incorporate strategic policies on waste and minerals in the City of York Local Plan with detailed policies and proposals brought forward in a joint Waste and Minerals Local Plan prepared with North Yorkshire County Council and North York Moors National Park Authority. The Joint Plan will contain a suite of policies to be used when assessing planning applications for minerals and waste developments. It will also contain site allocations for future minerals and waste activity. It is important that the two local Plans are aligned.

1.2.2 This approach recognises that waste and minerals are specialist topics and it is usual for such plans to cover a larger geographical area than that

covered by the City of York. There are also strong functional links for many aspects of waste and minerals especially between City of York and North Yorkshire. The joint plan provides a mechanism for formally addressing strategic cross-boundary issues and it will also contain detailed policies for waste and minerals. It is not appropriate therefore to duplicate these policies in the City of York Local Plan. However, it is necessary to provide the strategic context for these policies in the City of York Local Plan.

1.2.3 A City of York Local Plan Preferred Options report was published for consultation during summer 2013. A 'Local Plan Further Sites consultation' took place in summer 2014. The 'Local Plan Publication Draft and Proposals Map' were considered by the Local Plan Working Group in September 2014, their views were reported to Cabinet for further consideration and the drafts were approved to go out for consultation. However, a motion was submitted in October 2014 that halted the consultation whilst further work is undertaken. Following elections in May 2015, the new administration stated that '*we will prepare an evidence-based Local Plan which delivers much needed housing whilst focusing development on brownfield land and taking all practical steps to protect the green Belt and the character of York*'. It is anticipated that a new Publication Draft and Policies Map will be published for consultation early in 2016.

1.2.4 The current timetable for the production of the Minerals and Waste Joint Plan was agreed in 2013 and is currently under review. Consultation on Issues and Options took place early in 2014. This included initial details of minerals and waste sites submitted to the Authorities for consideration as to whether they were suitable for inclusion in the Joint Plan. One of the outcomes from the Issues and Options consultation were the submission of new and revised sites which have subsequently been put out for consultation in a Supplementary Sites document in January 2015. This consultation has now closed and a summary of responses is available to view on the Joint Plan web site. It is expected that a consultation on Preferred Options will commence in early November 2015.

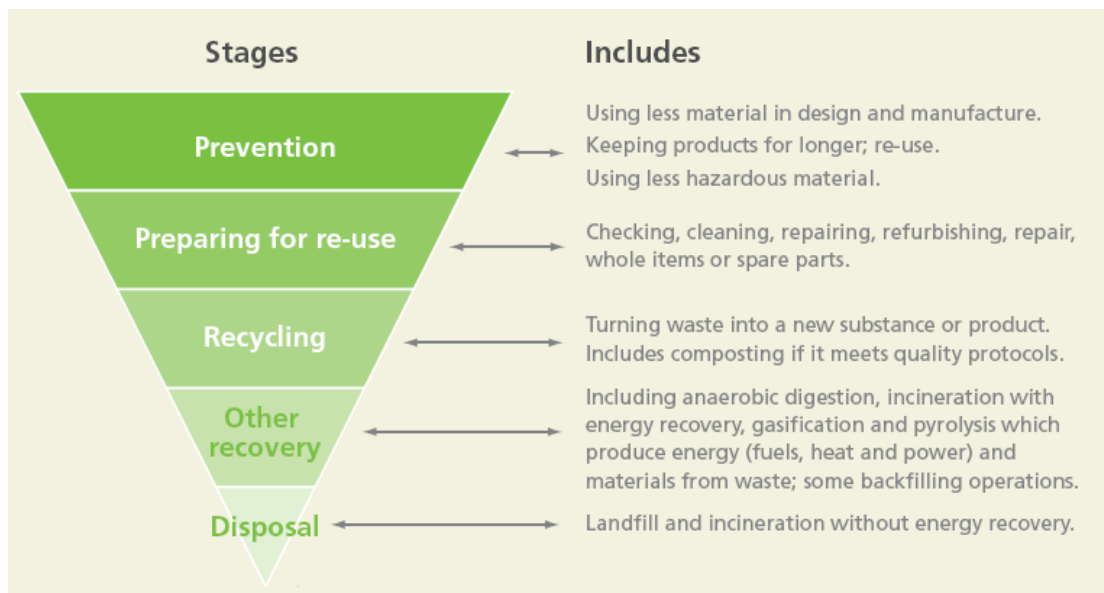
2. WASTE

2.1 Policy Context

European Policy

2.1.1 The Waste Framework Directive (75/445/EEC) introduced the Waste Hierarchy as a means of protecting the environment and human health. This has been at the heart of all subsequent policy and legislation on waste management. It is focused on looking at means to reduce, recycle and recover waste, before options for recovery of energy from waste, and then disposal of residues are considered. The revised waste hierarchy has been incorporated in to the Waste Management Plan for England (Dec 2013) and the National Planning Policy for Waste (Oct 2014).

Figure 1 The Waste Hierarchy



Source: Defra 2011

2.1.2 The Directive set targets for waste treatment in member states, including;

- Recycle 50% of household waste by 2020
- Recycle 70% of construction, demolition and excavation waste by 2020

2.1.3 With regard to these targets the Government has stated in the Waste Management Plan for England that *'the most recent statistics show that the rate of recycling for waste from households in England continues to increase towards the EU target of recycling 50% of household waste by 2020 [and the] 70% target for recovering construction and demolition waste is already being exceeded'*.

2.1.2 The EU Landfill Directive 1991 was the key driver behind most national legislation aimed at making waste management more sustainable. The Directive aimed to reduce biodegradable waste being landfilled and to drive waste management up the waste hierarchy. The Directive set binding and demanding targets to achieve this. It also required the pre-treatment of all wastes being landfilled where this is technically feasible; banned certain types of waste from landfill and required the classification of landfill sites for inert waste, hazardous waste or non-hazardous waste with standards that waste must meet to be accepted at these classes of site. The Directive has had very significant financial consequences for local authorities if they fail to achieve its overall objectives and individual targets. The Directive's overall aim was *'to prevent or reduce as far as possible negative effects on the environment, in particular the pollution of surface water, groundwater, soil and air, and on the global environment, including the greenhouse effect, as well as any resulting risk to human health, from the landfilling of waste, during the whole life-cycle of the landfill'*.

2.1.3 The Landfill Directive / Regulations sets three targets at the national level aimed at reducing the amount of Biodegradable Municipal Waste (BMW) disposed of to landfill: by 2010, reduce the amount of BMW landfilled to 75 percent of that produced in 1995; by 2013, reduce the amount of BMW landfilled to 50 percent of that produced in 1995; and by 2020, reduce the amount of BMW landfilled to 35 percent of that produced in 1995.

2.1.4 In June 2011 the Government announced that the UK had met the 2010 target for the diversion of BMW from landfill. The latest data produced by Defra for 2012, shows BMW to landfill already within the requirements of the 2013 target and the 2020 target (10.2 mt). Based on the latest assumptions, levels of BMW to landfill in England are expected to be around 3.5 million tonnes in 2020.

2.1.5 The Landfill Allowance Trading Scheme (LATS) was launched on 1st April 2005 and was a key tool in meeting landfill diversion targets set by the European Landfill Directive. However, the 2011 Review of Waste Policy in England announced that the Scheme would cease after 2012/13, with reliance remaining on the Landfill tax system as a key incentive for local authorities to reduce the waste they send to landfill.

2.1.6 Since 1996 the Landfill Tax has been a tax on the disposal of waste. It aims to encourage waste producers to produce less waste, recover more value from waste, for example through recycling or composting and to use more environmentally friendly methods of waste disposal. There are 2 rates with inert or inactive waste being subject to a lower rate, currently £2.60 per tonne. The standard rate is currently (2015/16) £82.60 per tonne. The 2015 Budget announced that both rates of Landfill Tax will increase in line with RPI from April 2016. It is a key driver in diverting waste from landfill.

National Waste Planning Policy

2.1.7 The Government published the National Planning Policy Framework (NPPF) in 2012. The NPPF does not contain specific waste policies, therefore

PPS 10 'Planning for Sustainable Waste Management' (July 2005) remained in force until October 2014 when a separate National Planning Policy for Waste (NPPW) was published. In addition accompanying the NPPF, the Government has consolidated a number of planning practice guidance notes, circulars and other guidance into a single Planning Practice Guidance suite that is available as an on-line resource. Most of this guidance was issued in March 2014 but it is revised and updated as appropriate. It contains a waste section that provides further information in support of the NPPF and NPPW.

2.1.8 The NPPF states that *'local authorities preparing waste plans and taking decisions on waste applications should have regard to policies in this Framework so far as relevant'* (paragraph 5). Of particular relevance is the presumption in favour of sustainable development. The NPPF state that *'at the heart of the National Planning Policy Framework is a **presumption in favour of sustainable development**, which should be seen as a golden thread running through both plan-making and decision-taking'* (paragraph 7).

