



Minerals and Waste Joint Plan

Environmental Evidence Paper

October 2016

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1. Introduction

As minerals and waste planning authorities, North Yorkshire County Council, the City of York Council and the North York Moors National Park Authority are producing a Minerals and Waste Joint Plan which will set out the planning policies for minerals and waste developments up until 2030. The Joint Plan area is shown on Figure 1 below.

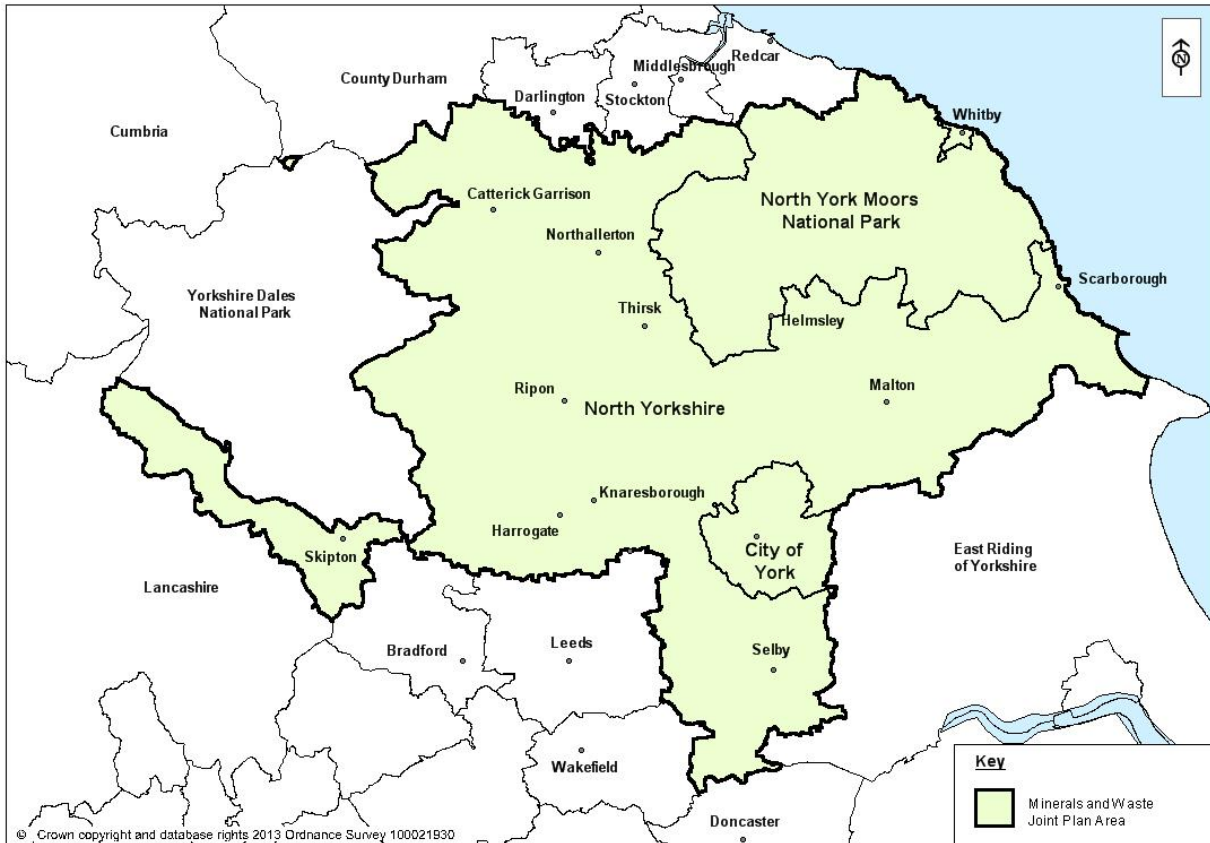


Figure 1: Minerals and Waste Joint Plan area

This Paper forms part of the Evidence Base which will support the preparation of the Minerals and Waste Joint Plan. The full list of evidence papers is available at www.northyorks.gov.uk/mwjointplan and, alongside this paper, also includes a Demographic and Economic Evidence Paper, minerals and waste technical papers for each of the three authorities and Topic Papers relating to different minerals and waste types.

The National Planning Policy Framework (NPPF), which was published in March 2012 and replaces a wide range of national planning policy, requires Local Plans to be justified and ‘based on proportionate evidence’¹. In addition the NPPF also requires Local Plans to be based on ‘adequate, up-to-date and relevant evidence’². Therefore, the key aim of this report is to present evidence which is;

- Proportionate
- Adequate
- Up-to-date, and
- Relevant to the Joint Plan area

¹ National Planning Policy Framework (DCLG, 2012) (para 182)

² *Ibid* (para 158)

Please note that data relating to the Plan area only is not readily available. Data in this report commonly relates to either North Yorkshire county (including both the North York Moors and Yorkshire Dales National Parks in the County) or to the North Yorkshire sub-region (ie North Yorkshire (as above) and York). Part of the western boundary of the Plan area is defined by the eastern boundary of the Yorkshire Dales National Park, whilst the north eastern boundary of the Plan area follows that of the North York Moors National Park. However, these boundaries do not follow ward boundaries, which are often the lowest spatial level of data, especially economic, provided by the Office of National Statistics. Similarly the National Park boundaries do not tie in with district, borough or county boundaries, which are also frequently used for data reporting. As most of the North York Moors National Park is covered under 'North Yorkshire' data it has not been considered appropriate to add in Redcar and Cleveland data in relation to most topics as only a small part of the Park is within this borough. The geographical coverage of data is specified throughout the report where it is not immediately clear.

The content of this report is derived primarily from factual sources, and is an 'evolving document' which will be updated as more contemporary evidence and legislation emerges.

This Paper is intended to highlight main environmental factors that may need to be taken into account in developing the Joint Plan, along with a summary of any relevant policy and legislation.

Although in many cases common data is used, the Paper is distinctly different to the 'baseline' which underpins the Sustainability Appraisal. The baseline specifically identifies the sustainability issues which have informed the development of sustainability objectives and will set the basis for the identification of sustainability indicators. This Paper considers data and policies in terms of what issues the Plan itself will need to consider. There are clear interrelationships between the two, but for the purposes of presenting evidence it is considered preferential to distinguish between the two.

Please note that with effect from 22nd February 2013 the Government formally revoked the Regional Strategy for the Yorkshire and Humber Region (RSS), with the exception of Green Belt policies relevant to York. From the 22nd February 2013 development plans across the former government office region, with the exception of York, will comprise the relevant local plan, and where they exist, neighbourhood plans. In York, the development plan will continue to include the Regional Strategy's Green Belt policies.

2. Characteristics of the Joint Plan area

The Minerals and Waste Joint Plan (MWJP) area comprises the three Minerals and Waste Planning Authorities of North Yorkshire County Council (which is the area of the county outside of the North York Moors National Park and Yorkshire Dales National Park), the North York Moors National Park Authority and the City of York Council. The total size of the area is 6,718 square kilometres.

There are 7 district planning authorities within the boundary of North Yorkshire County Council, as shown in Figure 2 below:

- Craven District Council
- Hambleton District Council
- Harrogate Borough Council
- Richmondshire District Council
- Ryedale District Council
- Scarborough Borough
- Selby District Council

The North York Moors National Park Authority and the City of York Council are unitary planning authorities.

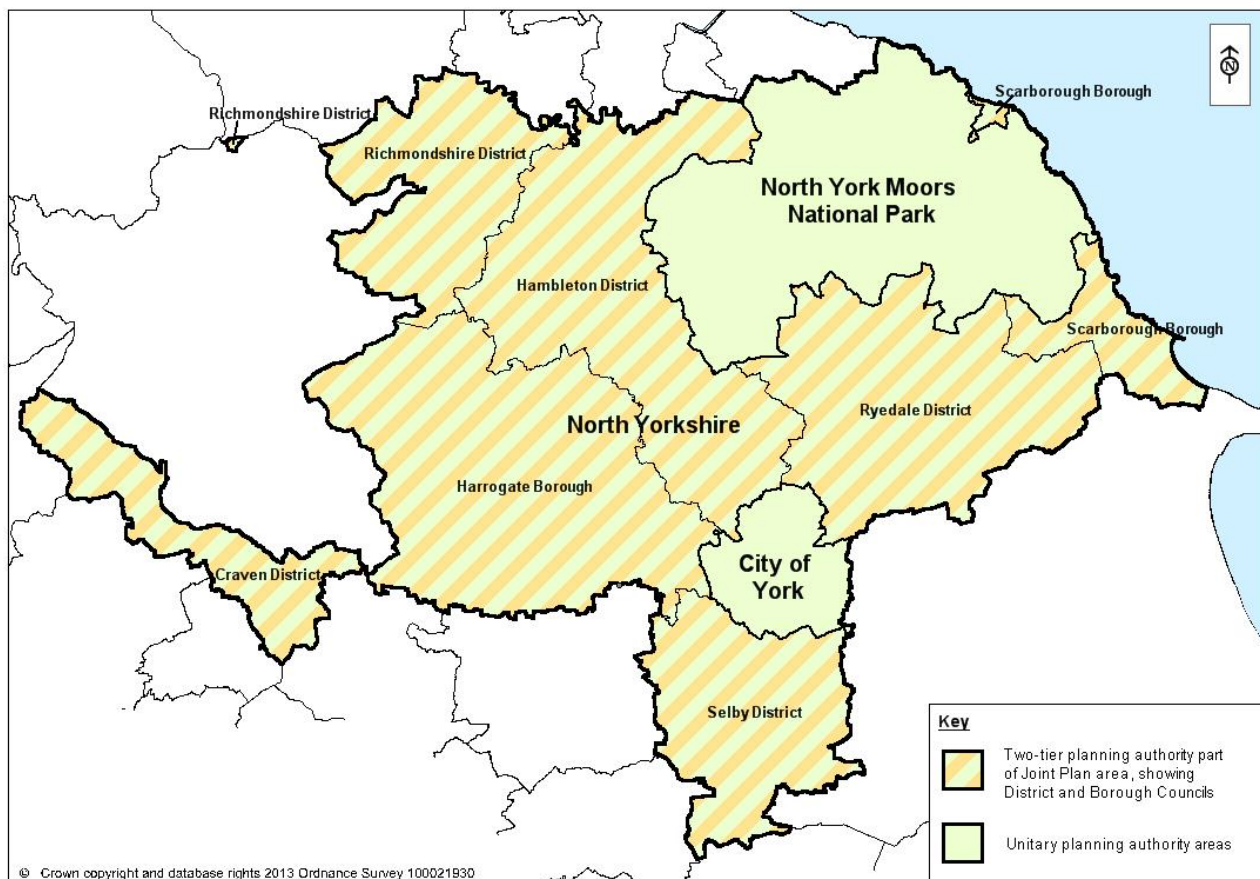


Figure 2: District and Borough Councils in the Joint Plan area

The Joint Plan area is bordered by the county of Lancashire and the Yorkshire Dales National Park to the west and County Durham and the unitary authorities of Darlington, Stockton on Tees, Middlesbrough and Redcar & Cleveland to the north. The City Councils of Bradford and Leeds lie to the south west. To the south and east are the metropolitan areas of Wakefield and Doncaster, together with the East Riding of Yorkshire. The North Sea

borders the Plan area to the north east.

The three authorities cover distinctly different areas and therefore there is a diverse character to the joint plan area. North Yorkshire (outside the National Parks) is a largely rural county containing a number of small market towns plus the larger towns of Harrogate and Scarborough, along with two Areas of Outstanding Natural Beauty (and parts of two others). The A1 and A1(M) run north-south through the centre of the area. The City of York area is mostly urban, focused upon the historic city of York itself. The North York Moors National Park was designated due to its 'intrinsic merits as an area of beautiful and unspoilt country and magnificent coast with a wealth of architectural interest'. It is largely rural, and the settlements in the Park are comparatively small.

3 Policy and Legislative Context

There are a number of key European and National Policy influences relating to the environment which may need to be taken into account when preparing the Minerals and Waste Joint Plan. The following section provides an overview of some of the key policy influences in relation to the natural and historic environment, landscape, air, water and soil.

3.1 European Legislation

Policy deriving from the European Union is a key driver for national policy. EU directives are transposed into national legislation and this in turn informs local policies.

3.1.1 EU Bathing Water Directive

The Bathing Water Directive (2006/7/EC) replaces (76/160/EC). It applies to surface waters that can be used for bathing except for swimming pools and spa pools, confined waters subject to treatment or used for therapeutic purposes and confined waters artificially separated from surface water and groundwater. The aim is to protect health and the environment, inform people about the quality of the water in their area and move away from just monitoring the waters to managing the water quality.

3.1.2 EU Birds Directive

The European Union Birds Directive (209/147/EC) is a codified version of (79/409/EEC) and provides a framework for the conservation and management of, and human interactions with, wild birds in Europe. The Directive requires measures to preserve, maintain or re-establish sufficient diversity and areas of habitats for all species of birds naturally occurring in a wild state providing a comprehensive scheme of protection for all wild birds. It applies special measures for the protection of listed rare and vulnerable and for regularly occurring migratory bird species. In part, these objectives are achieved by the establishment of a network of protected areas for birds, known as Special Protection Areas (SPAs). Member states have a duty to protect SPAs from deterioration and significant disturbance for which the areas have been designated, insofar as such disturbance could be significant in relation to the objectives of this Directive.

The Directive is transposed and implemented in the UK through the Wildlife and Countryside Act (1981).

3.1.3 EU Convention for the Protection of the Architectural Heritage of Europe (Granada Convention) (1985)

The Convention aims to reinforce and promote policies for the conservation and enhancement of Europe's heritage. It requires Member States to take statutory measures to protect architectural heritage and prevent the disfigurement, dilapidation or demolition of protected properties.

The Convention encourages environmental improvements in the surroundings of monuments and sites. Member states should also adopt conservation policies which include the protection of the architectural heritage as an essential town and country planning objective and ensure that this requirement is taken into account at all stages both in the drawing up of development plans and in the procedures for authorising work. The conservation, promotion and enhancement of architectural heritage should be a major feature of planning policies.

Development plans should reconcile the need for development with interests of conservation of archaeology. Detailed development plans should include policies for the protection, enhancement and preservation of sites of archaeological interest and of their settings.

3.1.4 EU Directive on the protection of groundwater against pollution and deterioration (2006/118/EC)

The Directive recognises that groundwater is a valuable natural resource which should be protected from deterioration and chemical pollution. This is considered to be particularly important for groundwater dependent ecosystems and for the use of groundwater in water supply for human consumption.

Groundwater in bodies of water used for the abstraction of drinking water or intended for such future use must be protected in such a way that deterioration in the quality of such bodies of water is avoided.

The Directive establishes specific measures to prevent and control groundwater pollution, including criteria for the assessment of good groundwater chemical status and criteria for the identification and reversal of significant and sustained upward trends.

There is a need to consider how minerals and waste related development may impact on the quality of groundwater in the Plan area.

3.1.5 EU Floods Directive (2007/60/EC)

The Directive's aim is to reduce and manage the risks that floods pose to human health, the environment, cultural heritage and economic activity. The Directive requires Member States to first carry out a preliminary assessment by 2011 to identify the river basins and associated coastal areas at risk of flooding. For such zones they would then need to draw up flood risk maps by 2013 and establish flood risk management plans focused on prevention, protection and preparedness by 2015. The Directive applies to inland waters as well as all coastal waters across the whole territory of the EU.

The Directive shall be carried out in coordination with the Water Framework Directive, notably by flood risk management plans and river basin management plans being coordinated, and through coordination of the public participation procedures in the preparation of these plans. All assessments, maps and plans prepared shall be made available to the public.

Member States shall furthermore coordinate their flood risk management practices in shared river basins, including with less developed countries, and shall in solidarity not undertake measures that would increase the flood risk in neighbouring countries. Member States shall take into consideration long term developments, including climate change, as well as sustainable land use practices in the flood risk management cycle addressed in this Directive.

The Directive is transposed and implemented in the UK through the Flood and Water Management Act 2010.

3.1.6 EU Habitats Directive (92/43/EEC)

The aim of this Directive is to contribute towards ensuring biodiversity through the conservation of fauna and flora and natural habitats of EU importance.

Measures taken pursuant to this Directive are designed to maintain or restore, at favourable conservation status, natural habitats and species of wild fauna and flora of Community interest.

The requirements of the Directive are transposed and implemented in the UK through the Conservation (Natural habitats etc) Regulations 1994

3.1.7 EU Nitrate Directive (91/676/EEC)

The Directive aims to protect fresh, coastal and marine waters against pollution caused by nitrates from diffuse sources. It requires member states to identify waters either actually or potentially affected by nitrate pollution. These are to include: Surface waters, particularly those for the abstraction of drinking water where nitrate concentrations exceed 50 mg/l; groundwaters actually or potentially containing more than 50mg/l nitrate; freshwater lakes; other freshwater bodies; estuaries; and coastal waters and marine waters which are, or may in the future be eutrophic.

3.1.8 European Landscape Convention (EC 2004)

The ELC was signed by the UK government on 24 February 2006, ratified on the 21 November 2006, and became binding on 1 March 2007, and is the first international convention to focus specifically on landscape, and is dedicated exclusively to the protection, management and planning of all landscapes in Europe.

