

# **PART 1**

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## 2. OVERALL STRATEGY

### Where we are now

- 2.1 As stated in the Introduction, the minerals and waste management industries are essential and indispensable to the county. Without them, other sectors of the economy could not function properly and the basic infrastructure of roads, buildings and other facilities could not be maintained or improved. Both industries also provide important direct local economic benefits, including jobs.
- 2.2 The industries fit within a county of contrasts and very serious challenges. We have some of the country's best environments, which attract 40 million visitors per year. These environments contrast with major industrial landscapes and there are also pockets of the most deprived wards in Europe. Some areas have experienced soaring house prices, others housing market collapse. Whilst the population has increased, it is ageing and many young people are leaving.
- 2.3 Given the scale and depth of economic problems facing economies worldwide, it is inevitable that Cumbria has also experienced economic difficulties over the last few years. To some degree, the structure of Cumbria's economy, with major employers in the defence and nuclear sectors, has provided some insulation from economic shock. However, Cumbria still faces major challenges to achieve its economic potential and to build on its strengths and natural assets. That potential includes the competitive advantage offered by the M6 corridor and the West Coast Mainline transport routes, its global reputation and expertise in nuclear and clean technologies, its strengths in the growing advanced manufacturing sector and the county's stunning environment, with its consequent tourism industry.
- 2.4 Details relating to the economy of Cumbria were set out in Cumbria County Council's Economic Ambition<sup>3</sup>. Since then, Cumbria's Local Enterprise Partnership (LEP) has published a strategic economic plan<sup>4</sup>, looking at the state of the county's economy now, and setting out a plan to unleash the economic potential of Cumbria, over the next 10 years. A summary of the SWOT assessment (Strengths, Weaknesses, Opportunities, Threats) of Cumbria's economy undertaken by the LEP, is set out in Appendix 2.
- 2.5 Cumbria is the second largest county in England with a relatively small number of people. Its main towns are dispersed around the edges of the county, whilst in the centre are the mountains and lakes of the Lake District National Park.
- 2.6 Cumbria is mostly self-sufficient for those minerals that can be worked from its own resources and also supplies regional and national markets for high skid resistance roadstones, industrial lime, specialist bricks, and plaster and plasterboard, made using gypsum. In general, waste management facilities in the county serve their local areas and most parts of the county have had access to the facilities that were seen to be necessary at the time. There has

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<sup>3</sup> Evidence Base document reference LD208: Cumbria County Council, September 2012

<sup>4</sup> Evidence Base document reference LD230: Cumbria Local Enterprise Partnership, March 2014

historically, however, been a shortfall in landfill capacity in the south of the county, resulting in residual waste being sent to landfill in Lancashire.

- 2.7 Within the last few years, there has been significant success in reducing the amount of household waste per head and in increasing the rates of recycling and composting. Recyclables are collected, separated and bulked up, but are then sent to major facilities elsewhere; for example, tins are sent to Liverpool, glass to Alloa and paper to Stirling. Very little processing of recyclates takes place within the county.
- 2.8 Levels of traffic through the three remaining operational ports of Barrow, Workington and Silloth, have steadily declined. Carlisle airport does not currently operate as a commercial airport, although there are plans for its development.
- 2.9 The Sellafield/Windscale complex in West Cumbria has one of the world's largest single concentrations of nuclear facilities. The Low Level Waste Repository near Drigg village provides a national radioactive waste facility; its current planning permission is for storage of wastes until 2018. A planning application was submitted for the construction of additional facilities for disposing of around 1 million cubic metres of Low Level Wastes, but this has subsequently been withdrawn, with the intention of submitting an amended scheme in the near future.
- 2.10 Employment in the area's traditional heavy industries declined some years ago and there is now the prospect that nuclear decommissioning will entail the future loss of many jobs from Sellafield. Even if a new nuclear power station is built at Moorside, adjacent to Sellafield, providing a number of new jobs, especially during construction phase, this will not recoup the overall job losses. This is primarily because the skills set required to run a modern nuclear power station is different and, although some retraining of the existing workforce is possible, a significant number of employees are of an age where they are more likely to retire.

### **Where we need to be**

- 2.11 The long term spatial vision of the Local Plan must take account of the challenges that have been outlined in the dialogue above and of the opportunities that have been identified. These opportunities are the quality of the urban and rural environments, transport routes and the strengths of some sectors of the economy.

### *Cumbria Strategic Economic Plan*

- 2.12 The vision of the Cumbria Strategic Economic Plan (SEP), published by the Local Enterprise Partnership in March 2014, is for Cumbria to have one of the fastest growing economies in the UK, in an energised and healthy environment. By delivering the priorities that are set out in the SEP between 2014 and 2024, the Enterprise Partnership will:-

- create 15,000 additional full-time equivalent jobs;

- boost Cumbria's economy by £600 million more than current predictions, through targeted investment in key projects;
- increase the county's GVA growth by 0.6 percentage points above current forecasts, yielding a GVA growth rate of 2.2% by 2024;
- support the local planning authorities to deliver 30,000 new homes through their Local Plans;
- raise skill levels through working with local education and training providers, reducing the proportion of Cumbria's firms facing a skills gap by 3%;
- increase visitor expenditure by over £500 million;
- increase the number of businesses reporting growth by 5% through the Cumbria Growth Hub support;
- achieve 100% coverage of superfast broadband.

2.13 The SEP identifies four priority growth areas for the county over the next 10 years: advanced manufacturing; nuclear energy and excellence; vibrant rural and visitor economy; and strategic connectivity of the M6 motorway corridor. Intervention will be focused on four economic drivers, which will prioritise investment in the right infrastructure to provide sustainable and resilient connections for businesses, their markets and workforces. These drivers are:-

- business support;
- skills development;
- infrastructure improvement;
- environmental sustainability.

### *Britain's Energy Coast*

2.14 West Cumbria faces challenges that are unique in the UK. The West Cumbria Spatial Masterplan was initiated, by Government, in response to the impacts on the economic and social well-being of the area through nuclear decommissioning at the Sellafield nuclear licensed site. The Masterplan was commissioned by the West Cumbria Strategic Forum and sought a long term perspective to address issues and realise opportunities.

2.15 The vision of the Masterplan, which became Britain's Energy Coast<sup>5</sup>, was that by 2027 West Cumbria will: be globally recognised as a leading nuclear, energy, environment and related technology business cluster, building on its nuclear assets and its technology and research strengths; be a strong, diversified and well connected economy, with a growing, highly skilled population with high employment; project a positive image to the world, and be recognised by all as an area of scientific excellence, outstanding natural beauty and vibrant lifestyle, which attracts a diverse population and visitor profile; provide opportunities for all its communities, where geography is not a barrier to achievement and where deprivation, inequality and social immobility have been reduced.

2.16 The West Cumbria Blueprint<sup>6</sup> aims to provide the framework for the next 15 years, to guide the prioritisation and investment of Britain's Energy Coast West

<sup>5</sup> Evidence Base document reference LD65: West Cumbria Strategic Forum, 2007

<sup>6</sup> Evidence Base document reference LD212: Britain's Energy Coast, June 2012

Cumbria, as well as other key partners, to maximise economic diversification and growth.

- 2.17 The Blueprint is an ambitious, aspirational document targeted at gaining the interest of Government and investors and seeks to build on the area's assets to maximise future economic opportunities. In doing so, it aims to contribute to the nation's future energy needs and deliver the Government's low carbon agenda.
- 2.18 The document recognises that for West Cumbria to realise its full economic potential, investment is required in a wide range of complementary activities and infrastructure that contribute to the area's quality of life. However, the Blueprint does not attempt to address these "wider conditions", the focus of the document is economic, it is not intended to be a broad regeneration or community strategy, or cover the wider responsibilities of other partners.
- 2.19 The developments that will be needed in connection with the vision to diversify and expand the economy, to improve transport links and to increase and improve the housing stock, cannot take place without minerals for construction. An adequate and secure supply of crushed rock and sand and gravel from reasonably local sources will be needed to make concrete and tarmac and for other construction operations. Similarly, wastes from Cumbria's municipal and business sectors will not be able to be managed sustainably unless the right types of new waste management facilities are provided in the right places and at the right time. Development and economic growth may be restrained if these facilities are not available.

#### *European and national policies*

- 2.20 European and national policies require that the amounts of waste going to landfill are progressively reduced and are driven up the waste hierarchy, by limiting disposals to those residual wastes that are left after treatment. The first step in the waste hierarchy is to minimise the amount of waste that is produced in the first place, followed by increasing the rates of re-use, recycling, composting and recovery of value from waste.
- 2.21 Other policies require that an increasing proportion of mineral use is met from recycled or re-used materials. The climate change agenda requires that substantial increases in renewable and low carbon energy generation are achieved. Renewable fuels, such as those produced by the county's municipal waste management processes, and recovery of energy from other wastes, including sewage, agricultural and food wastes, can make a significant contribution to this.

#### **Vision and overall strategy**

- 2.22 The spatial vision and the overall strategy of the Local Plan take account of the above matters and are set out in Box 2.1 and Box 2.2 respectively.

## BOX 2.1

The long term **spatial vision** is:-

That by the end of the Plan period the right types of **new waste management facilities** needed to reduce the amount of Cumbria's waste going to landfill will have been built on time and in the right places.

That everyone in Cumbria will give top priority to **minimising waste** and take responsibility for regarding it as **a resource**, not something to be thrown away. In particular, the trend for Cumbria to have one of the highest amounts of household waste per head of population will continue to diminish.

That facilities will have been provided to manage the **Low Level radioactive wastes** that arise from the Sellafield/Windscale complex and to make a reasonable contribution to managing ones from elsewhere that require specialist facilities, but do not have adverse social and economic impacts.

That, with an increasing proportion of re-used and recycled materials, **minerals from the County's own resources** will continue to be provided prudently to meet Cumbria's regeneration, renewal and development needs, together with those minerals proven to be required to meet regional and national needs.

That the **carbon footprint** of Cumbria's minerals and waste developments will demonstrate that the practicable savings in greenhouse gas emissions and fossil energy demand have been secured. In addition to design matters, this will include keeping road transport miles to a minimum by maintaining a pattern of local facilities that suits the geographic characteristics of the county. It will also take account of the contribution that **fuels** derived from Cumbria's waste make to the energy needs of other industries.

That Cumbria's **environmental assets** will have been protected, maintained and enhanced by siting developments in appropriate locations, by high standards of design and by working practices that are recognised to be best practice.

That optimal **economic benefit** will have been gained from minerals and waste developments, including new recycling industries based in Cumbria.

That Cumbria's **communities and stakeholders** will have been fully engaged in planning for minerals and waste developments.

## **BOX 2.2**

### **Local Plan overall strategy**

#### **By 2029:-**

- The Local Plan's provisions for waste management facilities and for supplies of minerals will have made a significant contribution to the county's economy and will have aided development and regeneration initiatives.
- Initiatives will have been successful in changing behaviours in order to meet, or exceed, targets for driving wastes up the waste hierarchy and minimising wastes sent to landfill, in accordance with the national zero waste agenda.
- The appropriate waste management facilities will have been provided in the right locations and at the right time, as far as practicable near to where it is produced and with options for non-road transport.
- There will have been a steady and adequate supply of aggregates in accordance with the Local Aggregates Assessments and of other minerals, in accordance with the National Planning Policy Framework.
- Maximum advantage will have been taken of the scope for using alternatives to primary land-won aggregate minerals.
- Waste management and minerals developments will have secured significant enhancement of Cumbria's environmental assets and local amenity.
- Prudent and environmentally sensitive use of Cumbria's minerals and waste management resources will have achieved an appropriate balance between their economic potential and the protection of the environment, in accordance with the principles of sustainable development.

### **Strategic objectives**

2.23 The overarching context of the Local Plan is that it must be consistent with the national planning policies, which are set out in the National Planning Policy Framework (NPPF, March 2012) and its presumption in favour of sustainable development. It must, therefore, also reflect an integrated spatial approach that accords with the UK's Sustainable Development Strategy "Securing the Future"<sup>7</sup>. That strategy sets out the five guiding principles of sustainable development:-

- living within environmental limits
- ensuring a strong, healthy and just society
- achieving a sustainable economy
- promoting good governance
- using sound science responsibly

2.24 Local Plans are required to include a policy that relates to the National Planning Policy Framework:-

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<sup>7</sup> Securing the Future: delivering UK sustainable development strategy, DEFRA, March 2005

### **POLICY SP1 Presumption in favour of sustainable development**

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

Planning applications that accord with the policies in this Local Plan (and, where relevant, with policies in Neighbourhood Plans) will be approved without delay, unless material considerations indicate otherwise.

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

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

2.25 The policies in the NPPF constitute the Government's view of what sustainable development means for the planning system. The three dimensions to sustainable development are stated to give rise to a number of roles for the planning system to perform:-

- **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 co-ordinating 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.

2.26 This Local Plan can help ensure that these roles can be successfully carried out. This is by making adequate positive provision for the construction materials and the waste management facilities that are needed for the development of identified housing and other land, the provision of necessary infrastructure and through its environmental policies.

- 2.27 Having taken account of the above principles and roles, the strategic objectives that are considered to be appropriate and relevant for the Local Plan are set out in Box 2.3.

### **BOX 2.3 Strategic objectives**

**Objective 1:** That minerals and waste management developments will take due account of the issues of climate change, in particular through energy use and transport; that any adverse impacts on the environment and the local economy will be minimised and that potential benefits will be maximised.

**Objective 2:** That effective waste minimisation measures will be adopted and, following these, that waste, including radioactive waste, will be managed at the highest achievable level within the waste hierarchy. In order to secure this, the right type of waste management facilities that Cumbria needs to increase the amounts of its wastes that are re-used, recycled, or composted will be provided in the right places and at the right time in order to minimise the disposal of waste to landfill.

**Objective 3:** That waste will be managed as near as practicable to where it is produced without endangering people's health and without harming the environment.

**Objective 4:** That the minerals from Cumbria that are required to meet local, regional and national needs will be supplied from appropriately located and environmentally acceptable sources.

**Objective 5:** That the need for new mining and quarrying will be minimised by prudent use of resources and by supplies of alternative re-used and recycled materials.

**Objective 6:** That mineral resources will be identified and safeguarded.

**Objective 7:** That the economic benefits of minerals and waste management developments will be optimised without harming the environment.

**Objective 8:** That the overall quality of Cumbria's environment will be protected and, where practicable, enhanced by high standards of design and operation in new developments and high standards of restoration once developments have been completed.

**Objective 9:** That the environmental impacts of minerals and waste management developments, including traffic, will be kept to a minimum by appropriate siting of facilities and sound working practices and that any unavoidable harmful impacts will be mitigated.

**Objective 10:** That there will be increased community and stakeholder involvement and ownership of initiatives and planning for sustainable minerals and waste developments.

**3. WASTE MANAGEMENT**

**Introduction and policy context**

3.1 The overarching national policy context is the Government’s commitment to working towards a “zero waste economy”, in which we reduce, reuse and recycle all we can, and throw things away only as a last resort<sup>8</sup>. Significant progress in changing our attitudes towards waste and how we manage it has already been made in recent years. These reductions have been driven by European Directives and national policies, but also voluntary agreements with business, aimed at implementing the waste hierarchy (see Figure 3.1), encouraging re-use and recycling of useful resources and diverting waste from landfill.

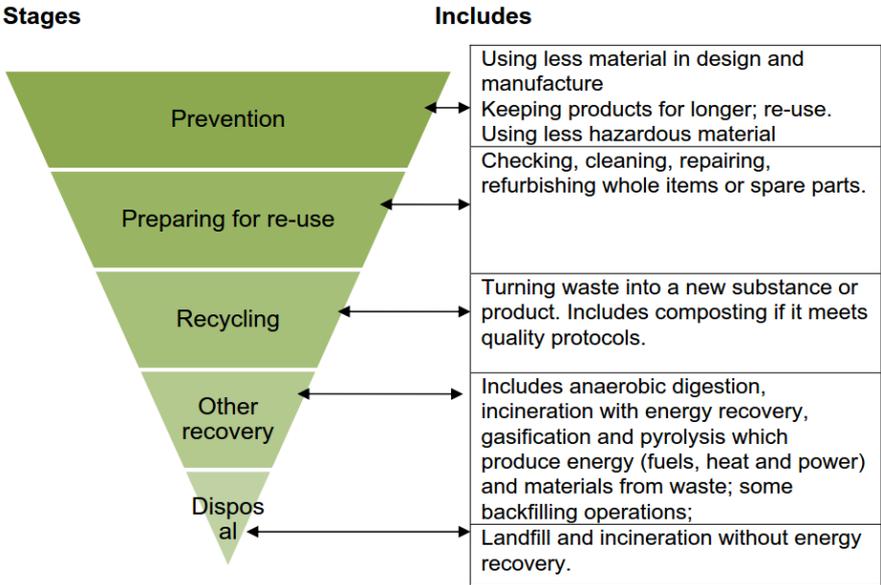


Figure 3.1: The waste hierarchy  
source: Waste Management Plan for England, Defra, December 2013

3.2 In 2011 the UK published the Government Review of Waste Policy in England<sup>9</sup> with an associated Action Plan. The actions set out in the plan included funding for waste management infrastructure for municipal waste, as well as voluntary codes with specific business sectors and statutory action in relation to producer responsibility for waste.

3.3 The Waste Management Plan for England<sup>10</sup> and the Waste Prevention Plan for England<sup>11</sup> were published in December 2013. The latter highlighted the savings to be realised by Local Authorities through the reduction in waste generated by households, but also that minimising the amount of waste produced, and making best use of resources, makes sense for the business sector.

<sup>8</sup> <https://www.gov.uk/government/policies/reducing-and-managing-waste>  
<sup>9</sup> Evidence Base document reference ND49: Defra, 2011  
<sup>10</sup> Evidence Base document reference ND84: Defra, December 2013  
<sup>11</sup> Evidence Base document reference ND117: Defra, December 2013

- 3.4 Significant financial savings have been realised by business: for example, 1.2 million tonnes of food and packaging waste generation was prevented over the first phase of the “Courtauld Commitment”<sup>12</sup>, with a monetary value of £1.8 billion, while the second phase prevented the generation of 1.7 million tonnes of commercial waste, saving £3.1 billion. Changing wasteful practices could have a significant financial impact, help increase competitiveness and resource security, and therefore protect against price volatility<sup>13</sup>.
- 3.5 The National Planning Policy for Waste<sup>14</sup>, published October 2014, superseded previous national policy in Planning Policy Statement 10, and updated planning guidance on waste has been added to the online Planning Practice Guidance suite (PPG). This makes it clear that Waste Planning Authorities should plan for the sustainable management of waste<sup>15</sup>, providing sufficient opportunities to meet the area’s needs, and identifying suitable sites and areas for waste management facilities in appropriate locations<sup>16</sup>. PPG also sets out clearly the role of the Waste Planning Authority in meeting European Waste Framework Directive 2008/98/EC<sup>17</sup>, and reiterates the importance of driving waste up the waste hierarchy (see Figure 3.1) and implementing the principles of self-sufficiency and proximity (commonly referred to as the “proximity principle”). These principles are embedded in the overall strategy of this Local Plan, in particular in Strategic Objectives 2 and 3.

### **Assessing waste management needs for Cumbria**

- 3.6 The County Council commissioned an assessment<sup>18</sup> of the need for new waste management infrastructure and facilities during the Plan period, which included the evidence and analysis required by PPG<sup>19</sup>. This Waste Needs Assessment (WNA) includes an explanation of how current arisings were assessed, and has been used to develop predictions of further capacity required immediately, by 2030, and at relevant interim dates. Potential sites to accommodate such capacity are proposed in the Site Allocations chapter of this Plan.

#### *Current waste arisings*

- 3.7 Waste arisings in Cumbria in 2013, from the following waste streams, are summarised in Table 3.1 overleaf. The Local Authority Collected Waste (LACW) data is provided by the County Council, as Waste Disposal Authority (WDA), and these arisings in Table 3.1 include a small amount of trade waste as well as household waste. Total tonnages of the Construction, Demolition and Excavation waste streams have been derived from the “Waste Data Interrogator” 2013 (WDI 2013), which is a database collating inputs of waste movements that need to be notified to the Environment Agency, and which are

<sup>12</sup> The Waste Prevention Plan for England, Defra, December 2013 (page 26)

<sup>13</sup> *ibid* (page 25)

<sup>14</sup> Evidence Base document reference ND130: DCLG, October 2014

<sup>15</sup> PPG paragraph 013, chapter 28 Waste (ID: 28-013-20141016)

<sup>16</sup> PPG paragraph 011, chapter 28 Waste (ID: 28-011-20141016)

<sup>17</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:312:0003:0030:en:PDF>

<sup>18</sup> Evidence Base document reference LD 267:Cumbria County Council Waste Needs Assessment, Urban Vision, December 2014

<sup>19</sup> PPG paragraph 022, chapter 28 Waste (ID: 28-022-20141016)

made available by them for analysis. The hazardous waste arisings have been collated from the Environment Agency's Hazardous WDI.