2.1.9 The National Planning Policy for Waste (NPPW) supersedes PPS10 as the key national waste planning policy document. It sets out *'detailed waste planning policies and should be read in conjunction with the NPPF, the Waste Management Plan for England and National Policy Statements for Waste Water and Hazardous Waste, or any successor documents. All local planning authorities should have regard to its policies when discharging their responsibilities to the extent that they are appropriate to waste management'*.

2.1.10 The NPPW provides more detail on the term *'proportionate evidence base'* used in the NPPF and states that in preparing Local Plans, Waste Planning Authorities should:

- *ensure that the planned provision of new capacity and its spatial distribution is based on robust analysis of best available data and information, and an appraisal of options. Spurious precision should be avoided;*
- *work jointly and collaboratively with other planning authorities to collect and share data and information on waste arisings, and take account of:*
 - *waste arisings across neighbouring waste planning authority areas;*
 - *any waste management requirement identified nationally, including the Government's latest advice on forecasts of waste arisings and the proportion of waste that can be recycled; and*
- *ensure that the need for waste management facilities is considered alongside other spatial planning concerns, recognising the positive contribution that waste management can bring to the development of sustainable communities'.*

2.1.11 Waste Planning Authorities are advised that they should identify sufficient opportunities within their Local Plan that meet the identified needs of the area for the management of waste. It states that Waste Planning Authorities should:

- *undertake early and meaningful engagement with local communities so that plans, as far as possible, reflect a collective vision and set of agreed priorities when planning for sustainable waste management, recognising that proposals for waste management facilities such as incinerators can be controversial;*
- *drive waste management up the waste hierarchy, recognising the need for a mix of types and scale of facilities, and that adequate provision must be made for waste disposal;*
- *in particular, identify the tonnages and percentages of municipal, and commercial and industrial, waste requiring different types of management in their area over the period of the plan;*
- *consider the need for additional waste management capacity of more than local significance and reflect any requirement for waste management facilities identified nationally;*
- *take into account any need for waste management, including for disposal of the residues from treated wastes, arising in more than one waste planning authority area but where only a limited number of facilities would be required;*
- *work collaboratively in groups with other waste planning authorities, and in two-tier areas with district authorities, through the statutory duty to cooperate, to provide a suitable network of facilities to deliver sustainable waste management;*
- *consider the extent to which the capacity of existing operational facilities would satisfy any identified need'.*

2.1.12 The Planning Act 2008 provided for the production of National Planning Statements (NPS) on Nationally Significant Infrastructure Projects (NSIPs) such as major energy from waste facilities, wastewater treatment plants and hazardous waste facilities. The *National Policy Statement for Waste Water* was published in February 2012 and the *National Policy Statement for Hazardous Waste* in June 2013 (updated July 2013).

Regional and Local Planning Policy

2.1.13 The Yorkshire and Humber Plan (the Regional Spatial Strategy) was published in 2008 and provided a broad development strategy for Yorkshire and the Humber for 15 to 20 years. It included policies to address housing, agriculture, minerals, energy and waste, as well as sub regional policies. The plan contains 3 waste management policies. Policy ENV12 aims to reduce, reuse, recycle and recover as much waste as possible, by ensuring the integration of strategies and proposals for sustainable waste management. It states that local authorities should support the urgent provision of a combination of facilities and other waste management initiatives which best meets environmental, social and economic needs for their areas. Policy

ENV13 requires waste planning authorities to ensure that adequate sites and facilities are available to manage the various waste streams taking into account benchmark figures set out in the Plan. It also aims to support the provision of additional recycling infrastructure and businesses. Policy ENV14 sets out broad strategic locational criteria for waste management facilities, which should be considered when Waste Planning Authorities choose site-specific site allocations or criteria based approaches.

2.1.14 The Yorkshire and Humber Plan, except for policies that relate to the Green Belt around York, was revoked by the Government in January 2013. The abolition of regional strategies makes the local plan the keystone of the planning system. The abolition of the Regional Strategy for Yorkshire and Humber (with the exception of the York Green Belt policies) places the responsibility for strategic planning upon local councils, including City of York. Local councils in the region are now responsible for planning for cross-boundary, strategic matters in local plans through the duty to co-operate. City of York Council recognises that waste has significant cross-boundary linkages with other councils, in particular North Yorkshire County Council. A City of York, North Yorkshire and North York Moors Minerals and Waste Joint Plan is being prepared in recognition of these functional linkages and to satisfy the duty to co-operate.

2.2 Waste Information

2.2.1 The quality, reliability and detail of waste data for different waste streams varies considerably. Data on Municipal Solid Waste (MSW) is monitored in detail on a regular basis and good quality data is available. Data on Commercial and Industrial Waste (C&I) is less well documented. Occasional surveys are undertaken and national estimates are produced. Other than PPC regulated businesses, there are currently no formal reporting requirements for businesses with respect to material flows or waste arisings. Other sources of information, e.g. waste transfer notes or regulatory returns from permitted waste management facilities, are not centrally collated and are not detailed or wide ranging enough to provide a reliable measure of the scale of C&I waste arisings, methods of treatment or movements.

2.2.2 Construction, Demolition and Excavation Waste (CD&E) is poorly understood. Periodic surveys are undertaken at a national level. A large and growing proportion of C&D waste is re-used or recycled on site and does not therefore enter the waste stream. Data on Hazardous Waste is monitored on a regular basis and reported through the Environment Agency's Special Waste Tracking database that holds information on arisings, movements and treatment/disposal of hazardous waste. Agricultural Waste became classed as a controlled waste in 2006 and data is poor, although it is hoped that estimates of the controlled element will be improved in the future.

2.2.3 Having regard to the paucity of good quality information, especially at the local level, North Yorkshire County Council, City of York Council and North York Moors and Yorkshire Dales National Park Authorities commissioned Urban Vision and 4Resources to prepare an assessment of waste arisings and capacity requirements for all controlled wastes in the North

Yorkshire sub-region. The findings of the initial study were presented in two reports published in 2013 – Part 1 Report: assessment of waste arisings; and Part 2 Report: assessment of local waste capacity, presentation of forecast scenarios, capacity gap assessment and identification of gaps. The work was updated in 2015 in an Addendum Report.

2.2.4 The assessment focused on arisings in the principal waste streams – Local authority Controlled Waste (LACW), C&I waste, CD&E waste and hazardous wastes which are a component of the other waste streams. A range of forecast scenarios were evaluated based on three different assumptions about future growth in waste arisings in the various streams which were combined with three different assumptions about future changes in the proportion of wastes that would be recycled, composted, re-used, recovered or disposed. These parameters were referred to as Growth and Behaviour factors respectively. The assessment was informed by the most accurate up-to-date information available at that time, in most cases 2011/12.

2.2.5 Urban Vision prepared an Addendum Report in May 2015 to update the earlier information and assessment, taking into account changes in EU and national policy and consultation responses on the earlier reports. Copies of all three reports are available on the Joint Plan web site.

2.2.6 North Yorkshire County Council (NYCC) has prepared a detailed evidence paper for the Joint Plan that presents waste specific information, much of which has been sourced from the consultants' reports.

2.2.7 This technical paper draws heavily on the consultants' reports and the NYCC evidence paper. It attempts to draw out the information that is particularly relevant to City of York, but does not attempt to reproduce the detail contained in the other reports. It should therefore be read in conjunction with these other reports.

2.3 Waste Arisings and Deposits

2.3.1 Research undertaken by Urban Vision and 4Resources has provided estimates of the amount and type of waste arising within the North Yorkshire Sub-region and its constituent Waste Planning Authorities. Table 1 shows waste arisings in the North Yorkshire Plan area, City of York and North York Moors National Park for Local Authority Collected Waste (LACW) and Hazardous waste in 2013 and Commercial and Industrial (C&I) waste, Construction, Demolition and Excavation (CD&E) waste, and Agricultural waste in 2011. The estimates of Agricultural Waste are based upon number of farm dwellings within the respective areas and are by far the biggest contributor of waste arisings. However, the vast majority of this is managed on the farm site where it arises through exempt management practices, with only a small element, approximately 32,000 tonnes, requiring off site management.