The convention highlights the need to recognise landscape in law, to develop landscape policies dedicated to the protection, management and creation of landscapes, and to establish procedures for the participation of the general public and other stakeholders in the creation and implementation of landscape policies. It also encourages the integration of landscape into all relevant areas of policy, including cultural, economic and social policies in order to maintain and improve landscape quality and bring the public, institutions and local and regional authorities to recognise the value and importance of landscape and to take part in related public decisions. LPAs can support this by:

- Ensuring landscape is systematically accommodated into spatial planning policies.
- Setting quality objectives for landscapes which have been identified and evaluated.

3.1.9 Ramsar Convention on Wetlands of international importance, especially waterfowl habitat (1971)

The Convention's Mission Statement is 'the conservation and wise use of all wetlands through local, regional and national actions and international co-operation, as a contribution towards achieving sustainable development throughout the world'.

The general objectives of the Ramsar Strategic Plan 2009-2015 are:

- The wise use of wetlands
- Develop and maintain wetlands of international importance
- International co-operation
- Implementation capacity

3.1.10 UN Convention on Biological Diversity (1992)

Aims to conserve biological diversity through various species and habitat protection measures. UK Biodiversity Action Plan are produced in response to this convention, listing UK priority habitats and species.

The Convention establishes three main goals: the conservation of biological diversity; the sustainable use of its components, and; the fair and equitable sharing of the benefits from the use of genetic resources. Article 6a requires each Contracting Party to develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity.

The Ecosystems Approach, an integrated strategy for the management of resources, is the framework for action under the Convention. The CBD's scope is all types of biodiversity.

3.1.11 Habitats Regulations Assessment (HRA)

The Joint Plan will need to be subject to a Habitats Regulations Assessment under the European Directive 92/43/EEC. HRA is the assessment of the impacts of implementing a plan or policy (either individually or in combination with other plans and programmes) on Natura 2000 Sites (Special Areas of Conservation and Special Protection Areas). Its function is to consider the likely impacts of a plan against the conservation objectives of the sites and to ascertain whether it would adversely affect the integrity of the site. Where significant negative effects are identified, alternative options should be examined to avoid any potential damaging effects. Ramsar sites (Internationally Important Wetlands) are treated as if they were European sites in accordance with the Government's policy statement of November 2000 and the DEFRA circular 01/2005 (paragraph 5). Detrimental effects of a plan may extend beyond the plan area, and therefore the Habitats Regulations Assessment may need to assess effects on sites also outside of the Plan area.

3.2 National Policy and Legislation

3.2.1 Environment Act (1995)

The Environment Act 1995 established the Environment Agency in England & Wales to protect and enhance the environment. It also brought a responsibility for local authorities to review and assess the quality of air within their district by introducing the local air quality management (LAQM) system.

The Joint Plan must ensure that any development has limited impact on air quality as well as the environment in general. At present there are three Air Quality Management Zones in North Yorkshire.

The Environment Act also established National Park Authorities and set the statutory purposes to:

‘Conserve and enhance the natural beauty, wildlife and cultural heritage of the Park
and
Promote opportunities for the understanding and enjoyment of the special qualities of the Park by the public.’

3.2.2 Countryside and Rights of Way Act (DEFRA 2000)

The Countryside and Rights of Way Act (CRoW ACT) extends the public's ability to enjoy the countryside and wildlife, while also providing safeguards for owners and occupiers. Its main functions are:

- to create a new statutory right of access to open country and registered common land
- to modernise the rights of way system
- to give greater protection to Sites of Special Scientific Interest
- to provide better management arrangements for Areas of Outstanding Natural Beauty (AONBs)
- to strengthen wildlife enforcement legislation

Section 74 provides a list of nationally important habitats and species for which action plans have been prepared under the UK Biodiversity Action Plan

The Agricultural Land Classification gives a high grading to land which allows more flexibility in the range of crops that can be grown (its 'versatility') and which requires lower inputs. National planning policy requires development to be directed towards land of lower quality in preference to higher quality land.

3.2.3 Wildlife and Countryside Act (1981)

The Wildlife and Countryside Act sets out legislation in relation to protection of certain species, making certain activities which may harm these an offence. It also provides the legislative basis for Sites of Special Scientific Interest.

3.2.4 Air Quality Standard Regulations (2010)

The Air Quality Standards Regulations, 2010 transposes into English law the requirements of several directives, including Directive 2004/107/EC.

Sets standards to improve air quality and reduce the impact of air pollution on human health and ecosystems. Targets relate to levels of arsenic, cadmium, sulphur dioxide, nitrogen dioxide, lead, PM10 and PM2.5, carbon monoxide, nickel, benzene, benzo(a)pyrenes. Critical levels are also set for the protection of vegetation – 30 micrograms/ m³ for nitrogen dioxide, 20 micrograms/ m³ for sulphur dioxide.

3.2.5 Climate Change Act (2008)

The UK Climate Change Act 2008 takes forward the Kyoto Protocol requirements (an international agreement which commits countries involved to emissions reduction targets) by setting a target to reduce the UK's emissions by at least 80% by 2050 from 1990 levels.

3.2.6 Ancient Monuments and Archaeological Areas Act (1979)

Defines archaeological sites of national importance, such as ancient monuments and areas of archaeological importance, which are to be protected.

3.2.7 The Protection of Military Remains Act (1986)

The Protection of Military Remains Act 1986 is intended to protect wrecked military vessels and aircraft and any associated remains of personnel who lost their lives in them. It applies to all aircraft that have crashed and also to any ship of any nationality lost on military service in UK waters since 4 August 1914. The Act allows wrecks to be designated either as controlled

sites or as protected places. Designation as a protected place allows a wreck site to be visited however any intrusive activity would again require a licence from MOD.

3.2.8 Conservation of Habitats and Species Regulations (2010)

The original Conservation (Natural Habitats &c) Regulations, 1994 transposed the EU Habitats Directive (described above) into national law. The Conservation of Habitats and Species Regulations, 2010 consolidate the various amendments to the original regulations and include new provisions to implement parts of the Marine and Coastal Access Act 2009.

The Regulations provide for designation and protection of Special Areas of Conservation (SACs) for sites of importance for habitats or species listed in the EU Habitats Directive as being of European importance. They also require the keeping of an up-to-date register of SACs and Special Protection Areas (SPAs) which are designated under the separate EU Birds Directive.

A number of provisions specifically affect the process of plan making and the undertaking of projects. This include Section 61 (1) which states: ‘A competent authority, before deciding to undertake, or give any consent, permission or authorisation for a plan or project which: a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects), and b) is not directly connected with or necessary to the management of that site; must make an appropriate assessment of the implications for that site in view of that site’s conservation objectives’.

The Regulations (Section 102) also specifically identify land use plans as subject to appropriate assessment where they have a significant effect on a European Site or European Offshore Site.

Section 39 (1) states that , for the purposes of Local Development Plan and Local Development Documents, policies relating to development and use of land are to be taken to include policies ‘encouraging the management of features of the landscape which are of importance for wild fauna and flora’. Section 39 (3) states that such features of landscapes ‘are those which, by virtue of their linear and continuous structure (such as rivers with their banks or the traditional systems of marking field boundaries) or their function as ‘stepping stones’ (such as ponds or small woods) are essential for the migration, dispersal and genetic exchange of wild species’.

The regulations provides legal protection of listed sites / species from potentially damaging activities, and also gives powers to relevant agencies to enter into management agreements, or even to compulsorily acquire sites to ensure their conservation. The regulations entrust powers to competent authorities to restrict or revoke planning permission where the integrity of an identified site may be affected.

In preparing the Minerals and Waste Plan there is a need to ensure Natura 2000 sites are adequately protected through the planning system and measures are taken to identify occurrences of listed species in advance of proposed development. This will be addressed through the Habitats Regulations Assessment.

3.2.9 The Protection of Wrecks Act (1973)

This Act empowers the Government to designate a restricted area around a vessel to protect it or its contents from unauthorised and uncontrolled interference. Designated sites are identified as being likely to contain the remains of a vessel, or its contents, which are of historical, artistic or archaeological importance.

3.2.10 England Biodiversity Strategy

The England Biodiversity Strategy, Biodiversity 2020, sets out a mission to ‘to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people.’ This is followed up with targets relating to improving SSSI condition, creating more, bigger and less fragmented areas for wildlife and restoring at least 15% of degraded ecosystems, with at least 17% of the country being conserved through effective integrated and joined up approaches.

3.2.11 Natural Environment White Paper

The Natural Environment White paper sets the direction for Government Policy in relation to the natural environment. It includes a series of key reforms grouped around themes including ‘protecting and improving our natural environment’, ‘growing a green economy’ and ‘reconnecting people and nature’. Central to the White Paper is the concept of ‘ecosystem services’, which are defined as ‘products of natural systems from which people derive benefits, including goods and services, some of which can be valued economically and others which have a non-economic value’. In relation to planning, the White Paper committed the Government to ‘protecting natural value through the planning system’ in the National Planning Policy Framework (NPPF).

3.2.12 Government Forestry and Woodlands Policy Statement (Defra, 2013)

Aims to protect, improve and expand England’s forests and woodlands whilst realising the social and environmental benefits of these assets and improving the governance of woodlands through simplification of governance structures.

Sets out key areas where the Government will take action. These are:

- Sustainable development in government;
- Green economy;
- Action to tackle climate change;
- Protecting and enhancing the natural environment;
- Fairness and improving wellbeing;
- National and international sustainable development;
- Building a Big Society;
- Business planning;
- Operations and procurement commitments;
- Transparency and public accountability.

3.2.13 English National Parks and the Broads – UK Government Vision and Circular (DEFRA, 2010)

This Circular contains the Government’s vision and aims for National Parks in England. It is referenced in the NPPF (see below) as a key reference document for national policy on National Parks. The Circular sets the vision for National Parks as:

‘By 2030 English National Parks and the Broads will be places where:

- There are thriving, living, working landscapes notable for their natural beauty and cultural heritage. They inspire visitors and local communities to live within environmental limits and to tackle climate change. The wide range of services they provide (from clean water to sustainable food) are in good condition and valued by society.
- Sustainable development can be seen in action. The communities of the Parks take an active part in decisions about their future. They are known for having been pivotal in the

transformation to a low carbon society and sustainable living. Renewable energy, sustainable agriculture, low carbon transport and travel and healthy, prosperous communities have long been the norm.

- Wildlife flourishes and habitats are maintained, restored and expanded and linked effectively to other ecological networks. Woodland cover has increased and all woodlands are sustainably managed, with the right trees in the right places. Landscapes and habitats are managed to create resilience and enable adaptation.
- Everyone can discover the rich variety of England's natural and historic environment, and have the chance to value them as places for escape, adventure, enjoyment, inspiration and reflection, and a source of national pride and identity. They will be recognised as fundamental to our prosperity and wellbeing.'

3.2.14 A Framework For Implementing The European Landscape Convention (ELC) in England

Natural England has worked with Defra and English Heritage to produce a framework for implementing the ELC in England, published in October 2007. This framework seeks to further strengthen the protection, management and planning of landscape in England by providing a structure for Action Plans of partners and stakeholders. It underpins a wide range of activities which, through public engagement and stakeholder involvement, will lead to wider understanding and appreciation, improved knowledge and care, as well as a sense of inspiration, well-being and connection between people and place.

3.2.15 The United Nations Educational, Scientific and Cultural Organisation's (UNESCO) 1972 World Heritage Convention

The Convention concerns the Protection of World Cultural and Natural Heritage. A protected area with World Heritage status has the benefit of being internationally recognised for its outstanding global value as such sites "constitute a world heritage for whose protection it is the duty of the international community as a whole to cooperate" (Article 6.1 of the Convention).

3.2.16 Protection of World Heritage in England (CLG Circular 07/2009)

This Circular states that it is Government Policy that the most appropriate way of meeting the UK's obligations under the World Heritage Convention is through the inclusion of relevant policies in planning documents. It sets out the role of regional and local authorities in ensuring the protection, promotion and enhancement of World Heritage Sites. The Circular advises that policies should consider how the obligations of World Heritage Site Status work into regional and local strategies for sustainable economic growth. Policies should apply both for the site and, as appropriate, its setting, including a buffer zone where they exist. Policies should also protect against minor incremental damage and should have regard to policies in World Heritage Site Management Plans.

3.2.17 Agricultural Land Classification: protecting the best and most versatile agricultural land (Natural England Technical Information Note TIN049, January 2009)

This note sets out guidance on the protection of the best and most versatile agricultural land. It states that where significant development of agricultural land is unavoidable, poorer quality land should be used in preference to that of higher quality, except where this would be inconsistent with other sustainability considerations.

3.2.18 Safeguarding our Soils: A Strategy for England

This document sets out an approach to safeguard and protect the country's irreplaceable and fundamental natural resource which provides many essential functions for life.

The strategy sets out how the government will:

- Support farmers in managing agricultural soil, and address the threats to it;
 - Reduce the rate of loss of carbon in soil to tackle climate change, and use soil to help adapt to the impacts of climate change;
 - Provide a framework for action to protect peat habitats;
 - Protect soils in urban areas during development and construction;
 - Value soils in the planning system; and
 - Prevent pollution of soils, and deal with the historic legacy of contaminated land.
- Measures include guidance, training and advice for the agriculture industry on protecting and increasing soil organic matter, incentives and regulation to prevent soil degradation, and the monitoring of levels and threats to the soil.

3.2.19 National Planning Policy Framework (NPPF) (2012)

The NPPF sets out the Government's planning policies for England and how these should be applied. The NPPF must be taken into account during the preparation of the local plans and during the consideration of planning applications. The policies set out in the NPPF set the Government's view of sustainable development in terms of the planning system. It identifies three dimensions to the sustainable development, these are as follows:

an economic role – contributing to building a strong, responsive and competitive economy, by ensuring that sufficient land of the right type is available in the right places and at the right time to support growth and innovation; and by identifying and coordinating development requirements, including the provision of infrastructure;

a social role – supporting strong, vibrant and healthy communities, by providing the supply of housing required to meet the needs of present and future generations; and by creating a high quality built environment, with accessible local services that reflect the community's needs and support its health, social and cultural well-being; and

an environmental role – contributing to protecting and enhancing our natural, built and historic environment; and, as part of this, helping to improve biodiversity, use natural resources prudently, minimise waste and pollution, and mitigate and adapt to climate change including moving to a low carbon economy.¹³

The National Planning Policy Framework states 'Local plans should: identify areas where development would be inappropriate, for instance because of its environmental or historic significance; and contain a clear strategy for enhancing the natural, built and historic environment, and supporting Nature Improvements Areas where they have been identified.'¹⁴

It also states that MPAs should set out environmental criteria, against which planning applications will be assessed so as to ensure that permitted operations 'do not have unacceptable adverse impacts on the natural, historic environments....increased flood risk, impacts on the flow and quality of surface and ground water and migration of contamination from the site; and take into account cumulative effects of multiple impacts from individual sites and/or a number of sites locally'¹⁵.

The National Planning Policy Framework states that Local planning authorities should put in place policies to ensure 'worked land is reclaimed at the earliest opportunity,..., and that high

³ NPPF (DCLG, 2012) (Paragraph 7)

⁴ *Ibid*, Paragraph 157

⁵ *Ibid*, Paragraph 143

quality restoration and aftercare of mineral sites takes place, including for agriculture (safeguarding the long term potential of best and most versatile agricultural land and conserving soil resources), geodiversity, biodiversity, native woodland, the historic environment and recreation'.⁶

In relation to protected landscapes the NPPF states that 'Great weight should be given to conserving landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to landscape and scenic beauty. The conservation of wildlife and cultural heritage are important considerations in all these areas, and should be given great weight in National Parks and the Broads.' It states that major developments should be refused in these areas except in exceptional circumstances and where it can be demonstrated they are in the public interest.'

In addition to the policies identified above, the NPPF contains a number of specific policies in relation to the Historic and Natural Environment and landscape which the Minerals and Waste Joint Plan will need to take account of. These policies will be discussed in the relevant sections of this document.

3.2.20 Planning Policy for Waste

The NPPF replaced all previous planning policy statements with the exception of Planning Policy Statement 10: Planning for Sustainable Waste Management (PPS10). PPS10 has subsequently been superseded by the National Planning Policy for Waste 2014, which is to be used alongside the NPPF. The National Planning Policy for Waste promotes the need to manage waste without harming the environment or human health. It states that environmental criteria and the potential impact of a proposed site on environmental quality should be considered during the assessment of potential sites for waste facilities. It seeks to protect the Green Belt. Local Authorities should look at sites outside the Green Belt first, as waste development within the Green Belt could be considered inappropriate development and will only be permitted in special circumstances. Appendix B of the policy contains a list of factors, including environmental ones, which should be considered during the preparation of local plans and determining planning applications.

3.2.21 National Planning Practice Guidance (NPPG)

In March 2014 a web based Planning Practice Guidance was launched to support the NPPF. Some previous Planning Practice Guidance documents have been cancelled and the online NPPG is updated as required. The Guidance provides a range of information to help support the implementation of national planning policy, including policies relating to the environment.

⁶ *Ibid*, Paragraph 143

4 Historic Environment

The Joint Plan area has a rich heritage which includes well known medieval monuments like Reivaulx Abbey and Richmond Castle, as well as the buried remains of prehistoric settlements, and Roman towns such as Aldborough. The Fountains/Abbey and Studley Roral World Heritage Site also lie within the area. The Roman city of York has a significant concentration of historic assets including York Minster which is largest surviving medieval church in England and largest gothic cathedral in northern Europe. The Plan area includes a diverse range of remains, from Second World War airfields to ancient field systems, as well as a wealth of historic buildings situated in our market towns and villages. Many of these features are fragile and irreplaceable and their significance is recognised, not only locally, but at regional, national and even international levels.