<b>WASTE STREAM</b>	<b>ARISINGS</b>
Local Authority Collected Waste (LACW)	259.6 <sup>A</sup>
Commercial Waste	331.3 <sup>E</sup>
Industrial Waste	354.1 <sup>E</sup>
Construction and Demolition Waste (C&D)	148.9 <sup>W</sup>
Excavation Waste	356.5 <sup>W</sup>
Hazardous Waste	27.8 <sup>W</sup>
<b>TOTAL OF ALL STREAMS</b>	<b>1,478.2</b>
<sup>A</sup> Actual - source WDA <sup>E</sup> Estimated in WNA <sup>W</sup> Derived from EA waste figures in WDI	

Table 3.1: Base data waste arisings in Cumbria 2013 (thousand tonnes)

- 3.8 Commercial and industrial waste arisings are more difficult to assess. Defra publishes annual statistics about waste arisings in England, but they are based on a limited number of surveys, and there is considerable uncertainty about the total quantities of commercial and industrial (C&I) waste. The most recent figures available for Cumbria are within the North West of England Commercial and Industrial Waste Survey 2009<sup>20</sup>, undertaken for the Environment Agency by Urban Mines. The WNA has estimated the commercial and industrial total arisings for 2013 by extrapolating from the 2009 data, using economic and household growth data for Cumbria, provided by Experian<sup>21</sup> (as used in other forward planning within Cumbria County Council).
- 3.9 The WNA also estimated arisings of 2 million tonnes of agricultural waste in Cumbria in 2013, which is discussed later in this chapter. Wastes arising from existing wastewater infrastructure are included in the relevant category of waste above, and potential need for new wastewater infrastructure capacity is dealt with later in this chapter. Radioactive waste is addressed in chapter 4 of this Local Plan.

#### *Current management of municipal waste*

- 3.10 The management of municipal waste in Cumbria has been transformed since the Cumbria Minerals and Waste Development Framework was adopted in 2009. This was achieved by the County Council and Cumbria District Authorities working together to develop a Joint Municipal Waste Management Strategy (JMWMS)<sup>22</sup> for the period 2008-2020, which updated waste collection and recycling services, and enabled the construction of the necessary infrastructure to treat the county's municipal waste.

<sup>20</sup> Evidence Base document reference LD147: Environment Agency, March 2010

<sup>21</sup> Experian Economic Impact Model for Cumbria (2014), Employment: Output and Net Migration Projections 2013-2031

<sup>22</sup> Evidence Base document reference LD38: Cumbria Strategic Waste Partnership

- 3.11 The Cumbria District Councils (including from the Lake District National Park Authority area and that part of the Yorkshire Dales National Park that lies in Cumbria) collect two types of waste at the kerbside: firstly, the mixed household waste, in grey bins or black sacks; and secondly, the source separated wastes, that are placed in separate boxes or bags by the householder, for onward recycling. These wastes are managed under a Joint Municipal Waste Management Scheme, and a long term municipal waste management contract, between the County Council and Shanks Group PLC.
- 3.12 Shanks operate two Mechanical and Biological Treatment (MBT) plants, each with a capacity of 75,000 tonnes per annum (tpa), at Hespian Wood near Carlisle and at Barrow-in-Furness; they commenced operation in 2012 and 2013 respectively. Household Waste Recycling Centres (HWRCs) are also managed within the contract. The management of wastes, sorted or otherwise treated at these facilities, is therefore now a commercial decision for the contract partner.
- 3.13 The MBT plants process the mixed household waste that is collected from the kerbside, plus the small amount of suitable trade waste collected by the District Waste Collection Authorities. The metal content is recovered for recycling. A Refuse Derived Fuel (RDF) is produced by the MBT plants as the final output. Some other residues can be processed further to recover additional value, and a further fraction is landfilled. A total of 102,825 tonnes of household waste was processed in the two MBT plants in 2013, and 37,612 tonnes of RDF was produced.
- 3.14 Table 3.2 below shows the management mix for all household waste in 2013, including the respective tonnages from the MBT plants and the HWRCs.

<b>Recycled</b>	<b>Composted</b>	<b>Recovered (including RDF)</b>	<b>Landfilled</b>
29.1%	18%	30.9%	22%

Table 3.2: Management of Cumbria household waste 2013  
Data from Waste Disposal Authority

- 3.15 Recycling and composting source separated waste collected at the roadside remains the responsibility of the six Cumbrian District Waste Collection Authorities, who continue to develop waste minimisation initiatives and improvements in separation of wastes by households. In calendar year 2013, 49% of all LACW and 47% of household wastes were recycled or composted, well on the way to meeting the European Waste Framework Directive target of 50% by 2020, but also to the JMWMS target of 55%.

*Current management of other wastes*

- 3.16 The Waste Data Interrogator provides considerable detail about all types of waste movements in and out of individual waste management facilities, but records are not sufficiently complete to identify commercial and industrial waste movements accurately. In order to establish current capacity gaps, and a baseline for a growth profile, the WNA estimated the management mix for

C&I waste in 2013, with reference to a survey of C&I waste by Defra in 2011<sup>23</sup>. The management mix for commercial, demolition and excavation (CD&E) waste was derived from the WDI.

- 3.17 The estimated quantities of wastes that should have been managed in Cumbria in 2013, if all Cumbria arisings were provided for in the county, is shown in Table 3.3. The figures do not tally precisely with Table 3.1 due to some reassignment between streams, e.g. rubble from the LACW stream and removal of hazardous waste from CD&E streams.

Waste stream	Recycled/composted	Non-thermal treatment	Thermal recovery	Non-thermal recovery	Landfill
<b>Commercial</b>	210,790	3,579	2,024	5,158	109,783
	63.6%	1.1%	0.6%	1.6%	33.1%
<b>Industrial</b>	157,422	8,875	510	2,683	184,639
	44.5%	2.5%	0.1%	0.8%	52.1%
<b>Recycled, Re-used or Recovered</b>					
<b>Construction and Demolition</b>	82%				18%
<b>Excavation</b>	28%				72%
<b>Total CD&amp;E in tonnes</b>	231,433				284,838

Table 3.3: Management of key non-LACW wastes in Cumbria 2013  
source: Cumbria Waste Needs Assessment, Urban Vision, December 2014

- 3.18 Hazardous waste is analysed in considerable detail in the WNA, but is actually a sub-set of the principal waste streams: 60% being industrial waste; 15% commercial waste; and 12% C&D waste<sup>24</sup>. The C&D wastes are primarily asbestos-containing. Of Cumbria's hazardous waste arisings, 16% are oils and solvents and 35% are organic chemicals. The management method required for hazardous wastes are, therefore, specific to the nature of the material and are shown in Figure 3.2 overleaf.
- 3.19 Hazardous waste arisings in Cumbria in 2013 were managed marginally less sustainably<sup>25</sup> than the average for the UK as a whole. The WNA also assessed recent trends in how hazardous wastes that were exported from, or imported to, Cumbria were managed. It should be noted, however, that the quantities of hazardous waste arising in Cumbria are small.
- 3.20 Management of agricultural wastes arising in Cumbria was estimated by the WNA<sup>26</sup> to be mainly (96.7%) carried out on site, primarily through land recovery, composting or other treatment, and only 3.3% (approximately 68,000 tonnes) off site. Of this total, 57,000 tonnes was probably recycled or re-used off site, leaving around 7,000 tonnes incinerated at specialised facilities and 4,000 tonnes being managed through other third party waste sites.

<sup>23</sup> The Economics of Waste and Waste Policy, Defra, June 2011

<sup>24</sup> Cumbria Waste Needs Assessment (WNA), Table 5.5

<sup>25</sup> Cumbria WNA, Table 5.3

<sup>26</sup> Cumbria WNA, Table 6.3, based on Defra 2010 figures

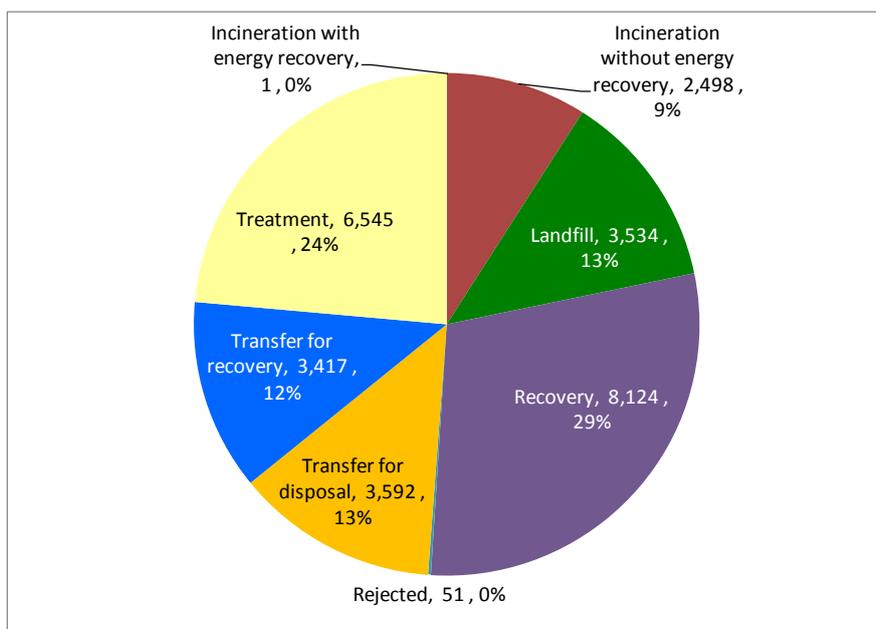


Figure 3.2: Fate of hazardous wastes arising in Cumbria in 2013  
source: EA Hazardous WDI (figures in tonnes)

3.21 By 2014, a number of Anaerobic Digestion plants had been constructed in Cumbria, processing both slurry and food crops to create electrical energy via methane gas engines and digestate to be used as fertiliser. Some of these plants serve a single farm and are small enough to be built under exemptions, and only a small number accept waste from several farms. Chapter 6 (Climate Change) addresses this type of development and a new Development Control policy is proposed to enable such plants to be developed and to encourage the maximum beneficial use of agricultural wastes.

### Imports and exports of waste

3.22 The County Council has monitored waste movements across the administrative boundaries of Cumbria since 2006 (see Table 3.4), in order to inform co-operation with other Waste Planning Authorities (WPAs) in both England and Wales, and in Scotland. These figures include both hazardous and non-hazardous waste.

2006	2007	2008	2009	2010	2011	2012	2013
40,696	41,422	65,527	141,178	249,248	260,742	175,041	178,936

Table 3.4: Recorded waste exports from Cumbria 2006 – 2013  
(excluding to Scottish WPAs)

source: Environment Agency Waste Data Interrogators, 2013

3.23 In December 2013 a consultation exercise, based on recorded waste exports<sup>27</sup> from 2006 to 2012, identified 51 authorities who were then consulted about cross border movements. The consultation included four Scottish WPAs, receiving in total 26,651 tonnes of waste from Cumbria in 2012. No concerns were raised about waste exports from Cumbria, or the impact on waste

<sup>27</sup> Evidence Base document reference LD270: Waste Export Consultation Exercise, Cumbria County Council, December 2013

planning in the recipient authorities' areas, although some information about the future of landfill sites in two areas has been incorporated into the WNA analysis.

3.24 The County Council also made estimates of exports and imports, including movements that are not precisely reported by the waste operators but which are allocated to a specific waste planning authority or region, including those to and from Scotland<sup>28</sup>. Waste exports and imports for 2013 are summarised in Table 3.5. These figures may overestimate Cumbria movements in both directions, as the data includes instances where the operator lists the destination generally as the NW region, of which Cumbria is a part. More accurate hazardous waste figures, derived from the separate Hazardous WDI, are discussed elsewhere in this report.

<b>2013 (all in tonnes)</b>	<b>Non-inert: Household and C&amp;I</b>	<b>Inert: CD&amp;E</b>	<b>Hazardous</b>	<b>TOTAL</b>
<b>EXPORTS</b>	204,586	30,495	10,967	246,048
<b>IMPORTS</b>	88,098	226,778	4,120	297,330

Table 3.5: Comparison of controlled waste exports and imports to Cumbria, 2013

source: Environment Agency WDI, 2013

3.25 The analysis of cross border movements indicates firstly that the volumes of waste imported to Cumbria and exported from Cumbria are not disproportionate, even when radioactive waste is excluded from the discussion. Secondly, the majority of exported material is Household and Commercial and Industrial (HIC) waste. This includes a proportion of household waste managed at waste facilities under contracts, including sorted waste from Household Waste Recycling Centres (HWRCs) and waste transfer stations, or from the county's Mechanical and Biological Treatment (MBT) plants. Refuse Derived Fuel (RDF) from the MBT plants is a significant component of these exports.

3.26 Thirdly, the county is virtually self-sufficient in management facilities for CD&E wastes. This is not surprising, as these wastes are heavy and costly to transport long distances, and relatively simple facilities are required to recycle such wastes and to dispose of the residual waste. In fact, the county receives and treats a significant amount of CD&E waste from other areas, although the majority of this is rail ballast imported for treatment at rail sidings in Carlisle. The ballast is then redistributed around the UK for reuse.

3.27 Treatment of hazardous waste, by contrast, can be complex and the tonnages to be treated are small. The WNA included a detailed analysis of hazardous waste movements, and the specialised treatment and disposal facilities required, and concluded that current exports and imports of hazardous wastes are likely to continue. There is also some evidence that both imports and exports of hazardous waste enable existing capacity to be used effectively and efficiently, and recycling to be maintained, without resulting in local over-

<sup>28</sup> drawn from Evidence Base document reference LD268: Waste Exports from Cumbria, EA WDI, 2013 and Evidence Base document reference LD269: Waste Imports to Cumbria, EA WDI, 2013

capacity. The analysis, therefore, assessed future needs for hazardous waste management facilities in Cumbria on the basis of an extrapolation of the waste currently managed within Cumbria (15,540 tonnes in 2013) rather than arising in Cumbria (27,762 tonnes in 2013).

### Current waste capacity

- 3.28 The WNA also included an assessment of waste capacity in Cumbria, based on environmental permits, waste exemptions and a survey of operators holding current planning consents. The current landfill capacity, together with the expiry dates of the planning consents, is tabulated in Table 3.6 below.

Site	Type	Voidspace (m <sup>3</sup> )	Closure
Bennett Bank	Non-inert	77,500	2017
Hespin Wood	Non-inert	1,027,000	2020
Lillyhall	Non-inert	1,302,400	2029
Flusco	Non-inert	963,400	2032
<b>TOTAL</b>	<b>Non-inert</b>	<b>3,370,300</b>	-
Derwent Howe	Inert	120,000	2016
Roan Edge	Inert	210,700	2016
Silver Fields Flusco <sup>29</sup>	Inert	240,000	2032
Goldmire Quarry <sup>30</sup>	Inert	1,173,000	2042
<b>TOTAL</b>	<b>Inert</b>	<b>1,743,700</b>	-
Lillyhall	Hazardous	17,500	2029
<b>TOTAL</b>	<b>Hazardous</b>	<b>17,500</b>	-

Table 3.6: Estimated landfill voidspace in Cumbria as at 31 December 2013  
source: Environment Agency

- 3.29 Potential losses of a Material Recovery Facility (MRF) in 2019, two composting sites in 2019 and 2021, and a C&D recycling site in 2025, all due to the expiry of temporary planning consents, were taken into account in the WNA model.

### Growth profile and future waste arisings

- 3.30 The WNA modelled the future waste arisings in Cumbria and the mix of waste management facilities likely to be needed over the Plan period. Growth profiles were developed for a range of scenarios for population (and hence household) growth and economic growth (employment and output alternatives) based on forecasts from the Experian econometric model<sup>31</sup> used widely in the County Council. The fundamental basis of the model is, therefore, that of economic and population growth for the county; however, the associated

<sup>29</sup> inert capacity at Flusco is linked to mineral extraction, in order to create the void, and the site is not yet receiving waste

<sup>30</sup> capacity at Goldmire Quarry is linked to continuing extraction, in order to create the void, and the site is not yet receiving waste

<sup>31</sup> Experian Economic Impact Model for Cumbria (2014), Employment: Output and Net Migration Projections 2013-2031

growth in waste arisings is moderated by predictions for waste minimisation and recycling.

- 3.31 A number of different scenarios were modelled before selecting two (upper and lower bound) scenarios referred to as “Best” and “Pragmatic” cases. Modelling based on employment rather than output was selected because of biases introduced by the methodology of the base data on C&I waste from a study by Urban Mines<sup>32</sup> in 2009. Each included different parameters for LACW and C&I waste, which are described in detail in the WNA Report.

*LACW minimisation and recycling parameters*

- 3.32 The JMWMS does include LACW waste minimisation and recycling targets, but only covers the period to 2020; however, this document is currently under review and any implications for this Local Plan will be considered when it is published. Initiatives by the Waste Collection and Disposal Authorities continue to develop, but certain aspects of the recent improvements in the management of household waste, such as the recovery of value through the municipal waste management contract, will continue at the current rate for the duration of the contract and, therefore, to the end of the Plan period. These rates were used for the “Pragmatic” case, while the LACW “Best” case drew on the European Commission revised Directive, which was proposed to amend recycling and other waste-related targets in the EU Waste Framework Directive 2008/98/EC, the Landfill Directive 1999/31/EC and the Packaging and Packaging Waste Directive 94/62/EC.

- 3.33 The aim of the proposal was to help turn Europe into a circular economy, boost recycling, secure access to raw materials and create jobs and economic growth; however, the targets and key provisions were ambitious, and it is currently considered unlikely that this Directive will come into force. In 2030, the “Best” case LACW scenario results in 0 tonnes of waste to landfill, whereas the “Pragmatic” case results in 17,000 tonnes waste to landfill.

*C&I waste minimisation and recycling parameters*

- 3.34 In spite of the policy goals and economic drivers referred to in paragraphs 3.1 to 3.5, waste minimisation and recovery initiatives for commercial and industrial waste streams are very difficult to predict. They impact differentially on various waste streams and materials, because both the European and national waste policy, target specific materials depending on their relative carbon and economic impacts. In addition, recent C&I waste minimisation initiatives have been voluntary, as opposed to the mandatory targets previously imposed. For example, “Courtauld 3”, which was launched in early May 2013 and runs until 2015, aims to further reduce the weight and carbon impact of household food waste, grocery product and packaging waste, both in the home and the UK grocery sector<sup>33</sup>.

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<sup>32</sup> Evidence Base document reference LD147: Environment Agency, March 2010

<sup>33</sup> Evidence Base document reference ND117: Waste Prevention Plan for England, Defra, 2013

- 3.35 There is no empirical evidence yet of the overall impact on C&I arisings per unit of economic activity, although Defra<sup>34</sup> has established a new methodology to use in future analysis and reporting<sup>35</sup>. The WNA concludes that it is reasonable to assume a 2% reduction per year until 2020, but in the absence of mandatory targets or a revised EU Directive on waste minimisation or the circular economy, the model assumes no resource efficiency improvements after that time.
- 3.36 It is likely, however, that some of the recent improvements in LACW management practice are also being implemented in the C&I sectors, and that UK Government aspirations and actions set out in 2013<sup>36</sup> would lead to a decrease in C&I waste to landfill, and some increase in materials recycling and recovery.
- 3.37 The WNA modelled a range of scenarios for C&I waste growth and diversion from landfill, to generate a reasonable predicted range for C&I residual waste at different stages of the Plan period. The upper and lower bound scenarios were described as “Pragmatic” case and “Best” case, with underlying assumptions<sup>37</sup> derived from a 2011 report by Defra<sup>38</sup>. The “Pragmatic” case assumes current trends to continue with little waste minimisation and slow diversion of waste from landfill (the “Reference” Scenario in the Defra report), while the “Best” case uses a more optimistic scenario, described as a “Sustainability Turn” in the Defra report.
- 3.38 The selected assumptions for improved C&I waste treatment give a “Best case” reduction from 296,000 tonnes in 2013 to 40,000 tonnes of waste to landfill in 2030; whereas the “Pragmatic” case results in 89,000 tonnes of waste to landfill in 2030. A corresponding increased need for recycling and recovery facilities, due to more significant diversion away from landfill in the “Best” case scenario, is demonstrated in the model.

#### *Forecasting other waste arisings*

- 3.39 CD&E waste arisings were modelled on the same economic and employment growth forecasts as the other wastes, and no waste reduction or further diversion from landfill is assumed. Hazardous waste growth forecast is moderated on recent trends, with a waste reduction of 0.6% a year for the next 5 years only. Current cross border movements are assumed to continue because, given the technical and economic constraints and the low volumes, it would be unrealistic to expect the necessary infrastructure to emerge.
- 3.40 Agricultural waste arisings were assumed to remain unchanged, as no evidence to substantiate significant changes has been found. Wastewater and sewage arisings are assumed to rise with population growth, but are included in the C&I waste totals.

<sup>34</sup> Evidence Base document reference ND129: New methodology to estimate C&I waste generation, Defra, August 2014

<sup>35</sup> <https://www.gov.uk/government/policies/reducing-and-managing-waste>

<sup>36</sup> Evidence Base document references ND84 and ND117: Defra, December 2013

<sup>37</sup> Evidence Base document reference LD267: WNA Table 10.4 – “Overview of Management Mix Assumptions”

<sup>38</sup> Evidence Base document reference ND47: Figure A9, The Economics of Waste and Waste Policy, Defra, June 2011

3.41 The WNA then compared the future arisings and waste management infrastructure with the capacity available, in order to identify how many new facilities, and of what type, are likely to be required.

### **Need for additional waste management infrastructure**

3.42 The WNA report provides a summary of total capacity required 2013-2030 for the principal types of waste management functions<sup>39</sup>, a summary of additional built waste facilities that may be required<sup>40</sup>, and estimates of landfill void capacity throughout the Plan period<sup>41</sup>. Each of these tables provides predictions under the “Best” case and “Pragmatic” case scenarios at 2015, 2020, 2025 and 2030. The capacity gaps estimated for the principal waste management functions are also detailed for both the Best<sup>42</sup> and Pragmatic<sup>43</sup> cases.