Table 1: North Yorkshire, City of York and North York Moors National Park Waste arisings in tonnes. 2011 and 2013

	LACW	C&I	CD&E	Hazardous	Agricultural
North Yorkshire	330,346	582,643	627,590	23,479	2,347,889
City of York	92,134	168,083	141,174	6,036	168,403
North York Moors NP	11,325	6,915	-	-	1,135,923

Source: Urban Vision and 4Resources

LACW and Hazardous waste data relates to the calendar year 2013

C&I waste extrapolations for 2011 are estimates based upon the North West Regional Survey (2009), excludes Power & Utilities Waste which is deposited at restricted user sites

CD&E waste refers to deposits, as arisings data is not currently available

North Yorkshire CD&E waste deposits includes North York Moors and Yorkshire Dales National Park data

2.3.3 In addition to the 2011 waste arisings data for the North Yorkshire plan area, updated waste arisings for the Joint Plan area as a whole are provided in the 2015 Addendum to the research undertaken by Urban Vision and 4Resources. This information is provided in the table below and shows waste arisings in the Joint Plan area for Local Authority Collected Waste (LACW), Construction, Demolition and Excavation (CD&E) waste and Hazardous waste in 2013 and Commercial and Industrial (C&I) waste and Agricultural waste in 2015.

Table 2: Joint Plan Area Waste Arisings in tonnes. 2013 and 2015

	LACW	C&I	CD&E	Hazardous	Agricultural
Joint Plan area	415,214	758,000	384,664	29,515	4,581,443

Source: Urban Vision and 4 Resources

LACW and Hazardous waste data relates to the calendar year 2013. LACW does not include local authority trade waste or hazardous waste and therefore does not sum from the local authority specific data above.

C&I waste extrapolations for 2015 are estimates based upon the North West Regional Survey (2009) and exclude Power & Utilities Waste which is deposited at restricted user sites

CD&E waste arisings are a minimum estimate calculated by deducting estimated hazardous CD&E waste and transfer CD&E waste from the CD&E waste arisings total

2.3.3 The estimates provided for C&I waste arisings in 2011 and 2015 are based upon extrapolations from the North West Regional C&I Survey (2009), as explained in the table above. The research suggests that the main waste

producing sectors are food & drink and the commercial sectors. LACW arisings are based upon information provided directly by the Waste Management Authorities. Arisings of Hazardous waste within the North Yorkshire Plan area are relatively small and information is provided by the Environment Agency's Hazardous Waste Interrogator.

2.3.4 The Environment Agency produces annual datasets of the amount and type of waste deposited within Waste Planning Authority areas, and the methods by which this waste was managed. The table below provides a brief overview of the total amount of waste managed by various methods in North Yorkshire.

Table 3: Total Waste received by Waste facilities in City of York. 2013

	Landfill	Treatment	Recycling	On/In Land	Use of Waste		Total		Transfer
North Yorkshire	1,643,332	269,382	87,755	53,481	-		2,053,950		428,985
City of York	293,686	66,831	89,648	-	-		450,165		95,245
Yorkshire & Humber	4,934,205	4,764,089	2,648,510	573,129	366,689		13,286,622		4,837,638

Source: Environment Agency Waste Interrogator

2.3.5 The data in Table 3 has been sourced from the Environment Agency's Waste Interrogator and therefore only applies to waste facilities that are required to hold an Environmental Permit. Not all waste facilities are required to hold Environmental Permits due to exemptions and thresholds set out in the Environmental Permitting Regulations. The data will therefore represent an underestimate of the total amount of waste managed. The data shows that landfill remains the dominant management method in City of York and is much higher than in the region as a whole.

Local Authority Collected Waste

2.3.6 Total waste arisings dealt with by City of York Council and their disposal methods are shown in Table 4. This shows that City of York is steadily reducing the amount of waste arisings but in the last 3 years the recycling rate has reduced from a high of 46.4% in 2011/12 to 44.1% in 2014/15. This can be attributed to a combination of factors such as improvements in the production and use of packaging (more use of lighter weight materials and less use of glass), decrease in the sale of newspapers (less material to recycle) and general reductions in household expenditure due to the recession. All these are likely to have contributed to a decrease in the percentage of waste that is recycled.

Table 4: Local Authority Collected Waste Arisings and Disposal Methods

Year	Total Waste Arisings* (tonnes)	Waste Landfilled (tonnes)	Waste Recycled (%)
2006/07	122,380	74,210	39.9
2007/08	118,600	68,040	43.4
2008/09	113,780	62,750	45.2
2009/10	106,290	60,300	43.3
2010/11	102,459	55,576	45.1
2011/12	101,070	53,490	46.4
2012/13	97,003	52,149	46.0
2013/14	93,985	52,469	43.6
2014/15	93,431	52,375	44.1

Source: City of York Council

*includes municipal and hazardous waste

2.3.7 For municipal waste City of York Council works closely with North Yorkshire County Council through an Inter-Authority Agreement. The councils have been working jointly for several years to secure a waste treatment facility to divert biodegradable municipal waste from landfill. North Yorkshire County Council has granted planning permission for a new mechanical treatment, anaerobic digester, energy from waste plant and incinerator bottom ash plant at the Allerton aggregates quarry and landfill site. The facility is currently under construction with commissioning expected in 2017. The incinerator will have capacity to deal with 320,000 tonnes per annum, but it is expected that it will typically treat 305,000 tonnes per annum of waste, principally municipal solid waste. The development of the Allerton energy from waste plant will mean that no other sites will be required for the treatment of municipal waste in the City of York Council area in the plan period.

2.3.8 By-products which will be produced include incinerator bottom ash (IBA) and Air Pollution Control (APC) residue. It is expected that 50,000 tonnes per annum of IBA will be produced. The planning consent permits the construction of an onsite IBA processing facility which will have the capacity for 50,000 tonnes per annum. It is expected that approximately 38,000 tonnes per annum will be recycled to produce secondary aggregate which can be used in construction.

2.3.9 The developer estimates that approximately 13,000 tonnes per annum

IBA residue and 15,000 tonnes per annum APC residue would be generated. The APC is a hazardous waste and is proposed to be transported off site in sealed tankers to a hazardous landfill site which is anticipated to be Knostrop in Leeds, but the developer has indicated that the situation will be reviewed before the development moves into the operational phase. It is expected that the IBA residue which cannot be recycled will be disposed of at the adjacent non-hazardous landfill (Allerton Park) or another suitably licenced landfill, but this will also be reviewed before the development moves into the operational phase.

Commercial and Industrial Waste

2.3.10 Defra commissioned a national survey of C&I waste arisings which determined the total tonnage of C&I waste produced in England and its 8 regions in 2009. The resulting report (The Jacobs Report) *Commercial and industrial waste Survey 2009* was published in December 2010. The results of this survey represent the most up-to-date, reliable and comprehensive set of national data on C&I waste.

2.3.11 The survey found that the total C&I waste arisings in England in 2009 was 48 million tonnes, split evenly between commercial and industrial businesses. In addition it was estimated that a further 2.5 million tonnes of blast furnace slag and virgin timber were not captured by the survey.

2.3.12 The previous national C&I national survey in 2002/03 had found a total of 67.9 million tonnes, so the decrease in 2009 was 29%, despite the total business population increasing by 10%. The data on management methods showed the significant effect of fiscal and regulatory policy on waste arisings since 2002/03, with landfilling decreasing from 41% to 23% and recycling increasing from 15% to 48%.

2.3.13 The survey found that 15% of the total arisings (6.94 million tonnes) were in the Yorkshire & Humber Region, the highest percentage of the nine regions. Mineral waste accounted for 2.7 million tonnes. 2 million tonnes were disposed of in landfill sites whilst 3.1 million tonnes were recycled.

2.3.14 Two regions (London and the South West) funded additional surveys and for these regions the results were broken down by Waste Planning Authority area. Unfortunately WPA results are not available for Yorkshire and Humber region.

2.3.15 The research undertaken by Urban Vision and 4Resources has produced an estimate of C&I waste arisings within the North Yorkshire Sub-region based upon data extrapolated from the North West Region Survey (2009), the results of which are shown in Table 5. This suggests that the City of York produces a total of 170,000 tonnes of C&I waste arisings.

Table 5: North Yorkshire Sub-region 2015 C&I Waste Arisings (Tonnes) extrapolated from North West Region C&I Survey (2009). Excludes Power & Utilities Waste

	Commercial & Industrial Waste
North Yorkshire Sub-region	758,000
North Yorkshire	588,000
City of York	170,000

Source: Urban Vision and 4 Resources. 2015

Construction, Demolition and Excavation Waste

2.3.16 The research undertaken by Urban Vision and 4Resources has produced estimates of 2013 CD&E waste arisings within the North Yorkshire Sub-region, the results of which are shown in Table 6. The total CD&E waste arisings within the Sub-region in 2013 was in the order of **384,664 tonnes**. However, the Report states that given the uncertainty about fate of material passing through transfer stations and the lack of information about exempt sites which includes utilising waste for reclamation purposes, the estimates should be regarded as a minimum estimate of the quantity of local arisings. The majority of this is excavation waste, accounting for approximately 74%, with construction & demolition waste accounting for the remainder. There is likely to be an uneven geographical distribution of CD&E arisings across the Sub-region with most arisings concentrated in urban areas.