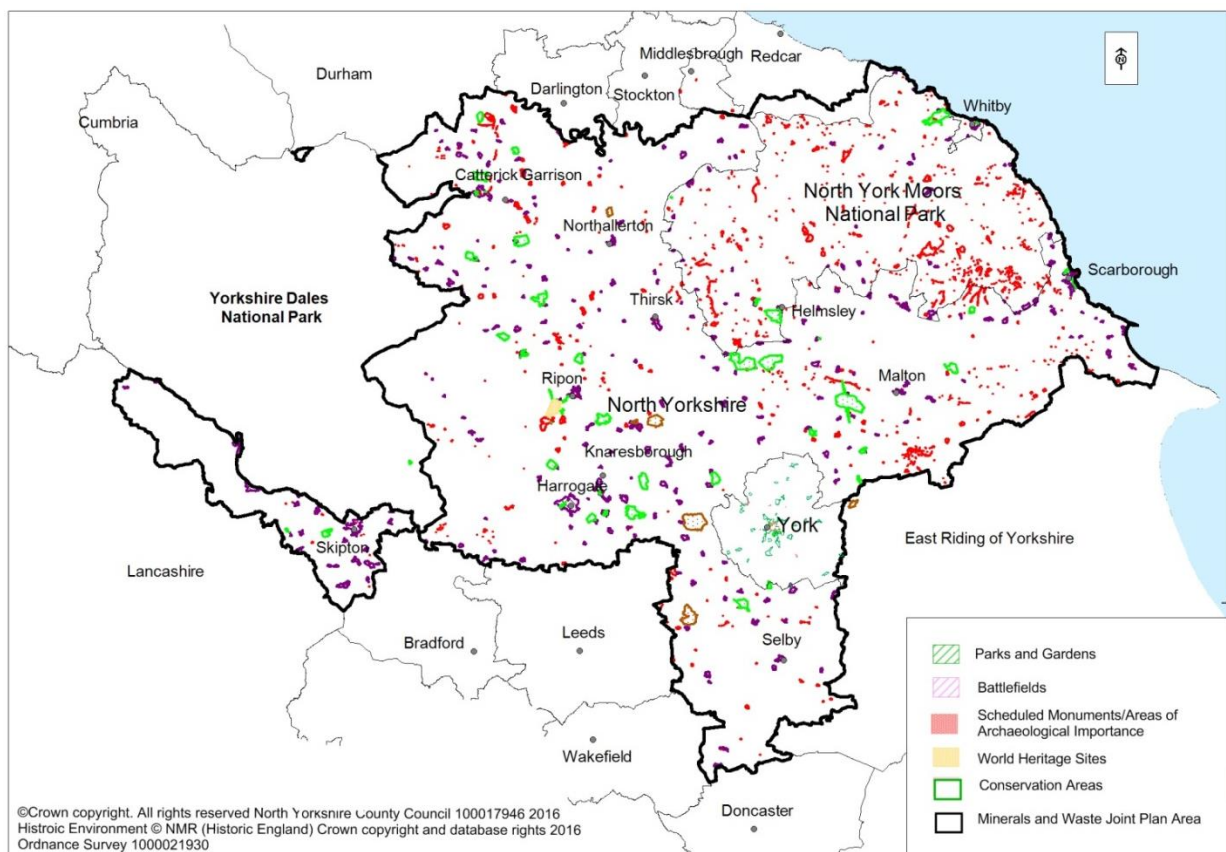


Figure 3: Historic assets (as at October 2016)

In March 2012 the Government published the National Planning Policy Framework (NPPF) which replaced previous Planning Policy Statement which addressed the Historic Environment.

The NPPF identifies the need to assess the significance of historic assets and the contribution they make to their environment, emphasising that significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. It goes on to say that as heritage assets are irreplaceable, any harm or loss should require clear and convincing justification.

In terms of the historic environment, the NPPF states that 'local planning authorities should have up-to-date evidence about the historic environment..... They should use it to predict the

likelihood that current unidentified heritage assets, particularly sites of historic and archaeological interest, will be discovered in the future....⁷.

4.1 Listed Buildings

Listed Buildings enjoy statutory protection in recognition of their architectural or historic significance. The Joint Plan area has a rich heritage of historic buildings and structures, of which over 14,000 are listed.

4.2 Scheduled Monuments, Registered Battlefields, Registered Parks & Gardens & World Heritage Sites

World Heritage Sites (WHS) are protected areas that are internationally recognised for their outstanding global value. Within the Plan area, Studley Royal Park including the ruins of Fountains Abbey is designated as a WHS in recognition of the striking 18th-century landscape created around the ruins of the Cistercian Fountains Abbey and Fountains Hall Castle.

‘Scheduling’ is the process through which nationally important sites and monuments are given legal protection by being placed on a list, or ‘schedule’, primarily undertaken by English Heritage. The term ‘monument’ covers the whole range of archaeological sites. Scheduled Monuments (SMs) are not always ancient, or visible above ground, they range from prehistoric standing stones and burial mounds, through the many types of medieval site - castles, monasteries - to the more recent results of human activity, such as collieries and wartime pillboxes.

Scheduling applies only to sites of national importance, and only if it is the best means of protection. Only deliberately created structures, features and remains can be scheduled. There are 1,605 Scheduled Monuments on English Heritage’s record in the Joint Plan area. An example of a significant SM within the Plan area is Thornborough Henges, which is located to the north of Ripon. The City of York is designated as an Area of Archaeological Importance, one of only 5 nationally.

A Register of Historic Battlefields is maintained by English Heritage in recognition of their importance. Inclusion on the Register offers battlefields protection and promotes a better understanding of their significance. Each Register entry is based on the available evidence and includes a map of the battlefield area showing the position of the armies and features which were part of the original battleground. These maps are intended to be the starting point for battlefield conservation and interpretation by identifying the most visually sensitive areas. Within North Yorkshire five Historic Battlefields are recognised.

English Heritage is required to compile a Register of Parks and Gardens of special historic interest in England. The main purpose of this register is to help ensure that the features and qualities which make the landscapes so listed of national importance are safeguarded during on-going management or if any change is being considered which could affect them.

Although inclusion of an historic park or garden on the Register in itself brings no additional statutory controls, local authorities are required by central government to make provision for the protection of the historic environment in their policies and their allocation of resources. There are 40 registered Parks and Gardens in the Plan area.

⁷ NPPF (DCLG,2012) (Paragraphs 169-170)

4.3 Conservation Areas

Conservation Areas are those areas which represent ‘an area of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance under the Planning (Listed Buildings and Conservation Areas) Act 1990’. As at April 2013, there are 327 Conservation Areas within the Plan area.

4.4 Protected Wrecks

The Protection of Wrecks Act (1973) empowers the Government to designate a restricted area around a vessel which is of historical, artistic or archaeological importance. There is one English Heritage Protected Wreck Site off Filey Bay, on the coast of North Yorkshire, designated for its archaeological significance.

4.5 Protected Military Remains

Various sites can be afforded legal protection under the 1986 Military Remains Act. These sites include aircraft crash sites as well as the offshore wrecks of ships.

4.6 Heritage at Risk Register

The Register, published annually, brings together information on all designated sites (Grade I and II* listed buildings, Registered Parks and Gardens, Scheduled Monuments, Battlefields and Shipwrecks) known to English Heritage to be ‘at risk’ through neglect and decay, or vulnerable to becoming so. Most of the buildings and structures are in poor to very bad condition, but a few in fair condition are also included, usually because they have become functionally redundant or are vulnerable, making their future uncertain. In addition to English Heritage’s register, local planning authorities also keep their own local ‘at risk’ registers.

The following number of designations are known to English Heritage to be ‘at risk’ within the Plan Area⁸. The data is also provided for each of the Districts and Boroughs within the North Yorkshire county area. There are no shipwrecks currently listed on the Risk Register.

| District / Borough | Listed Buildings | Scheduled Monuments | Conservation Areas | Registered Historic Parks and Gardens | Registered Battlefields |
|---------------------------------------|------------------|---------------------|--------------------|---------------------------------------|-------------------------|
| North Yorkshire | 37 | 160 | 6 | 4 | 1 |
| York | 0 | 0 | 1 | 0 | 0 |
| North York Moors National Park | 4 | 46 | 0 | 0 | 0 |
| Craven | 1 | 0 | 0 | 0 | 0 |
| Hambleton | 3 | 18 | 0 | 0 | 0 |
| Harrogate | 7 | 9 | 0 | 3 | 1 |
| Richmondshire | 7 | 11 | 0 | 0 | 0 |
| Ryedale | 12 | 96 | 0 | 2 | 0 |
| Scarborough | 0 | 12 | 5 | 1 | 0 |
| Selby | 4 | 16 | 0 | 0 | 0 |

Figure 4: Assets on English Heritage’s ‘At Risk’ area⁹

⁹ English Heritage, Heritage at Risk Register 2016

4.7 Non Designated Historic Environment Assets

Not all nationally important remains are designated, and even if not nationally important, these remains are equally in need of protection and management. There are various mechanisms in place to ensure that mitigation of the affects of development or land use change can be put in place, ranging from changes in design through to full recording prior to or during development.

The main way that non-designated assets are identified is through the Historic Environment Record (HER). These are information services that provide access to comprehensive and dynamic resources relating to the historic environment of their locality for public benefit and use. HER are unique repositories of, and signposts to, information relating to landscapes, buildings, sites and finds spanning more than 700,000 years of human activity.

The three Joint Plan authorities all have their own HERs which together contain over 45,000 records. The North Yorkshire HER currently contains over 25,000 records. However, not all the information is available digitally, and a significant amount is in hard copy format only.

4.8 Historic Landscape Characterisation

The landscape of North Yorkshire, covering over 8,000 square kilometres (km²), has a rich and diverse character. Historic Landscape Characterisation (HLC) identifies historic aspects of the current landscape and helps promote the consideration of a wider focus (beyond individual sites) to the landscape. Moving attention to the broader historic environment also helps development of an understanding of past human activity, as well as developing an integrated way of managing change. The HLC places an emphasis on understanding how historic processes have contributed to the current landscape rather than reconstructing, for example, the medieval landscape of North Yorkshire.

The North Yorkshire HLC project forms part of a national programme and is the largest in the Country. It is managed jointly by the County Council, English Heritage, Yorkshire Dales National Park Authority, North York Moors National Park Authority, Tees Archaeology and City of York Council.

The complex of monuments and remains at and around Thornborough Henges, extending from the Boroughbridge area northwards to the West Tanfield area, is recognised as being a landscape of particular historic significance. Other important areas include the Wolds and the Vale of Pickering.

5 Natural Environment and Landscape

5.1 Policy Context

5.1.1 National Policy

The NPPF states that ‘The planning system should contribute to and enhance the natural and local environment by:

- protecting and enhancing valued landscapes, geological conservation interests and soils;
- recognising the wider benefits of ecosystem services;
- minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government’s commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability; and
- remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.’

Specifically in relation to the preparation of local plans the NPPF states ‘...when planning for development needs, the aim should be to minimise pollution and other adverse effects on the local and natural environment. Plans should allocate land with the least environmental or amenity value, where consistent with other policies in this Framework.’

It states that ‘Local planning authorities should set criteria based policies against which proposals for any development on or affecting protected wildlife or geodiversity sites or landscape areas will be judged...’

Expanding upon this the NPPF states that ‘Distinctions should be made between the hierarchy of international, national and locally designated sites, so that protection is commensurate with their status and gives appropriate weight to their importance and the contribution that they make to wider ecological networks.’

As stated earlier in the Paper, the NPPF states that ‘Great weight should be given to conserving landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to landscape and scenic beauty. The conservation of wildlife and cultural heritage are important considerations in all these areas, and should be given great weight in National Parks and the Broads.’ National Park designation in itself recognises the importance of the natural environment which is a fundamental part of the first purpose. The Government’s policy specifically for National Parks is contained in the 2010 Circular (see above).

5.1.2 Local Policy

North Yorkshire County Council’s current Minerals Local Plan (1997) and the Waste Local Plan (2006) contain a number of saved policies relevant to the protection of the natural Environment and Landscape (referred to below). It is expected that these policies will be replaced by new ones in the new Minerals and Waste Joint Plan.;

- Minerals Local Plan 4/6A Nature Conservation and Habitat Protection - Local

- Waste Local Plan 4/3 Landscape Protection
- Waste Local Plan 4/5 Heritage Coasts
- Waste Local Plan 4/9 National Sites
- Waste Local Plan 4/10 Locally Important Sites

The North York Moors Core Strategy and Development Policies is centred around delivering National Park purposes and sustainable development within this context, a key element of which is conserving and enhancing the Park's special natural environment and landscape. Key policies which relate to conserving the landscape and natural environment are:

- Core Policy A: Delivering Sustainable Development
- Core Policy C: Natural Environment, Biodiversity and Geodiversity
- Development Policy 1: Environmental Protection
- Core Policy G: Landscape, Design and Historic Assets

These policies will remain in place upon adoption of the Minerals and Waste Joint Plan.

The City of York Council's Draft Development Control Local Plan (2005) contains a number of policies which relate to conserving York's landscape and natural environment. These are as follows:

- Policy NE1: Trees, Woodlands and Hedgerows
- Policy NE2: River and Stream Corridors, Ponds and Wetland Habitats
- Policy NE4a: International and National Nature Conservation Sites
- Policy NE5a: Local Nature Conservation Sites
- Policy NE5b: Avoidance of, Mitigation and Compensation for Harm to Designated Nature Conservation Sites
- Policy NE6: Species Protected by Law
- Policy NE7: Habitat Protection and Creation
- Policy NE8: Green Corridors
- Policy HE11: Trees and Landscape

These policies will be replaced by the emerging City of York Local Plan.

5.1.3 North Yorkshire and York Local Nature Partnership

The North Yorkshire and York Local Nature Partnership (LNP), established in July 2012, brings together a range of organisations involved in nature conservation across the area including North Yorkshire County Council, the City of York Council, the North York Moors

National Park Authority, district and borough councils, the Howardian Hills AONB, the York North Yorkshire and East Riding Local Enterprise Partnership, Natural England and English Heritage. The LNP covers the whole of the Minerals and Waste Joint Plan area with the exception of the Nidderdale AONB (covered by the Northern Upland Chain LNP) and the part of the North York Moors National Park in Redcar and Cleveland Borough (covered by the Tees Valley LNP).

The North Yorkshire and York LNP have recently published a strategy which contains priority themes around nature, people and communities, economy and climate change and includes the following vision: ‘To see the natural environment of North Yorkshire and York conserved, enhanced and connected for the benefit of wildlife, people and the economy’. Of specific relevance to the Minerals and Waste Joint Plan is the identification of the opportunity for area-wide minerals restoration in the River Swale area.

5.2 Nature Conservation Designations

The UK Planning system includes mechanisms to protect and enhance biodiversity and geodiversity throughout the County. One of these mechanisms is the designation of areas of particular value which provides an increased level of protection.

The Hierarchy of international, national and locally designated sites are identified below. A further detailed explanation of these in the context of the North Yorkshire Plan area is included in following sections of this document.

| | | | |
|--|--|--|--|
| Internationally designated sites: | Special Areas of Conservation (SACs) | Special Protection Areas (SPAs) | Ramsar Sites |
| Nationally designated sites: | Sites of Specific Scientific Interest (SSSIs), | National Nature Reserves (NNRs) | |
| Locally important designations: | Local Nature Reserves (LNRs) | Regionally Important Geological and Geomorphological Sites (RIGS) / Local Geological Sites (LGS) | Site of Importance for Nature Conservation (SINC) / Local Wildlife Sites (LWS) |

5.3 International Nature Conservation Designations

Biodiversity refers to the totality of life on the earth and interactions between them. Future change in biodiversity is uncertain and may be influenced by factors such as climate change as well as development pressures. Minerals related development has the potential to have a detrimental impact on biodiversity and designated sites through, for example, loss/fragmentation of habitats, changes to air and water quality. In the longer term minerals planning has the potential to provide significant enhancements for example through the creation of new habitats. The following section provides an overview of the range of statutory and non-statutory designations relating to biodiversity within the Plan area.