3.43 The key conclusions from these tables are as follows:

- There is sufficient non-inert landfill void capacity for the Plan period under both scenarios **if all current consents were granted time extensions at the end of their current expiry dates.**
- The low inert landfill capacity remaining by 2030 under the “Pragmatic case” would be even lower **if no time extensions were granted to existing sites.**
- A need for a single additional mixed recycling facility for C&I waste is identified, but the model shows this as an existing need required immediately. The capacity gap, however, disappears when C&I waste and LACW are considered together, so no need would arise during the Plan period **if the existing facilities are utilised flexibly for both waste streams.**
- A need for additional composting facilities for C&I waste and LACW would arise in 2020 **if a time extension were not to be granted for an existing facility.** The existing consent would, however, automatically be extended if the adjacent landfill were to be granted a time extension.
- There is a current requirement for thermal waste treatment capacity in the county, **which is likely to reach a maximum of almost 120,000tpa in 2020 and diminish thereafter.**

3.44 It should be noted that these conclusions are necessarily based on many assumptions. The parameters used for both scenarios are cautious as regards waste minimisation, and the total quantities of C&I waste in particular would be much reduced if ambitious statutory targets were to be imposed, or if economic imperatives drove genuine implementation of the circular economy for resource utilisation. However, the County Council considers that the conclusions provide a sound and evidenced base direction for policy

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<sup>39</sup> Evidence Base document reference LD267: Table 11.1, Cumbria County Council Waste Needs Assessment, Urban Vision, December 2014

<sup>40</sup> ibid Table 11.4

<sup>41</sup> ibid Table 11.5

<sup>42</sup> ibid Table 11.2

<sup>43</sup> ibid Table 11.3

formation, whilst the inherent uncertainties underline the need for flexibility and responsiveness in the overall provision within the Plan.

### *Landfill*

- 3.45 The predictions with respect to non-inert landfill requirements indicate that a flexible policy framework is required to ensure that there is not an overprovision of landfill, which could undermine efforts to drive waste up the waste hierarchy. Underprovision, however, could place pressure on remaining landfill capacity in neighbouring authorities. It is considered likely that Bennett Bank Landfill will close before its permission expiry date in 2017, but a time extension application at Hespian Wood is expected well in advance of its expiry date in 2020, and approximately 400,000m<sup>3</sup> additional capacity was suggested by the operator<sup>44</sup>, which could potentially be considered if a need was demonstrated. It is, therefore, not considered necessary to define additional non-inert landfill capacity and no landfill sites are identified in the Site Allocations chapter.
- 3.46 Ongoing provision for inert landfill at Roan Edge would require a time extension early in the Plan period, but there is also additional inert capacity with planning consent at Flusco and at Goldmire Quarry. However, the County Council has identified several major infrastructure projects that, if they come to fruition, may create considerable inert waste arisings. It is, therefore, considered that an overly restrictive policy approach to new inert landfill should be avoided, whilst ensuring that inert landfill capacity to meet specific needs, if and when they arise, do not undermine the waste hierarchy.

### *Mixed recycling*

- 3.47 The third bullet point in paragraph 3.43 above, referring to an immediate need for a further mixed recycling facility for C&I waste, is based on a C&I waste capacity gap of 43,000tpa in 2015; yet an excess capacity of around 400,000tpa is identified as dedicated to LACW. The assumptions within the WNA model that generate this split do not reflect the actual situation because Cumbria Waste Management Ltd (CWM), which operates much of this capacity, is a County Council owned subsidiary that is already managing C&I waste in addition to LACW. An overall “excess” capacity of around 170,000tpa would remain by 2030, even under the “Best case” scenario with maximum recycling.
- 3.48 It is, therefore, considered that there is no immediate need for an additional site for mixed recycling, although provision for a further facility in the Plan could give additional flexibility. Experience would indicate that a number of small sites or extensions to small sites may be sought, particularly in areas where there are already a number of mixed waste recycling or skip hire operators. These “Broad Areas” are discussed in paragraphs 3.66 to 3.72.

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<sup>44</sup> Submission under Article 30 of the Town and Country Planning (Development Management Procedure Order) (England) 2010, Stephenson Halliday, 28 February 2011

### *Composting*

- 3.49 The need for composting sites in 2020, identified in the WNA, arises from the potential closure of one 25,000tpa composting facility adjacent to the Thackwood landfill site, and one 75,000tpa facility that is adjacent to Hespian Wood landfill. The temporary planning consent for the latter development is directly linked to the continued operation of the Hespian Wood landfill site, and would automatically be extended if a time extension for the landfill site were to be granted.
- 3.50 The model assumes that any replacements would have a 25,000tpa capacity, giving rise to a need for three new composting sites in 2021; however, the combined LACW and C&I capacity gap in 2030 is 54,000tpa (rising steadily from 47,000tpa in 2021) and a time extension for the existing Hespian Wood composting facility would remove the need for further sites. If such a time extension is not granted, one additional site of 75,000tpa capacity would be sufficient.

### *Thermal treatment and energy from waste*

- 3.51 The WNA identifies an immediate need for 36,000tpa of thermal capacity for LACW and 10,000tpa for C&I waste. The former need relates to the RDF (which is defined as a secondary waste), arising from Cumbria's two MBT plants and would reduce gradually throughout the Plan period if household waste minimisation was successful and recycling increased. The higher specification of RDF (known as solid recovered fuel or SRF) is appropriate for use in cement plants, and is currently baled and sent to suitable plants, some in Latvia and some in the UK. Lower specification RDF can be sent to a range of energy from waste plants in the UK.
- 3.52 At present, there is no infrastructure in Cumbria to utilise this fuel, although sites for such plants have been discussed with potential users of the fuel. The allocation of sites for energy from waste plants to utilise the RDF arising from Cumbria's municipal waste stream, is a matter to be considered in this Local Plan. The destination of the RDF is, however, a decision for the municipal waste management contract holder. It is also relevant that Shanks obtained planning consent for a gasification plant in Derbyshire in 2013, which would create electricity from RDF, and has secured funding for its construction to commence<sup>45</sup>. A new gasification plant suitable for energy generation from RDF is also expected to be completed by New Earth Ltd in Galashiels during 2015<sup>46</sup>, which could theoretically provide thermal treatment capacity for RDF from Dumfries and Galloway that may currently be brought into Cumbria for onward shipment to Europe, or it could accept RDF arising within Cumbria.
- 3.53 The relative advantages of exporting this waste or developing new facilities in the UK are not clearly defined, as was identified by a Parliamentary Committee of the Environment, Food and Rural Affairs Committee. The Committee published their Fourth Report on waste management in England

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<sup>45</sup> <http://www.shanksmunicipal.co.uk/news/shanks-successfully-secures-funding-for-27-year-derby-city-and-derbyshire-ppp-contract>

<sup>46</sup> <http://www.letsrecycle.com/news/latest-news/galashiels-gasification-plant-longer-track-2015/>

on 15 October 2014<sup>47</sup>, which included recommendations to Defra, based on the evidence presented to the Committee. One of the recommendations was that a study be undertaken on this issue. Overprovision of energy from waste facilities is likely to frustrate the movement of waste up the waste hierarchy, as facilities seek feedstock to support the viability of the plant; whilst on the other hand, export of RDF is contrary to the proximity principle.

- 3.54 The need for similar facilities for C&I waste in Cumbria is a theoretical prediction based on the national management mix of C&I waste. The WNA analysis identifies an immediate need to cater for the 10,000tpa identified in 2013, and suggests that the need would rise to between 76,000 and 88,000tpa in 2020, depending on the scenario. If 75,000tpa is considered a viable plant size, a need for one plant in Cumbria during the Plan period would be reasonably likely. As technology develops further, smaller plants may be feasible, enabling a number of smaller facilities to develop, possibly with specific manufacturing processes dealing with their own waste on site.
- 3.55 Theoretically, any plant developed to recover energy from RDF from the LACW stream could also be used to treat commercial and industrial waste. However, this could not be assumed or planned for, because these would be market led facilities, neither is this Plan able to predict which technologies are likely to develop or be viable in the Cumbrian context. It is, therefore, considered that this Plan should provide for two thermal treatment developments, whilst also providing a positive framework for developments on these or other suitable sites for both thermal and non-thermal energy from waste plants, such as anaerobic digesters or gasification plants.

#### *Household Waste Recycling Centres*

- 3.56 A need for additional HWRC capacity was identified in the WNA, due to the planned closure of sites at Kendal, Workington and Frizington, and the expiry of the planning consent for Flusco HWRC. This consent was originally timed to reflect the expiry date of the adjacent Flusco Landfill site, which has since been extended to 2032, and an application for a time extension for this HWRC is expected. The additional capacity is discussed further in paragraph 3.64 and in the Site Allocations chapter.

#### *Hazardous waste*

- 3.57 Cumbria has adequate hazardous waste landfill capacity for the Plan period, and no capacity gap for hazardous waste management facilities was identified by the WNA. Cumbria is a net exporter of hazardous waste, but the quantities of each type of material are small. The WNA concluded that there was limited scope to directly affect the quantities exported for disposal even if the Plan were to provide for additional treatment or recovery capacity in Cumbria.

#### *Agricultural and sewage waste*

- 3.58 The WNA did not identify any current or predicted gaps in provision for agricultural waste or significant gaps in provision for sewage waste (wastewater treatment). United Utilities (UU), the statutory undertaker for

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<sup>47</sup> <http://www.publications.parliament.uk/pa/cm201415/cmselect/cmenvfru/241/24102.htm>

wastewater in Cumbria, confirms that their latest 5-year Asset Management Programme (AMP6)<sup>48</sup> identifies the need for a new wastewater treatment works (WwTW) as part of a major capital scheme to upgrade the West Cumbria water supply network. The proposed WwTW at Bridekirk would connect a new clean water transfer main from Thirlmere and a new treated water transfer main to an existing service reservoir. However, there will be associated decommissioning of a number of WwTWs and pumping stations, so the amount of wastewater needing treatment will not increase significantly. Progress will be kept under review.

### **Strategic policy for waste**

- 3.59 Strategic Objectives 2 and 3 of this Local Plan, express the County Council's aim to manage Cumbria's wastes at the highest achievable level within the waste hierarchy, as near to where it is produced, without endangering people's health or the environment. Table 3.5 and paragraphs 3.25 to 3.27 indicate that, whilst waste is exported from Cumbria, the quantities imported are not disproportionate, and, excluding the considerable imports of radioactive waste and net exports of hazardous waste, Cumbria is close to net self-sufficiency in waste management.
- 3.60 National planning policy<sup>49</sup> makes it clear that while each waste planning authority should aim to manage all its own waste, the proximity principle does not require them to deal solely with such waste. Some cross boundary movements may enable more efficient use of facilities, and prevent local over-provision, and the geography of Cumbria does mean that cross border movements may involve fewer "waste road miles" to a suitable and viable management facility, rather than transferring waste to a facility elsewhere in Cumbria. The cost of transport itself is one of the factors affecting commercial decisions about where to manage wastes; decisions that are not directly influenced by the planning system.
- 3.61 Centralised facilities, taking waste from all parts of Cumbria to achieve economies of scale, are less likely to be feasible than in many waste planning authorities, due to the low population density, the dispersed urban settlement pattern and the presence of the Lake District National Park in the centre of the county. This is particularly true for hazardous waste, of which only small quantities arise in Cumbria, and for which specialised facilities are often required.
- 3.62 Strategic planning policy SP2 is, therefore, founded on the goal of providing for management of all wastes arising in Cumbria, whilst accepting that limited cross boundary movements of waste will occur. Proposals to import significant volumes of waste would be acceptable only if local social and economic benefits demonstrably outweigh other sustainability criteria.

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<sup>48</sup> Report and Financial Statements for the year ended 31 March 2014, United Utilities, June 2014

<sup>49</sup> PPG paragraph 007, chapter 28 Waste (ID: 28-007-20141016)

## **POLICY SP2 Provision for waste**

Provision will be made for the management of all of Cumbria's wastes within the county, with the acceptance of limited cross boundary movements (net self-sufficiency). This will be achieved by allocating sufficient sites to meet objectively identified needs for additional facilities.

Any proposals to manage significant volumes of wastes from outside the county would have to demonstrate that the local, social and economic benefits outweigh other sustainability criteria.

These other criteria include the impacts of the additional "waste miles" and the principles of managing waste as close as possible to its source, with each community taking responsibility for its own wastes and taking account of the nearest appropriate facility.

- 3.63 Strategic Policy SP3 builds on the principles in policy SP2, in order to provide waste infrastructure for current and future needs, as identified by the WNA. Recognising that not all sites allocated will be developed, and to ensure that a rigid cap is not imposed on development proposals<sup>50</sup>, it is proposed to identify eight additional sites for waste treatment facilities. This is considered sufficiently flexible to meet the need for the three sites identified in paragraphs 3.48 and 3.55, as some sites may be lost to other developments or may prove to be unsuitable. An additional site for composting is not proposed at this time as the need is unclear. Any such proposals would be addressed through Development Control Policies, in order to allow flexibility and responsiveness to demand.
- 3.64 Broad Areas suitable for waste management are also proposed, as supported by PPG<sup>51</sup> and discussed in paragraphs 3.48 and 3.66 to 3.72 of this Local Plan. Provision for alternative sites for HWRC's is proposed where existing sites are due for closure and replacement is required.
- 3.65 The policy does not identify a need for additional landfill capacity, but provides strategic criteria by which time extensions for existing non-inert landfills, and for additional inert or non-inert landfill capacity, would be considered. It should be noted that capacity needs for either landfill or site allocations can be objectively identified at regular intervals during the Plan period, or at the time of fresh proposals, through re-application and updating of the WNA model.

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<sup>50</sup> PPG paragraph 038, chapter 28 Waste (ID: 28-038-20141016)

<sup>51</sup> PPG paragraph 040, chapter 28 Waste (ID: 28-040-20141016)

## **POLICY SP3 Waste capacity**

### **Waste management facilities**

In order to provide an integrated network and to meet any waste capacity gaps that are predicted to arise during the Plan period, the Plan identifies:

- 8 sites of between 2 and 4ha for additional waste recycling and treatment facilities (these could provide for commercial and industrial waste or municipal waste);
- Broad Areas where any of a number of sites may be suitable for waste management;
- alternative sites for those Household Waste Recycling Centres (HWRC) that are required to be replaced.

Preference will be given to sites that contribute to an integrated network of waste facilities by accommodating several types of facility, or by being well located in relation to the sources, or to the destination of, the waste stream being managed.

Proposals on unallocated sites, where opportunities arise that were not anticipated, will be considered if they conform to the other policies in this Plan and would meet an identified need in a timely manner.

The need for provision for construction and demolition, or excavation, waste arising from major infrastructure projects will be kept under review and proposals considered against relevant policies in this Plan.

### **Landfill**

Time extensions for existing non-inert landfill facilities will be considered if they are necessary:

- to meet the capacity need identified in this Plan; or
- to achieve acceptable restoration contours; or
- to maintain an integrated network of a range of appropriate and necessary waste management facilities across the county.

Proposals for additional inert or non-inert landfill capacity would need to demonstrate that there is a need for the development and that it would not undermine the waste hierarchy.

### **Broad Areas and site locational criteria for waste management developments**

- 3.66 As discussed in paragraph 3.48, proposals on sites that have not been allocated are likely, and may be appropriate for a number of reasons. Planning policy<sup>52</sup> makes it clear that unallocated sites may be used where opportunities arise that were not anticipated, potentially due to technological or land ownership changes, or for new entrants into the market. In addition, smaller scale waste management developments may be proposed in industrial areas where other waste uses already exist, where there are industries where waste arises or where waste could be used as a resource. Such proposals would be addressed through Development Control Policies, but the list of

<sup>52</sup> PPG paragraph 046, chapter 28 Waste (ID: 28-046-20141016)

criteria in Table 3.7 overleaf, highlights some of the material considerations that are relevant from a strategic viewpoint.

- 3.67 The criteria set out in Table 3.7, do not imply that waste management proposals on sites that have not been allocated in this Plan would be acceptable on all commercial or industrial estates throughout Cumbria, but some will clearly be suitable for certain types of facility.
- 3.68 The location of new waste management facilities, now that the primary LACW waste management facilities are in place, will be market led and dependent on proposals from the private sector. These may be “merchant” facilities provided by waste management companies, or “in-house” facilities provided by commercial and industrial waste producers or waste users. Provision for an integrated network of suitable sites in places that meet the proximity principle and other sustainability criteria is, however, the role of the Waste Planning Authority.
- 3.69 Policy DC9 (Criteria for waste management facilities) develops the considerations in Table 3.7, by listing suitable locations and key criteria for the principal types of facility, to give developers some indication of potentially acceptable proposals. There are also some employment areas containing existing waste management facilities, or where the key criteria above apply, and some synergies may be achieved by locating new provision in the same areas if sites become available.
- 3.70 The County Council considers that the following estates have potential to support further waste provision, and can be considered as Broad Areas, where any of a number of individual sites would be suitable for waste management<sup>53</sup> if the proposals conform to the other relevant policies of this Plan:
- Lillyhall Industrial Estate, Workington
  - Sowerby Wood and Park Road Estates, Barrow
  - Gilwilly Industrial Estate, Penrith
  - Kingmoor Park Rockcliffe Estate, Carlisle.
- 3.71 The above list of Broad Areas is not exhaustive, and opportunities for additional or improved waste provision may exist on other employment or industrial estates, if they are required. Together with the provision in SP3, site allocations in chapter 18 and the positive approach to development control described in chapter 14, it is considered that suitable sites and areas for the provision of waste management facilities have been identified in appropriate locations, as required by planning guidance<sup>54</sup>.
- 3.72 The implementation chapter of this Plan explains how monitoring and review will enable the County Council to ensure that provision responds to future changes in waste growth and management practice if they diverge from the ranges predicted by the 2014 Waste Needs Assessment.

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<sup>53</sup> PPG paragraph 040, chapter 28 Waste (ID: 28-040-20141016)

<sup>54</sup> PPG paragraph 011, chapter 28 Waste (ID: 28-011-20141016)

<b>Criteria</b>	<b>Characteristics</b>
<b>1. Proximity and contribution to an integrated network</b>	<ul style="list-style-type: none"> <li>▪ Within 5 miles of the centre of an urban area,</li> <li>▪ Close to source of the specific arisings to be managed, or</li> <li>▪ Close to a site that would use the waste resource, or</li> <li>▪ Serving an area with a demonstrable lack of similar facilities</li> </ul>
<b>2. Accessibility</b>	<ul style="list-style-type: none"> <li>▪ Well related to existing road network, or</li> <li>▪ Well related to proposed road network</li> <li>▪ Potential for rail or sea transport</li> </ul>
<b>3. Allocated land use</b>	<ul style="list-style-type: none"> <li>▪ On land already used or allocated for waste management, or</li> <li>▪ B2-B8 commercial or industrial use</li> </ul>
<b>4. Deliverable</b>	<ul style="list-style-type: none"> <li>▪ No owner objection</li> </ul>
<b>5. Flood risk</b>	<ul style="list-style-type: none"> <li>▪ Sequential test needed for Zones 2 and 3<sup>55</sup></li> <li>▪ Possible need for exception test</li> <li>▪ Avoid functional floodplain (Zone 3b)</li> </ul>
<b>6. Away from houses</b>	<ul style="list-style-type: none"> <li>▪ Further than 250 metres</li> <li>▪ Number of houses</li> </ul>
<b>7. Environmental interests</b>	<ul style="list-style-type: none"> <li>▪ Not within or affecting environmental assets as listed in Boxes 8.1 and 8.2 in this Local Plan</li> </ul>
<b>8. Visual impact</b>	<ul style="list-style-type: none"> <li>▪ Not affecting the setting of the National Parks, AONBs, World Heritage Site, Heritage Coast, Registered Historic Parks and Gardens, Listed Buildings, Conservation Areas or Scheduled Monuments</li> </ul>
<b>9. Other land uses</b>	<ul style="list-style-type: none"> <li>▪ No likely conflict</li> </ul>
<b>10. Economic potential</b>	<ul style="list-style-type: none"> <li>▪ Likely to be part of, or aid, regeneration or safeguard jobs</li> </ul>
<b>11. Co-location potential</b>	<ul style="list-style-type: none"> <li>▪ Large enough to be able to accommodate more than one type of facility, or</li> <li>▪ In close proximity to complementary waste management uses</li> </ul>

Table 3.7: Site location criteria

<sup>55</sup> PPG paragraph 065, Table 1, chapter 7 Flood Risk and Coastal Change (ID: 7-065-20140306)

## 4. RADIOACTIVE WASTES

### Background

- 4.1 Radioactive wastes are produced in the UK as a result of: the generation of electricity in nuclear power stations and from the associated production and processing of the nuclear fuel (including decommissioning of plant); from the use of radioactive materials in industry; from the extraction of minerals, which may include some naturally occurring radioactive materials (NORM); from medicine; from academic research; and from military nuclear programmes (such as the nuclear-powered fleet of submarines).
- 4.2 Radioactive waste is divided into three categories according to how much radioactivity it contains, in terms of becquerels per gram, and the heat that this radioactivity produces. The categories identified<sup>56</sup> are: High (HLW), Intermediate (ILW) and Low Level Waste (LLW). Very Low Level Waste (VLLW) is a sub-category of LLW; together they are often termed 'lower activity wastes'. HLW and ILW together, are often termed 'higher activity wastes'.
- **High Level Waste** – more than 12,000 becquerels/gram (Bq/g) and significantly heat generating
  - **Intermediate Level Waste** - more than 12,000 Bq/g, but not significantly heat generating
  - **Low Level Waste** – not exceeding 4,000 Bq/g of alpha radiation or 12,000 Bq/g of beta/gamma radiation
    - **Very Low Level Waste** - a sub-category of LLW for waste with activity levels between 0.4 and 4 Bq/g

Further information about alpha, beta and gamma radiation can be found in the Glossary.