Table 6: CD&E 2013 Waste Arisings in the North Yorkshire Sub-region. Excludes CD&E waste deposited at 'registered exemption' sites

Waste Stream	Tonnes
Construction & Demolition Waste	101,000
Excavation Waste	291,600
Total CD&E	392,600
Total CD&E (Excluding Hazardous Waste)	384,664

Source: Urban Vision and 4 Resources. 2015

Agricultural Waste

2.3.17 Information from Defra indicates that in 2012 there were 248 farm holdings in City of York. Urban Vision and 4Resources have estimated that these holdings would produce 168,403 tonnes of agricultural waste, assuming

that each holding in the North Yorkshire sub-region as a whole produces the same quantity of waste. They estimate, however, that only 1210 tonnes would be managed off site. The caveats regarding the accuracy of data on agricultural waste referred to in paragraph 2.2.3 should be noted.

Low Level Radioactive Waste

2.3.18 There is no reliable information on low level radioactive waste arisings in City of York. However, a survey carried out by Urban Vision and 4Resources in 2013 suggested that arisings are low.

2.4 Waste Management Facilities

2.4.1 The major waste facility in City of York is at Harewood Whin, located near Rufforth and owned and operated by the council's existing waste contractor, Yorwaste. The site includes a non-hazardous landfill, leachate treatment plant, landfill gas generation plant, recycling plant and wind-row composting facility. The landfill site is the only such facility within the City of York area and has planning permission until 2017 to accept up to 300,000 tonnes of waste per annum. However, reduced volumes of waste are being disposed to landfill which may mean that the site is not full by 2017, hence enabling the operators to seek planning permission to allow operations to continue for a longer period.

2.4.2 In 2013 Yorwaste submitted a planning application for a material recycling facility, waste transfer station and associated development on Green Belt land immediately to the south of their existing site. The Council decided to grant planning permission but the application was called-in by the Secretary of State. Yorwaste subsequently withdrew the application and are currently preparing for a new application for similar development but within the existing site.

2.4.3 The Council also operates two household waste recycling centres at Hazel Court and Towthorpe. A third recycling centre at Beckfield Lane was closed in 2012 following an evaluation of provision in York.

2.4.4 Yorwaste also operate a waste transfer station at Hessay with a capacity of 49,000 tonnes per annum (tpa) of C&I and CD&E waste. Other transfer stations in City of York are located at Outgang Lane (5000 tpa of CD&E waste), Outgang Lane (25,771 tpa of C&I and CD&E waste), Rufforth Airfield (5027 tpa of C&I and CD&E waste), Woodhouse Farm (1861 tpa of C&I and CD&E waste) and Caltal (5000 tpa of CD&E waste).

2.5 Waste Movements

2.5.1 Most waste is transported some distance for disposal and recovery. In general inert wastes that cause least risk are dealt with close to the point of arising whereas more difficult wastes need to be transported further to specialist facilities. This is particularly the case for hazardous waste. Information on waste movements, including the types and quantities of waste deposited and their origin, can be obtained from the returns which operators

of waste management facilities submit to the Environment Agency. Whilst some operators do not consistently record waste origins, in Yorkshire and Humber this is only 4% of the tonnage so good information is available. At this stage information only regional information is available and this is summarised in the following paragraphs.

2.5.2 In 2010 14.9 million tonnes of waste was deposited at sites in the region, of which over 80% arose from within the region. Imports were mainly from the North West, North East and East Midlands regions. 9.5 million tonnes were household, commercial and industrial waste of which over 70% originated from within the region. 5 million tonnes were inert, construction and demolition waste of which over 90% originated from within the region. 460,000 tonnes of hazardous waste were deposited of which just over 50% originated from within the region.

2.5.3 Over 90% of landfill deposits, over 80% of transfer station deposits and just under 80% of treatment deposits originated from within the region.

2.5.4 At least 508,000 tonnes of waste were exported from the Yorkshire and Humber Region in 2010 and the Environment Agency considers that this is likely to be a significant under-estimate. The main regions receiving waste from Yorkshire and Humber were East Midlands (208,000 tonnes), the North West (115,000 tonnes) and the North East (108,000 tonnes).

2.6 Future Waste Management Needs

2.6.1 Factors that are likely to influence future waste arisings include the landfill tax and its escalator, which make it increasingly cost-effective to minimise, re-use or recycle C&I and C&D wastes, and the Aggregates Levy, which encourages re-use of C&D waste. There is also the impact of producer responsibility measures, such as the Packaging, ELV and Batteries Directives, and of integrated product policy initiatives to be considered. Similarly, the Landfill (England and Wales) Regulations require pre-treatment and encourage diversion whilst the costs of disposal of hazardous waste have increased. These influences all encourage producers to minimise, reuse or recycle waste.

2.6.2 Although continued economic growth will tend to lead to increases in waste arisings, through greater activity in the provision of goods and services all of which will produce waste, the correlation need not be linear because the instruments mentioned above are largely acting to break the link between growth and waste arisings. This is an explicit policy aim in government waste policy.

Forecasts in the RSS (revoked)

2.6.3 Assumptions must be made for further growth, or otherwise, for different waste streams and projections will vary according to the waste stream being considered. Key assumptions were made in setting sub-regional waste apportionment in the former RSS (Policy 46), for MSW and C&I waste.

2.6.4 The Yorkshire and Humber Plan (RSS) (now revoked) contained growth forecasts for MSW and C&I waste for the period up to 2021. As well as regional figures, there are forecasts for each Waste Planning Authority area including City of York. It is stressed that these are not intended to be a detailed forecast but to provide a suitable benchmark for the preparation of local development documents. The relevant figures are set out in Tables 8 and 9.

Table 8: Forecasts for Municipal Solid Waste

Area	Tonnes to be managed 2005 ('000 tonnes/pa)	Tonnes to be managed 2010 ('000 tonnes/pa)	Tonnes to be managed 2015 ('000 tonnes/pa)	Tonnes to be managed 2021 ('000 tonnes/pa)
Y&H Region	2,908	3,033	3,183	3,384
North Yorkshire	494	522	551	589
NYCC	375	395	416	443
City of York	119	127	135	146

Source: The Yorkshire and Humber Plan. May 2008

Table 9: Forecasts for Commercial and Industrial Waste*

Area	Tonnes to be managed 2005 ('000 tonnes/pa)	Tonnes to be managed 2010 ('000 tonnes/pa)	Tonnes to be managed 2021 ('000 tonnes/pa)	Tonnes to be managed 2021 ('000 tonnes/pa)
Y&H Region	8,936	8,869	8,8913	8,985
North Yorkshire	954	969	995	1,029
NYCC	678	688	706	730
City of York	276	281	289	299

*excludes closed gate

Source: The Yorkshire and Humber Plan. May 2008

2.6.5 The RSS also contained forecasts of capacity requirements to manage the forecast C&I waste by disposal/treatment method and these are set out in Tables 10 and 11.

Table 10: Landfill Capacity Required for C&I Waste*

Area	2005 ('000 tonnes)	2010 ('000 tonnes)	2015 ('000 tonnes)	2021 ('000 tonnes)
Y&H Region	2,949	2,927	2,941	2,965
North Yorkshire	315	320	328	340
NYCC	224	227	233	241
City of York	91	93	95	99

*excludes closed gate

Source: The Yorkshire and Humber Plan. May 2008

Table 11: Treatment Capacity Required for C&I Waste*

Area	2005 ('000 tonnes)	2010 ('000 tonnes)	2015 ('000 tonnes)	2021 ('000 tonnes)
Y&H Region	5,987	5,942	5,972	6,020
North Yorkshire	639	649	667	689
NYCC	454	461	473	489
City of York	185	188	194	200

*excludes closed gate

Source: The Yorkshire and Humber Plan. May 2008

2.6.6 The RSS noted that whilst a limit should be put on the provision of landfill capacity, there will still be a need to landfill the residual elements of MSW and C&I waste after treatment.

2.6.7 The RSS also estimated the additional waste capacity required in the region to manage these quantities of MSW and C&I waste. Relevant figures are set out in Table 12 which show the additional capacity needed. However, these estimates were not broken down to Waste Planning Authority area.

Table 12: Additional capacity required to manage MSW and C&I Waste

Area	Required capacity 2010 (‘000 tonnes p/a)	Required capacity 2015 (‘000 tonnes p/a)	Required capacity 2021 (‘000 tonnes p/a)
Y&H Region	3,682	1,554	4,690
North Yorkshire	864	1,554	1,069

Source: The Yorkshire and Humber Plan. May 2008

City of York Forecasts

2.6.8 City of York Council has produced projections for the amount of MSW and hazardous waste that will need to be managed by the Council over the next two decades. The figures are based on zero growth in existing domestic properties but allow for additional waste arisings from new households. In addition there will be further such arisings not managed by the Council and further work is needed to identify the levels of these arisings. The Council’s waste projections are shown in Table 13. These projections date from 2011 but have not yet been updated to take account of more recent information.