5.3.1 Special Areas of Conservation (SACs)

SACs have been designated under the European Union Habitats Directive. They provide increased protection to a variety of species and habitats and are a vital part of global efforts

to conserve the world’s biodiversity by establishing a network of important high-quality conservation sites. There are 11 SACs wholly or partly within the Plan Area:

- Arnecliff and Park Hole Woods
- Beast Cliff – Whitby
- Ellers Wood and Sand Dale
- Flamborough Head
- Ingleborough Complex
- Kirk Deighton
- Lower Derwent Valley
- North York Moors
- River Derwent
- Skipwith Common
- South Pennines

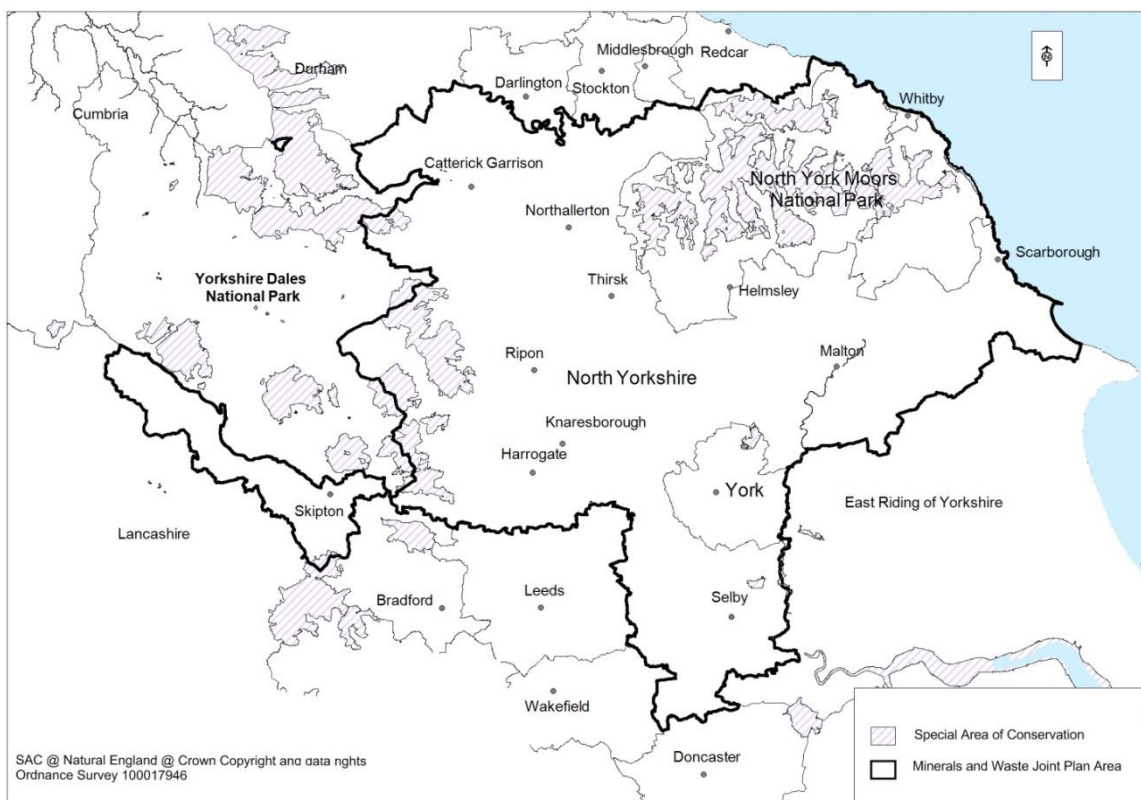


Figure 5: Special Areas of Conservation

5.3.2 Special Protection Areas (SPAs)

The European Union Birds Directive provides a framework for the conservation and management of wild birds in Europe. It applies special measures for the protection of listed rare and vulnerable bird species. In part, these objectives are achieved by the establishment of a network of protected areas for birds, known as Special Protection Areas (SPAs). There are 4 SPAs which are wholly or partly within the Plan area:

- Flamborough Head
- Lower Derwent Valley
- South Pennines
- North York Moors

5.3.3 Ramsar Sites

Ramsar sites are designated under the Convention of Wetlands of International Importance, adopted in Ramsar, Iran, in 1971 and ratified by the UK Government in 1976. This treaty provides the framework for action and cooperation for the conservation of wetlands and their resources. Ramsar sites receive the same statutory protection as SPAs and SACs. Within the Joint Plan area there is one Ramsar Site which is the Lower Derwent Valley.

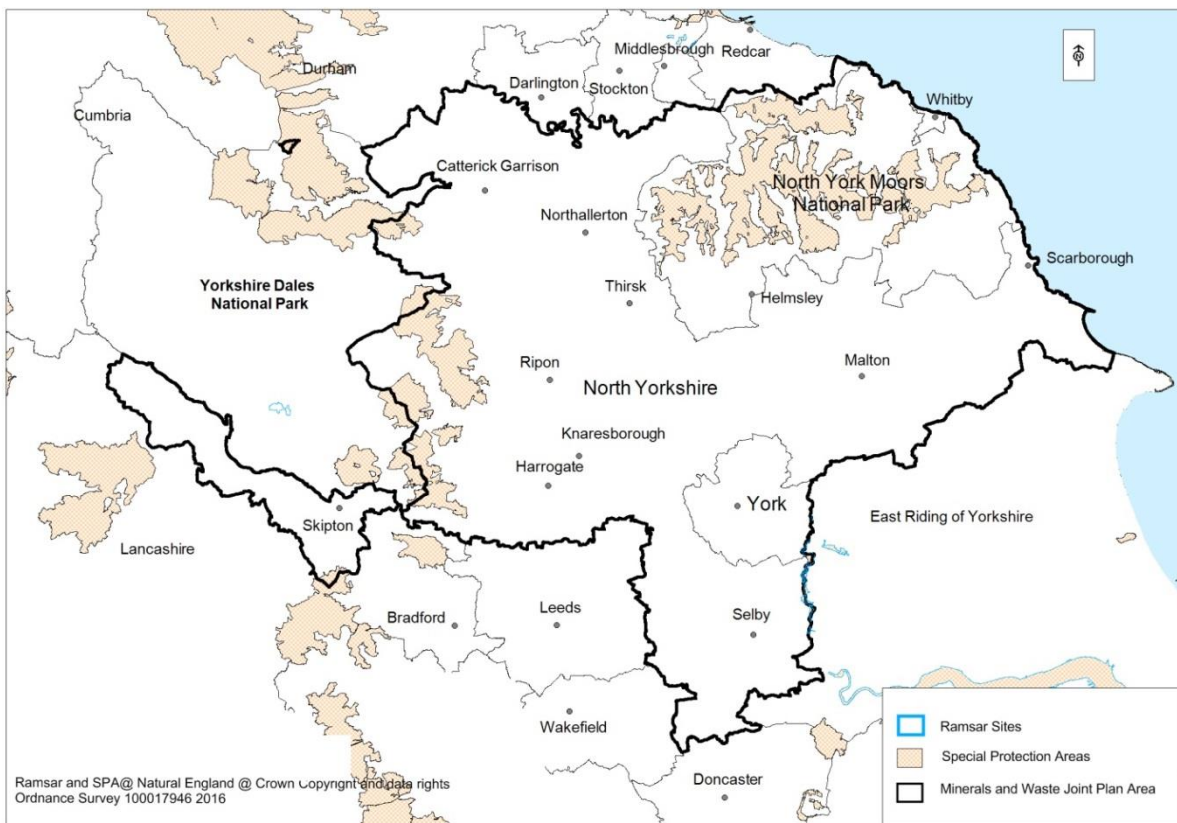


Figure 6: Special Protection Areas and Ramsar Sites

5.4 National and Local Nature Conservation Designations

5.4.1 Sites of Special Scientific Interest

Sites of Special Scientific Interest (SSSIs) are representative of the country's most important wildlife and geological sites and are recognised as being of national importance. SSSIs are important as they support plants and animals that find it more difficult to survive in the wider countryside as well as protecting the important geological and geomorphological features. Natural England is responsible for identifying SSSIs in England, their protection and management is a partnership between Natural England, land owners and managers. All SSSIs represent part of a scarce, finite resource, the conservation of which is vital to protect and sustain the quality of the County's nature conservation capital. Accordingly, any development proposal which might affect an SSSI should be subject to special scrutiny. Some SSSIs in the Joint Plan area are also designated at international level, see above. There are over 200 SSSIs either wholly or partly within the Plan area, covering approximately 110,140ha. Of the SSSIs in the Joint Plan area, 52% are in 'favourable' condition and 38% are in 'unfavourable recovering' condition.

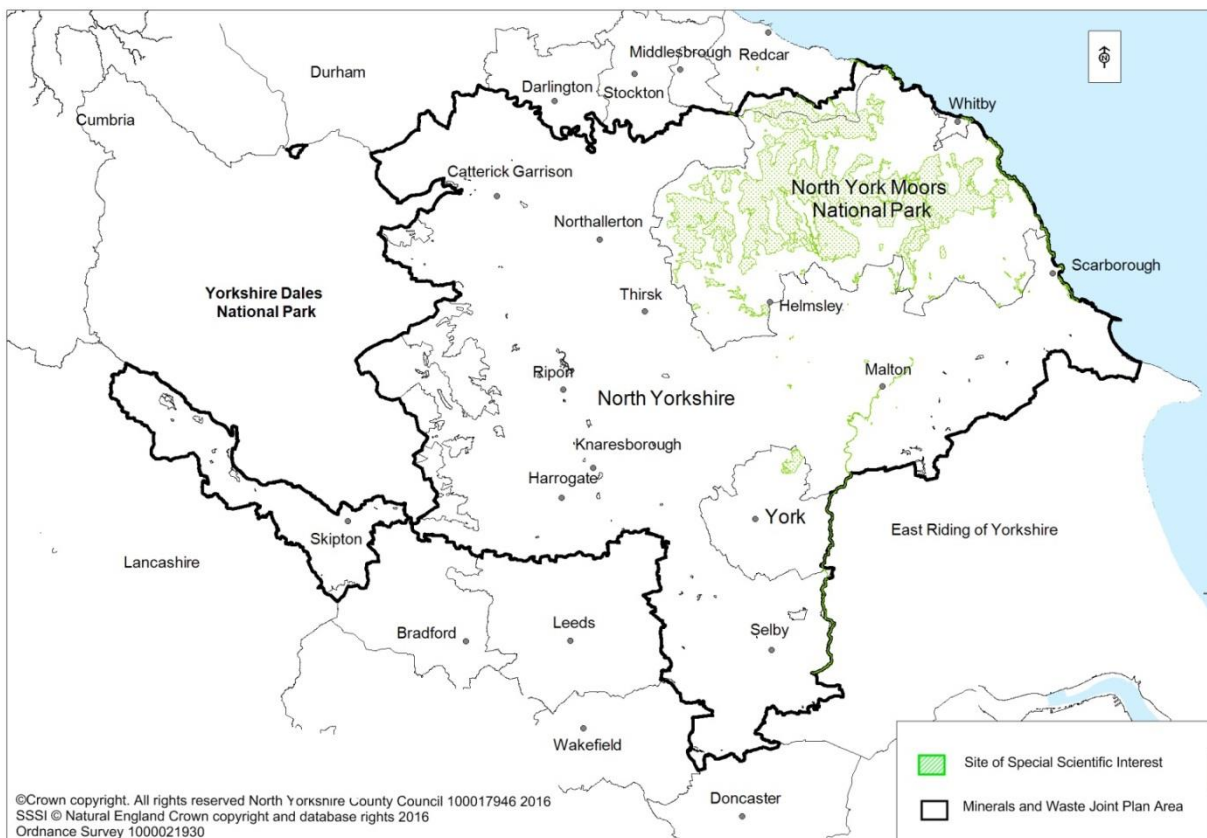


Figure 7: Sites of Special Scientific Interest

5.4.2 National Nature Reserves and Local Nature Reserves

Created as a result of the National Parks and Access to the Countryside Act 1949, the designation of National Nature Reserves (NNRs) help protect some of the best wildlife and earth heritage sites in the Country. There are five NNRs wholly or partly in the Joint Plan area, occupying 829 hectares:

- Skipwith Common
- Lower Derwent Valley

- Forge Valley
- Duncombe Park
- Lower Derwent Valley

Local Nature Reserves (LNRs) are statutory designations made by local authorities and are intended to be for both people and wildlife. They are sites that are considered of local interest due to the presence of wildlife or geological features. There are currently 15 LNRs covering 1,405ha within the North Yorkshire plan area.

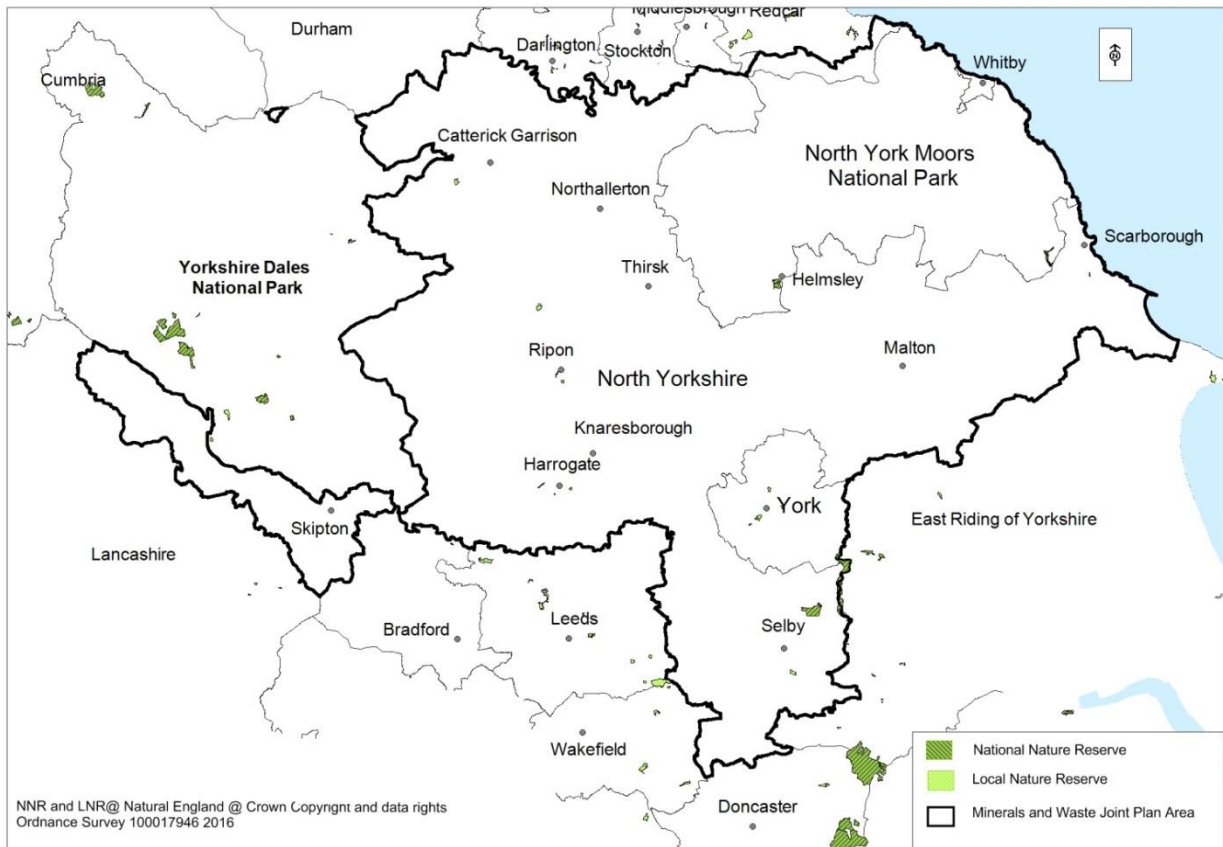


Figure 8: National and Local Nature Reserves

5.4.3 Sites of Importance for Nature Conservation and Local Wildlife Sites

A Site of Importance for Nature Conservation (SINC) is a non-statutory designation used to identify other high quality wildlife sites in the County. These sites are also known as Local Wildlife Sites. The protection and management of SINC sites is important in conserving our natural habitats that cannot be recreated.

The North Yorkshire SINC partnership consisting of North Yorkshire County Council, Natural England, Yorkshire Wildlife Trust, the Districts and Borough Councils, the Environment Agency and Forestry Commission, identify and help monitor potential and current SINC sites in the part of the County outside of the National Parks. There are currently in excess of 730 sites on the Council's list. SINC sites have not been identified in the North York Moors National Park as the National Park purposes (see above) already provide a degree of protection to wildlife across the Park. However, Local Wildlife Sites have been identified in the part of the Park in Redcar and Cleveland Borough by the Tees Valley Biodiversity Steering Group.

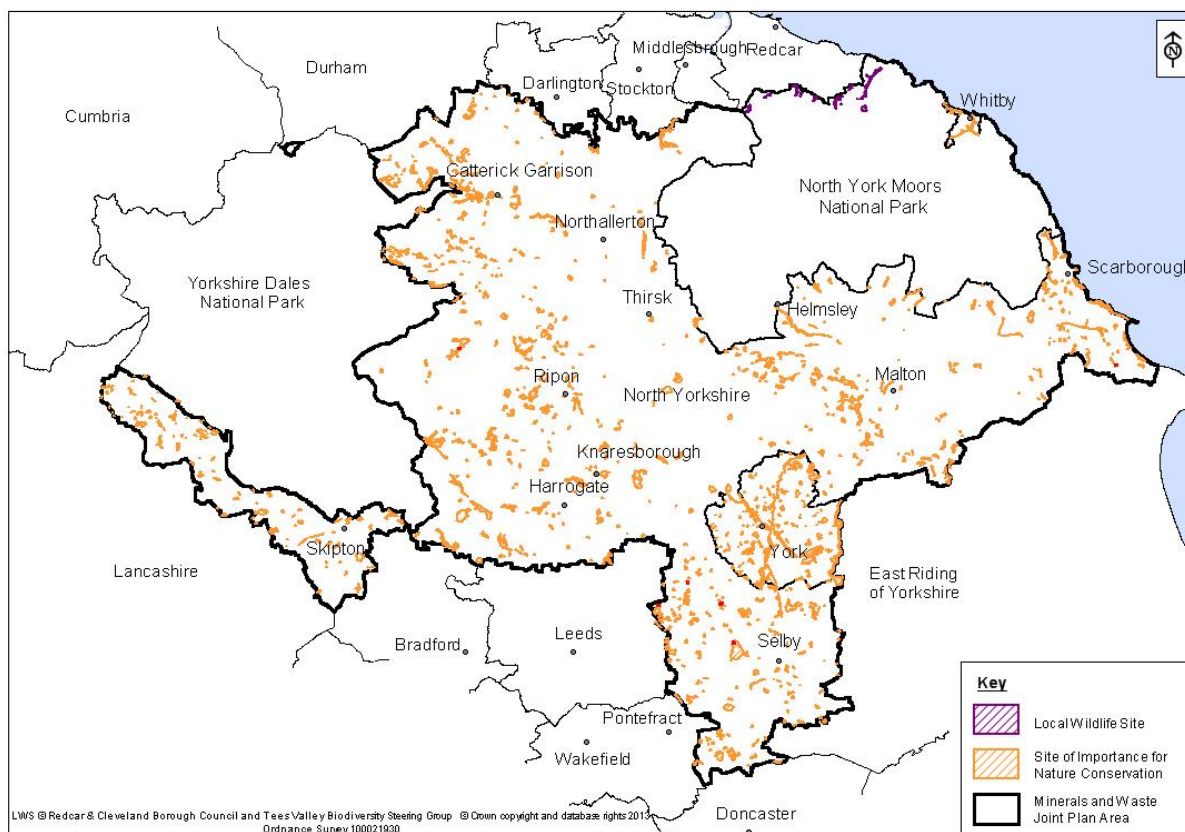


Figure 9: Sites of Importance for Nature Conservation and Local Wildlife Sites

5.4.4 Geological sites

In addition to geological SSSIs there are a number of Regionally Important Geological Sites or Local Geological Sites in the Plan area but at present, apart from those in the Redcar and Cleveland Part of the National Park, mapped information on these is not available. RIGS are designated by locally developed criteria, and are currently the most important places for geology and geomorphology outside statutorily protected land such as SSSI. The North East Yorkshire Geology Trust, North Yorkshire Geodiversity Partnership, East Yorkshire RIGS Group and the Tees Valley RIGS groups are the bodies which identify and survey RIGS and recommend them to local authorities for designation.