- 4.3 The Department of Energy and Climate Change (DECC) and the Nuclear Decommissioning Authority (NDA) periodically publish an inventory of radioactive waste in the UK. The 2013 UK Radioactive Waste Inventory is the most recent public record of information on the sources, quantities and properties of LLW, ILW and HLW in the UK. As of 1 April 2013, the Inventory contains details of over one thousand individual wastes that have been reported by organisations responsible for their management.
- 4.4 The Inventory does not include liquid and gaseous wastes containing very low concentrations of radioactivity, which are routinely discharged to the environment within authorised limits. Nor does it include small quantities of solid wastes with very low concentrations of radioactivity, typically from hospitals, universities and the non-nuclear industry (collectively termed 'small users') that can be disposed of with domestic refuse to landfill, either directly or after incineration. Also excluded are NORM wastes (which accumulate as scale on pipework during the extraction of oil and gas) and radioactively contaminated land. Waste estimates for any new nuclear power stations are not projected in the Inventory.

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<sup>56</sup> Strategy for the management of solid low level radioactive waste from the non-nuclear industry in the United Kingdom, Part 1 anthropogenic radionuclides, DECC, March 2012

4.5 The total volume of radioactive waste that exists or is forecast to arise in the UK, from existing facilities, is about 4.5 million cubic metres (4.9 million tonnes); this volume would fill Wembley stadium about four times over. A further 1 million cubic metres of radioactive waste has already been disposed. About 96% (4.3 million cubic metres) of the total volume of radioactive waste has already been produced. Some has been processed, and is being held in stores, but most is contained within existing nuclear facilities, including reprocessing plants and nuclear reactors, and will not be processed until these are shut down and dismantled. This waste is the legacy of past and current civil and military nuclear programmes.

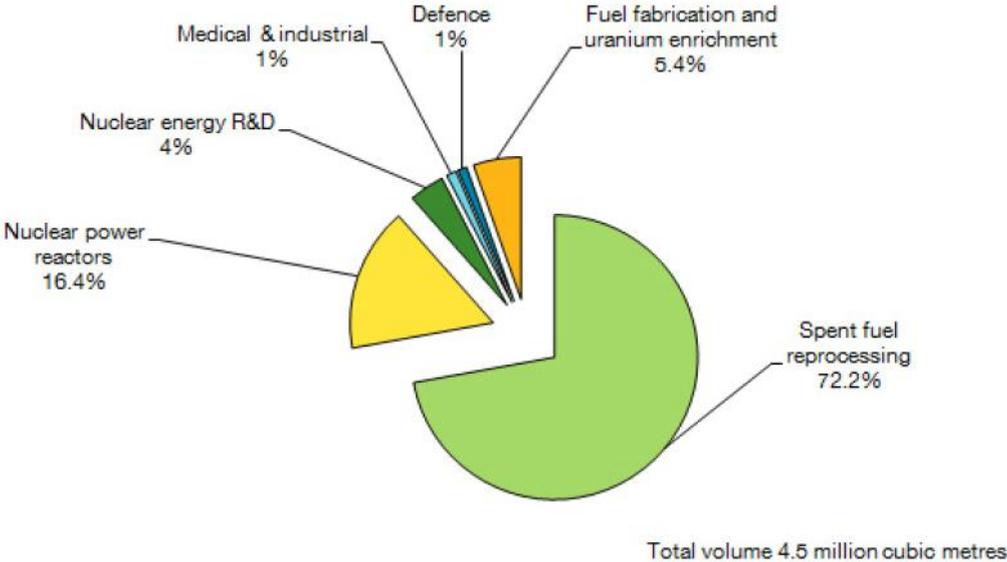
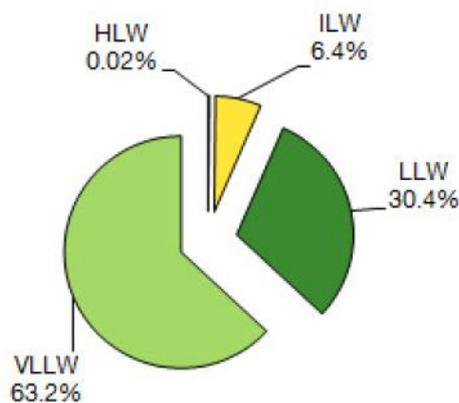


Figure 4.1: Waste volumes from each activity at existing facilities  
 source: UK Radioactive Waste Inventory, DECC & NDA, 2013

Note: spent fuel reprocessing includes all wastes from Sellafield, where there are large waste volumes from legacy defence programmes in addition to those from commercial fuel reprocessing.

4.6 About 94% (4.2 million cubic metres) of the radioactive waste total volume is categorised as LLW and VLLW. Of this, around 3.9 million cubic metres will arise from the dismantling and demolition of nuclear facilities and the clearance of contaminated ground at nuclear sites. About 6% (290,000 cubic metres) of the total volume is categorised as ILW, whilst less than 0.1% (1,100 cubic metres) is in the HLW category. Although the volume of HLW is relatively small, it contains about 95% of the radioactivity in the total volume; LLW contains less than 0.01% of the radioactivity. These percentage values will change gradually over time, as radioactivity decays.

Total cubic metres	
VLLW	2,800,000
LLW	1,400,000
ILW	290,000
HLW	1,100
<b>Total</b>	<b>4,500,000</b>



Total volume 4.5 million cubic metres

Table 4.1: Total volume by waste type  
source: UK Radioactive Waste Inventory, DECC & NDA, 2013

### Radioactive waste in Cumbria

- 4.7 The county hosts a significant number of nuclear industry and non-nuclear industry sites (see Table 4.2); they variously produce, treat, manage, store and/or dispose of radioactive wastes (see Glossary). They are almost all located in West Cumbria, which has by far the largest concentration of nuclear waste management facilities in the UK. The issue for Cumbria is the storage and disposal of radioactive wastes in the county.
- 4.8 At present, the full range of radioactive wastes (HLW, ILW, LLW, VLLW), arising from both within and outwith the county, are either stored or disposed of in West Cumbria. There have been proposals for further such developments in recent years, which would not only cater for the radioactive wastes arising in the county, but would also import these wastes from across the UK. It can be expected that more proposals will be put forward in the future.
- 4.9 This situation is not regarded by the County Council as being sustainable or acceptable since, in accordance with national policy, it is expected that communities must take appropriate responsibility for managing their own wastes and must make provision for its sustainable management in their Local Plans<sup>57</sup>. Whilst it is not expected that all Waste Planning Authorities need to host their own radioactive waste management facilities, and certainly not for all

<sup>57</sup> <http://planningguidance.planningportal.gov.uk/blog/guidance/waste/the-role-of-waste-planning-in-meeting-european-obligations/>

activity levels, this does not mean that there should be a default position of exporting these wastes to existing facilities in West Cumbria. For some radioactive wastes, it is recognised that there is no alternative - HLW only arises at Sellafield, so it is in accordance with national policy that it is managed and stored on site until a disposal facility is developed.

Table 4.2: Sites associated with radioactive waste in Cumbria

Site	Description
Sellafield nuclear licensed site (including Windscale)	This is the only site in the UK that produces HLW and it is also treated and stored here. Foreign HLW is sent to Sellafield for reprocessing and is then returned to its country of origin. ILW arises, is treated and stored on site. Some ILW from across the UK is also stored here. LLW and VLLW arise on site. Some of the lower activity LLW and VLLW is disposed into the onsite landfill, some is managed by sending to Studsvik for treatment, some is sent to landfill or for incineration.
Sellafield National Nuclear Laboratory	LLW is produced in the Laboratory during research. Depending on its activity level, it is either managed by consignment to the LLWR, sent to landfill or incinerated.
Low Level Waste Repository	Some ILW has arisen here in the past, as a result of former MOD magazines contaminated with plutonium – this has been safely retrieved and sent to Sellafield for storage. Historically, the LLWR has disposed of the UK's higher activity LLW that required highly engineered barrier containment. Currently, the site accepts such LLW for storage only.
Eskmeals MoD test range	LLW is produced from test firing and is managed by consignment to the LLWR.
Studsvik UK Ltd	This company treats metals that are contaminated by LLW. Some LLW is managed by sending to the parent company in Sweden, which has more extensive facilities. Clean metal is entered into the metal market.
Lillyhall Landfill	The landfill has an Environmental Permit to dispose of VLLW and planning permission until 2029.
Furness General Hospital	The three hospitals in Cumbria use a range of radioactive isotopes, such as technetium, iodine and carbon-14, for diagnostic and therapeutic applications. The majority of the arising radioactive waste substances are liquid, with lesser amounts of solid waste and minimal gaseous waste. Solid waste is usually in the form of syringes, needles, swabs, vials and gloves. The Environment Agency regulates the disposal of these wastes, mostly as wastewater, though the solids are sent for incineration, which is then disposed of in appropriate landfill.
West Cumberland Hospital	
Cumberland Infirmary	
BAE Systems Marine Ltd	LLW arises here as a result of work on the UK's nuclear-powered submarine fleet. Depending on its activity level, it is either managed by consignment to the LLWR, sent to landfill or incinerated.
Kingmoor Park Properties Ltd	LLW is produced as a result of industrial processes. Depending on its activity level, it is either managed by consignment to the LLWR, sent to landfill or incinerated.
International Nuclear Services Ltd	This company manages the transport, using its own fleet of ships, to deliver foreign HLW to Sellafield for reprocessing and to then return it to the country of origin.

#### *Volumes of radioactive waste*

- 4.10 In some cases, it is difficult to separate those arisings from within Cumbria and those from other parts of the UK, except for HLW, which only arises at

Sellafield. The 2013 Radioactive Waste Inventory<sup>58</sup> identifies the volumes of existing, stored radioactive waste at the following sites in Cumbria:

Sellafield: 1,770m<sup>3</sup> HLW (100% of UK total), in 5,626 packages  
69,600m<sup>3</sup> ILW (73% of UK total), in 47,569 packages  
3,450m<sup>3</sup> LLW (5% of UK total)  
1,080m<sup>3</sup> VLLW (92% of UK total)  
LLWR: 32,800m<sup>3</sup> LLW (49% of UK total), stored in Vaults 8 and 9

The recorded volume at the LLWR will include LLW from across the UK.

- 4.11 The Inventory also identifies future waste arisings, which reflect current waste management practices. The period of these forward projections varies from site to site, depending on forecast plant end date and the timing of plant decommissioning activities. The 2013 Inventory includes waste projections up to 2120.
- 4.12 The forecast for HLW at Sellafield actually shows a fall in volume. This is because HLW is first stored as a liquid, which will later undergo an evaporation process before vitrification into glass blocks; these blocks are roughly one-third of the volume of the original liquid. The process is due to finish around 2021.
- 4.13 The forecast future arisings of ILW in the UK are about 190,000m<sup>3</sup>, of which 112,000m<sup>3</sup> (about 59%) is from Sellafield; this is mostly from decommissioning of facilities, but some is from operational activities. Other nuclear licensed sites in the UK either have or are preparing their own ILW stores, but there may be some ILW that has to be sent to Sellafield for storage.
- 4.14 The forecast future arisings of LLW in the UK are about 1,300,000m<sup>3</sup>, of which 291,000m<sup>3</sup> (about 22%) is from Sellafield; of this amount, the split is roughly 60% from decommissioning and 40% from operations. Much of the UK's Higher Activity LLW will be consigned to the Low Level Waste Repository.
- 4.15 The forecast future arisings of VLLW in the UK are about 2,840,000m<sup>3</sup>, of which 2,760,000m<sup>3</sup> (about 97%) is attributable to waste from the decommissioning of reprocessing and associated plants, waste storage and treatment plants, and site service facilities at Sellafield. However, there is a large uncertainty in potential radioactive waste arisings from decommissioning, and current expectations are that about 70% of this material, which comprises concrete, brick and metal from building structures, may be out of scope of regulatory control because it would fall below the defined activity levels for 'radioactive waste'.

### **Planning for radioactive waste management**

- 4.16 It is essential that all radioactive wastes and materials are safely and appropriately managed in ways that pose no unacceptable risks to people or the environment, now or in the future. How radioactive waste is dealt with depends to a large extent on how radioactive it is. Some radioactive wastes are stored untreated, but many are treated in some way soon after they arise,

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<sup>58</sup> United Kingdom Radioactive Waste & Materials Inventory, 1 April 2013, DECC and NDA

in order to reduce their volume and so minimise the requirements for storage. Techniques include compaction and incineration (for solid wastes) and evaporation and filtration (for liquid wastes).

- 4.17 There are a number of organisations who regulate radioactive waste arisings. The Environment Agency's remit is to regulate the disposal of these wastes, whilst the Office for Nuclear Regulation must regulate their storage. Cumbria County Council, as the Waste Planning Authority, must prepare planning policies that will ensure the sustainable management of these wastes and are the determining authority for all planning applications associated with waste, whether radioactive or not. The Nuclear Decommissioning Authority (NDA) is responsible for developing and delivering the strategy for the management of the country's radioactive wastes; they also own most of the nuclear sites and most of the waste.
- 4.18 There are a range of national policy frameworks and documents for the management of 'ordinary' waste (NPPF, Planning Practice Guidance, Waste Management Plan for England, etc.), but there is no national *planning* policy or guidance on radioactive waste management. Many of the principles within the national policy documents can, of course, be applied to radioactive waste; for example, sustainability, the waste hierarchy, the proximity principle, community engagement and the Duty to Co-operate.
- 4.19 During the Inquiry into the construction of new landfill void for wastes, including LLW, at the East Northamptonshire Resource Management Facility (ENRMF), the Planning Inspector concluded that there is no distinction between national planning policies and other national policies, so the latter must also apply to Waste Planning Authorities. This conclusion was endorsed by the Secretary of State. Hence an interpretation of the spatial planning implications of other national policies and strategies, relating to radioactive waste, is required to develop the policies in this Local Plan.
- 4.20 Therefore, the NDA Strategy<sup>59</sup> should be taken into account in the preparation of Local Plans when considering the full range of radioactive wastes. This document states that strategic decisions about radioactive waste management should be informed by the key principles:
- risk reduction is a priority;
  - centralised and multi-site approaches should be considered;
  - waste should be minimised; and
  - the waste hierarchy should be used as a framework for decision-making.
- 4.21 For higher activity wastes, the Managing Radioactive Waste Safely<sup>60</sup> document is also relevant. For lower activity wastes, relevant national policy documents include the Government's policy statement<sup>61</sup> and the NDA's

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<sup>59</sup> NDA Strategy, April 2011

<sup>60</sup> Managing Radioactive Waste Safely: a framework for implementing geological disposal, DEFRA, June 2008

<sup>61</sup> Policy for the long term management of solid low level radioactive waste in the UK, DEFRA, March 2007

strategy<sup>62</sup> on LLW management, plus the strategy for NORM wastes<sup>63</sup>. A consultation draft has recently been published by DECC of a revised UK Strategy for the Management of Solid Low Level Waste from the Nuclear Industry<sup>64</sup>. The document reflects changes since the last strategy was issued, including diversion of significant volumes of LLW from the Low Level Waste Repository and the development and use of alternative treatment and disposal routes. The draft document continues to promote application of the waste hierarchy by waste producers when making waste management decisions. The County Council is engaging in the consultation process and will keep the implications of the document under review.

#### *Best Available Technique*

- 4.22 Best Available Technique (BAT) is a key principle of the European Union Industrial Emissions Directive 2010/75 and is a requirement of the Environment Agency's Environmental Permitting process. BAT review complements the preparation of waste management plans for generators of radioactive wastes, including nuclear-licensed sites, and is prepared by the waste producer/consignor.
- 4.23 The BAT review assesses the management options available and seeks to ensure that the waste producer optimises operations, in order to reduce and keep exposures into the environment (from the disposal of radioactive waste) as low as reasonably achievable (ALARA), and that economic and social factors are taken into consideration. The BAT review includes consideration of the disposal options for LLW that cannot be managed by means higher up the waste hierarchy, including identification of the nearest appropriate installation (including on-site disposal), taking into account the nature of the waste and suitability of waste disposal facilities.
- 4.24 The nuclear industry's code of practice for the use of BAT<sup>65</sup> emphasises that there is no single 'right way' to identify BAT. The County Council would expect to see documentary evidence of how the BAT process was undertaken, comprehensively setting out constraints, assumptions made and all options considered (as set out in policy SP4). The data arising from any BAT review will be used to demonstrate the detailed requirements set out in policy SP5 (Development criteria for low level radioactive waste sites) and SP6 (High and intermediate level radioactive wastes treatment, management and storage). It should also be noted that the code of practice states "The identification of BAT is an important element within the decision-making process, but does not necessarily represent the final decision".

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<sup>62</sup> UK Strategy for the Management of Solid Low Level Radioactive Waste from the Nuclear Industry, NDA, August 2010

<sup>63</sup> Strategy for the management of solid low level radioactive waste from the non-nuclear industry in the United Kingdom, Part 1 anthropogenic radionuclides, DECC, March 2012

<sup>64</sup> consultation document: UK Strategy for the Management of Solid Low Level Radioactive Waste from the Nuclear Industry, DECC, January 2015

<sup>65</sup> Best Available Techniques (BAT) for the Management of the Generation and Disposal of Radioactive Wastes: A Nuclear Industry Code of Practice, Nuclear Industry Safety Directors Forum, Issue 1, December 2010

## **Policy SP4 Use of Best Available Technique**

Proposals for additional radioactive waste facilities, which utilise the Best Available Technique review process, will need to demonstrate how the development complies with:

- the principles of sustainable development;
- the waste hierarchy;
- the precautionary principle; and
- the proximity principle.

### **Lower activity wastes**

#### *Strategy and development principles*

- 4.25 The term 'lower activity waste' encompasses the category of LLW and its sub-category of VLLW. LLW can also be differentiated as:-
- High Activity Low Level Waste (HA-LLW) with activity levels above 200 becquerels/gram (Bq/g) (up to the threshold for LLW of 4,000 Bq/g)
  - Low Activity Low Level Waste (LA-LLW) with activity levels up to 200 Bq/g (down to the 0.4 Bq/g threshold for VLLW)
- 4.26 LLW can be disposed of at near surface facilities, but there is a difference required in the containment of the two categories. Most HA-LLW requires highly engineered containment facilities, such as the Low Level Waste Repository (LLWR) near Drigg. LA-LLW usually does not require the level of engineering and containment provided by the LLWR, and could be disposed of via alternative routes, such as disposal to landfill. This would include non-inert landfill, where permitted for such activities, such as at Lillyhall.
- 4.27 The majority of the UK's solid LLW is sent to the LLWR in Cumbria, where it is currently being stored in vaults 8 and 9, though it only has permission to do this until 2018. A planning application was submitted for further vaults at the Repository, but this has been withdrawn, pending submission of amended proposals in the near future. Therefore, at present, this site does not have the capacity to meet the projected future needs for LLW. The lifetime of the LLWR could be extended by using other disposal routes for waste at the lower end of the LLW activity range.
- 4.28 The total predicted volume of LA-LLW arising during the Plan period is 445,918m<sup>3</sup>, of which 220,207m<sup>3</sup> (an average of 12,234m<sup>3</sup> per year) will require disposal to a near surface facility (i.e. wastes with this level of activity do not need deep geological disposal). Over 80% of this waste will consist of soil and rubble, arising from the decommissioning of nuclear industry facilities. The estimated total UK arisings from the non-nuclear industry are unlikely to exceed 100,000m<sup>3</sup> per year, and the majority of this can be attributed to the medical and research sectors<sup>66</sup>. NORM wastes arising from the oil and gas industries are currently not quantified, but if the use of fracking to exploit

<sup>66</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/48291/4616-strategy-low-level-radioactive-waste.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/48291/4616-strategy-low-level-radioactive-waste.pdf)

hydrocarbons rises there is the potential at the national level, for large volumes of this waste stream requiring disposal in the future.

- 4.29 There are very few facilities currently available within the UK to dispose of LA-LLW, these are: the ENRMF at Kings Cliffe, Northamptonshire (which can also accept HA-LLW and has permission to 2026), Clifton Marsh landfill in Lancashire (permission to 2015, though an application for an extension of time has been submitted to Lancashire County Council) and Lillyhall landfill in Cumbria (permission to 2029 for VLLW only).
- 4.30 This Local Plan supports the national policy direction on radioactive waste management. The LLWR should continue to fulfil a role as one component of the UK's radioactive waste management capability for HA-LLW. However, the County Council does not consider that an additional site should be developed in Cumbria for this waste stream, unless it can be demonstrated that there is a need for one to accept wastes that arise within the county.
- 4.31 It is recognised that the LLWR has a continued strategic role to fulfil in terms of the storage and/or disposal of HA-LLW. However, in terms of the duration of operation and the site's storage/disposal capacity, this would need to be set against the forecasted demand established in the national inventory. The Council will also consider the potential for such wastes to be diverted through treatment higher up the waste hierarchy, or for there to be potential for other more sustainable locations to be established elsewhere in the UK that allow for waste miles to be reduced. Recognition will be given to national policy imperatives and to a reasonable lead time for the establishment of engineered containment facilities.
- 4.32 Lillyhall landfill has planning permission to accept waste until 2029. The Environmental Permit issued by the Environment Agency, which is volume rather than time limited, allows disposal of VLLW to the site. By virtue of the fact that once Lillyhall landfill is closed there will be no viable disposal route, the provisions of the Permit will be tied to the end of that planning permission.
- 4.33 The majority of the radioactive waste material sent to Lillyhall is intended to be sourced from decommissioning and demolition works at Sellafield; it will account for only 20% of the total waste volume received at Lillyhall. Sellafield is 25km south of Lillyhall landfill and, therefore, broadly complies with development plan policies relating to reducing waste road miles. It is possible that some VLLW may be sent to Lillyhall from outside the county, most likely from decommissioning activity at Chapelcross nuclear licensed site, which lies around 80km across the border in Scotland.
- 4.34 The Sellafield site has its own facility onsite (the Calder Landfill Extension Segregated Area - CLESA) for the disposal of VLLW and LA-LLW; however, it is understood that there are specific radioactive waste types that cannot be accommodated at this facility. The CLESA has a remaining capacity of approximately 70,000m<sup>3</sup>, so it is scheduled to be full around 2025. Sellafield Ltd is, therefore, already carrying out feasibility studies into where CLESA-2 may be located<sup>67</sup>.