Table 13: Projections of Waste Arisings

Year	Total Waste Arisings (tonnes)	Residual Waste (tonnes)
2011/12	103,877	53,000
2012/13	104,627	52,855
2013/14	105,374	53,383
2014/15	106,120	53,917
2015/16	106,862	54,456
2016/17	107,602	54,802
2017/18	108,340	55,146
2018/19	109,075	55,488
2019/20	109,808	55,829
2020/21	110,539	56,167
2021/22	111,267	56,504
2022/23	111,992	56,840

2023/24	112,716	57,174
2024/25	113,436	57,506
2025/26	114,155	57,836
2026/27	114,871	58,165
2027/28	115,585	58,492
2028/29	116,296	58,818
2029/30	117,005	59,142
2030/31	117,712	59,464

Source: City of York Council. Core Strategy Submission Document. 2011

Urban Vision and 4Resources Forecasts

Capacity

2.6.9 Urban Vision and 4Resources have undertaken research which includes assessing capacity of waste management facilities within the North Yorkshire Plan area. Table 14 shows the estimated capacity of waste management facilities. The information includes facilities with planning permission but not yet operational. It does not include restricted user landfill sites or Barnsdale Bar Landfill and Long Lane Landfill sites in North Yorkshire which were not operational but did have theoretical capacity when the report was written.

Table 14: Estimated Waste Management Capacity in the Joint Plan Area 2015

Waste Management Method	May 2015 Estimated Capacity (tonnes per annum)
Landfill	693,000
Anaerobic Digestion	197,000
Composting	112,000
Household Waste Recycling Centres	93,000
Incineration with Energy Recovery	675,000
Recycling (CD&E)	223,000
Recycling	721,000
Transfer	718,000
Treatment	115,000

Source: Urban Vision and 4 Resources Addendum Report. May 2015

2.6.10 Table 15 summarises the projected 2030 capacity of waste facilities within the Joint Plan area based upon current planning permission and Environment Agency licence capacity data and end dates. It does not include restricted user landfill sites or Barnsdale Bar Landfill and Long Lane Landfill sites in North Yorkshire which at the time of producing the information were assumed to be inactive over the plan period. The capacity projections are based upon waste streams or combinations of waste streams, due to the fact that facilities often accept more than one type of waste management stream.

Table 15: Projected Waste Management Capacity in Joint Plan area 2030

Waste Management Stream	2030 Projected Capacity (tonnes per annum)
Local Authority Collected Waste (LACW)	100,000
Commercial and Industrial (C&I) waste	542,000
Construction, Demolition and Excavation (CD&E) waste	203,000
LACW and C&I	1,011,000
C&I and CD&E	938,000
LACW and C&I and CD&E	259,000

Source: Urban Vision and 4 Resources Addendum Report. May 2015

Capacity Requirements

2.6.11 The research undertaken by Urban Vision and 4Resources projects waste arisings within the North Yorkshire Sub-region up to 2030 based upon a number of scenarios and growth assumptions, and compares these against existing waste management capacity in order to identify any potential capacity gap.

Local Authority Collected Waste

2.6.12 For the early part of the Joint Plan period continued reliance on landfill for LACW would be required, pending development of the AWRP facility. If AWRP were not commissioned reliance on landfill may need to continue and a capacity gap for anaerobic digestion and other recovery processes of LACW would exist.

2.6.13 However, as AWRP is currently being developed and expected to be operational in 2017, no specific capacity gap in LACW management facilities would exist for the Plan period, on the assumption that exports of recyclate continue as is currently the case although the Waste Management Authorities in the area have indicated that some additional facilities, such as transfer facilities, may be needed in order to provide an adequate overall geographical network of capacity.

Commercial and Industrial Waste

2.6.14 The Urban Vision and 4Resources research projects C&I arisings up to 2030 based upon a number of scenarios and growth assumptions, and compares these against existing waste management facilities in order to calculate a potential capacity gap.

2.6.15 The research suggests that under the majority of scenarios there is a recycling capacity gap at the beginning of the plan period until the Allerton Waste Recovery Park (AWRP) becomes operational. A small capacity gap for recycling of C&I waste at the end of plan period is projected only under one scenario which calculates high waste growth and high recycling rates. There is a capacity gap for the recovery of energy from suitable C&I waste under a number of the scenarios tested, but only until AWRP becomes operational. A capacity gap for landfill of C&I waste is only projected under the baseline scenario where no increase in recycling or recovery is assumed. In addition to this, the research identifies a small potential capacity gap for the landfilling of hazardous C&I waste, although the amount would not justify specific provision in the Plan area.

Construction, Demolition and Excavation Waste

2.6.16 The Urban Vision and 4Resources research projects CD&E arisings up to 2030 based upon a number of scenarios and growth assumptions, and compares these against existing waste management facilities in order to calculate a potential capacity gap. This has resulted in the identification of a predicted significant shortfall in capacity for facilities to recycle CD&E waste, primarily the construction and demolition element, throughout the majority of the plan period. In addition to this, a potentially significant capacity gap has been identified for landfill of CD&E waste, particularly over the latter part of the Plan period.

2.6.17 With regard to the current management of 'construction and demolition waste', information from the Environment Agency Waste Interrogator shows that in 2013 over 520,000 tonnes was sent to landfill in the Joint Plan area, around 64% of total 'construction and demolition waste' deposits, and over 135,000 tonnes was managed at treatment facilities.

3. MINERALS

3.1 Policy Context

3.1.1 Minerals underpin our modern economy. They are essential for manufacturing and energy supply. They also provide the materials to build the homes, schools, hospitals and infrastructure needed by sustainable communities. Minerals extraction is one of many pressures on land-use in the UK and it is the purpose of our planning system to address these competing demands.

3.1.2 Mineral working is different from other forms of development as it can only take place where the mineral occurs. Mineral planning determines when and where minerals are extracted by providing a framework integrating protection of the environment with the need for the minerals industry to maintain our economy and way of life. The planning system addresses national, regional and local issues and encourages public involvement throughout. It has an important role to play in contributing to the Government's strategy for promoting sustainable development.

3.1.3 Government policies for mineral planning are contained in the National Planning Policy Framework published in March 2012. The special place of mineral planning is recognised by the NPPF devoting a separate chapter to the subject of 'Facilitating the sustainable use of minerals'. The policy states that 'minerals are essential to support sustainable economic growth and our quality of life. It is therefore important that there is sufficient supply of material to provide the infrastructure, buildings, energy and goods that the country needs. However, since minerals are a finite natural resource, and can only be worked where they are found, it is important to make the best use of them to secure their long-term conservation' (paragraph 142). The NPPF then sets out a list of requirements for local planning authorities in preparing Local Plans and a similar list of requirements for them in determining planning applications. Mineral planning authorities are required to plan for a steady and adequate supply of aggregates and industrial minerals.

3.1.4 Accompanying the NPPF, the Government has consolidated a number of planning practice guidance notes, circulars and other advice into a single Planning Practice Guidance suite which is available as an on-line resource. Most of this guidance was issued in March 2014 but it is revised and updated as appropriate. This replaces the 'Technical Guidance to the National Planning Policy Framework' that was published with the NPPF in March 2012.

3.1.5 The emphasis placed on minerals in the NPPF and the need for additional technical guidance reflects the specialist nature of mineral planning and the fact that before the publication of the NPPF, previous Governments had published very extensive policy and guidance on minerals, through a series of Mineral Policy Statements (MPSs), separate from the main series of Planning Policy Statements. The over-arching MPS (Planning and Minerals – MPS 1) was published in 2006 and was accompanied by a practice guide offering examples and principles of good practice and background

information. Before this, MPS 2 (Environmental Effects of Mineral Working) had been published in 2005.

3.1.6 Previously mineral planning policy and advice was provided in a series of 15 Minerals Planning Guidance Notes which were published between 1988 and 2004. These covered general mineral planning matters; guidance on specific minerals including coal (MPG 3), aggregates (MPG 6), peat (MPG 13) and silica sand (MPG 15); and guidance on specific topics such as reclamation (MPG 7) and noise control (MPG 11). All these MPSs and MPGs have now been superseded by the new NPPF.

3.1.7 There are currently no active mineral workings in City of York. However, the British Geological Survey has identified areas within York offering potential resources of sand and gravel. Aggregates are the most commonly extracted and used construction materials in the UK, comprising about 75% by tonnage of all land-won mineral extraction. In 2005 216.1 million tonnes were consumed in England including 11.9 m tonnes from marine landings. Although the mineral planning system in the UK applies to all minerals, the foundations of the system relate to aggregates.