5.5 Conservation of Habitats and Species outside Designated Sites

The UK Government established the Biodiversity Action Plan (UK BAP) and a Biodiversity Action Plan Steering Group in 1994. The UK BAP outlined the Government's response to the June 1992 Rio Convention for Biodiversity Conservation.

Biodiversity means 'the variety of life'. The Joint Plan area is extensive, with varied geology, soils, climate and land use. This gives rise to a range of habitats, including remote moorland, lowland meadows and streams, and rugged coastline, which in turn support many varied species.

The Countryside and Rights of Way Act (2000) and the Natural and Environment and Rural Communities Act (2006) which places a duty on Local Authorities to maintain and enhance and create new biodiversity within their area.

Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services (2011) sets out a series of actions that will be taken by the government and its partners to halt overall

biodiversity loss, support well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people'. It sets national priorities for 'habitat restoration and the creation of ecological networks that safeguard ecosystem services'.

The NPPF states that 'Local planning authorities should set out a strategic approach in their local plans, planning positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure.'

The Government's approach to minimising impacts on biodiversity and geodiversity through planning is set out in paragraph 117 of the NPPF. It states that 'planning policies should;

- Plan for biodiversity at a landscape-scale across local authority boundaries;
- Identify and map components of the local ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them and areas identified by local partnership for habitat restoration or creation'

Through policies in plans, local authorities should also conserve other important natural habitat types that have been identified in the Countryside and Rights of Way Act 2000 as being of principal importance for the conservation of biodiversity in England and identify opportunities to enhance and add to them.

Development proposals provide many opportunities for building-in beneficial biodiversity or geological features as part of good design. When considering proposals, local planning authorities should maximise such opportunities in and around developments, using planning obligations where appropriate.

Reclamation can provide opportunities for creating, or enhancing, sites for nature conservation. This can make a contribution, for example, towards achieving specific targets set in the UK Biodiversity Action Plan.

The Yorkshire and Humber Regional Biodiversity Strategy¹⁰ describes the Region's biodiversity as outstanding. The 'vision is for a region where the wildlife and wild-spaces of our rural, urban and marine environments all contribute to a healthy functioning ecosystem, and where nature is conserved and treasured as an important part of a contented and economically successful community'. It also recognises the value of biodiversity to the region's social and economic sectors and identifies those actions which are required jointly to enhance our region's natural environment.

5.6 Biodiversity Action Plans and Geodiversity Action Plans

Each district and borough within the Plan area, along with the National Park, has generated a local Biodiversity Action Plan. Biodiversity Action Reporting System (BARS) is an information system that supports the planning, monitoring and reporting requirements of national, local and company BAPs. It enables progress being made with local and national BAPs and the status of BAP species and habitats to be monitored.

The North Yorkshire Geodiversity Partnership and the North East Yorkshire Geology Trust are both working on the implementation of Geodiversity Action Plans (GAPs) to conserve and enhance the geodiversity across the area.

¹⁰ Yorkshire and Humber Regional Biodiversity Strategy (Yorkshire and Humber Environment Forum, 2009)

5.7 Woodland

National inventories of Woodland and Trees are carried out at 10-15 year intervals. According to the National Inventory of Trees and Woodland (2002), the total area of woodland of 1.0 hectares and over in North Yorkshire county is 60,843, equating to 7.3 percent of the land area. The inventory estimates that 41.2 percent of woodland is broadleaved, 32.3 percent is Conifer woodland, 13.7 percent is mixed woodland the remaining 11.2 percent is openspace within woodland.¹¹ Around half of this woodland is in the North York Moors National Park which has around 31,000 hectares. There is a further 998 hectares of woodland in the City of York.

These woodland sites are home to a diverse collection of flora and fauna, and provide food and nest sites for a host of bird species as well as contributing to the landscape of the Plan area.

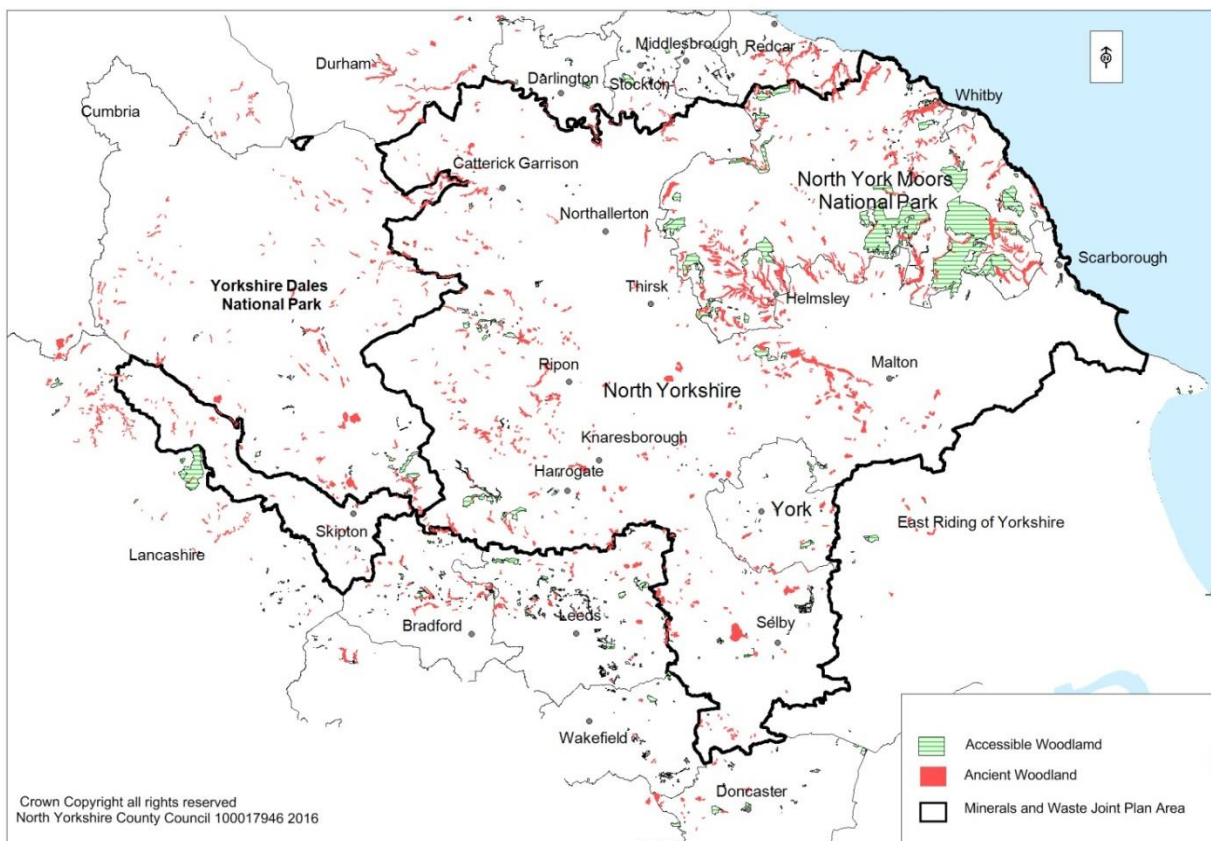


Figure 10: Woodland

5.7.1 Ancient Woodland and Veteran Trees

Veteran trees and many types of woodland, especially ancient semi-natural woodland, can be of importance for biodiversity conservation. When considering whether particular trees or woodlands merit a Tree Preservation Order (TPO) in the interests of amenity, local planning authorities should include consideration of their nature conservation value.

North Yorkshire contains many small areas of ancient woodland, i.e. land believed to have

¹¹ Forestry Commission, National Inventory of Woodland and Trees- County Report: North Yorkshire (2002)

had a continuous cover of native trees since at least 1600 AD. These areas are of nature conservation significance. There are around 8,000 hectares of ancient woodland in the Joint Plan area. There are also 8,708ha of woodland which is Plantation on Ancient Woodland Sites (PAWS).

5.8 Green Infrastructure

Green Infrastructure is made up of a network of protected sites, nature reserves, green spaces and greenway linkages, such as rights of way, river corridors and flood plains. Green infrastructure is increasingly seen as a fundamental part of infrastructure required to create functional communities as well as enabling the interconnecting of habitats to allow for the movement of species between what would otherwise be isolated sites. Minerals and waste development has the potential to impact both adversely and positively on green infrastructure networks.

Paragraph 114 of the National Planning Policy Framework states that 'Local planning authorities should: set out a strategic approach in their Local Plans, planning positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure'

Green Infrastructure corridors were developed by Natural England for the Yorkshire and Humber region by considering the functionality and connectivity between different green infrastructure assets. A map showing the corridors can be viewed at www.naturalengland.org.uk/Images/gi-mapdiag_tcm6-20429.pdf. Each corridor has been ranked according to how large it is and how many functions it fulfils. The map shows where green infrastructure is currently, and also where it could be developed, such as along disused railway lines or at former landfill sites. The rankings are:

- Strategic/Regional – Passes through many local authorities. Provides most functions.
- Sub-regional – Passes through fewer local authorities. Provides many functions.
- District – Connects only one or two local authorities. Provides many functions.

Parts of the Plan area are covered by the Leeds City Region Green Infrastructure Strategy. This sets out four strategic objectives to deliver green infrastructure as well as a number of strategic initiatives. In addition, the part of the North York Moors National Park which is in Redcar and Cleveland Borough is covered by the Tees Valley Green Infrastructure Strategy¹² which identifies the National Park as an element of green infrastructure in its own right.

Some local authorities within North Yorkshire have mapped out local green space although much of this work is focused on recreational assets and accessibility rather than biodiversity. The City of York Council have identified and mapped all open space – the city contains approximately 480 hectares of parks and open spaces.

Green infrastructure is especially important in dealing with the effects of climate change on the environment through the maintenance and enhancement of migration routes and features of the landscape which are important as wildlife corridors.

5.9 Habitat Networks

Wildlife corridors provide an interconnecting network of habitats allowing for the movement of species between what would otherwise be isolated sites. They are important for the maintenance of the range and diversity of flora and fauna in the Plan area, because many species cannot survive within the limits of designated sites. It is predicted that climate

¹² Tees Valley Green Infrastructure Strategy (Tees Valley Joint Strategy Unit, 2008)

change will increase these problems of isolation.

Mapping of habitat networks has been done at a national scale (the England Habitat Network), at a regional level (Yorkshire Wildlife Trust's Living Landscapes) and at the local level (North York Moors National Park habitat connectivity maps).

North Yorkshire County Council is working towards expanding the network of natural habitats by identifying and delivering biodiversity opportunity areas, which are the areas that have the greatest potential to reconnect gaps in the ecological network by for example planting new areas of woodland and hedgerows and managing grasslands. The North York Moors National Park Authority is focussing its conservation work on addressing identified gaps in habitat networks in the Park.

5.10 Ecosystem Services

The ecosystem services approach is the concept of looking at whole ecosystems and the services they provide as part of the planning and decision making process. Ecosystem services are the benefits received from nature such as climate regulation, flood protection, clean water, pollination and a range of economic, cultural and recreational benefits. They can be grouped into four main categories:

- Supporting services: those which are necessary for the functioning of all other ecosystem services such as nutrient cycling, soil formation and photosynthesis.
- Regulating services: benefits obtained from the regulation of natural processes e.g. climate regulation, flood regulation and water purification.
- Provisioning services: the products (including those derived from both renewable and finite resources) that can be obtained from ecosystems e.g. food, fresh water, wood and fibre, fuel and minerals.
- Cultural services: including the availability of land suitable for development but also nonmaterial or intrinsic benefits e.g. educational and recreational opportunities, aesthetic and spiritual values.

The NPPF states that 'the planning system should contribute to and enhance the natural and local environment by... recognising the wider benefits of ecosystem services; minimising impacts upon biodiversity and providing net gains in biodiversity where possible....'

A recent study on ecosystem provision for York and North Yorkshire¹³ has identified the following as important ecosystems in the area:

- Food production
- Heritage
- Aesthetics
- Raw materials
- Recreation
- Genetic resources
- Pollination
- Climate regulation
- Water regulation
- Erosion prevention
- Water quality
- Potable water
- Pest control

¹³ Applying an Ecosystem Services Approach in Yorkshire and Humber, Yorkshire Futures

Different areas will vary in the kinds of habitats they support and hence the level of services they provide. Also of importance is where beneficiaries of ecosystem services are located relative to sites of service provision.

According to the Yorkshire Future's report¹⁴, pressures on ecosystem services include:

- Climate change – affecting woodlands, grasslands, fens and bogs
- Poor management/land abandonment
- Over and under grazing and natural succession affecting all types of grassland
- Agricultural expansion and land drainage
- Atmospheric pollution and eutrophication
- Urban development

Minerals and waste development has the potential to impact on provision of ecosystems services and these impacts can be both positive and negative. In some cases a particular form of development may perform well in respect of some ecosystems services provision but may have a detrimental impact on others.

5.11 Landscape

Landscapes are protected by a range of mechanisms including statutory designations, such as National Parks and Areas of Outstanding Natural Beauty, non-statutory designations such as Heritage Coasts, and by planning policies including those providing support for landscape characterisation as an aid to conserving and managing landscapes. An extensive part of the Joint Plan area is covered by the North York Moors National Park or by Areas of Outstanding Natural Beauty.

The European Landscape Convention (ELC) is the first international convention to focus specifically on landscape, and is dedicated exclusively to the protection, management and planning of all landscapes in Europe regardless of their status. The convention highlights the need to recognise landscape in law, to develop landscape policies dedicated to the protection, management and creation of landscapes, and to establish procedures for the participation of the general public and other stakeholders in the creation and implementation of landscape policies. It also encourages the integration of landscape into all relevant areas of policy, including cultural, economic and social policies.

5.12 National Parks

The North York Moors National Park is one of the three planning areas to be covered by the Minerals and Waste Joint Plan. National Parks were created following the National Parks and Access to the Countryside Act 1949. The 1995 Environment Act established National Park Authorities as the sole planning authority for the area, and sets the statutory National Park purposes, of which conservation of the landscape is a part. The first statutory purpose is to 'Conserve and enhance the natural beauty, wildlife and cultural heritage of the Park'.

The North York Moors National Park was designated in 1952 and extends to 1,436km², covering over 20% of the Plan area. The landscape of the National Park was the primary reason for its designation as such and was recognised in the 1947 Hobhouse Report for its diversity - 'within a relatively small compass and amazing wealth of variety and beauty.' The diverse landscape includes open heather moorland, interspersed by narrow dales, extensive woodland area, high coastal cliffs and dramatic geological features such as Sutton Bank and Roseberry Topping. The National Park can be best described through reference to its Special Qualities, which are defined as:

¹⁴ Applying an Ecosystem Services Approach in Yorkshire and Humber (Yorkshire Futures, 2010)

- Great diversity of landscape; Sudden dramatic contrasts associated with this
- Wide sweeps of open heather moorland; Distinctive dales, valley and inland headlands
- An abundance of forest and woodland; Ancient trees and woodland rich in wildlife
- Special landforms from the Ice Age; Exceptional coastal geology
- Majestic coastal cliffs and sheltered harbours; Distinctive coastal headlands
- A special mix of upland, lowland and coastal habitats; A wide variety of wildlife dependent on these
- Settlements which reflect their agricultural, fishing or mining past; Locally distinctive buildings and building materials
- Long imprint of human activity; A wealth of archaeology from prehistory to the 20th Century
- A rich and diverse countryside for recreation; An extensive network of public paths and tracks
- Strong religious past and present; Ruined abbeys and ancient churches
- Strong feeling of remoteness; A place for spiritual refreshment
- Tranquillity; Dark skies at night and clear unpolluted air
- Distinctive skills, dialects, songs and customs; Strong sense of community and friendly people
- A place of artistic, scientific and literary inspiration; A heritage of authors, artists, scientists and explorers

The long-term vision for the National Park is:

- A place managed with care and concern for future generations
- A place where the diversity and distinctiveness of the landscape, villages and buildings is cherished
- A place where biological and cultural diversity, and other special qualities are conserved and enhanced
- A place where the environment and way of life is respected and understood
- A place where communities are more self sustaining and economic activity engenders environmental and recreational benefits
- A place that is special to people and that provides pleasure, inspiration and spiritual well being; where calm and quality of life are celebrated
- A place where visitors are welcome and cultural and recreational opportunities and experiences are accessible
- A place that continues to adapt to change whilst National Park purposes continue to be furthered and pursued
- A place where natural resources are managed sustainably and environmental limits are recognised

The North Yorkshire Moors and Cleveland Hills National Character Area boundary almost reflects that of the National Park. The landscape of the National Character Area is identified as ‘changing – enhancing’¹⁵, which means that it continues to evolve in a positive way.