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<sup>67</sup> Review of Potential Suitability for Disposal of LLW/VLLW on or Near to the Sellafield Site, Sellafield Ltd., February 2013

- 4.35 Sellafield Ltd is also working on a Development of Sellafield Decommissioning Strategy, which will set out a critical path of what activities have to occur when and where, in order to carry out an effective and efficient decommissioning programme. The site currently has many spatial constraints, so the strategy will look at all the NDA-owned land adjacent to Sellafield, for its potential to accommodate temporary clean waste storage, such as construction, demolition or excavation wastes. Both the CLESA-2 work and the decommissioning strategy work, tie in with the Local Plan's site allocation CO32 land adjacent to Sellafield (see chapter 18), and this will have to provide a more flexible approach for Sellafield's future needs than solely for the disposal or storage of radioactive wastes.
- 4.36 Having a dedicated facility in Cumbria for managing the range of Sellafield's VLLW and LA-LLW that cannot be sent to the CLESA or should not be sent to the LLWR, would be in conformity with national policy regarding communities dealing with their own wastes. It is anticipated that Lillyhall landfill will provide a medium term solution to the disposal of these wastes, but the County Council expects that a longer term solution should be provided at Sellafield, either on site or adjacent, for their own wastes.

#### *Policy*

- 4.37 National policy is for LLW to be managed and/or disposed of in a manner that satisfies the waste hierarchy and enables waste to be disposed of in one of the nearest appropriate installations. Cumbria County Council considers that proposals to treat, manage, store or dispose of VLLW and LLW arising within or outwith the county, will need to demonstrate compliance with the waste hierarchy. Furthermore, the County Council's and Copeland Borough Council's approach, is that decommissioning wastes should be managed on the site where they arise unless a rigorous assessment demonstrates that this is not practicable. In those circumstances, a similarly rigorous assessment should be carried out for land adjacent to the nuclear site, before new and more distant sites are considered, with priority given to licenced nuclear sites. The County Council recognises that the Best Available Technique review is both a requirement of the Environment Agency's Environmental Permitting process and is also used to assess the available management options for radioactive waste. The Council would wish to see clear evidence of how management decisions are formulated, in order to safeguard, through planning decisions, the interests of Cumbria's communities and environmental assets.
- 4.38 In addition to the priorities set out above, proposals for the treatment, management, storage and/or disposal of LLW must demonstrate that the proposal satisfies national requirements (including relevant guidance, strategies and policies) and supports sustainable development (including sustainable transport movements). Development proposals should also be accompanied by a strategy that demonstrates the long-term integrity of the site; this may include considerations such as ground stability or coastal erosion.
- 4.39 Where a proposal for disposal involves co-location at a waste site with an existing planning permission, the disposal of LLW should not prejudice the existing waste use, unless it can be clearly demonstrated that the existing use

is no longer required at that location. Determination of proposals for radioactive waste disposal will be made in line with Policy SP5 and other relevant Local Plan policies.

#### **Policy SP5 Development criteria for low level radioactive waste sites**

Any proposal for the treatment, management, storage and/or disposal of low level radioactive waste, must demonstrate that:

- it conforms to the other relevant policies of this Local Plan;
- it represents the most appropriate option;
- it is in line with the principle that communities take more responsibility for their own waste, enabling the waste to be managed in the nearest appropriate installations to its point of arising, the preference being on existing nuclear licensed sites;
- it complies with national guidance and the principles of sustainable waste management - in doing so, it should identify the intended catchment area;
- any adverse impacts can be mitigated to an acceptable level;
- a feasible strategy is in place in relation to the long-term integrity of the site;
- it will not prejudice the existing use where the proposal involves co-location on an operational waste disposal site.

#### **Higher activity wastes**

- 4.40 These wastes require storage in secure containers, with or without prior treatment, or are 'packaged' to allow for radioactivity to undergo its natural decay process. HLW, whether stored as liquid in water-cooled, stainless steel tanks or as vitrified glass blocks, needs thick concrete walls to shield the high radiation. ILW is stored in tanks, vaults and drums, with most waste requiring concrete to shield the radiation. Some ILW is cemented for storage, as it arises.
- 4.41 HLW is accumulating in stores at the Sellafield site, as there is no current disposal route for this waste type. HLW is conditioned by initially storing it in a liquid form, known as Highly Active Liquor (HAL), then it undergoes an evaporation process, before vitrification into glass blocks within stainless steel canisters.
- 4.42 ILW is also accumulating in stores at Sellafield, as there is no current disposal route for this waste type. This ILW includes a range of materials arising from current and historic operations, which need to be retrieved, processed, managed and stored on site. Waste that is ready for storage is placed in stainless steel drums that are grouted with cement. These are held in specially engineered drum stores for safe storage. Current 'interim' storage arrangements in the UK cover periods of 50 to 100 years.
- 4.43 As outlined in paragraphs 4.10 to 4.15, the Radioactive Waste Inventory provides estimated volumes of future waste arisings at Sellafield. Given the potential for further processing and technical developments, as well as the reclassification of wastes, some caution is required in giving absolute

confidence to these figures. One of the greatest impacts on the amount of higher activity wastes requiring safe storage could arise if the current proposals for a new generation nuclear power station on land at Moorside, adjacent to Sellafield, comes to fruition. Although decommissioning wastes will not arise from the new plant within the Plan period, operational waste could.

#### *MRWS process*

- 4.44 The Managing Radioactive Waste Safely (MRWS) policy of the UK Government and devolved administrations for Wales and Northern Ireland, is to provide a disposal facility in the UK for HLW and ILW by deep geological disposal. The concept of a Geological Disposal Facility (GDF) has been discussed for some years, but progress towards underground research and development is at an early stage.
- 4.45 A GDF is an engineered containment facility, deep inside a suitable rock formation at a depth of 200 to 1,000 metres. Solutions for such wastes are considered at the national level.

#### *Strategy and development principles*

- 4.46 The West Cumbria MRWS Partnership was set up in 2011 by Allerdale Borough Council, Copeland Borough Council and Cumbria County Council, in order to consider whether or not to volunteer to host a GDF in the county. Its role was an advisory one, of fact-finding and research gathering, on the issues that would be involved in moving to the next stage of the MRWS process. On 30 January 2013 the Councils made their decisions; both Copeland and Allerdale Borough Council decided to continue to participate in the process.
- 4.47 At its Cabinet meeting that day, Cumbria County Council's resolution was that "Cabinet decide not to participate in stage 4, thereby excluding Allerdale and Copeland areas of Cumbria from further consideration in the MRWS process, and to encourage the Government to make the necessary investment to improve surface storage facilities at Sellafield (taking account of the findings of the National Audit Office report HC 630 dated 7 November 2012<sup>68</sup>)". This resolution brought the MRWS process to an end, as subsequently confirmed by the Secretary of State. One of the key reasons for the Council's resolution, was continuing concern over there being no regulatory right for a County Council, in a two tier authority area, to bring the process to an end if there were concerns in the future.
- 4.48 In July 2014 the Government published a new White Paper – Implementing Geological Disposal<sup>69</sup>; this details a renewed approach to implementing a GDF in the UK following a consultation in 2013. Specific actions set out in the White Paper between 2014 and 2016 include:

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<sup>68</sup> Managing Risk Reduction at Sellafield, report HC 630, National Audit Office, 7 November 2012: <http://www.nao.org.uk/report/managing-risk-reduction-at-sellafield/>

<sup>69</sup> Implementing Geological Disposal, DECC, 24 July 2014

- bringing development of a GDF in England within the definition of a 'Nationally Significant Infrastructure Project' in the Planning Act 2008, including the production of a National Policy Statement
- a national geological screening exercise, which will consider what level of information is already available about geology across the country, how this could be usefully related to the safety case for a GDF and how this could help the developer of a GDF engage openly with interested communities
- work with experts and stakeholders to develop the detail of community representation mechanisms in the siting process, including a test of public support prior to final decisions on facility siting, and community investment.

Following the short term work, there will be a period of 15 to 20 years when site investigation could occur, but construction of a GDF is not likely to start until after 2030.

- 4.49 It is important to keep a watching brief on the progress of the White Paper, in order to assess any implications for the county. The White Paper excludes all County Councils in two tier authority areas from decision-making in relation to a GDF. As Waste Planning Authority, however, any applications associated with new or existing surface storage facilities for higher activity wastes at Sellafield, would be considered by the County Council; these types of application could arise within the Local Plan period. Furthermore, if one or more communities outside Cumbria volunteered to host a GDF, there would be implications for the movement of the wastes currently stored at Sellafield; however, this is very unlikely to occur within the Plan period.

#### *Policy*

- 4.50 As set out in paragraph 4.9, in the UK, HLW only arises at Sellafield, so there is no requirement to consider long term storage of HLW that is imported from outside Cumbria. However, the policy on higher activity wastes has to be flexible enough to cater for foreign HLW that is sent to Sellafield for reprocessing, but which is then returned to its country of origin. The policy must also allow the import of some ILW that arises from outside the county, for which there are no suitable, alternative storage options. Therefore, the bullet in policy SP6 concerning alternative locations being rigorously assessed for wastes originating outside the county, applies only to ILW. However, the other two bullets apply to all higher activity wastes, as any development proposals should minimise impacts and should not prejudice site restoration.
- 4.51 The policy also has to be flexible enough to cater for any operational waste that may arise if a new nuclear power station is built at Moorside. Furthermore, five UK nuclear facilities have been confirmed as potential sites for interim storage of ILW from decommissioned nuclear-powered submarines, and Sellafield is one of those sites. The Government's consultation on their final destination closed in February 2015. If Sellafield were to be chosen as the interim storage site, the County Council would be the authority that determined the planning application.

### **Policy SP6 High and Intermediate level radioactive wastes treatment, management and storage**

Sellafield is the only site in the county where development proposals for the treatment, management and storage of higher activity radioactive waste will be permitted.

Such proposals will need to demonstrate:

- compliance with national and international standards and best practice for environment, safety and security;
- the reasons why possible alternative methods (for dealing with the waste) have been rejected; and
- that any adverse impacts have been adequately mitigated or compensated for.

Development proposals at Sellafield for the treatment, management and/or storage of waste that arises from outside Cumbria, will need to demonstrate that:

- for Intermediate Level Waste, alternative locations, at or closer to where these wastes arise, have only been rejected following rigorous assessment;
- all practicable measures are taken to minimise the adverse effects of development and associated infrastructure;
- acceptable measures are in place to secure decommissioning and site restoration.

### **Locations for radioactive waste sites**

- 4.52 Sites for facilities for radioactive waste treatment, management, storage and/or disposal, have been specifically identified in this Local Plan – see chapter 18. Sites identified will include those existing waste management facilities that should be safeguarded throughout the Plan period (to 2029), as well as land adjacent to Sellafield (allocation CO32), which is owned by the NDA and may be used for the management, storage and/or disposal of LA-LLW or VLLW.

## 5. MINERALS

### Policy context

- 5.1. Minerals are essential to support sustainable economic growth and our quality of life. It is, therefore, important that there is a sufficient supply of materials to provide the infrastructure, buildings, energy and goods that the county needs. National policy<sup>70</sup> sets out the duties of Mineral Planning Authorities in preparing a Local Plan and in planning for a steady and adequate supply of minerals. Strategic Objectives 4, 5 and 6 reflect national policy, and this chapter sets out the mineral resources available in Cumbria, the need for extraction of those resources, and the Strategic Policies proposed to achieve the objectives of the Local Plan.
- 5.2. Some minerals, such as oil, gas and coal, (hydrocarbons) are used to produce energy, whilst others do not have that capability. Non-energy minerals are currently of greater significance for the economy of Cumbria than energy minerals, but the potential pressure for unconventional hydrocarbon development, and current interest in coal development, mean that these are an important element of the Local Plan. These are considered within this chapter, in paragraphs 5.83 to 5.113. Peat can be used to produce energy, but in the UK is used to make composts and soil improvers, and is treated in this Plan as a non-energy mineral.

### Non-energy minerals

- 5.3. There are several types of mineral that are not used to produce energy:
- *aggregates* - minerals that are used primarily to support the construction industry; in Cumbria, these include both land won and marine dredged sand and gravel, and crushed rock;
  - *industrial* - minerals that are necessary to support industrial and manufacturing processes and other non-aggregate uses; in Cumbria, these include brick-making mudstones, industrial grade limestone, gypsum and peat. These are considered in paragraphs 5.64 to 5.75;
  - *building stones* – minerals used for building and roofing; in Cumbria, these include limestone, sandstone and slate, and are discussed in paragraphs 5.76 and 5.77.

### Aggregates

- 5.4. Cumbria is self-sufficient in aggregates and also supplies other markets, especially in the North West and the North East. Just under a third of Cumbrian quarries supply national markets, including Wales and Scotland, and three of Cumbria's crushed rock quarries are able to supply high specification aggregates (HSA) that are essential for high skid resistance roadstone used for highway surfacing. These are a nationally significant resource.
- 5.5. There are 12 sand and gravel quarries within Cumbria, outside of the Lake District National Park (LDNP), and 19 hard rock quarries, providing limestone,

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<sup>70</sup> NPPF paragraph 143 and 145

igneous and sandstone rock, although not all are currently operating. Two of the hard rock quarries, Shap Beck and Shap Blue, are partly within the LDNP. In addition to producing aggregates, four of the limestone quarries supply industrial markets, mostly for burnt lime (see Appendix 1 for maps and lists of each type of quarry).

- 5.6. Production of secondary and recycled aggregates in the county makes a valuable contribution to resource efficiency and the protection of the environment from unnecessary primary extraction. There are almost 20 main processing plants<sup>71</sup> in Cumbria, producing alternative aggregates from quarry waste, recycled or reused materials. A further resource is provided by marine dredged aggregates that are landed at Barrow Port, with small amounts arising as a result of channel maintenance activities at some Cumbrian harbours.

#### *The Managed Aggregate Supply System*

- 5.7. The national Managed Aggregates Supply System (MASS) has enabled sustainable supplies of these essential construction materials to be maintained since the 1970's. Originally founded on national estimates of need for aggregates, which were apportioned to regions, the system was amended when the NPPF was introduced in 2012. MASS<sup>72</sup> is undertaken through national, sub-national and local partners working together to deliver a steady and adequate supply of aggregates:

- at the local level, mineral planning authorities prepare Local Aggregate Assessments (LAA), to assess the demand for and supply of aggregates in their area;
- at the sub-national level, mineral planning authorities belong to and are supported by Aggregate Working Parties, who produce data on aggregates covering specific geographical areas; Cumbria and the Lake District National Park are members of the North West Aggregates Working Party (NW AWP). The NW AWP publishes a regional Annual Monitoring Survey, and also sets an annual aggregate production apportionment for each sub-region in order to maintain production of an adequate proportion of the region's aggregate needs;
- at the national level, the National Aggregate Co-ordinating Group monitors the overall provision of aggregates in England.

- 5.8. As required by national policy<sup>73</sup>, Cumbria County Council prepared its second LAA<sup>74</sup> in 2014, jointly with the Lake District National Park Authority. The LAA was based on sales and reserves data for the calendar year 2013, collected from mineral operators in Cumbria. This data is confidential and can only be used in aggregated formats that do not disclose the sales and markets of individual operators. The LAA also took account of comments made by the NW AWP Secretariat and its wider membership.

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<sup>71</sup> Evidence Base document reference LD272: Cumbria and LDNPA LAA - 2013 Data ,Supporting information, Table 10

<sup>72</sup> PPG paragraph 060, chapter 27 Minerals (ID: 27-060-20140306)

<sup>73</sup> NPPF paragraph 145

<sup>74</sup> Evidence Base document references LD271 and LD272: Cumbria and LDNPA LAA - 2013 Data, Overview and Supporting Data, September 2014

- 5.9. A key tool that underpins the working of the MASS is the aggregate landbank, which is derived by dividing the total permitted reserve of an aggregate by average annual sales. NPPF paragraph 145 requires mineral planning authorities to plan for a steady and adequate supply of aggregates by maintaining landbanks based on a 10-year rolling average of annual sales, but also on “local information”<sup>75</sup>, and an assessment of all supply options (including marine dredged, secondary and recycled sources).

*Policy alternatives considered*

- 5.10. A number of alternative policy approaches with respect to aggregate provision, sub-regional apportionment, landbanks and safeguarding were considered as part of the Cumbria MWDF Core Strategy that was adopted in 2009, and these have been reconsidered in the light of the current policy context, and the updated and more robust evidence base provided by the LAA.
- 5.11. One key issue, addressed in paragraphs 5.22 to 5.24 below, is whether to calculate the aggregate landbanks on the basis of the 10-year rolling average sales for Cumbria, as required by the NPPF, or by using the sub-regional annual apportionments set by the NW AWP, which carries forward the apportionment in the, now revoked, NW Regional Spatial Strategy (NWRSS).
- 5.12. A subsidiary issue relates to the possibility of separate and distinct landbanks, either for types or qualities of aggregate, or for localities within Cumbria, and is considered in paragraphs 5.25 and 5.50 to 5.58.
- 5.13. The Plan has also had to consider whether to provide strategic locational policy guidance for certain minerals that are important for particular industries or purposes. Discussion of these choices, and the preferred options, are included in this chapter where appropriate.
- 5.14. The production of a Local Plan, which incorporates Development Control and Site Allocations policies into a single document, offered alternative approaches to clarify and simplify the overall suite of policies. This chapter of the Plan considers provision for minerals extraction, and safeguarding and consultation areas, plus the need for a strategic locational policy for specific minerals, whilst site allocations conforming to those strategic policies are addressed in chapter 18.

*Aggregate reserves, landbanks and requirements*

- 5.15. The following section draws on the 2014 LAA, updated with further information available as at February 2015, under the following headings:
- Current permitted reserves of aggregate in Cumbria;
  - Alternative (secondary and recycled) and marine dredged aggregates;
  - Potential re-assessment of reserves;
  - Expiry dates of planning permissions for existing quarries;
  - Potential additional areas of working;
  - Aggregate requirements for potential major development projects;

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<sup>75</sup> PPG paragraph 064, chapter 27 Minerals (ID: 27-064-20140306)

- Local supply patterns and availability issues.

*Current permitted reserves of aggregate in Cumbria*

5.16. Table 5.1 shows annual aggregate sales from Cumbria from 2001 to 2013, together with the averages for the last 10 years and the last 3 years (9-year averages are shown for HSA and other sandstone and igneous sales, because separate data collection was only established in 2005).

Survey year	Limestone	Sandstone and igneous	High spec roadstone (HSA)	All crushed rock	Sand and gravel	Marine dredged	Secondary and recycled aggregates
2001	3.0	1.1		4.1	0.7	0.03	
2002	2.9	1.1		4.0	0.9	0.04	
2003	2.6	1.1		3.7	1.0	0.04	
start of the period for 10-year averages							
2004	2.8	1.1		3.9	0.8	0.02	-
2005	2.6	0.36	0.74	3.7	0.7	0.02	-
2006	2.7	0.27	0.69	3.66	0.79	0.02	-
2007	2.8	0.53	0.70	4.03	0.87	0.01	-
2008	2.7	0.40	0.75	3.85	0.77	0.02	-
2009	1.91	0.38	0.78	3.07	0.52	0.02	-
2010	2.46	0.41	0.59	3.46	0.53	0.02	-
2011	1.84	0.37	0.60	2.81	0.46	0.012	0.294
2012	2.03	0.37	0.55	2.95	0.46	0.01	0.212
2013	1.62	0.37	0.41	2.4	0.48	0.012	0.823
3-year average	1.83	0.37	0.52	2.72	0.47	0.011	0.443
9-year average	-	0.38	0.64	-	-	-	-
10-year average	2.35	1.04 combined total sandstone, igneous, HSA		3.38	0.64	0.016	-

Table 5.1: Aggregate sales from Cumbria (million tonnes)  
source: Cumbria and LDNPA LAA - 2013 Data - Supporting information

5.17. It is clear that sales of all aggregates have fallen since 2001, with reasonable consistency, and with an additional dip in 2009 that reflects the influence of the recession. National sales trends are beginning to indicate significant improvements in sales of mineral products since mid-2013; crushed rock was the fastest growing market (up 9%), whilst both asphalt and sand and gravel were up 4%. The Mineral Products Association, however, predicts that sales are not likely to recover to pre-recession levels until after 2020<sup>76</sup>. This is in line with evidence provided by the Competition Commission, who state that the demand for aggregates, cement and ready mix concrete declined by about a third over the period of the UK recession (2007 to 2009), and, although there

<sup>76</sup> Mineral Products Association: Press Release 1 Aug 2014 <http://www.mineralproducts.org/14-release28.htm>

was upturn during 2013, demand has still not recovered to its pre-recession levels<sup>77</sup>.