3.1.8 The managed supply system for aggregates has been an important part of minerals planning policy and practice for 40 years. Regional Aggregates Working Parties (RAWPs) were established in all regions in England and in Wales in the 1970s. The system included the periodic collection and analysis of the RAWPs' findings as the basis for national policy guidelines and national integration of the work of the RAWPs by a National Coordinating Group. This led to the publication of the first national supply *Guidelines* for aggregates provision in England and Wales in 1982.

3.1.9 From 1982 until 2012 the fundamentals of the system remained largely intact. The *Guidelines* became part of *Mineral Planning Guidance Note 6: Aggregates* in 1989 and updated in 1994. They were then detached as a separate document again in 2003 before being included within the Aggregates Annex to MPS 1 in 2006 and new *Guidelines* were issued by Government in June 2009.

3.1.10 The Coalition Government abolished Regional Strategies, Regional Development Agencies and regional Government Offices. This had a significant impact on the managed aggregates supply system and the NPPF makes no reference to the word "Region" or 'Regional'. RAWPs have been replaced by 'Aggregate Working Parties' and the sub-regional apportionment has been replaced by a '*Local Aggregate Assessment*'. The NPPF states that Mineral Planning Authorities should '*plan for a steady and adequate supply of aggregates by making provision for the land-won and other elements of their Local Aggregate Assessment*' (paragraph 145).

3.1.11 In accordance with the NPPF, a Local Aggregate Assessment for the North Yorkshire sub-region was published in 2013 and a First Review of the LAA was published in February 2015. The LAA confirms that no sand and gravel sites have been worked in the City of York during the last 10 years,

there are currently no reserves with planning permission and does not envisage any of the requirement for the period 2014-2030 being provided by City of York.

3.1.12 RSS Policy ENV4 aimed to safeguard mineral deposits by maximising use of secondary aggregates, and where this is not possible, undertake primary extraction as needed. It sought to reduce aggregate production from National Parks and Areas of Outstanding Natural Beauty and to make provision for the extraction of sand and gravel based on the regional sand and gravel study. The RSS anticipated that a total of 73 million tonnes of land-won sand and gravel would be required for the period 2001-2016 and made a sub-regional apportionment to deliver this tonnage. There was no apportionment to City of York. As noted in paragraph 2.1.18 the RSS was formally revoked in January 2013.

3.1.13 The regional sand and gravel study referred to in Policy ENV14 was carried out by Land Use Consultants who developed and appraised spatial options for revised sub-regional apportionments but these were not accepted by either the industry or the local authorities. The study effectively has been superseded by the Local Aggregate Assessment for the North Yorkshire Sub-region.

3.1.14 The City of York Local Plan Deposit Draft 1998 identified an Area of Search for sand and gravel extraction between Upper Poppleton, Rufforth and the north western boundary of the district. This was part of a wider Area of Search identified in the North Yorkshire Minerals Local Plan. It was stated that its primary purpose was to offer long-term flexibility and that any prospective developers would be encouraged to investigate the possibility of moving extracted materials by rail. The 1998 Local Plan also included policies on the sterilisation of unworked minerals, on criteria against which any proposals for sites would be assessed and on after-use of mineral workings.

3.1.15 The 1998 Local Plan also noted that the planning permission for the Selby Coalfield extended into the southern part of the District as far as Copmanthorpe, Bishopthorpe and Elvington. Apart from an access shaft to the coal seam there was no working in or below City of York. The Selby mine ceased production in 2004.

3.2 Mineral Resources

3.2.1 Mineral resources are natural concentrations of minerals that are or may become of potential economic interest as a basis for the extraction of a mineral product. Areas that are of potential economic interest may change with time.

Sand and Gravel

3.2.2 A study by the British Geological Survey (BGS) in 2005 identified broad areas of sand and gravel resources in the Yorkshire and Humber region, including resources potentially suitable for use as aggregate in concrete. These glacial, glacio-fluvial and river terrace deposits occur principally in the

central and northern parts of North Yorkshire, including the valleys of the Rivers Swale and Ure, the Vales of Mowbray and York, the Derwent and Leven valleys and in the area of the City of York.

3.2.3 The above study helped to inform another BGS report *Mineral resource Information in Support of National, Regional and Local Planning: North Yorkshire (comprising North Yorkshire, Yorkshire Dales, North York Moors and City of York)*, published in 2006. The purpose of this report was to assist all interested parties involved in the preparation and review of development plans both in relation to the extraction of minerals and the protection of mineral resources from sterilization. It provides a knowledge base, in a consistent format, on the nature and extent of mineral resources and the environmental constraints which may affect their extraction. It covers sand and gravel, crushed rock aggregate, chalk, brick clay, industrial limestone, silica sand, potash, salt, building stone, coal and hydrocarbons.

3.2.4 The report and accompanying maps show that the majority of the area of the City of York is underlain by mineral resources.

3.2.5 In 2013 BGS carried out an updated assessment of sand and gravel resources within City of York. The study concludes that, although large volumes of sand and gravel are present within York, the majority of these are lower quality, heterogeneous resources in heavily developed areas. Glaciofluvial sediments, which are the most heavily worked sand and gravel resource within the North Yorkshire sub-region, are not as common in the York area and, where present, are generally of lower quality, with a low proportion of coarse material which limits their use for concreting aggregate.

3.2.6 Three areas are identified in the study as being most prospective for concreting sand and gravel. These are:

- Between Upper Poppleton and Knapton - although clean sands and some gravel are proved here the resources are largely sterilised by existing development.
- East of Bishopthorpe - these sediments contain fine to medium sand overlying gravels. They are less constrained by existing development than those closer to York but sterilisation is still an issue.
- East of Grimston - these comprise some of the most heterogeneous resources comprising up to 3m of sand and gravel overlying till.

3.2.7 In addition to deposits with potential for concreting sand and gravel the study has identified significant tonnages of fine, wind-blown sands. Although unsuitable for use as concreting aggregate they may be suited to applications such as building sand, which are also worked elsewhere in the North Yorkshire sub-region. These deposits are located to the north of York and are best identified as a resource to the east of Earswick and Strensall, with an outlying area to the north east of Stockton on Forest. The areas in question are identified on maps included within the BGS 2013 report.

3.2.8 A further review of the above locations has taken place in August 2014 to help understand the potential, if any, for development of sand and gravel

resources in the City of York Council area. This is necessary as national planning policy for minerals indicates that all areas with resources should make a contribution to meeting requirements for minerals. The review was undertaken via visits to the locations identified above on 11 August 2014 and via a GIS based review of key constraints. The main findings are summarised below

3.2.8 Area between Upper Poppleton and Knapton. This resource area lies mainly along or immediately to the east of the York outer ring road, with a small outlying area to the north west of Nether Poppleton. The small area to the north west of Nether Poppleton is significantly constrained by the proximity of public rights of way, poor road access and proximity to residential development. A number of listed buildings are in relatively close proximity. Total estimated resource in this area (minus urban areas) is 2.1mt. The larger area along and to the east of the ring road is significantly constrained by surface development (mainly residential, commercial and infrastructure) and proximity to residential development. Although the total potential resource (minus urban areas) in this area is quite large (estimated at 27.7mt), it is highly fragmented.

3.2.9 East of Bishopthorpe This resource area lies mainly to the west of the A19 and south of the A64 and is crossed by the latter road. The total estimated resource (minus urban areas) is 16mt. The northern part of the area is substantially sterilised by existing surface development including retail and recreational uses and farm buildings. An overhead power transmission line also crosses the southern part of the area. The resource is significantly fragmented. A site of special scientific interest lies adjacent to the western most part of the area.

3.2.10 East of Grimston This resource straddles the A1079 and A166 road junction within the A64(T) and adjacent land to the east and west. It is highly constrained by existing surface development and infrastructure, proximity to residential property and other uses and is very highly fragmented. A number of listed buildings are in close proximity.

3.2.11 East of Easwick and Strensall The main part of this area is a large area (c.348ha) containing an estimated resource of 6.3mt. Substantial parts of it (particularly in the west and north) are highly constrained by existing surface development, including residential, agricultural buildings MoD training and firing ranges and overhead transmission cables. A substantial part of the northern part of the area falls within the Strensall Common Site of Special Scientific Interest. The south eastern part, south of the road between Towthorpe and the A64(T) near Stockton on Forest is less constrained, comprising mainly agricultural land and woodland, with isolated farm buildings. Access could be a constraint, probably necessitating travel through residential areas or via a junction on to the A64 trunk road. The outlying area to the north east is very small (estimated resource of 0.4mt) and lies mainly within woodland within Stockton Common. A listed building is in close proximity. The area is directly adjacent to the A64(T) and a new access would be required.