The Yorkshire Dales National Park adjoins the Joint Plan area to the west and any potential impacts on the setting of the Park will need to be considered. The boundary of the Park was extended in 2016 to include additional land in Cumbria and a small area within Lancashire. This boundary change is not considered to have any specific implications for the Joint Plan area.

¹⁵ State of the Natural Environment in Yorkshire and Humber (Natural England 2008)

5.13 Areas of Outstanding Natural Beauty

The designation of AONB was created by the legislation of the National Parks and Access to the Countryside Act of 1949 and further protection was added through the introduction of the Countryside and Rights of Way Act 2000 (the CRoW Act).

The Countryside Commission defined the primary purpose of designation as being to conserve and enhance the natural beauty of the area.

There are two AONBs wholly within the Plan area (the Howardian Hills and Nidderdale AONBs). Together they cover 16% of the Plan area. Small parts of two further AONBs, the Forest of Bowland and the North Pennines, both extend into the Plan area in the far north and west respectively.

Howardian Hills AONB is situated between the North York Moors National Park, the Yorkshire Wolds and the Vale of York. It covers 204 km² of the North Yorkshire countryside. The Howardian Hills form a distinctive, roughly rectangular area of well-wooded undulating countryside rising, sometimes sharply, between the flat agricultural plains of Pickering and York.

Jurassic limestone gives the landscape its character and in effect, the irregular 180m ridges of the Howardian Hills are a southern extension of the rocks of the North York Moors. It contains a rich and intimate tapestry of wooded hills and valleys, pastures and rolling farmland, as well as dramatic views from the higher ground across the agricultural plains below. On the eastern edge, the river Derwent cuts through the Hills in the Kirkham Gorge, a deep winding valley which was formed as an overflow channel from glacial Lake Pickering.

Nidderdale AONB shares a common border with the Yorkshire Dales National Park and extends over 603 km² to the east of the National Park. Nidderdale AONB is located on the eastern flanks of the Yorkshire Pennines stretching from the high moorland of Great Whernside south and east towards the edge of the Vale of York. The area is crossed by the deep pastoral, often wooded dales of the Washburn, Laver, Burn and long majestic dale of the Nidd itself. Reservoirs add a further dimension to the beauty of the dale. Rich, rolling and wooded pastoral scenery, with stone settlements like Lofthouse and Kirkby Malzeard, contrast with bleak heather moorland which is broken by craggy gritstone outcrops, including the curious shapes of Brimham Rocks. To the east, in the wooded pasture lands of the Skell Valley, stands the internationally renowned and much visited Studley Royal, with the picturesque ruins of Fountains Abbey which are also the County's sole World Heritage Site.

The landscape is dominated by its millstone grit geology giving it a typically dark, sometimes sombre appearance which is reflected in the stone of buildings and walls, in the heather moorland and in the characteristic grasslands that occur on this type of formation. Glaciation and the differential resistance to weathering of the sand, shale and gritstones produces some of the most dramatic features such as cut off crags on valley sides and wide U-shaped valleys. This is in contrast with the pastoral landscapes of the dales and upland fringes running down to the dale. Hamlets and villages built in local stone contribute greatly to the character of the area.

The North Pennines AONB Management Plan 2014-2019 Forest of Bowland AONB Management Plans 2014-2019, Nidderdale AONB Management Plan 2014-2019, and Howardian Hills AONB Management Plan 2014-2019 identify the important features of the AONBs and set out guidance and objectives on how these can be protected, restored and enhanced.

There are existing mineral workings within the Howardian Hills and Nidderdale AONBs.

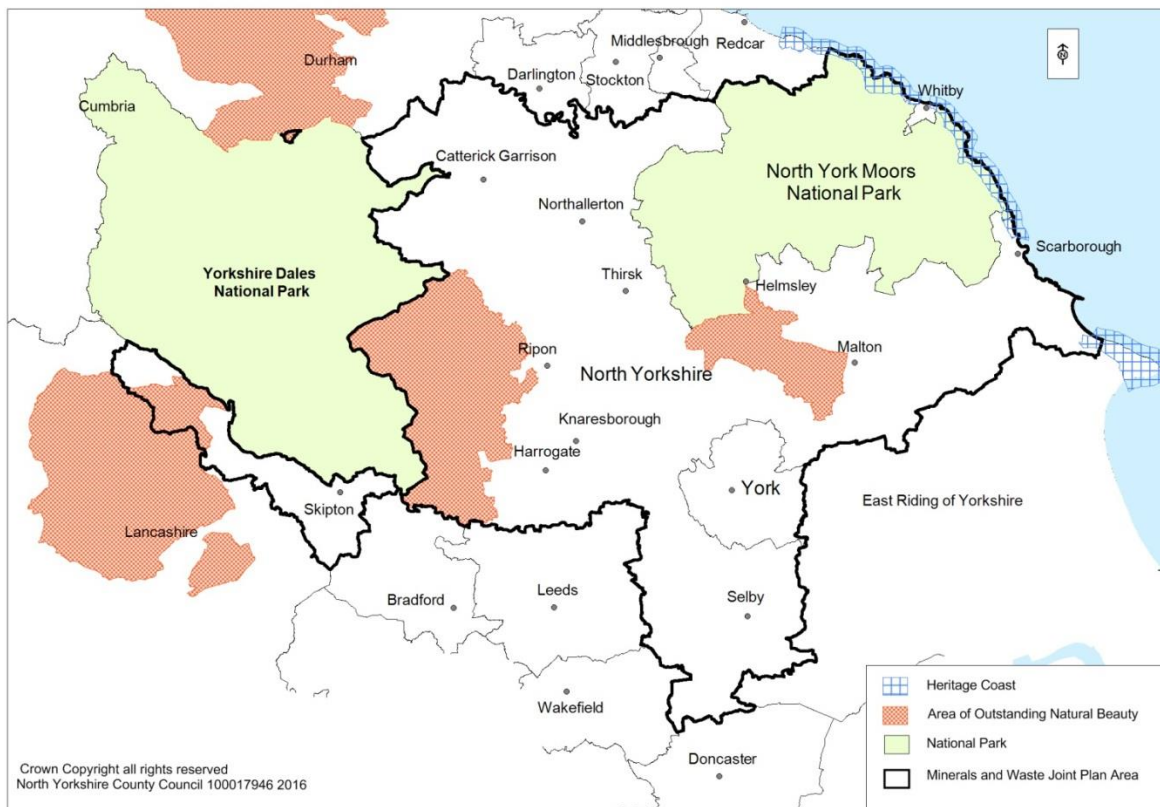


Figure 12: National Parks, AONBs and Heritage Coast

5.14 Heritage Coast

Heritage Coasts are a non-statutory landscape classification. They are defined by agreement between the relevant maritime and local authorities and Natural England. Around one third of the English coastline is defined as Heritage Coast and managed so that its natural beauty is conserved and, where appropriate, the accessibility for visitors is improved.

The National Planning Policy Framework states that planning should ‘maintain the character of the undeveloped coast, protecting and enhancing its distinctive landscapes, particularly in areas defined as Heritage Coast, and improve public access to and enjoyment of the coast.’¹⁶

As Figure 12 above shows, there are two stretches of designated Heritage Coastline within the Plan area. The North Yorkshire and Cleveland Heritage Coast starts north of the Plan area in Saltburn and finishes 57 km south at Scalby Ness near Scarborough. The Flamborough Head Heritage Coast runs for 19 km from Reighton in North Yorkshire to Sewerby, East Riding of Yorkshire and has an inland boundary that encloses 32.65 km². Much of the North Yorkshire and Cleveland Heritage Coast is also within the North York Moors National Park.

5.15 Local landscape designations

The following district and boroughs have identified and designated additional local landscapes in their local area:

¹⁶ National Planning Policy Framework (DCLG, 2012 (Paragraph 113)

Craven

The District's Local Plan includes a Policy on Special Landscape Areas (ENV4)

Harrogate

Policy EQ2: The natural and built environment and green belt in Harrogate's adopted Core Strategy (2009) identified a number of local landscape designations which the district has identified or designated. These include:

- Special Landscape Areas
- Green Wedges
- Amenity Open Spaces

Richmondshire

Richmondshire's Local Plan (2014) policy CP3 does not designate specific areas but promotes the character and quality of the local landscapes and the wider countryside. Policy CP12 conserves and enhances environmental and historic assets including assets in East Witton and Muker Parishes which are in AONBs and the green infrastructure network which includes specific areas and assets and designations.

Ryedale

Ryedale's Local Plan Strategy (2013) contains Policy SP13: Landscapes which identifies the following as locally valued landscapes:

- The Wolds Area of High Landscape Value
- The Fringe of the Moors Area of High Landscape Value
- The Vale of Pickering

Scarborough

The saved policy E7 Local Nature Conservation Sites in the Local Plan does designate specific sites however the policy seeks to protect features such as hedgerows, streams, footpaths and woodland.

Selby

Selby District Core Strategy Local Plan (2013) Policy SP18: Protecting and enhancing the environment, states that it will identify, protect and enhance locally distinctive landscapes, areas of tranquillity, public rights of way and success, open spaces and playing fields.

York

Policy SP3 of the draft Development Control Local Plan (2005) sets out the principles through which the historic character and setting of York will be safeguarded. This includes the protection of the Minster's dominance at a distance on the York skyline and environmental assets and landscape features which enhance historic character and setting including river corridors, green wedges and areas of open countryside which provide an impression of an historic city. The policy is supported by the 2003 CYC report 'Approach to the Green Belt Appraisal'.

In addition, two other landscape features are considered worthy of local recognition: Hambleton Hough and Brayton Barff located to the south-west of Selby. Their significance is attributable to the outcropping of Triassic sandstone above the glacial till of the surrounding area. Both are extensively wooded, further enhancing their prominence.

Local landscape designations are not relevant within the North York Moors National Park which is a nationally protected landscape.

5.16 Landscape Character Assessment

5.16.1 National Character Areas

In the mid 1990's the then Countryside Commission and English Nature (now merged to form Natural England) developed a joint project to map variations in the landscape and ecological characteristics of the English Countryside. The result of this collaboration was the identification of 181 Countryside Character Areas and 120 Natural Areas in 'The Character of England: landscape, wildlife and natural features'. Natural Areas are broad bio-geographic zones and Countryside Character Areas are broad regional landscapes.

In 2005, the Character of England Landscape, Wildlife and Cultural Features Map updated the 1996 map and subdivided the Country in 159 National Character Areas (previously Joint Character Areas) which form a national framework for decision-making about landscape and biodiversity. The following fifteen National Character Areas cover the Joint Plan area:

- Yorkshire Dales
- Pennine Dales Fringe
- Tees Lowlands
- Vale of Mowbray
- North Yorkshire Moors and Cleveland Hills
- Vale of Pickering
- Yorkshire Wolds
- Vale of York
- Howardian Hills
- Southern Magnesian Limestone
- Bowland Fringe and Pendle Hill
- Bowland Fells
- Lancashire Valleys
- Southern Pennines
- Humberhead Levels

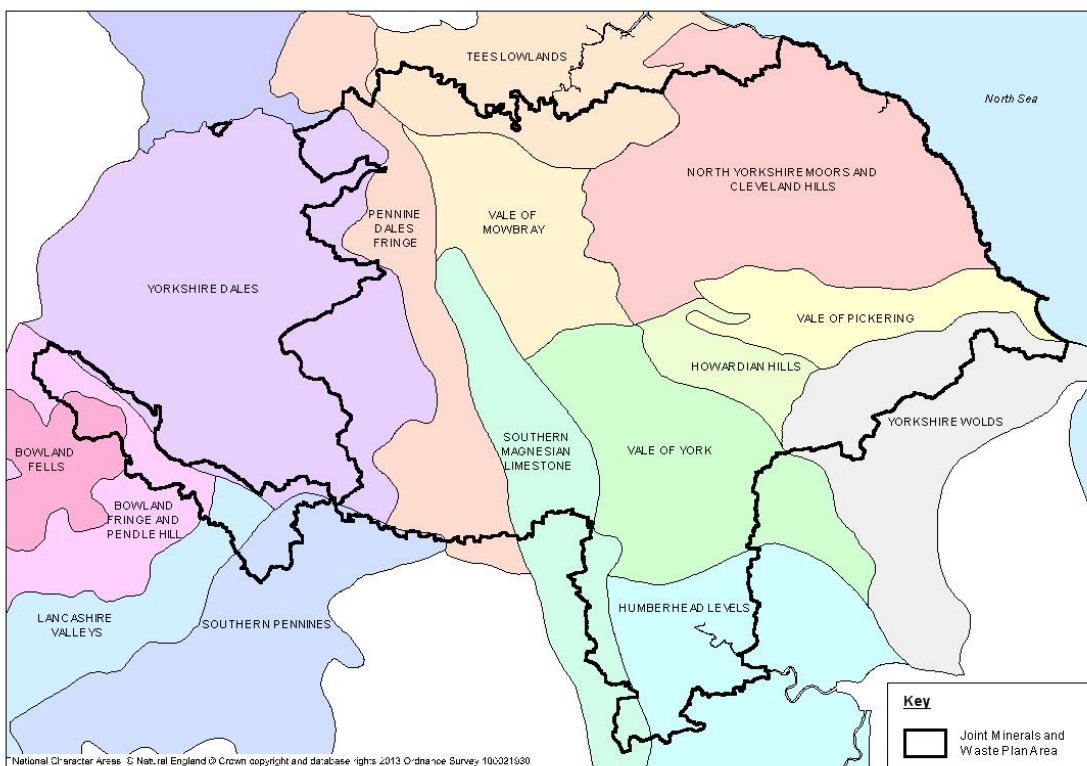


Figure 12: National Character Areas

5.16.2 Local Landscape Character Assessment

Landscape Character Assessment is a technique that has been developed to help identify the special qualities or characteristics of the landscape, and provides a framework to analyse, describe and classify a landscape in a systematic way. This in turn allows judgements to be made about the landscape so that policy makers, developers and landscape managers can achieve high quality development within a well maintained and sustainable environment.

North Yorkshire County Council has undertaken a landscape character assessment that takes the national character work to a more local scale and as a result 9 primary character units were identified which can be further divided to create 39 County Landscape Character areas. This work will be closely linked to that being carried out on the evaluation of the historic landscape. The Landscape Character Assessment for the North York Moors National Park identifies 9 Landscape Character Areas and within these 31 landscape character types.

5.17 Green Belt

Although not a landscape designation, Green Belt is defined to maintain the openness of land around England's largest towns and cities. Through the National Planning Policy Framework the Government attaches great importance to Green Belts. In the case of North Yorkshire it is the responsibility of the District and Borough Planning Authorities to establish the green belt boundaries within their local plans.

The area of designated greenbelt land in the Plan area has increased from 342 km² in 2003 to 361 km² in 2007 due to additional designations in Selby (between 2004 & 2006) and Harrogate (between 2006 & 2007). The City of York inner green belt boundary has not yet been formally adopted.

As stated above Green Belt is not a landscape designation and is primarily a designation for planning policy purposes, restricting inappropriate development. In this respect, certain forms of development are considered 'not inappropriate' within the Green Belt. As set out in paragraph 90 of the NPPF, minerals extraction is specifically stated to be considered as 'not inappropriate' in the Green Belt.

The new national waste policy indicates that planning authorities should first look outside the Green Belt for suitable sites and areas for waste facilities which, if located in the Green Belt, would be inappropriate development.

Policy YH9 of the Yorkshire and Humber Regional Spatial Strategy has been retained to maintain the principle of a Green Belt for York, which will be defined through the Council's Local Plan.

5.18 Tranquillity

North Yorkshire is ranked as the third most tranquil county council / unitary authority in England after Northumberland and Cumbria¹⁷. The mean tranquillity score for Yorkshire and the Humber and England is 4.16 and -9.34 respectively. Yorkshire and the Humber is the second most tranquil region in the country. Within the Plan area, the upland areas of the National Park are the most tranquil with the towns and cities being the least tranquil, as would be expected. Tranquillity is not just a measurement of noise but is based upon peoples' perceptions of an area which can include the presence of features such as pylons or being able to see other people.

¹⁷ Campaign to Protect Rural England (CPRE)

Tranquillity has been mapped for England by the Campaign to Protect Rural England. The mapping shows relative levels of higher or lower tranquillity. This shows that much of the MWJP area, compared to surrounding more urban areas, is relatively tranquil. This is with the exception of York, Harrogate, Scarborough and the market towns, and also the main roads show up as being particularly less tranquil. The most tranquil parts of the Plan area are the most upland areas of the North York Moors National Park and the Nidderdale AONB. The factors that contribute to tranquillity in the plan area are seeing remote, wild and natural landscapes, seeing deciduous woodland, seeing rivers and streams, seeing the sea and seeing stars at night. Factors that detract from tranquillity in the plan area include seeing urban development and signs of human impact and people, hearing noise from transport and seeing powerlines and transport infrastructure.