- 5.18. Cumbria's annual apportionment for sand and gravel was set by the NW AWP at 880,000 tpa, and for crushed rock at 4.02 million tpa (Mtpa). These are significantly higher than the 10-year rolling averages for 2004 to 2013, shown in Table 5.1, and also exceed the average sales figures from 2001 to 2003.
- 5.19. Table 5.2 below, shows the aggregate reserves at the end of 2013 and the landbanks corresponding to different sales estimates. National policy requires landbanks of 10 years for crushed rock and 7 years for sand and gravel (calculated on 10-year rolling averages) to be maintained throughout the Plan period. Therefore, at the end of the Plan period in 2029, the landbank end date for crushed rock should be 2039, and, for sand and gravel, 2036.

	<b>Limestone</b>	<b>All sandstone &amp; igneous</b>	<b>All crushed rock</b>	<b>Land won sand and gravel</b>
<b>Reserves at end 2013 (million tonnes)</b>	<b>99.17</b>	<b>21.86</b>	<b>121.03</b>	<b>9.89</b>
<b>10-year average sales to 2013 (thousand tonnes)</b>	2.35	1.04	3.38	0.64
landbank (in years)	42.20	21.02	35.81	15.45
landbank end	early 2056	end 2034	late 2049	mid 2029
<b>NW AWP apportionment (thousand tonnes)</b>			4.02	0.88
landbank (in years)			30.12	11.24
landbank end			early 2044	early 2025
<b>3-year average sales to 2013 (thousand tonnes)</b>	1.83	0.89	2.72	0.47
landbank (in years)	54.19	24.56	44.50	21.04
landbank end	early 2068	mid 2038	mid 2058	end 2034

Table 5.2: Aggregate landbanks in Cumbria at the end of 2013  
source: Cumbria and LDNPA LAA - 2013 Data - Supporting information

- 5.20. Permitted reserves of **crushed rock (limestone)** at the end of 2013 were, on the basis of the information in Tables 5.1 and 5.2, more than adequate. The reserve is predicted to be exhausted in 2056, with a 27-year landbank remaining at the end of the Local Plan period in 2029. On the basis of recent trends, i.e. the 3-year rolling average sales, the landbank would end (i.e. reserves be exhausted) much later, in 2068.

<sup>77</sup> Aggregates, cement and ready mix concrete market investigation: Final Report, Competition Commission, 14 January 2014

- 5.21. The NW AWP sub-regional apportionment figure refers to all crushed rock, not just limestone, and the crushed rock landbank of 30.12 years<sup>78</sup>, calculated on the AWP apportionment, would end in 2044 as opposed to late 2049 under the 10-year rolling average sales. Either would be adequate, and, if trends continue as in the 3-year rolling average, overall crushed rock reserves could last until 2058. Significant re-assessment of reserves, as discussed in paragraph 5.31, could reduce these figures and will be kept under review.
- 5.22. The end date for the **sand and gravel landbank** based on 10-year rolling average sales and reserves at the end of 2013 was mid-2029, whereas the landbank calculated on the basis of the NW AWP apportionment would end in 2024. The 3-year rolling average sales (2011-2013) figure, however, is significantly lower than the 10-year average sales figure and only 53% of the sand and gravel annual apportionment. If these recent trends were to continue, and no further reserves received permission during the Plan period, the landbank of 21 years<sup>79</sup> would last until 2034, which is only two years short of the NPPF target of 2036.
- 5.23. For reasons discussed in paragraph 5.17 above, it is considered that the most likely outcome for ongoing sales of sand and gravel lies between the 10-year and 3-year trends. Most quarries are operating well below both their original annual production estimates, and below any annual tonnage limits imposed on highway grounds, indicating that planning policy has not restricted Cumbrian production over the last 13 years. Furthermore, there are no policy drivers to increase aggregate production if the market does not see a demand.
- 5.24. The 4-yearly survey<sup>80</sup> collated by British Geological Survey, shows that Cumbria does help to meet the mineral needs of other parts of the region. However, much of the NW region's shortfall is met from other regions; for example, quarries in Derbyshire and north Wales supply Greater Manchester due to their proximity, whilst half of Cumbrian quarries serve other regions, especially the North East, and just under one third of Cumbrian quarries also supply national markets, including Wales and Scotland. As a result, after fully considering the advice of the NW AWP, it is considered reasonable to calculate landbanks in accordance with the NPPF requirement, rather than the sub-regional apportionments that were based on sales averages to 2003, and excluded any consideration of the contribution of secondary and recycled aggregates. This will be kept under review through the LAA process.
- 5.25. The County Council also decided during the previous MWDF process to develop a separate **landbank for high and very high specification aggregates (HSA and VHSA)**, which are used in highway construction as high skid resistance roadstones. This is consistent with NPPF paragraph 145, as these comprise a specific type or quality of aggregate that has a distinct and separate market of regional and national significance.

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<sup>78</sup> Evidence Base document reference RD34: North West AWP Annual Monitoring Report 2014, Cheshire West and Cheshire Council

<sup>79</sup> Cumbria and LDNPA LAA - 2013 Data - Supporting information, Table 5.1

<sup>80</sup> Aggregates Minerals Survey for England and Wales 2009, BGS, May2011

	HSA/VHSA	other Sandstone and Igneous
Reserves at end 2013 (million tonnes)	11.53	10.33
9-year average sales to end 2013	0.64	0.38
landbank	18.02	27.18
landbank end	end 2031	early 2041
3-year average sales to end 2013	0.52	0.37
landbank	22.17	27.92
landbank end	early 2035	late 2041

Table 5.3: Landbanks for High Specification Aggregates in Cumbria, end 2013  
source: Cumbria and LDNPA LAA - 2013 Data - Supporting information

- 5.26. The separate landbank, as calculated at the end of 2013, had, based on 9-year rolling average sales, an end date of 2031, which fell short of the target end date of 2039, and gives a more demanding target than the NW AWP general crushed rock apportionment. A policy approach for security of HSA supplies is therefore required, even though the HSA landbank based on 3-year rolling average sales would probably last until the end of 2035. The landbank for other sandstone and igneous rock is also shown in Table 5.3, and is adequate, ending in 2041 on both 3-year and 10-year averages.

*Alternative (secondary and recycled) and marine dredged aggregates*

- 5.27. The development of secondary and recycled aggregate facilities as an alternative to land won aggregates has been encouraged by national and local policy for some years. Table 5.1 above appears to show that the sales of these aggregates in Cumbria increased from nearly 300,000 tonnes in 2011 to over 800,000 tonnes in 2013. However, it has proved difficult to obtain information, in which there can be confidence, about the amounts of alternative aggregates that are produced, and the figures in Table 5.1 are definitely underestimates. Data on tonnages produced each year is, at present, sketchy, dependent upon figures held in the Environment Agency's Waste Data Interrogator and Environmental Permits or gleaned from the monitoring of planning permissions.
- 5.28. The production and use of alternative aggregates, as a sustainable option to augment primary aggregates, will become an increasingly important element in the growth of Cumbria – whether for more housing or for wider economic development. There cannot be a reserve or a landbank for such material as it arises mainly from construction and demolition wastes, however, the ongoing policy drivers discouraging disposal of such waste in landfills are highly likely to enable these supplies to continue.
- 5.29. The adopted MWDF Core Strategy included a policy seeking to identify sufficient sites to enable 25% of aggregates used in Cumbria to be provided from secondary or recycled sources. It would appear that some progress has been made towards this objective, as Table 5.1 shows that at least 22% of aggregates sales from Cumbria in 2013 were from these sources. The 2014 Cumbria Waste Needs Assessment confirmed that sufficient aggregate

recycling facilities are in place at the present time, and a positive development control approach to further proposals should be maintained.

- 5.30. Marine dredged aggregates sales from Cumbria landings have fallen since 2001, with landings at Barrow in 2013 being only 50% of those in 2009. NW marine dredged sand landings are only 37% of the totals permitted by the Crown Estate, which holds the commercial rights, and there would be scope for increase. The Marine Management Organisation (MMO) is the environmental regulator, and planning policy relates only to on-shore facilities to enable or facilitate off shore dredging. There is no general environmental or other advantage in substituting marine aggregates for land won resources, but such sources could be beneficial in areas where there are local shortages of supply; therefore policy SP9 sets out the approach to this resource.

#### *Potential re-assessment of reserves*

- 5.31. Issues at two crushed rock quarries have the potential to have an adverse impact on the size of the county's permitted reserves. Firstly, there is a substantial amount of water in **Rowrah** Quarry, which is co-located with Eskett Quarry, and, if an environmentally acceptable solution for its dewatering is not found, the reserves could be lost. Secondly, **Kendal Fell** Quarry is the subject of a master-planning exercise that could potentially sterilise its permitted reserves. The quarry has not been worked for around 20 years and the current owners are seeking an economically viable use that may not include prior extraction<sup>81</sup>.
- 5.32. There is also the potential for an issue to arise at **Roosecote** sand and gravel quarry. Although the site has planning permission to 2029, the owner of the land and the mineral rights is only prepared to grant licences to continue quarrying at the site on a one year at a time basis, in case the land is required for their own operational purposes. If that were to happen, the reserves would be lost.
- 5.33. Re-assessment of reserves can sometimes be notified through the annual minerals survey, or be discussed with planning officers at monitoring visits or pre-application discussions. Revised working plans submitted with planning applications for time extensions may also involve reductions in the working areas and recoverable reserves. This was the case with the 2011 **Low Plains** application, which proposed a reduction in working area and in total reserves.

#### *Expiry dates for planning permissions at existing quarries*

- 5.34. The permitted reserves figures and resultant landbanks include reserves at quarries whose current planning permissions expire before the reserves are exhausted. Reserves remaining after the expiry date, if no planning permission was applied for, or if a planning permission was refused (and this decision upheld at any subsequent appeal<sup>82</sup>) would be removed from the overall reserve.

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<sup>81</sup> Cumbria and LDNPA LAA - 2013 Data - Supporting information

<sup>82</sup> <http://www.planningportal.gov.uk/planning/appeals/>

- 5.35. The LAA listed the quarries that were due to expire within the Plan period, but was compiled using data from the end of 2013. The original LAA tables are included in this Plan as Appendix 1, but the following paragraphs and tables update the information to include subsequent amendments.
- 5.36. The 2014 LAA noted that the planning permissions of four **crushed rock quarries** were to expire before 2029. Table 5.4 shows that one of these has been granted a time extension, although this is only to 2024. The planning permission also approves additional reserves, which will be noted in the 2015 LAA. The operator of Holme Park Quarry has also indicated the intention of applying for a time extension before 2020, by securing a delay in the Review of Mineral Permission (ROMP) pending a planning application. One more crushed rock quarry, Tendley, expires in 2029.

Quarry	Expiry date	Notes
Moota	31.12.2016	granted planning permission to 31.12.2024 subject to legal agreement <sup>83</sup> . Note: <b>1.8 Mt</b> of additional reserves
Shap Fell (aka Hardendale)	31.12.2018	application for time extension and to deepen quarry (with <b>5.2 Mt</b> additional reserve) submitted in 2008 with additional information in 2014
Sandside	30.06.2020	potential for submission of time extension
Holme Park	31.12.2023	ROMP delayed to 2020 pending submission of planning application for time extension

Table 5.4: Crushed rock quarry permissions expiring within the Plan period  
source: Table 5 Cumbria and LDNPA LAA - 2013 Data - Supporting information

- 5.37. One **roadstone quarry** permission was highlighted in the 2014 LAA as expiring within the Plan period. A planning application for this quarry, which produces very high specification aggregate (VHSA), was approved in January 2015 subject to a legal agreement under S106 of the Town and Country Planning Act 1990. The application included a lateral extension and additional reserves, which represent an approximate 60% increase in the total reserve of HSA and extend the permission end date of this nationally significant landbank to 2041.

Quarry	Geology	Expiry date	Notes
Ghyll Scaur	igneous	31.12.2021	granted planning permission to 31.12.2045 subject to legal agreement <sup>84</sup> . Note: <b>6.87 Mt</b> of additional reserves

Table 5.5: HSA and VHSA quarry permissions expiring within the Plan period  
source: Table 7 Cumbria and LDNPA LAA - 2013 Data - Supporting information

- 5.38. Table 5.6 shows all the **sand and gravel quarries** and the expiry of their current permissions in date order. All expire before the end of the Plan period. Sand and gravel quarries tend to have shorter temporary consents, but with

<sup>83</sup> under S106 of the Town and Country Planning Act 1990

<sup>84</sup> under S106 of the Town and Country Planning Act 1990

the generally reduced sales since 2003, reserves have lasted longer and planning applications for time extensions are expected on many sites.

- 5.39. It will be noted that two planning permissions have already expired. The expiry date of the permission for **Low Plains** was in 2011 but, because a 2011 application for a time extension is still the subject of an Appeal, the site continues to work. **Bonnie Mount** is shortly to submit an application for a time and physical extension, which would access a small amount of further reserves. A planning application for a time extension (without additional reserves) from 2015 to 2025 has been submitted with respect to **Peel Place**.

Quarry	Expiry date	Quarry	Expiry date
Low Plains	30.09.2011	Faugh No.2	31.12.2022
Bonnie Mount	31.12.2014	Kirkhouse	28.07.2023
Peel Place	26.04.2015	Faugh No.1	30.06.2024
Low Gelt	31.12.2019	Cardewmires	1.12.2025
Brocklewath	31.08.2021	Overby No.2	31.12.2026
High House	31.12.2021	Roosecote	28.05.2029

Table 5.6: Sand and gravel quarries, with expiry dates  
source: Table 6 Cumbria and LDNPA LAA - 2013 Data - Supporting information

- 5.40. **Low Gelt** has also been operating slower than expected, and it is quite likely that an application for a time extension will be submitted in due course. No proposals have yet been discussed for further time extensions for the eight sand and gravel quarries in the Plan area that expire between 2020 and 2029; however, four additional sites for sand and gravel extraction have been identified by operators, which are discussed in paragraph 5.43, and in the site allocations chapter of this Plan.

- 5.41. Of the **building stone** quarries that also provide some aggregate, the six whose permission will expire before 2029 are shown in Table 5.7. As with all building stone quarries, these quarries tend to operate on a campaign basis or in response to local building need. The LAA process enables progress to be monitored, and flexible approaches through development control are considered to be more appropriate than allocating new areas for development.

Quarry	Expiry date	Quarry	Expiry date
Snowhill No.2	31.05.2015	Rooks	31.10.2017
Scratchmill Scar	30.01.2016	West Brownrigg	31.07.2021
Snowhill No.1	31.05.2017	Flinty Fell	13.12.2024

Table 5.7: Building stone quarries that provide aggregate, with expiry dates  
source: Table 9 Cumbria and LDNPA LAA - 2013 Data - Supporting information

- 5.42. The paragraphs above show that there has been steady progress in the granting of time extensions and additional reserves at both crushed rock and sand and gravel quarries in Cumbria. It is considered important that the development control policies in this Plan continue to provide a positive and balanced policy context for the continued provision of aggregates.

### *Potential additional areas for aggregate working*

- 5.43. Some of the quarries referred to above are expected to utilise all their remaining reserves before the end of the Plan period, and quarry operators have, in response to several “calls for sites”, submitted proposals for additional areas of working to the County Council. The adopted MWDF Core Strategy (2009-2020) included a policy commitment to identify sites for future aggregate extraction, but the Site Allocations Policies document, prepared as part of the MWDF and which considered the sites proposed by mineral operators, was challenged on procedural grounds, and the replacement document was withdrawn during its examination in 2012 in order to proceed with a new Local Plan.
- 5.44. However, for the purposes of assessing the adequacy of existing approved or allocated aggregate reserves in the Plan area, it must be assumed that there are currently no allocated sites for future mineral extraction in Cumbria, although a number of sites have been subject to several stages of public consultation.

### *Future need for aggregates from Cumbria*

- 5.45. In the short term, there are a number of major projects likely to need aggregate supplies from Cumbria. The new M6 to Heysham link road is already underway in north Lancashire, and at least one Cumbrian quarry is contracted to supply coated roadstone. Dong Energy offshore wind farm<sup>85</sup> is a major renewables project at Walney, Barrow, due to commence construction in 2017. The development could require up to 5.5 Mt of crushed rock<sup>86</sup> over the period 2017-2018. Rock may be sourced from outside Cumbria, but if from within the county, the total is significant given that total sales of crushed rock from Cumbria in 2013 were only 2.4 Mt (see Table 5.2).
- 5.46. The very large landbank for crushed limestone would suggest that sales could be increased if limestone was suitable to meet the technical and environmental requirements of this project. The sandstone and igneous (not including HSA/VHSA) landbank is smaller (with a projected end date of 2041).
- 5.47. Five further infrastructure projects identified by central Government for the 2014-15 financial year<sup>87</sup> are located in Cumbria: four concern road pinch points and one is for flood defence. If the proposed new nuclear power station at Moorside, on the west coast of Cumbria, and National Grid’s North West Coast Connections 400kV power line go ahead, they are projected to be constructed before 2020. Although aggregate requirements have not yet been quantified for these two projects, there could be a significant ongoing need for sand and gravel in west and south west Cumbria. As discussed in paragraph 3.58, United Utilities’ water supply network project in West Cumbria is scheduled for completion within the Plan period, and there may be a consequent need for locally sourced aggregates.

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<sup>85</sup> Major new renewables projects, DECC, April 2014, <https://www.gov.uk/government/news/government-unveils-eight-major-new-renewables-projects-supporting-8500-green-jobs>

<sup>86</sup> Walney Extension Offshore Wind Farm – Environmental Statement, June 2013

<sup>87</sup> Projected infrastructure starts and completions in 2014-15, HM Treasury, April 2014, <https://www.gov.uk/government/news/pm-and-chancellor-welcome-36-billion-infrastructure-projects>

- 5.48. The Local Enterprise Partnership (LEP) will also be giving support to the six District Councils to deliver up to 30,000 new homes through their Local Plans, and it has published a strategic economic plan<sup>88</sup> that will focus interventions on infrastructure. It is considered that any increased demand for aggregates from house building or major infrastructure projects, will have a sufficient lead-in time for any necessary allocations to be identified.
- 5.49. The implications of planning policies outside the Plan area have also been considered. For example, the need to supply HSA and VHSA from Cumbria may increase if the supply of non-energy minerals from within National Parks were to be restricted in the future, as implied by NPPF paragraph 144, or if policies for European Wildlife sites led to closures of existing quarries in or adjacent to such sites. The greatest impact on Cumbria would be the loss of provision of high specification roadstones sourced in the Yorkshire Dales National Park. Including the resources at both HSA quarries, as well as the single quarry for VHSA, as strategic areas for further supplies of these minerals, would enable the effective use of Cumbria's increasingly important skid resistant roadstone resources (see policy SP8).

*Local supply patterns and availability issues*

- 5.50. In considering allocations for further mineral extraction, it would be very useful to know whether a main market area is heavily dependent on one or more quarries, and whose permitted reserves are likely to be exhausted within, or near the end of, the Plan period. This would be a significant indication that an additional, appropriately located, area for mineral working is needed, even if an adequate landbank is predicted for the Plan area as a whole. Similar considerations would also apply in considering planning applications<sup>89</sup>.
- 5.51. As the maps in Appendix 1 show, the geology of Cumbria means that locations of quarries are not dispersed uniformly around the county. Hard rock quarries are concentrated in the central belt of the county, although there are a few hard rock quarries in the north and south. In contrast, most of Cumbria's sand and gravel quarries are north of the Lake District National Park, both to west and east, and there are only two sand and gravel quarries in the area covered by Barrow Borough, South Lakeland District and Copeland Borough Councils.
- 5.52. In order to address this issue, the concept of "supply areas" within the county was used in the 1996-2006 Minerals and Waste Local Plan, and referred to in the adopted MWDF Core Strategy. The 2014 LAA, however, has not been able to establish a quantitative or robust evidence base on which to establish the boundaries of such local supply/production areas, the size of the permitted reserves within them or the main markets they might serve. The overall sales data provided by operators for the annual aggregates survey for the LAA is on a confidential basis, and analysis can only be conducted for areas containing at least three operators producing similar mineral products. This gives rise to large areas unrelated to main market areas or the transport network.
- 5.53. As noted in paragraph 5.25 above, a separate landbank has been established for HSA and VHSA, but no other distinct or separate grades or types of

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<sup>88</sup> The Four Pronged Attack: Cumbria Strategic Economic Plan 2014-2024', Cumbria LEP, March 2014

<sup>89</sup> PPG paragraph 084, chapter 27 Minerals (ID: 27-084-20140306)

aggregate have been identified for which data could be collected to develop separate landbanks. This is particularly relevant for sand and gravel, which does vary in quality and grain/stone size from quarry to quarry, but such disaggregation is not required in the annual aggregates survey. Although questions on this subject have been added to the Cumbria annual survey, responses are generally qualitative rather than quantitative.