3.2.12 Summary and conclusion This brief assessment suggests that resource areas identified through the BGS work have, in practice, only very limited potential for deliverability, primarily as a result of surface sterilisation, environmental constraints and access considerations. In particular it is considered that there is unlikely to be any realistic potential for delivery of a contribution to concreting sand and gravel requirements from within the City of York area.

3.2.13 Areas of resource with potential for use as building sand are geographically extensive to the north of the City of York (in addition to the area east of Earswick and Strensall discussed above) although sufficient geological information is not available for these. Some parts of these areas are generally less constrained than areas closer to the City. This suggests there may therefore be potential for delivery of an element of building sand supply from within the York area. However, the lack of detailed geological information relating to substantial parts of this resource and the current absence of any apparent interest by the minerals industry in bringing forward proposed allocations in these areas, suggests that the national policy requirement for all areas with resources to contribute to supply could best be addressed through inclusion of a criteria based policy in the Minerals and Waste Joint Plan. Such a policy could provide support in principle for development of building sand resources in the York area, subject to suitable proposals coming forward which meet identified criteria to ensure that any development would be sustainable.

Brick clay

3.2.14 Deposits of brick clays occur in the Heworth, Layerthorpe, Dringhouses and Acomb areas. They were formerly extensively worked for the manufacture of bricks as early as Roman times and throughout the 19th and into the 20th century. However, there has been no brick making industry in York for over 50 years.

Coal

3.2.15 Deep coal below 50 metres underlies much of the district. As noted above, the planning permission for the Selby Coalfield extended into the district and more recently a prospect area for deep coal mining, the North Ouse Prospect, was identified to the north of the city. This would require the development of a new deep coal mine and there is no record of any interest in taking forward such a proposal. There are no shallow coal resources capable of being worked by surface mining methods.

Hydrocarbons

3.2.16 A hydrocarbon exploration well was drilled at Wheldrake in 1973 but this was plugged and abandoned and there has been no recent interest in drilling in the district.

Coal-bed Methane

3.2.17 Associated with the coal seams that underlie the district there is potential for extraction of coal-bed methane which is recognised in the NPPF as a potential source of energy. The Coal Authority has granted licenses for exploration in extensive areas in the west of the Council area and a smaller area on the eastern boundary. There are currently no commercially active sites in operation in the UK and exploration nationally is at a very early stage.

Shale Gas

3.2.18 The assessment of shale gas resources in the UK is in its infancy. A recent report 'The Carboniferous Bowland Shale gas study: geology and resource estimation' summarises the background geological knowledge and methodology that has enabled a preliminary in-place gas resource calculation to be undertaken for the Bowland-Hodder (Carboniferous) shale gas play across a large area of Central England, including the City of York area. The study has identified a large volume of gas in the shales beneath central England, but not enough is yet known to estimate a recovery factor, or to estimate potential reserves. There have been no enquiries for shale gas exploration in City of York.

Conclusion

3.2.19 Whilst there are mineral resources within and below the City of York, there are no current workings, nor has there been any working within the last 50 years. The potential for future working is considered in the next section of this technical paper.

3.3 Future Mineral Requirements

Sand and Gravel

3.3.1 The Local Aggregate Assessment (LAA) First Review for the North Yorkshire Sub-region:

- (i) summarises available information on the supply of aggregate within, and movements of aggregates into and out of, the sub-region;
- (ii) identifies a basis for establishing future requirements for aggregates from the region over the period to 2030;
- (iii) summarises key issues which may impact on the supply of aggregates and identifies the extent to which it is likely that future supply requirements can be met; and
- (iv) identifies a range of factors which may need to be considered in the preparation of minerals plans, addressed through co-ordination with other planning authorities, or may require on-going review.

Sales

3.3.2 Available information of the sales of primary land-won aggregates in the sub-region is summarized in the following table.

Table 9: Historic sales of land-won aggregate by MPA and aggregate type 2002 – 2011

	Sand and Gravel (m. tonnes)				Crushed Rock (m. Tonnes)				
	NYCC	YD	NYM	CYC	NYCC	YD*	YD**	NYM	CYC
2004	2.8	0	0	0	4.2	3.8	0.9	0.2	0
2005	2.8	0	0	0	3.9	4.0	1.1	0.1	0
2006	2.7	0	0	0	3.8	3.8	1.0	0.1	0
2007	2.7	0	0	0	4.3	4.0	1.0	0.1	0
2008	2.3	0	0	0	3.8	3.8	1.0	0	0
2009	1.7	0	0	0	2.6	2.6	0.9	0	0
2010	1.6	0	0	0	2.9	2.6	0.8	0	0
2011	1.7	0	0	0	1.9	2.6	0.9	0	0
2012	1.6	0	0	0	2.4	2.6	0.8	0	0
2013	1.5	0	0	0	2.8	2.9	0.8	0	0
Av	2.1	0	0	0	3.3	3.3	0.9	0	0

*Limestone and High psv Aggregate ** High psv Aggregate only

Source: Local Aggregate Assessment First Review for the North Yorkshire Sub-region. February 2015

Marine Aggregates

3.3.3 Data on sales of marine aggregate into the sub-region are not available on a year by year basis, although some data on consumption of marine sand and gravel for the Yorkshire and Humber region has been published by the British Geological Survey and is shown in Table 10 below.

Table 10: Consumption of marine aggregate in Yorkshire and Humber 2002 – 2011 (tonnes)

2002	277,000	2008	322,000
2003	300,000	2009	322,000

2004	277,000	2010	234,000
2005	277,000	2011	234,000
2006	322,000	2012	234,000
2007	322,000	2013	234,000
2008	322,000		

Source: Local Aggregate Assessment First Review for the North Yorkshire Sub-region. February 2015

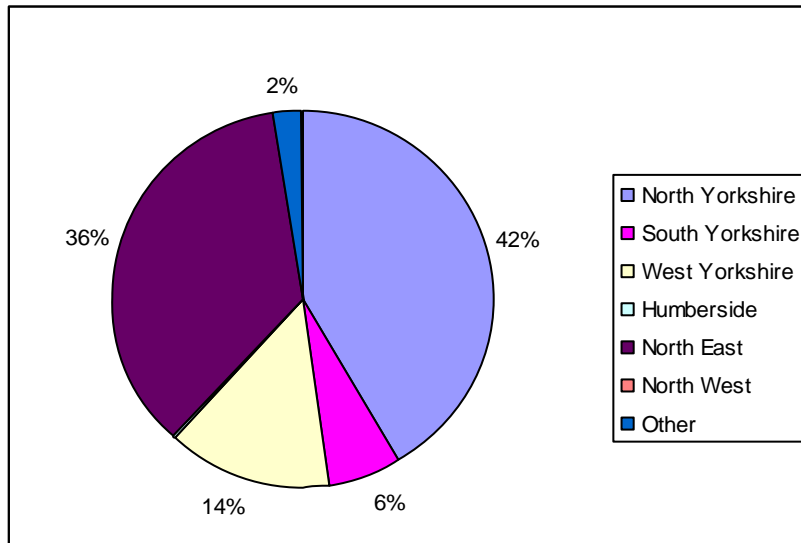
3.3.4 The Crown Estate estimated that the Humber dredging region had reserves of 13.8mt of marine aggregate in 2012. Information published by the Crown Estate for 2013 indicates that in the Humber Region 4.8mtpa of marine aggregate is currently permitted for extraction with around 2.1mt actually dredged in 2013. It is also noted that wharf infrastructure in the Region is well established and can cope with the tonnage currently delivered and any future tonnage uplift although a number of constraints to increasing supply of marine aggregates via the Humber were identified in a recent study commissioned by the Mineral Planning Authorities in the Yorkshire and Humber area.

3.3.5 The LAA therefore concludes that whilst the current contribution from marine aggregate to overall supply within the North Yorkshire sub-region is relatively small, there is potential for this to be maintained and increased. The study commissioned by the MPAs identified potential for a significant increase in supply of marine sand and gravel into the Yorkshire and Humber region. The LAA states that 'should such a scenario occur it may impact on the scale of future requirements for land won aggregate from the North Yorkshire sub-region in the mid to longer term. However it is considered reasonable to assume at this stage that the proportion of overall supply in both the Yorkshire and Humber region and the North Yorkshire sub-region will remain broadly static, or only increase relatively slightly, in the short term. Safeguarding of relevant infrastructure in line with national policy will be important in helping to support supply capability in future' (paragraph 106).