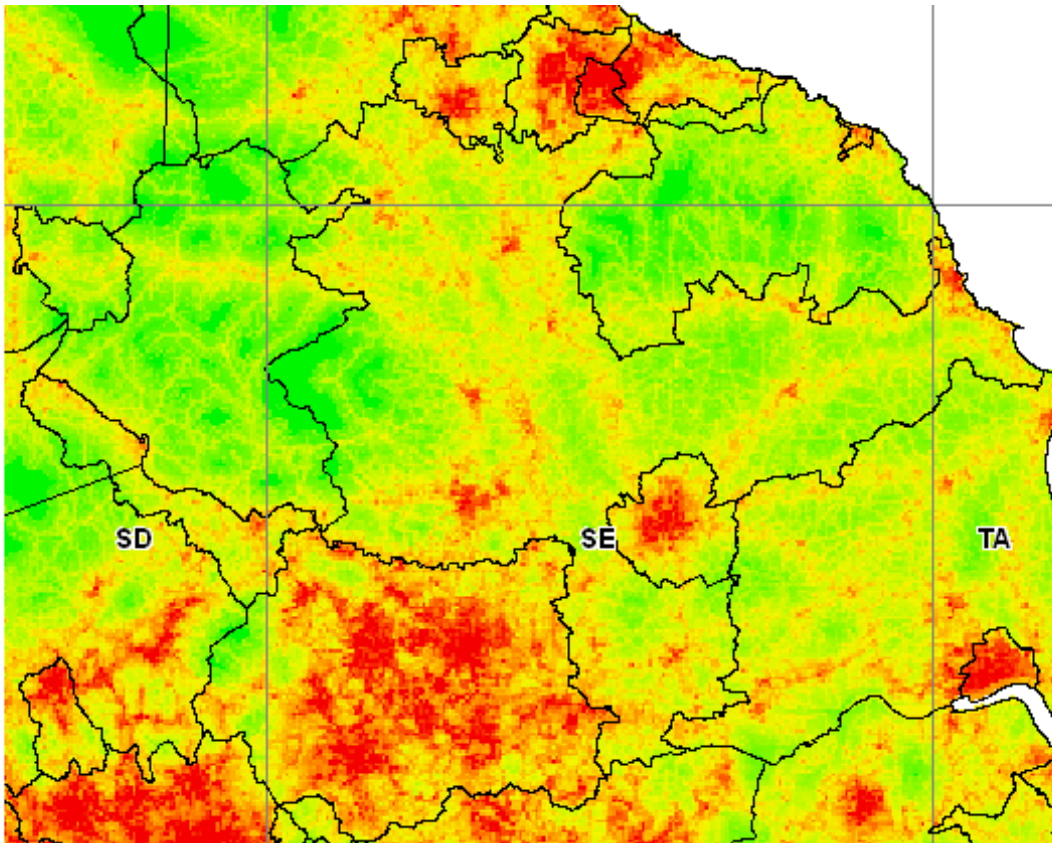


Figure 13: Relative tranquillity. Tranquillity is shown on a sliding scale – the closer to red the lower the tranquillity, the closer to green the higher the tranquillity.

Sourced from National Tranquillity Mapping Data 2007 developed for Campaign to Protect Rural England and Natural England by Northumbria University. OS Licence number 1000018881.

Minerals development has the potential to have a detrimental impact on tranquillity, through for example vehicle movements and noise. Similarly, waste management facilities may also have the potential to negatively impact tranquillity, through factors such as noise and odour generated on site and the movement of vehicles transporting waste.

5.19 Managing Landscape Change Project

The project was carried out in 2011 and arose as a result of the need to provide an improved environmental evidence base to gain a better understanding of the relationship between environmental assets, particularly the historic and natural environment and landscape and mineral resources. This study only relates to the part of the Joint Plan area in North Yorkshire minerals and waste planning authority area. The Managing Landscape Change

(MLC) study was undertaken by consultants on behalf of North Yorkshire County Council and was funded jointly by English Heritage and North Yorkshire County Council.

The MLC Study sought to improve understanding of environmental sensitivities and likely capacity of the area to accommodate additional mineral working, although the extent to which this could be achieved in the study was inevitably limited by its broad scale strategic nature. The project sought to identify areas with similarities in terms of mineral resource and important environmental assets. The result of this exercise established 15 'land categories' which, the report suggests, may begin to provide a potential basis for developing planning policies at a strategic level

The findings of the MLC Study led to a recommendation that NYCC, when developing a new planning strategy for minerals, should develop a strategy which takes account of the availability and distribution of mineral resources; environmental sensitivities and capacity; wider sustainability considerations (such as transport); and the potential for mineral extraction and restoration to contribute to other initiatives for maintaining and enhancing the existing landscape and natural/historic environments.

The full report of the Managing Landscape Change is available to view on North Yorkshire County Council's website at www.northyorks.gov.uk/mwevidence .

The impact on the landscape from waste related development would vary depending upon the nature and location of the development. For instance, landfill sites are likely to be located in rural areas where they may have an impact upon the landscape. The negative impacts of this would need to be considered in any planning proposal and relevant mitigation measures put in place if approved. However, waste disposal can provide positive impacts, such as environmental enhancements in areas of poor or degraded landscape through utilisation of the products of waste treatment, such as compost for agricultural uses (e.g spreading on land). Other waste management facilities such as transfer stations or material recycling facilities are likely to be located in urban areas, such as industrial parks, and are less likely to have an impact upon the landscape.

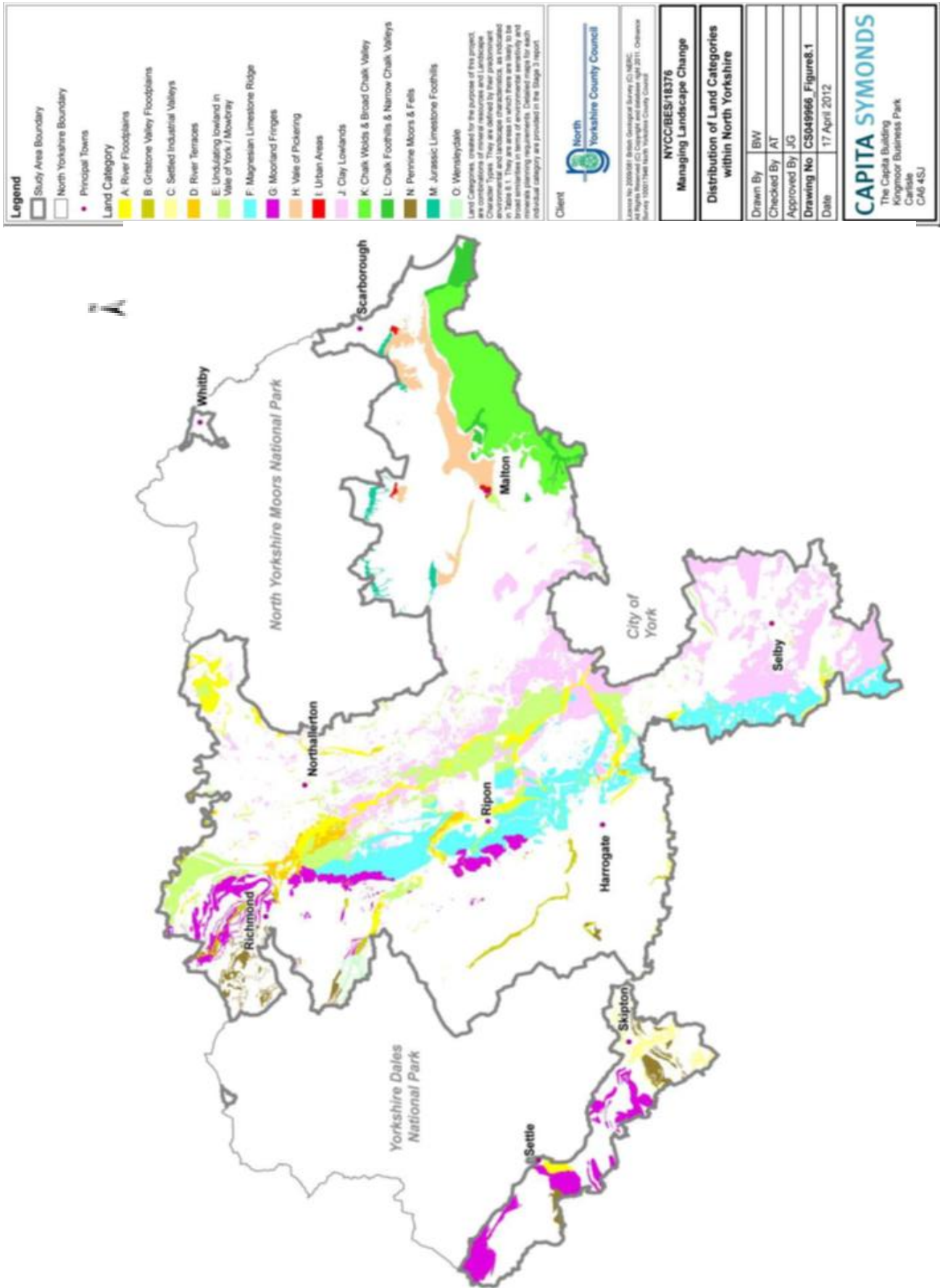


Figure 14 - Land Categories Identified in the Managing Landscape Change Project

6 Water, Air, Soil and Land

6.1 Water

The Minerals and Waste Joint Plan is bound by legislation to ensure water resources are considered when formulating minerals related planning policy. An understanding of the complicated nature of water resources within the Plan area is required in order to adequately plan for its management.

6.2 Extent of Floodplains

National policy, with regard to flooding, is provided in the National Planning Policy Framework and the accompanying practice guidance. The practice guidance sets out the planning approach to flood risk and the vulnerabilities of different land uses to flooding. As defined in this guidance, the vulnerability of minerals and waste related development is set out below;

Essential Infrastructure;

- Water treatment works that need to remain operational in times of flood

More Vulnerable;

- Landfill and sites used for waste management facilities for hazardous waste

Less Vulnerable;

- Waste treatment (except landfill and hazardous waste facilities).
- Water treatment works which do *not* need to remain operational during times of flood.
- Sewage treatment works (if adequate measures to control pollution and manage sewage during flooding events are in place).
- Minerals working and processing (except for sand and gravel working

Water-Compatible Development;

- Sewage transmission infrastructure and pumping stations
- Sand and gravel working

These classifications of development vulnerability to flooding inform planning decisions when cross referenced with the flood zone of a proposed site.

Minerals working and processing (except for Sand and Gravel working which is classified as water-compatible development) is regarded as a less vulnerable land use on the Flood Risk Vulnerability Classification scale. Therefore, with regard to flood risk, this use is acceptable in principle in Flood zones 1, 2, and 3a but not 3b (where flood zone 1 is at least risk of flooding and flood zone 3b the most).

The Minerals and Waste Joint Plan should seek to reduce the risk and impact of flooding with regard to minerals and waste related development.

It is important to note that Figure 16 does not differentiate between flood zones 3a and 3b which, for reasons given above, is a significant issue.

As detailed above the Plan area has an intricate range of uplands and lowlands and extensive river systems. Any part of the Plan area at risk of flooding has the possibility to impact upon and be impacted by minerals working, due to the land level changes that are inherent to this type of development.

A Strategic Flood Risk Assessment (SFRA) for the North Yorkshire planning authority will be undertaken to support the evidence base of the Minerals and Waste Joint Plan. The SFRA will contain a more detailed assessment of North Yorkshire's flood zones in order to identify potentially suitable and unsuitable areas for minerals development. The Strategic Flood Risk Assessment will form an important part of the evidence base for the Plan. A Strategic Flood Risk Assessment covering the North York Moors National Park was published in 2006 and updated in 2010. This will be used to inform the Joint Plan unless it is considered necessary to revise it in line with North Yorkshire County Council's during preparation of the Plan.

| Flood risk vulnerability classification (see table 2) | | Essential infrastructure | Water compatible | Highly vulnerable | More vulnerable | Less vulnerable |
|---|-------------------------------|--------------------------|------------------|-------------------------|-------------------------|-----------------|
| Flood zone (see table 1) | Zone 1 | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Zone 2 | ✓ | ✓ | Exception Test required | ✓ | ✓ |
| | Zone 3a | Exception Test required | ✓ | * | Exception Test required | ✓ |
| | Zone 3b functional floodplain | Exception Test required | ✓ | * | * | * |

Key: ✓ Development is appropriate.
 * Development should not be permitted.

Figure 16: Flood risk vulnerability and flood zone 'compatibility'
 Source – DCLG, Technical Guidance to the National Planning Policy Framework (March 2012)

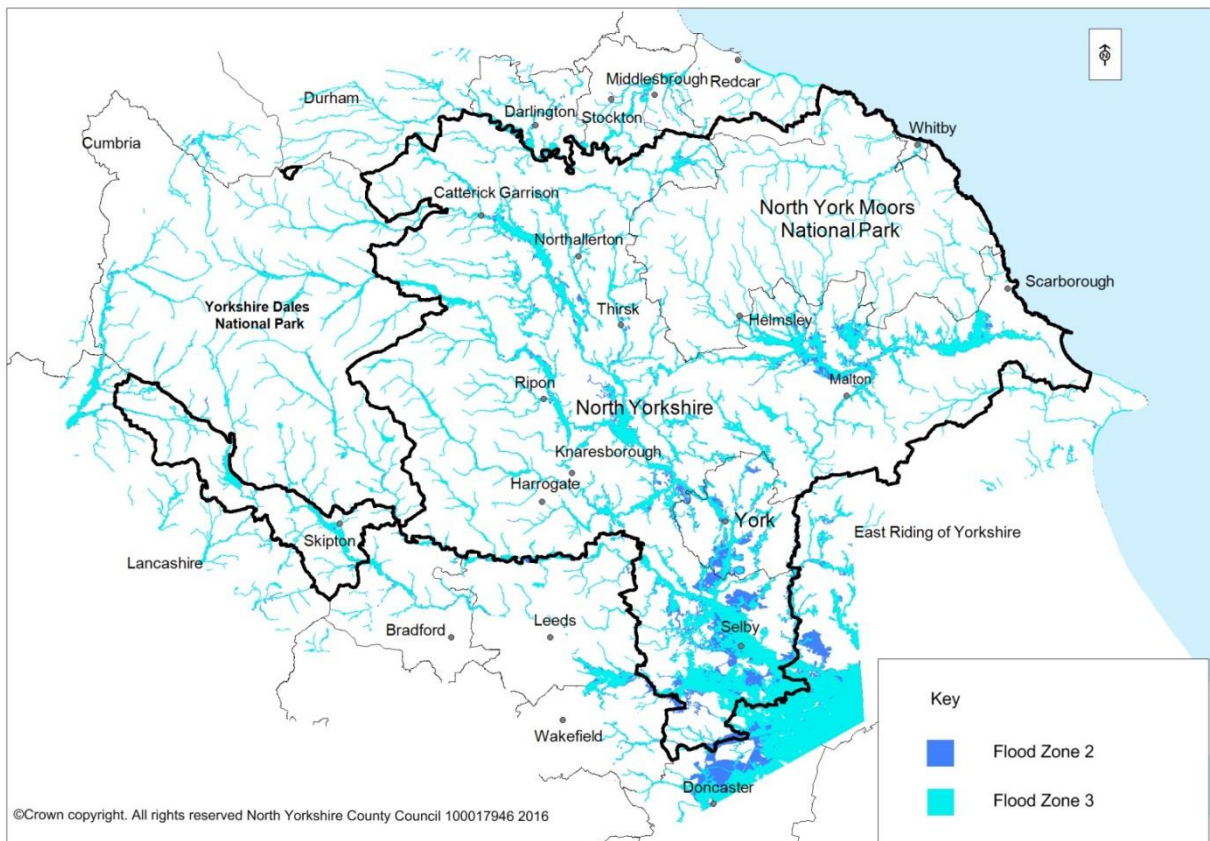


Figure 17: Flood zones 2 and 3

6.3 Groundwater Source Protection Zones & Nitrate Vulnerable Zones

Minerals development and open air waste management sites have the potential to result in groundwater pollution. However, environmental regulations should ensure that adverse impacts are avoided.

As can be seen from Figures 18 and 19 Groundwater Source Protection Zones and especially Nitrate Vulnerable Zones cover a large part of the Plan area concentrating in a central corridor in Selby, Hambleton, Ryedale and Harrogate, and in the south east part of the National Park. The zones are defined by the time taken to travel from any point below the water table to the source, 1 being the lowest amount of time.

The quality and quantity of ground water resources is an important issue. Minerals extraction can affect water resources through dewatering and physical removal of material which is essential to the protection of aquifers. In addition, mineral related development can cause physical disturbances which can artificially alter groundwater levels. Open air waste management facilities, such as landfill and composting sites, have the potential to produce leachate (a polluting liquid) which unless managed safely may cause harmful effects on the surrounding groundwater. The Minerals and Waste Joint Plan should seek to reduce the impact of minerals and waste related development on water quality.