- 5.54. Qualitative information collected in the 2014 survey does indicate that although the smaller Cumbrian operators often have a local niche market, national, conglomerate or international companies usually operate across a wider area, often sending their minerals to their own processing/production plants around the UK. In addition, a number of Cumbrian quarries are currently, or have recently been, mothballed in order to concentrate operations on a single quarry in Cumbria. This would appear to indicate that the distances between quarries and areas of market demand within Cumbria is not a general problem, and that there are currently no local shortages of supply.
- 5.55. An alternative approach to locational factors, considers the urban or industrial areas likely to require aggregates for development, and the quarries that are most appropriately linked to them by the strategic highway network, taking into account the natural barriers within the county such as mountains, lakes and river estuaries. Such consideration, in conjunction with the spatial distribution of quarries, highlights the south west of the county, which is dependent on coastal roads (and railways) skirting the Lake District National Park.
- 5.56. Barrow and Copeland Districts both contain market areas requiring aggregates for ongoing development and potential major infrastructure projects, and planning permissions for both of the sand and gravel quarries in the south west of the county expire within the Plan period. The planning permission for Roosecote Quarry in Barrow expires in 2029, and that for Peel Place (in the Gosforth/Holmrook area) in 2015. A time extension for Peel Place is currently under consideration, and additional areas for working in the future have been proposed by operators of both quarries. This is considered to be both a strategic and a site allocations issue; therefore, the sand and gravel resources around both Roosecote Quarry and Peel Place Quarry are identified in policy SP8 as strategic areas for further supplies of this mineral.
- 5.57. No strategic location issues have been identified for the provision of limestone aggregate, as the two crushed rock quarries in the south west of the county have planning permission to 2042, and there are also other crushed rock quarries in South Lakeland and Copeland districts.
- 5.58. The other main concentrations of population in the county, where growth and development is most likely, and which can be considered “main market areas”, have a range of both limestone and sand and gravel quarries, either inside the county or in adjacent areas, which are reasonably well networked by good highway connections. Additional areas for mineral extraction have been proposed by operators that would appear to meet future needs in these locations and the LAA process will keep both landbanks and locational issues under review.

## *Summary of aggregate supply proposals*

- 5.59. Good progress has been made in 2014 to ensure that sand and gravel reserves are both maintained (through time extensions) and increased, and this will be monitored through the LAA process. It is clear, however, that further planning permissions for sand and gravel extraction, both time extensions and new reserves, are required to ensure that a 7-year landbank remains in place throughout the Plan period. It is considered that the most reasonable alternative is to base policy on the 10-year rolling average sales, as required by national policy and proposed in the 2014 LAA, rather than the NW AWP apportionment.
- 5.60. In addition, the provision of additional sand and gravel reserves in the south west of the county needs to be addressed as a strategic locational issue. If quantitative non-confidential data at an appropriate scale is provided by a sufficient number of mineral operators, the potential for local supply areas or further disaggregation of sand and gravel aggregates could be reconsidered. This should, however, only be incorporated into planning policy where it is supported by clear definitions and a robust evidence base.
- 5.61. Crushed rock reserves, especially limestone, are very healthy; however, the need for additional planning permissions may arise if significant re-assessment of reserves occurs, and/or major new infrastructure developments requiring such aggregate are brought forward. Offshore developments may require sandstone or igneous aggregate as well, and this should also be kept under review. A policy option to seek to actively reduce the crushed rock landbank was rejected as part of MWDF considerations, and as there is no maximum landbank level, this is not a reasonable alternative to consider.
- 5.62. A need for further reserves of high and very high skid resistance roadstones was identified at the end of 2013, and the 2015 LAA (for calendar year 2014) will reassess the situation in the light of further planning permissions and proposals. The 2014 LAA suggests that a 10-year HSA/VHSA landbank be assessed on 3-year<sup>90</sup> rolling sales basis, but it is proposed to maintain some flexibility on this approach in policy terms. The sources of these important reserves also need to be supported as strategic locations.
- 5.63. It is proposed that strategic policy should commit to identifying sufficient sites to meet the above needs and those for other minerals as discussed in paragraphs 5.64 to 5.76 below, and also to safeguard mineral resources and the railheads and wharves that either do, or potentially could, be used for sustainable transport.

## **Industrial Minerals**

### *Gypsum*

- 5.64. The only **gypsum** deposits that are being worked in Cumbria are by underground mining in the Long Marton/Kirkby Thore area. In recent years, demand for gypsum for plaster and plasterboard has reduced substantially due to the recession. Reserves of gypsum at Birkshead mine are consequently still

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<sup>90</sup> 2014 LAA paragraph 5.10 erroneously says 5-year, but it should say 3-year

likely to be sufficient for around 15 years, depending on how soon major construction activity picks up. Once that mine is exhausted, the remaining resources in that area would have to be worked by surface mining.

- 5.65. Policy SP8 identifies a strategic area for the continued extraction of gypsum; within this currently economically viable area, a site at Stamphill is allocated in policy SAP4, should it be needed towards the end of the Plan period. Policy SP7 identifies a Mineral Safeguarding Area for all gypsum resources within the county that may become economically viable in the future. The alternative of not identifying such sites was not considered reasonable in the light of national policy, and comments made during the Minerals and Waste Development Framework's Examination by the Planning Inspectorate<sup>91</sup>.

#### *Mudstones*

- 5.66. The **mudstones** needed for Askam-in-Furness brickworks are only found near the brickworks. Output from the brick-making mudstones quarry (High Greenscoe) has significantly reduced due to the recession and a planning permission to extend the life of the permission to 2028 was approved in 2013.
- 5.67. National policy<sup>92</sup> requires mineral planning authorities to plan for a 25-year landbank for brick clay. Whilst it is difficult to predict the rate of extraction and life of existing or proposed resources, it is proposed to include a strategic policy commitment to identify site(s) to enable continued extraction of brick-making mudstones, and to identify an area next to the existing quarry as a strategic area (policy SP8).

#### *Industrial limestone*

- 5.68. Some quarries also market high purity **industrial grade limestone**; but these are not included in the figures of sales of aggregates. The most notable of these quarries is Shap Fell, which supplies the steel industry's lime kilns at the nearby Hardendale Works, and may potentially be required for other associated industrial facilities.
- 5.69. Policy SP10 carries forward a strategic policy from the adopted MWDF Core Strategy that aims to conserve industrial limestone resources for such purposes, but with amendments to reflect current national policy<sup>93</sup>.

#### *Zinc*

- 5.70. There has been interest in recent years in the potential for resurrecting **zinc** mining in the North Pennines Area of Outstanding Natural Beauty (NP AONB) near Nenthead. Geological investigations by borehole have been carried out under permitted development rights, but no development proposals have been discussed. The dormant permissions for underground mining that exist in the area are shown on the map below, but it is not yet clear where the exploitable resources lie.

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<sup>91</sup> Inspector's Report on the Examination into the Site Allocations Policies and Proposals Map, paragraphs 122 and 123, December 2010

<sup>92</sup> NPPF paragraph 146

<sup>93</sup> NPPF paragraph 146

5.71. The potential for developing a specific policy on **zinc** mining in the NP AONB was considered and rejected at an early stage of the MWDF. This has been re-considered in the light of subsequent developments and current national policy. There are no extant planning permissions for surface developments, and, as this would be drift mining with a long sloping underground access route, there is currently no information available about the likely location of any surface developments, including associated liquid waste management or mineral waste disposal facilities or haulage routes. Such facilities may be in Cumbria, or in adjoining areas of Northumberland or Durham. As a result, it is not proposed to provide a strategic policy or site allocations and any development proposals would be considered under all relevant policies in this Plan.

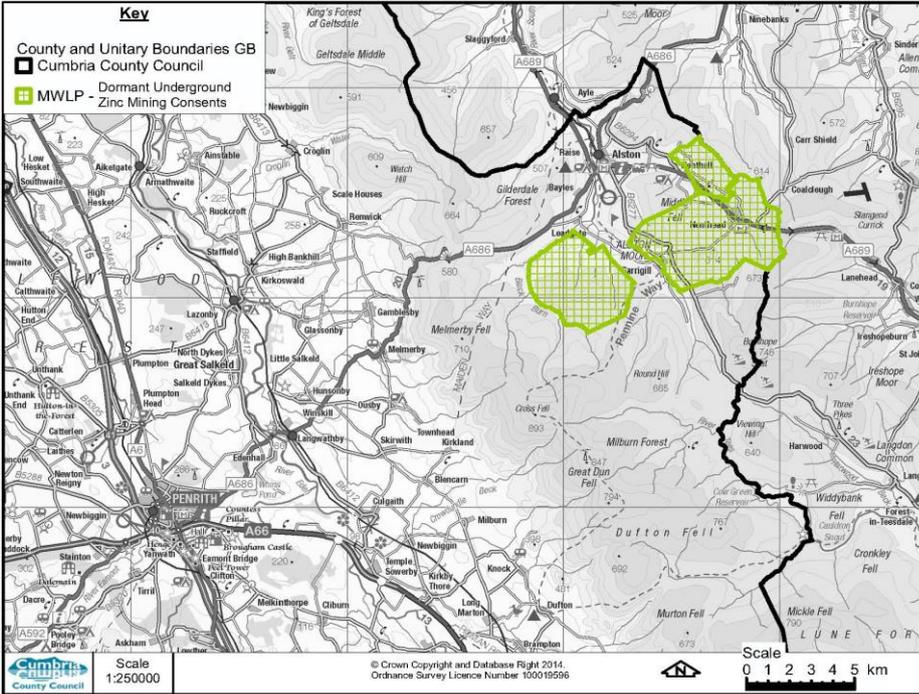


Figure 5.1: Dormant planning consents for underground zinc mining source: Cumbria County Council

*Peat*

5.72. **Peat** is currently worked at one commercial peat site at Solway Moss, where continued extraction is permitted until the expiry of the planning permission in 2042. A scheme to close and restore a second site at Bolton Fell was approved in 2014 following its purchase by Natural England.

5.73. National planning policy<sup>94</sup> says that, unlike other mineral resources, Local Authorities should not identify new sites or extensions to existing sites for peat extraction, and no further areas for peat extraction are proposed during the Plan period. Furthermore, the impacts from proposals for time extensions for existing peat extraction sites, such as that on climate change and biodiversity, must be fully considered. Planning guidance<sup>95</sup> provides further clarification of the circumstances under which time extensions for peat extraction sites may be considered, for example to allow sufficient time to extract further small

<sup>94</sup> NPPF paragraph 143  
<sup>95</sup> PPG paragraph 224, chapter 27 Minerals (ID: 27-224-20141017)

quantities of peat, thus facilitating the subsequent proper restoration of the land.

- 5.74. Policy SP11 is intended to address all potential proposals for peat extraction; however, given that Solway Moss has consent to 2042, it is difficult to envisage a situation under which such a time extension might be proposed within the Plan period. The inclusion of the Solway Moss site as a strategic resource was also considered, but rejected as unnecessary, on the grounds that the site has planning permission and a strategic designation.
- 5.75. As peat plays such an important role in climate change as a carbon sink (see Glossary), a strategic policy to protect peat bogs from other types of minerals and waste developments is proposed in chapter 6 of this Plan.

### **Building stones**

- 5.76. There are 25 operating building stone quarries across the county. Eight of these quarries are located in the Lake District National Park, of which only one produces aggregate, as a by-product of slate working. The remaining 17 building stone quarries are located outside the Park and, of these, eight produce aggregates from slate, sandstone and limestone.
- 5.77. Table 9 in Appendix 1 shows that 13 of the building stone quarries have planning consents that expire during the Plan period, and a development control policy is proposed which supports national planning policy<sup>96</sup> to maintain supplies of building stone required for repair of heritage assets, and to maintain Cumbria's local architectural distinctiveness. No need for additional sites is anticipated, due to the often slow and intermittent use of such quarries. However, policy SP8 identifies the Wray Castle slate formation around Kirkby Slate Quarry, which has an international market, as a strategic area for further supplies of slate, outside the National Park.

### **Areas of designation**

- 5.78. National planning guidance<sup>97</sup> enables minerals planning authorities to make provision for mineral extraction by identifying the following types of areas (in order of priority):-
- **Specific Sites:** where viable resources are known to exist, landowners are supportive of minerals development and the proposal is likely to be acceptable in planning terms - such sites may also include essential operations associated with mineral extraction;
  - **Preferred Areas:** these are areas of known resources where planning permission might reasonably be anticipated - such areas may also include essential operations associated with mineral extraction; and/or
  - **Areas of Search:** which are broader areas, where knowledge about mineral resources may be less certain, but within which planning permissions for particular sites could be granted, particularly if there is a potential shortfall in supply.

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<sup>96</sup> NPPF paragraph 144

<sup>97</sup> PPG paragraph 008, chapter 27 Minerals (ID: 27-008-20140306)

- 5.79. Policy SP7 designates only Preferred Areas and Areas of Search for new mineral extraction, as no potential Specific Sites have been put forward by the minerals industry in the county. Any planning applications for minerals development on Preferred Areas and Areas of Search would be subject to the usual tests of environmental acceptability, and may still require Environmental Impact Assessment.
- 5.80. In addition, minerals planning authorities are required to ensure that non-minerals development does not needlessly prevent the future extraction of mineral resources of local and national importance by designating the following:
- **Mineral Safeguarding Areas:** these are intended to cover known deposits of minerals which require to be safeguarded from unnecessary sterilisation by non-mineral development;
  - **Mineral Consultation Areas:** are geographical areas, based on a Mineral Safeguarding Area, where the district or borough council should consult the Mineral Planning Authority for any proposals for non-minerals development.
- 5.81. The proposed Mineral Safeguarding Areas, identified in policy SP7 and on the Policies Map, are for: sand and gravel, hard rock (including high specification aggregates), shallow coal, gypsum and slate resources. Mineral Consultation Areas will be defined by a 250 metre wide buffer around the Mineral Safeguarding Areas, to enable consultation between the county and district councils about development that would either be likely to affect the winning and working of minerals, or where mineral working could affect other existing or proposed land uses.
- 5.82. The need to safeguard other mineral resources, secondary aggregate resources and existing or potential railheads and wharves, are considered in the site allocations policies. Policy SAP4 sets out the type of suitable locations where secondary or recycled aggregate facilities may be located, whilst SAP5 allocates a specific site for safeguarding secondary aggregates. Policy SAP6 identifies those sites where it is considered necessary to safeguard existing and potential railheads and wharves. The supporting text indicates why those sites require safeguarding in the longer term.

### **Policies for non-energy minerals**

#### **Policy SP7 Minerals provision and safeguarding**

Provision for potential further mineral working will be made by identifying Preferred Areas and/or Areas of Search:-

- to enable a landbank of at least seven years sales at the Local Aggregates Assessment level for sand and gravel and at least ten years for crushed rock to be maintained throughout the Plan period;
- for continued quarrying of nationally important very high specification roadstone and regionally important high specification roadstone;

- for continued quarrying of brickmaking mudstones;
- for continued quarrying of slate; and
- for continued extraction of gypsum.

Mineral resources will be safeguarded from being unnecessarily sterilised by other developments by identifying:-

- Mineral Safeguarding Areas for the indicative sand and gravel and hard rock resources (including high specification aggregates) and shallow coal resources identified by the British Geological Survey in its report “Mineral Resource Information for Development Plans - Cumbria and the Lake District: Resources and Constraints” (BGS Technical Report reference WF/01/02);
- Mineral Safeguarding Areas for the remaining gypsum resources;
- Mineral Safeguarding Area for identified resources of slate;
- Mineral Consultation Areas, which will include 250 metre wide buffer zones around the Mineral Safeguarding Areas.

#### **Policy SP8 Strategic areas for new mineral developments**

The **Kirkby Thore/Long Marton** area is identified as the location for further supplies of gypsum, if required towards the end of the Plan period.

Land next to **High Greenscoe Quarry** is identified as the location for further supplies of mudstones for the Askam in Furness brickworks.

The slates near **Kirkby Slate Quarry** are identified as the location for further supplies of slate.

The igneous rocks near **Ghyll Scaur Quarry** are identified as the location for further supplies of nationally important very high specification roadstone.

The sandstones near **Roan Edge Quarry** and **Holmescales Quarry** are identified as the locations for further supplies of regionally important high specification roadstone.

The sand and gravel resources in the **Roosecote** area and near **Peel Place Quarry** are identified as the location for further supplies of sand and gravel in the south west of the county.

#### **Policy SP9 Marine dredged aggregates**

Planning permission will be granted for developments at appropriate locations, and which do not have unacceptable environmental impacts, that would enable the increased use of marine dredged aggregates as an alternative to land won aggregates.

### **Policy SP10 Industrial limestones**

Any proposal for the extraction of high purity limestone should demonstrate that it is primarily for non-aggregate uses. Each application will be considered on its own merits against other relevant policies in this Plan, regardless of the stock of permitted reserve. However, low stocks of permitted reserves, to serve a related industrial facility, may be seen as an indicator of urgent need.

### **Policy SP11 Peat**

Planning permission will not be granted for peat extraction from new or extended sites.

Time extensions for existing peat extraction planning consents will be considered on a case-by-case basis, where it is demonstrated that it is necessary to enable the proper restoration of the land or to secure biodiversity, climate change or other objectives of this Plan. Any such proposals must conform to all relevant policies in this Plan.

## **Energy minerals (hydrocarbons)**

### *Coal and fireclay*

- 5.83 Cumbria has extensive coal and associated fireclay resources, although the last deep mine, Haig Colliery, closed in 1986 and there are no active opencast sites in Cumbria – the last of these was Keekle Head, which ceased operations around 2001. There is one inactive planning permission at Main Band Colliery near St Bees, which expires in June 2018. There is also a working mine at Ayle in Northumberland and a planning permission for a small opencast development in Halton Lea Gate, also in Northumberland but close to the Cumbria boundary.
- 5.84 The ongoing demand for energy minerals has led to increased interest in Cumbria's resources in recent years, and a proposal is currently being developed by West Cumbria Mining Ltd to open a new underground (i.e. deep) mine near Whitehaven, extracting coking coal for use in the steel industry. Exploratory boreholes were drilled in October 2014, and if appraisal is favourable, consultation on planning applications for new surface works and infrastructure may be expected during 2015. The company describes<sup>98</sup> the coalfield as *“extending from onshore to offshore, over 400m below ground and the sea, along the coast of Whitehaven, West Cumbria in NW England and covering an area of 200km<sup>2</sup>”*.
- 5.85 Figure 5.2 shows provisional licences indicated on the Coal Authority website<sup>99</sup> as at 29 October 2014. Exploration is permitted in these areas, and if sufficient potential is established, applications for operational licences are sought, usually for smaller areas where viable reserves are proven. Planning

<sup>98</sup> <http://www.westcumbriamining.com/site/>

<sup>99</sup> <http://coal.decc.gov.uk/en/coal/cms/publications/data/map/map.aspx>

consent and land owners agreement are required before operational licences are granted. More detail about each area is included in Table 5.8.

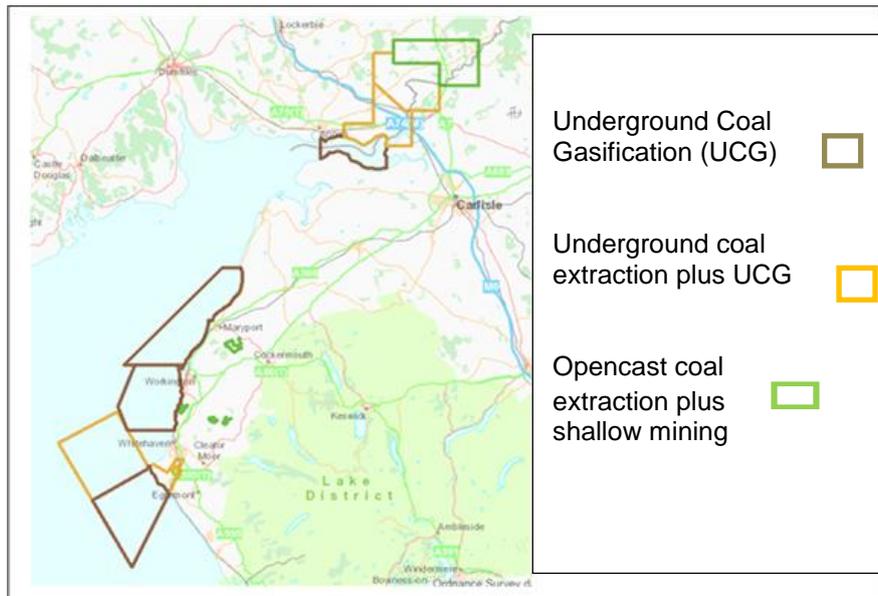


Figure 5.2: Licences granted by the Coal Authority (at 29.10.2014)

- 5.86 Table 5.8 below reflects updated information provided by the Coal Authority<sup>100</sup>, which confirmed that the three most southerly areas on the map above encompass the West Cumbria Mining's area of interest. Of these, the two offshore areas permit exploration for both underground coal extraction and Underground Coal Gasification (UCG), which is an unconventional process for recovering gas from coal seams and is addressed in the oil and gas section of this Plan. Further licences for exploration for UCG, without prior coal extraction, have been granted in the two areas offshore from Workington and Maryport, shown in Figure 5.2.
- 5.87 There are two conditional licences for underground mining (UND/0176/N and UND/0182/N), which extend across the border between Cumbria and Dumfries and Galloway in Scotland. Dumfries and Galloway Council have been informed about draft proposals for coking coal extraction in these areas, but no planning application or details of surface works have been submitted<sup>101</sup>. It is not yet known whether the extent of mining, surface works or transport issues would affect Cumbria, so this will be kept under review.
- 5.88 A further provisional licence for opencast mining (OPC/0431/N) covers an area to the east of the above two licences, including land within Cumbria. Any subsequent application for an operational licence would reduce and refine a development boundary, so it is unclear yet whether Cumbria would be affected. A UCG licence (UCG/0008/N) is also in place along the Solway Firth, adjacent to the underground mining licence area, and any operational licence would need to define the location of onshore development and be subject to securing planning consent. At present, it is unknown whether any onshore infrastructure would be in Cumbria or in Scotland.