Demand

3.3.6 There is relatively little published detailed information on the destination of sales of sand and gravel produced in North Yorkshire. The most recent published data, for 2009, indicates that about one-third was exported to the North East region, about a quarter exported to other parts of the Yorkshire and Humber Region and the remainder sold within the County (see Figure 1)

Figure 1: Destinations for sand and Gravel production in North Yorkshire



Source: North Yorkshire County Council

Policy and Apportionment

3.3.7 As stated in paragraphs 3.1.8 and 3.1.9 guidelines for aggregates supply in England have been published by central Government and have provided a basis for the identification of future requirements for aggregate minerals at the national and regional levels, as part of a managed system of aggregates supply. The most recent figures were published in the National and Regional Guidelines for Aggregate Supply in England 2005-2020, published in June 2009 and these Guidelines remain extant. The key Regional guideline figures are reproduced in Table 11 below. The table also shows for comparison purposes figures from the previous Guidelines issued in 2003 which covered the period 2001-2016, as these provided the basis for the sub-regional apportionment contained in the former RSS. As the RSS has now been revoked its apportionment figures no longer have any planning status.

Table 11: Apportionment to Yorkshire and Humber Region

Source	2005-2020 (million tonnes)	2001-2016 (million tonnes)
Land-won sand & gravel	78	73
Land-won crushed rock	212	220
Marine sand & gravel	5	3
Alternative materials	133	128
Net imports to England	3	0

Source: CLG. National and regional guidelines for aggregates provision in England. 2003 and 2009.

3.3.8 National planning guidance on LAAs published in March 2014, indicates that the two main roles of the Guidelines are to: (1) provide an indication of the total amount of aggregate provision that the MPAs, collectively within each Aggregate Working party, should aim to provide; and (2) provide individual MPAs, where they are having difficulty in obtaining data, with some understanding or context of the overall demand and possible sources that might be available in their Aggregate working party area. This Guidance reflects the policy approach in the NPPF, which states that MPAs should still take into account published National and Sub-national Guidelines on future provision which should be used as a guideline when planning for the future demand for and supply of aggregates.

3.3.9 The 2009 Guidelines have not yet been subject to apportionment in the Yorkshire and Humber area. In 2010 the Yorkshire and Humber RAWP advised that the apportionment contained in the former RSS was substantially out of date and should no longer be used. It is therefore not an appropriate basis for future planning. The approach taken in the LAA is to use the 2009 Guidelines as an indicator against which any other sources of information about possible future requirements can be compared. The NPPF recommended using 10 years average sales as an initial basis for future apportionment exercises. It is also advised that average sales over the previous 3 years should be examined in particular to identify the general trend of demand, as part of consideration of whether supply should be increased.

3.3.10 The LAA notes that over the 3 year period 2011-2013, sales of both crushed rock and sand and gravel in North Yorkshire have been significantly below the 10 year average, i.e. 2.9 and 1.6m tonnes respectively, compared to 3.3 and 2.1m tonnes respectively for the 10 year average. It concludes that it is very unlikely that sales will increase to the 10-year average levels in the short-term although there is less certainty about the longer term trend in demand.

Future Requirements

3.3.11 The LAA utilizes a demand forecast approach based on forecast house building requirements to assess future requirements for sand and gravel. For crushed rock it looks at a range of methods including historic sales averages and uses a pragmatic approach of a mid-point between the various approaches considered, to assess future requirements. It accepts that special policy considerations exist in the National Parks. The implications of this for future supply requirements, taking into account permitted reserves at the end of 2014, are that around 42m. tonnes of sand and gravel and 60m. tonnes of crushed rock will be required from North Yorkshire for the period 2015-2030. This is then compared with current reserve figures (taking into account reserves of crushed rock in the Yorkshire Dales National Park) to identify potential shortfalls in supply. The conclusion is that for crushed rock overall there are adequate reserves overall with permission to ensure adequate supply though to 2030 but that further reserves of Magnesian Limestone

amounting to 5.2 m. tonnes would need to be made available to ensure an adequate and steady supply over the period to 2030. For concreting sand and gravel and building sand it is concluded that additional reserves would also need to be made available amounting to 20.7m. tonnes.

3.3.12 It is anticipated that the large majority of the 20.7m. tonnes shortfall (at the end of 2014) would need to be sourced from the North Yorkshire County Council area, primarily for geological reasons, although it is also considered that there is some potential for an increase in supply from marine dredged sources in the medium and longer term. The LAA notes that at the end of 2014 a number of planning applications were awaiting determination which could, if permitted, reduce the size of any shortfall.

3.3.13 With regard to the contribution which production from sites within City of York might make, as noted earlier in this technical paper, the LAA states in paragraph 94 that 'the potential for supply from the City of York is also likely to be very limited, particularly for concreting quality sand and gravel'. The LAA notes that there has not been any apparent interest from the minerals industry in the development of resources within York.

Conclusions

3.3.14 The key conclusions from the LAA First Review are as follows.

(i) Currently all aggregates produced in the sub-region are from the North Yorkshire County Council and Yorkshire Dales National Park areas, with no production from the City of York and North York Moors National Park areas.

(ii) Aggregates supplied from the sub-region are of significance at a regional level and beyond.

(iii) Although there has been a decline in production over the past few years, in response to economic conditions, the strategic significance of aggregate supply from the sub-region is likely to remain high and may increase, particularly for concreting sand and gravel.

(iv) The LAA suggests future provision for sand and gravel at an overall annual rate equivalent to 2.62mt and for crushed rock at an annual rate of 3.75mt for the period 2014 to 2030 for the North Yorkshire County Council, City of York Council and North York Moors National Park Authority minerals plan area. These levels are around 25% and 16% higher respectively than that derived using 10 year average sales.

(v) Unless new permissions are granted, and if recent levels of sales are maintained, there is potential for reserves of high PSV aggregate in the North Yorkshire Dales National Park to be significantly reduced in the mid term.

(vi) There is potential for shortfall in supply of sand and gravel and Magnesian Limestone in the mid term in the absence of release of further reserves.

(vii) Unless new permissions are granted, and if recent levels of sales are

maintained, there is potential for reserves of high PSV aggregate to be significantly reduced in the mid term.

(viii) There is no expectation of a substantial near term shift in the overall balance of supply from the main sources of aggregate produced in the sub-region (i.e. crushed rock, land won sand and gravel and secondary and recycled aggregate) although a number of factors, discussed further in the LAA, have been identified which could impact on this in the mid to long term.

(ix) A range of factors including matters relating to resource distribution and the presence of substantial areas of National Park and other important designations are likely to place increasing constraints on the supply of aggregates in the longer term.

(x) A number of significant cross-boundary movements of aggregate to/from other areas have been identified which should be considered further through preparation of local minerals plans; and

(xi) A number of matters relating to aggregate supply and demand have been identified which should be kept under review through future updates to the LAA.

Brick Clay

3.3.15 Brick is a traditional building material within City of York and it is likely that there will continue to be a demand for bricks for new building and refurbishing existing buildings throughout the plan period. As pointed out in paragraph 3.2.4 there has been no brick making industry in York for over 50 years.

3.3.16 The NPPF states that mineral planning authorities (MPAs) should plan for a steady and adequate supply of industrial minerals by co-operating with neighbouring authorities and for brick clay, providing a stock of permitted reserves of at least 25 years supply. There has been no interest expressed by mineral operators during the preparation of the Local Plan (or the Core Strategy) in the extraction of brick clay and with no recent extraction it is considered highly unlikely that there will be any requirement from the City of York area during the plan period.

Coal

3.3.17 As stated in paragraph 3.2.4 whilst it is known that deep coal resources underlie much of the City of York area there has been no recent interest expressed by the industry in working. The NPPF does not require MPAs to make provision for energy minerals in their local plans but states that MPAs should indicate any areas where coal extraction and the disposal of colliery spoil may be acceptable. It is considered highly unlikely that there will be any requirement from the City of York area during the plan period.

Hydrocarbons

3.3.18 The NPPF states that MPAs should distinguish between the three

phases of development when planning for on-shore oil and gas development and address constraints on production and processing within areas that are licensed for exploration or production. Although there has been no proven existence of resources or licences, current and proposed PEDL areas extend into the City of York area. There are no grounds to differentiate between York and the remainder of the Joint Plan area in relation to hydrocarbons. It is not considered that these requirements apply in the City of York area where there has been no proven existence of resources or licenses.

Coal-bed Methane

3.3.19 As stated in paragraph 3.2.4 the Coal Authority has granted licenses for exploration in extensive areas in the west of the Council area and a smaller area on the eastern boundary. The NPPF states that MPAs should encourage the capture and use of methane from coal mines in active and abandoned coalfield areas. An exploration well has been drilled in York but further activity has not been pursued.

Shale gas

3.3.20 As stated in paragraph 3.2.4 a recent study has identified a large volume of gas in the shales beneath central England, but not enough is yet known to estimate a recovery factor, nor to estimate potential reserves. There have been no enquiries for shale gas exploration in City of York.

4. NEXT STEPS

4.1.1 The information in this Technical Paper will help to inform subsequent stages of the City of York Local Plan and the Minerals and Waste Joint Plan. The information will be kept under review and the Technical Paper may subsequently be updated to reflect any such new information.