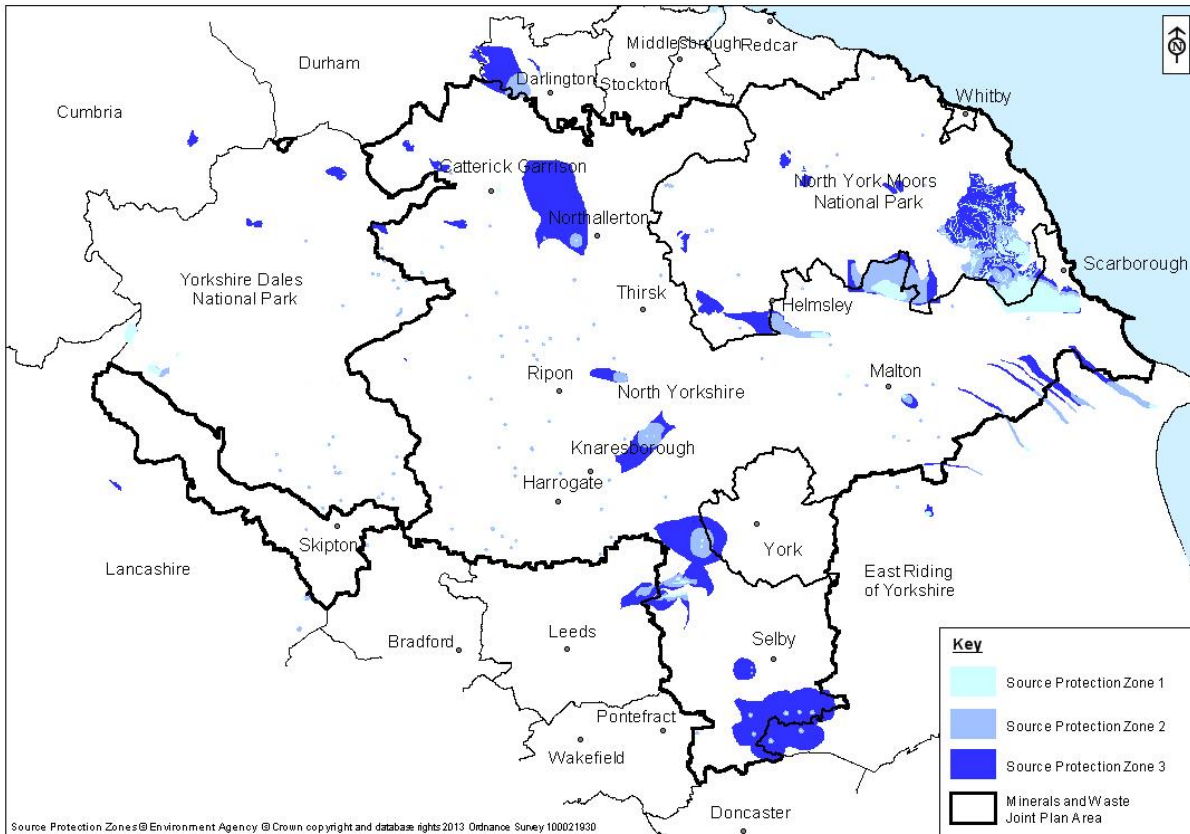


Figure 18: Groundwater Source Protection Zones

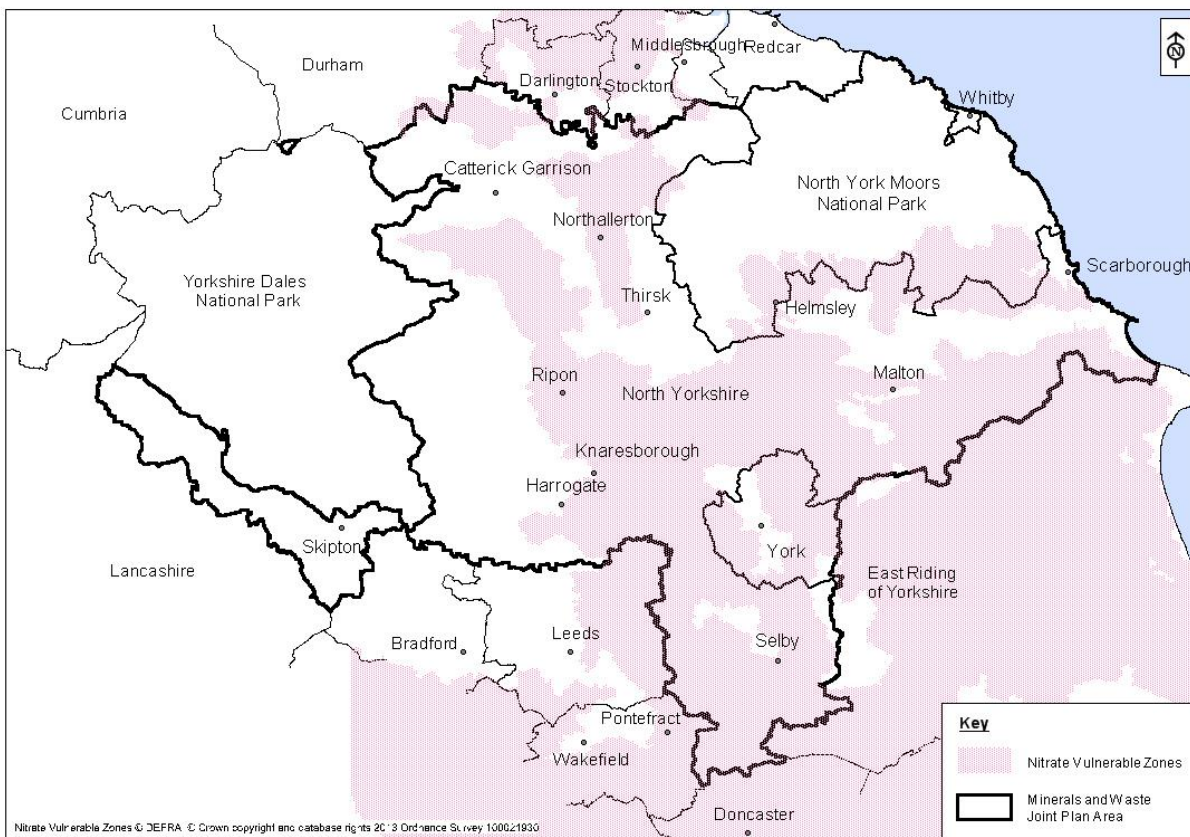


Figure 19: Nitrate Vulnerable Zones

6.4 Water Quality

The quality of river water within North Yorkshire is an important feature that needs to be taken into account when assessing the baseline data for the Minerals and Waste Plan. Mineral working, its associated activities and open air waste management sites have the potential to negatively impact upon river water quality. The Water Framework Directive has set a target for all waterbodies to be classified as 'good' by 2015. Figure 20 below shows that for those catchments that fall within or partly within the Plan area only a relatively small percentage are currently achieving 'good' status.

| Catchment | % of waterbodies with good status | % of waterbodies with moderate' status | % of waterbodies with poor' status |
|---------------------------------|-----------------------------------|--|------------------------------------|
| Aire and Calder | 8.6 | 82.8 | 8.6 |
| Derwent (Humber) | 14.3 | 69.0 | 14.3 |
| Esk and Coast | 36.7 | 50.1 | 13.3 |
| Hull and East Riding | 11.8 | 73.5 | 13.2 |
| Swale, Ure, Nidd and Upper Ouse | 34.6 | 33.3 | 30.7 |
| Tees | 33.3 | 36.8 | 29.8 |
| Wharfe and Lower Ouse | 26.0 | 56.0 | 18.0 |
| Don | 6.2 | 63.9 | 26.8 |
| Lune | 42.6 | 53.7 | 1.9 |
| Ribble | 32.4 | 58.8 | 7.8 |

Figure 20: Status of waterbodies under the Water Framework Directive within or partly within the Plan area (Source – Environment Agency, 2014)

The quality of coastal water is also an important factor that can contribute to the evidence base for the Minerals and Waste Plan. In 2016, beaches in the Plan area were all classified in either the 'Excellent' 'Good' , 'Satisfactory' or 'Poor' standard under a new bathing standard based on measurements taken over a four year period, with one reported as being poor. The classifications are shown below:

- Cayton Bay – Excellent
- Filey - Good
- Reighton – Sufficient
- Robin Hoods Bay – Excellent
- Runswick Bay – Excellent
- Sandsend – Excellent
- Scarborough North Bay – Excellent
- Scarborough South Bay – Poor
- Whitby – Excellent

Staithe was removed from the list before the start of the 2016 recording season due the low number of swimmers who used the bay. Future trends in water quality associated with development are uncertain. However, climate change and development are likely to create greater pressure on water quality, whereas positive policies at EU, national and local level will help to protect and improve water quality. Climate change is predicted to increase flood risk, with marked effects due to more extreme weather.

The potential impact of waste related development on the water environment is primarily through the potential for pollution to occur, such as leachate from landfill sites, if appropriate mitigation measures are not taken.

6.5 Soil

Soil is an irreplaceable and fundamental natural resource which provides many essential functions on which we rely including food production, water management and support for valuable biodiversity and ecosystems. It also plays a vital role in the fight against climate change as a major reservoir of carbon. 'Safeguarding our Soils: A Strategy for England', reported that the carbon stored in UK soils is in the order of some 10 billion tonnes.

The soil of North Yorkshire is an extremely important asset which needs to be valued when considering the evidence base of the Minerals and Waste Plan. This is particularly the case with regard to Best and Most Versatile Land (BMVL). BMVL is defined as land which falls into grades 1, 2 or 3a of the Agricultural Land Classification (ALC).

The NPPF (in paragraph 112) states that the economic and other benefits of the BMVL agricultural land should be taken into account and that 'where significant development of agricultural land is demonstrated to be necessary, local planning authorities should seek to use areas of poorer quality land in preference to that of a higher quality.'

The NPPF also states (in paragraph 143) that, in preparing local plans, local planning authorities should put in place 'policies to ensure ... that high quality restoration and aftercare ... takes place including for agriculture (safeguarding the long term potential of best and most versatile agricultural land and conserving soil resources) ...'. Therefore the presence of BMVL is a material planning consideration when considering the loss of land to development.

It is important to note that Figure 22 does not differentiate between ALC zones 3a and 3b which, for reasons given above, is an important factor. Unfortunately, detailed information that differentiates within Grade 3 land between BMVL and other, lesser quality agricultural land such as 3b, is not available over the Plan area. This information is usually only available on a site specific basis following more detailed investigation on the ground.

Agriculture is the predominant land use in North Yorkshire. Approximately 82% of the land in the North Yorkshire planning authority part of the Joint Plan area is regarded to be within agricultural use, which equates to approximately 4,150 km². The proportion of the UK land area judged to be within agricultural use is approximately 73%. Figure 22 shows the ALC zones across the Plan area.

There is considerable overlap between areas of minerals resource and areas of higher quality agricultural land (known as best and most versatile land (BMV land). The agricultural sector is an important element of the North Yorkshire economy and whilst it may sometimes be possible for former mineral sites in these areas to be restored to agricultural land this is not always practicable, for example when extraction takes place below the water table.

New developments arising as a result of existing and future land use plans may create pressures for development on greenfield land, while positive policies to protect and enhance the environment and to focus development on brownfield land will help to avoid or mitigate impacts. Minerals extraction is one of the few developments which are more constrained in locational terms as minerals can only be worked where they occur in economically viable quantities and configurations. The potential for conflict between maintenance of supply of minerals and protection of agricultural land, including BMV land is likely to be an important consideration in developing the Plan.

Waste management facilities are likely to have less of an impact upon soil quality and agricultural land within the Plan area than minerals related development, however, any potential impacts need to be taken into account in the production of the Minerals and Waste Joint Plan.

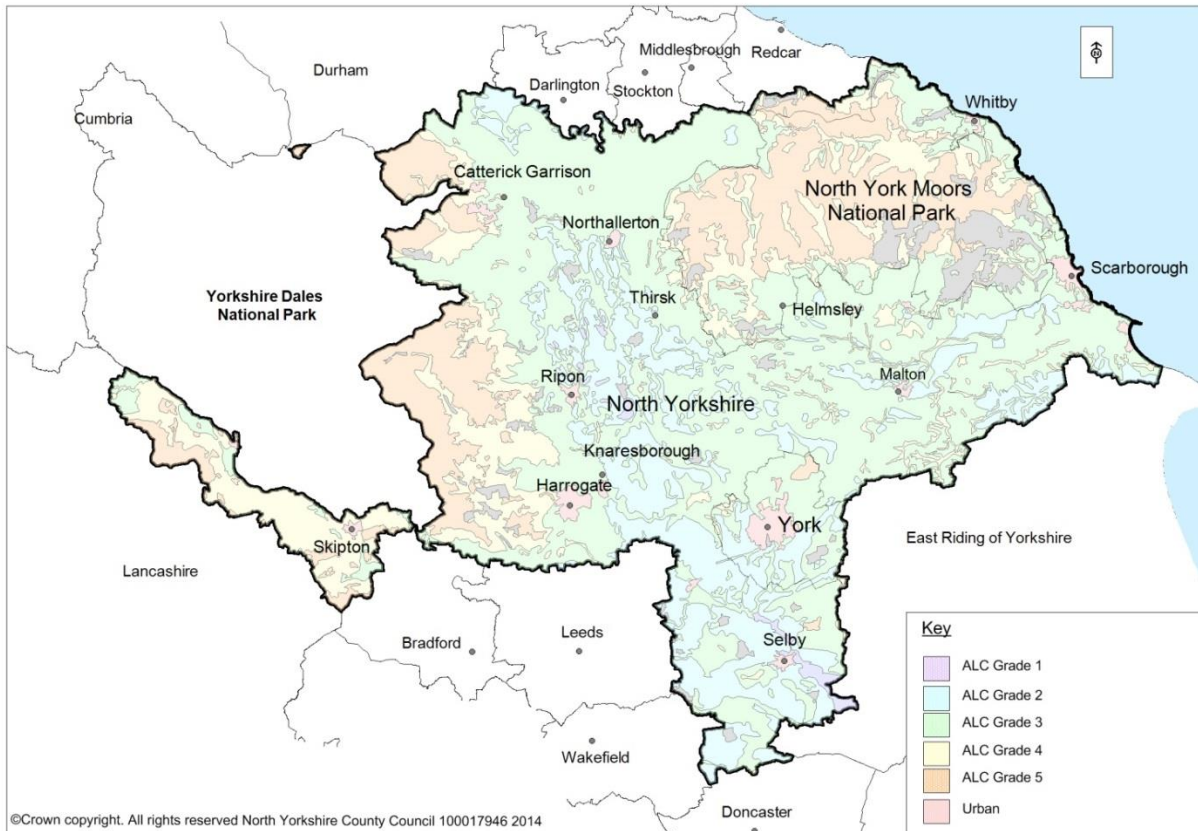


Figure 22: Agricultural Land Classification

6.6 Land Stability

In North Yorkshire there is land in areas of past and present mining, former landfill sites and other areas where land is unstable or potentially unstable and may subside in the future. The Coal Authority is dealing with the legacy of mining by mapping all the former sites and defining consultation areas which industry and members of the public can request information on¹⁸. Parts of Ripon are known to be at risk of subsidence as a result of the dissolution of underground gypsum deposits. Further information on the location of areas at risk is available in the Harrogate Borough Local Plan.

During the preparation of development plans, such as the Minerals and Waste Joint Plan, local planning authorities need to take into account the possibility of ground instability and treat it in the same way as any other planning constraint. The causes of ground instability can be placed in three broad categories, the effects of underground cavities, unstable slopes and ground compression. The instability can result in subsidence which may affect property and land use.

¹⁸ Details are available at http://coal.decc.gov.uk/en/coal/cms/publications/data/map/about_our_data/about_our_data.aspx.

6.7 Air Quality

Air quality in North Yorkshire is not generally a major concern, however there are a number of locations where high volumes of traffic, (usually coupled with developments adjacent to the road) create a canyon like effect causing air quality issues. Air quality is measured and monitored by the District and Borough Councils. Air Quality Management Areas (AQMA) are identified where air quality objectives are not being met. There are six AQMAs in the Joint Plan area, as shown in Figure 23 below. However, on the whole air quality is good in the Plan area.

| Local Authority area | Site | Name | Pollutant |
|----------------------|-------------------------------|--------------------------------|------------------|
| Harrogate | A59 Bond End, Knaresborough | Knaresborough AQMA No1 | Nitrogen Dioxide |
| Harrogate | B6265 Skellgate, Ripon | Ripon AQMA No1 | Nitrogen Dioxide |
| Ryedale | B1248 Butch Corner, Malton | Malton AQMA | Nitrogen Dioxide |
| York | Around the Inner Ring Road | York City Centre (York No.1) | Nitrogen Dioxide |
| York | Area around Fulford Road | Fulford (York No. 2) | Nitrogen Dioxide |
| York | Area around Salisbury Terrace | Salisbury Terrace (York No. 3) | Nitrogen Dioxide |

Figure 23: AQMAs in the Plan area

The National Planning Policy for Waste 2014 states that when identifying locations for waste facilities adverse air emissions should be controlled so do not adversely impact on human or ecological receptors¹⁹ in addition to this policy and with specific regard to the emissions from municipal waste incinerators the Health Protection Agency advises that 'While it is not possible to rule out adverse health effects from modern, well regulated municipal waste incinerators with complete certainty, any potential damage to the health of those living close-by is likely to be very small, if detectable'²⁰.

¹⁹ DCLG National Planning Policy for Waste October 2014

²⁰ HPA, The Impact on Health of Emissions to Air from Municipal Waste Incinerators, February 2010

Contact Details for the respective Planning Authorities

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