<sup>100</sup> Coal Authority informal consultation response, 28 October 2014

<sup>101</sup> minutes of meeting with Dumfries and Galloway Council, 30 October 2014

Status	Reference	Name	Type	Company
Future	UND/0177/N	West Cumbria	Underground	West Cumbria Mining
Future	UCG/0038/N	West Cumbria Offshore	Underground and UCG	
Future	UCG/0021/N	Whitehaven Offshore No 2	UCG - also permits deep coal extraction	
Future	UCG/0033/N	Northern Cumbria Offshore	UCG only	Cluff Natural Resources Ltd
Future	UCG/0037/N	Maryport	UCG only	
Future	UND/0176/N	Lochinvar Project	Underground	New Age Exploration Ltd
	UND/0182/N	Lochinvar Project - Southern Area	Underground	
Future	UCG/0008/N	Solway Firth	UCG	FiveQuarter Energy
Future	OPC/0431/N	Canonbie Prospect	Opencast - also permits shallow coal mining	Kier Mining and Buccleuch Estates

Table 5.8: Licence applications  
source: Coal Authority, October 2014

- 5.89 The West Cumbria coking coal proposal, referred to in paragraph 5.83, would not supply “thermal coal” used in power stations, much of which is currently being imported to the UK from the US because the availability and low cost of shale gas has depressed the US price for coal. UK demand may decrease during the Plan period due to the Government policy of phasing out coal fired power stations without Carbon Capture and Storage (CCS) by 2030; however, progress on CCS could lead to new fully abated coal fired power stations in the future. Cumbria’s resources, therefore, could be important in the longer term and safeguarding, i.e. preventing sterilisation by other development, is addressed in policy DC15 Minerals Safeguarding, and in policy SAP5, which defines Mineral Safeguarding Areas.
- 5.90 National policy<sup>102</sup> requires mineral planning authorities to identify any areas where coal extraction and the disposal of colliery spoil may be acceptable, and to highlight areas where mineral extraction is expected to take place, as well as managing potentially conflicting objectives for use of land<sup>103</sup>. The following paragraphs and figures indicate the areas with deep or shallow mining potential, but also a number of constraints that would need detailed environmental assessment, as outlined below.
- 5.91 Figure 5.3 shows the deep coal resources in Cumbria. The resources offshore, and on the Scottish border, are currently under investigation as discussed in paragraph 5.84 above. The key issues with respect to deep mining proposals, which would be relevant for Cumbria County Council, would be the siting of any surface facilities, transport and other infrastructure, disposal of colliery spoil, as well as the associated impacts on populations, landscape and the natural environment. It is considered that these issues are most appropriately managed through development control policy, including policy on mineral safeguarding.

<sup>102</sup> NPPF paragraphs 147 and 149

<sup>103</sup> PPG paragraph 007, chapter 27 Minerals (ID: 27-007-20140306)

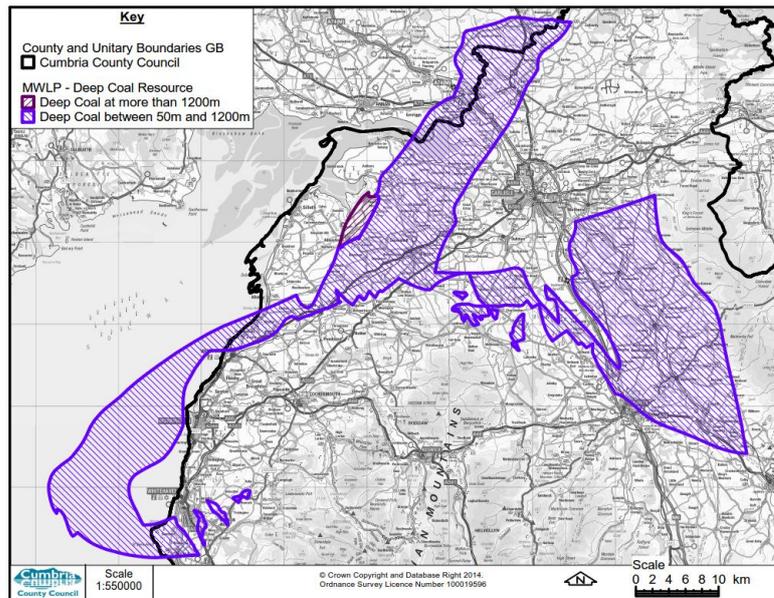


Figure 5.3: Deep coal resources  
source: the Coal Authority

5.92 The surface and shallow coal measures, with associated fire clay (Figures 5.4 and 5.5), underlie a wide range of landscape types, with both compact towns and dispersed residential areas on the west coast, plus rural areas with widely dispersed population in the Eden Valley.

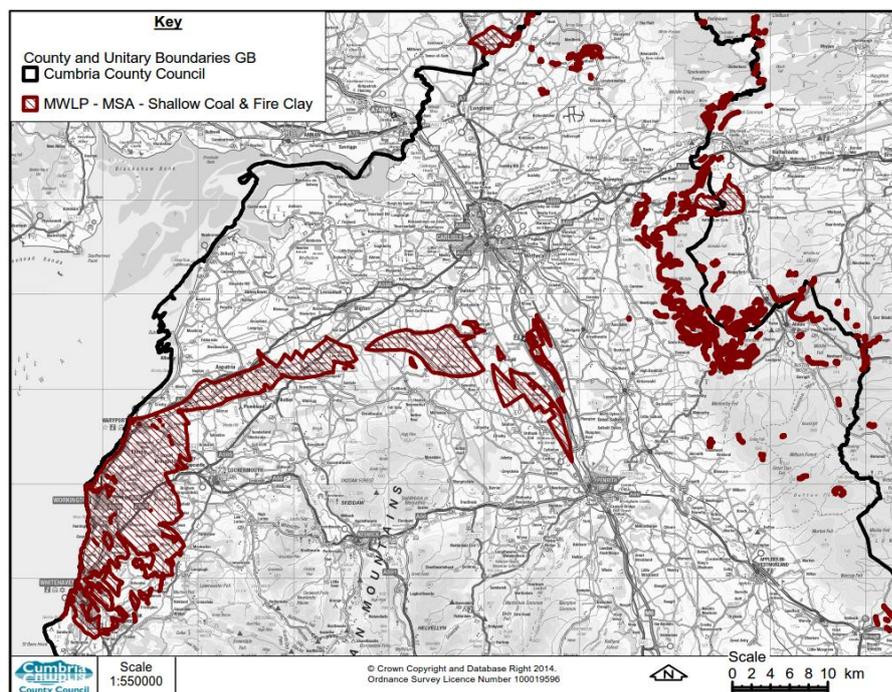


Figure 5.4: Shallow coal and fire clay  
source: British Geological Survey

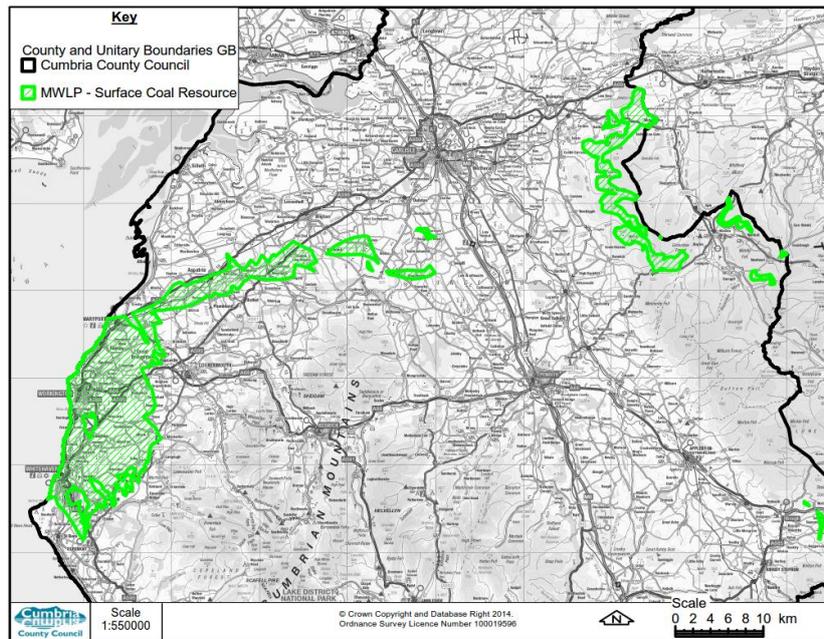


Figure 5.5: Surface coal resources  
source: the Coal Authority

- 5.93 Opencast proposals could be expected to have adverse impacts, even if temporary, over a significant area. It can be seen that the western area of shallow coal resources skirts the Lake District National Park, contains the St Bees Head Heritage Coast, part of the Solway Coast AONB, and part of the Frontiers of the Roman Empire World Heritage Site (Hadrian's Wall) and its Visual Impact Zone. Much of the Solway Coast AONB is also designated as a Site of Special Scientific Interest (SSSI), and there is also a Special Area of Conservation, Special Protection Area and a Ramsar site associated with the Solway Firth and its surroundings. Furthermore, the eastern area of this resource is largely within the North Pennines Area of Outstanding Natural Beauty (NP AONB).
- 5.94 There is considerable experience of open cast coal extraction in West Cumbria, and one site, at Keekle Head, has still not been restored following cessation of extraction around 2001. Two non-inert landfills in West Cumbria also occupy areas previously subject to open cast coal extraction, although it should be noted that such development does not create a usable void space due to the lower density of colliery spoil compared to the extracted material.
- 5.95 The previous policies in the 1996-2006 Minerals and Waste Local Plan, ruled out opencast extraction in the Alston/Nenthead area of the NP AONB, in East Fellside in the Eden valley, and any opencast extraction that would inhibit inward investment, economic development and tourism in West Cumbria, or have adverse impacts on designated landscapes. These issues, however, are addressed by other policies in this Local Plan, and by national policy, which states that:

*“Permission should not be given for the extraction of coal unless the proposal is environmentally acceptable, or can be made so by planning conditions or obligations; or if not, it provides national, local*

*or community benefits which clearly outweigh the likely impacts to justify the grant of planning permission*<sup>104</sup>.

- 5.96 Options for coal extraction were considered on an area basis during the MWDF process, and one Area of Search for coal was proposed on a large brownfield site at Broughton Moor in Allerdale. The site was, however, removed as undeliverable, because the regeneration plan agreed in December 2011 by Allerdale and Cumbria County Council (the site owners) excluded prior extraction of the coal as an option.
- 5.97 It is, therefore, deemed appropriate to consider all such applications on their merits, and in the light of detailed proposals, rather than make a strategic or site allocation policy defining “acceptable areas” for either coal extraction or storage or disposal of spoil. The County Council considers both types of development would be more positively addressed through appropriate Development Control policies: see policy DC13 Criteria for energy minerals, and DC15 Mineral Safeguarding. Many other policies in this Local Plan could also be relevant.
- 5.98 To assist with decision-making on any proposals for coal development that may come forward, the Coal Authority also provides maps of the areas that have already been worked for coal, notifies local planning authorities under the provisions of Article 16 and Schedule 5 of the Town and Country Planning (Development Management Procedure) (England) Order 2010, and publishes Standing Advice.
- 5.99 The strategic issues in relation to energy minerals, i.e. hydrocarbon developments, are considered by mineral planning authorities in the light of national planning guidance as contained in the NPPF, PPG and national energy policy. In addition, the location of oil and gas development is governed by the Department of Energy and Climate Change (DECC) through the allocation of Petroleum Development and Exploration Licences (PEDL) and, therefore, it is not necessary for this Local Plan to allocate strategic locations for such development.
- 5.100 The NPPF and PPG do require mineral planning authorities to:
- make appropriate provision for hydrocarbon development in their Local Plan;
  - highlight areas where proposals for hydrocarbon extraction may come forward<sup>105</sup>;
  - address constraints on production and processing within areas that are licensed for oil and gas exploration or production<sup>106</sup>; and
  - manage potentially conflicting objectives for use of land.
- 5.101 In order to fulfil these obligations, the County Council has made an assessment based on published information from DECC, in particular their Office of Unconventional Oil and Gas (OUGO), of the most likely locations and types of oil and gas development within Cumbria, and whether it is likely that

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<sup>104</sup> NPPF Paragraph 149

<sup>105</sup> PPG paragraph 105, chapter 27 Minerals (ID: 27-105-20140306)

<sup>106</sup> NPPF paragraph 147

any such proposals may be put forward within the Plan period. A summary of this assessment, and the key documents that have informed it, is contained in the paragraphs below.

5.102 The extent of the 14th round for onshore oil and gas PEDL licensing, offered between July and October 2014, is shown in Figure 5.6 below. Any licences granted, and future areas offered for licence, can be seen on DECC's website<sup>107</sup>. The 2014 Licensing Map included significant areas in the north and south of the county, and the previously issued licence area (within PEDL 159) around Carlisle is also shown (yellow 'r' shaped block).

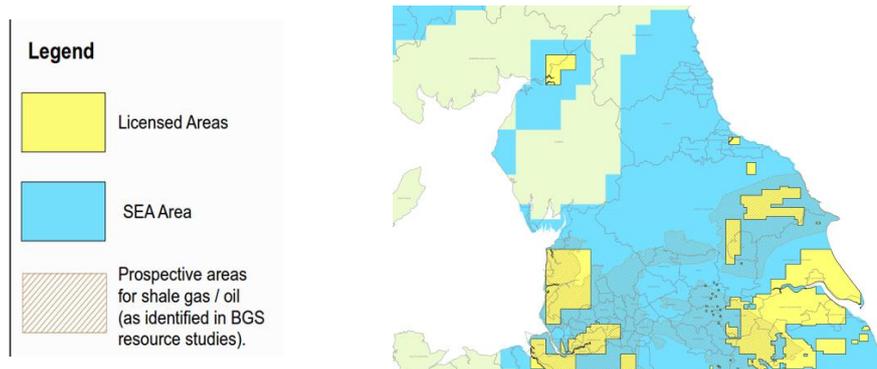


Figure 5.6 Onshore licences, SEA areas and prospective areas  
source: DECC

5.103 The County Council has not received any expressions of interest in conventional onshore oil or gas development, although there is an offshore gas field to the south and west of the county, off the coast at Barrow. The published information does, however, give some indication of the likelihood of Coal Bed Methane (CBM) development, in which methane is extracted from coal seams that have never been mined, and shale gas development, in which gas (not exclusively methane) is extracted from impermeable shale deposits.

5.104 DECC and the OUGO are currently encouraging research in both types of development, in order to clarify the extent and recoverability of UK unconventional gas resources. National planning guidance says that:

*“there is a pressing need to establish – through exploratory drilling – whether or not there are sufficient recoverable quantities of unconventional hydrocarbons such as shale gas and coal bed methane present to facilitate economically viable full scale production”<sup>108</sup>.*

### Shale gas

5.105 DECC has also commissioned British Geological Survey (BGS) to undertake assessments of “prospective areas” where shale gas production could progress quickly; shale development appears to be focused currently on the BGS study areas of the Bowland Shale and the Weald Basin; current BGS assessments do not cover any part of Cumbria. Figure 5.7 below indicates a very limited extension of the hydrocarbon basin into Cumbria, and maps of

<sup>107</sup> <https://www.gov.uk/oil-and-gas-onshore-exploration-and-production>

<sup>108</sup> PPG paragraph 091, chapter 27 Minerals (ID: 27-091-20140306)

likely shale resources<sup>109</sup> do not show further resources in this area. A thin band of potentially suitable measures have sometimes been reported along coal measures north of the Lake District National Park boundary.

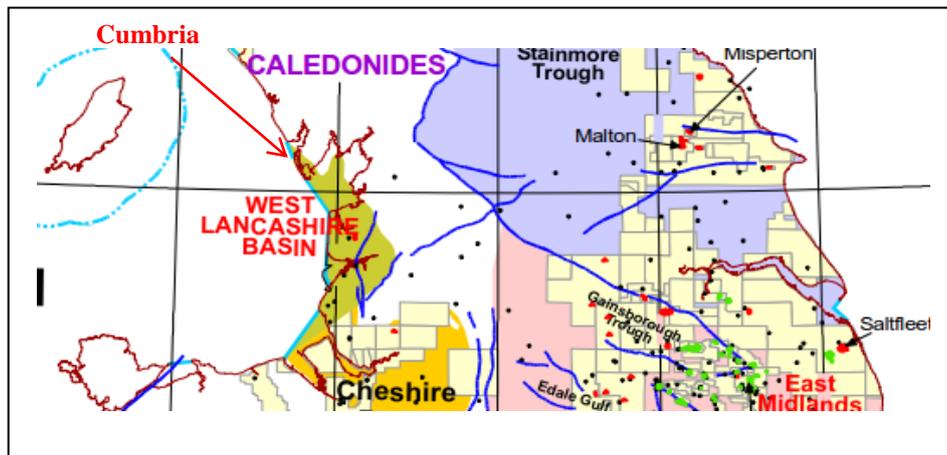


Figure 5.7: ‘Principal UK Onshore Hydrocarbon Provinces’  
source: The Hydrocarbon Prospectivity of Britain’s Onshore Basin, DECC 2011

5.106 No interest in appraising these resources has been addressed to the County Council at the time of writing this Plan, and it would be reasonable to expect that development of shale gas would progress first in areas that are currently being investigated. The Strategic Environmental Assessment (SEA) of the 14<sup>th</sup> Round Licensing Offer, completed by AMEC on behalf of DECC, concluded that “it is noteworthy that the industry is not expected to be at substantial scale before the 2020s”<sup>110</sup> and, whilst this Local Plan should contain policies related to shale gas development, it is considered that if widespread development was to come forward, it would probably be towards the end of the Plan period.

#### *Coal Bed Methane*

5.107 There is a much stronger likelihood of Coal Bed Methane (CBM) development within Cumbria within the Plan period. Figure 5.8 is taken from a 2011 DECC report on the potential for CBM in Britain’s onshore basins. It indicated that there is “good potential for coal bed methane” in the Cumbria-Canonbie coalfield area<sup>111</sup>, although the report contained little detailed information about the nature of the resource.

5.108 Figure 5.8 shows the most likely locations for such development, and the resources were subject to initial exploratory drilling in 2009. The exploratory wells have since been restored without any gas production taking place. CBM development in the same coalfield in Dumfries and Galloway has also not been progressed yet, with the company that holds the PEDL licence concentrating on progress in central Scotland. It is, however, considered likely that CBM exploration, and production, proposals will come forward in the Plan period.

<sup>109</sup> Unconventional Hydrocarbon Resources: Shale, DECC, 2010

<sup>110</sup> The Environmental Effects of Onshore Oil and Gas Licensing (two page synopsis), AMEC, 2014

<sup>111</sup> The Unconventional Hydrocarbon Resources of Britain’s Onshore Basins: CBM, DECC, 2010

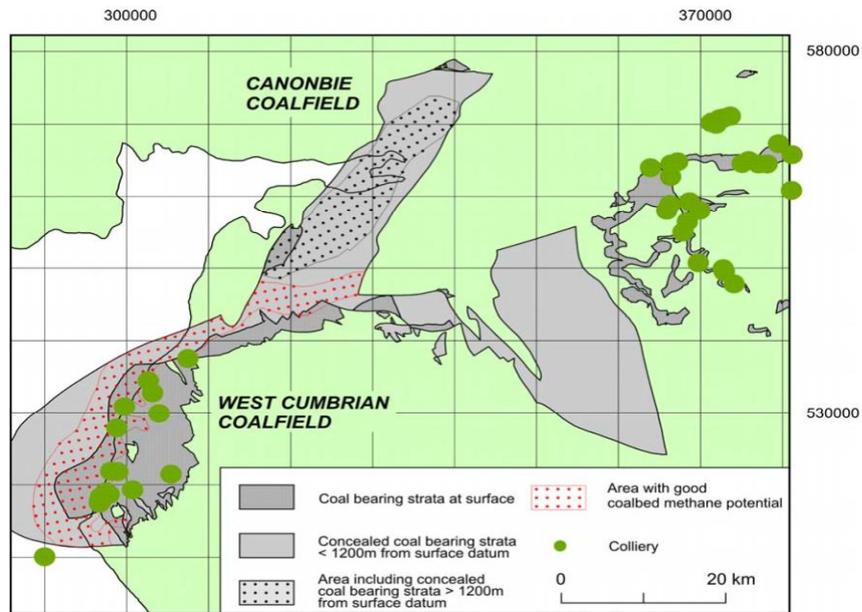


Fig. 32 Cumbria-Canonbie – summary map of unconventional hydrocarbon potential

Figure 5.8: The Cumbria-Canonbie coalfield area  
source: DECC

5.109 In considering potential need for supporting infrastructure, possible constraints on production and processing, and potential conflicts with other land uses, it is necessary to look at the nature of CBM production, and of the areas that are within the current licence offer. The constraints listed in paragraph 5.93 above in considering coal development are also relevant for CBM proposals, and would need to be considered during site selection.

5.110 CBM extraction releases gas by pumping out the water held in the coal seam, but hydraulic fracturing of the seam to increase gas flow is sometimes also necessary. Drilling the well requires a significant volume of water, as would any hydraulic fracturing required, but very large volumes of water may need to be pumped from the underground coal measures to enable gas to flow. Safe handling and disposal of this water, which has some similarities to “mine drainage” encountered around previous coal developments, requires either onsite treatment, new pipelines to appropriate disposal points or significant traffic movements.

5.111 Development proceeds using horizontal drilling techniques and several wells can be centred on one drilling pad site. However, exploration and appraisal currently requires two wells sited 1km apart, and viable commercial exploitation of a gas field may need a significant number of drill pads, together with shared ancillary development for water treatment and gas compressing. The need for pipelines to enable connection to the gas transmission network is particularly relevant in rural areas, which currently have no gas distribution network. The active phase of drilling and site set up for each well is of a relatively short duration, and the impact of a well pad once gas is flowing is considerably reduced. However, impacts, particularly on highways and landscape, may not be appreciated until an overall development plan for exploitation of the CBM resource area, including drilling of new wells, and potentially re-drilling for final capping and restoration, has been considered.

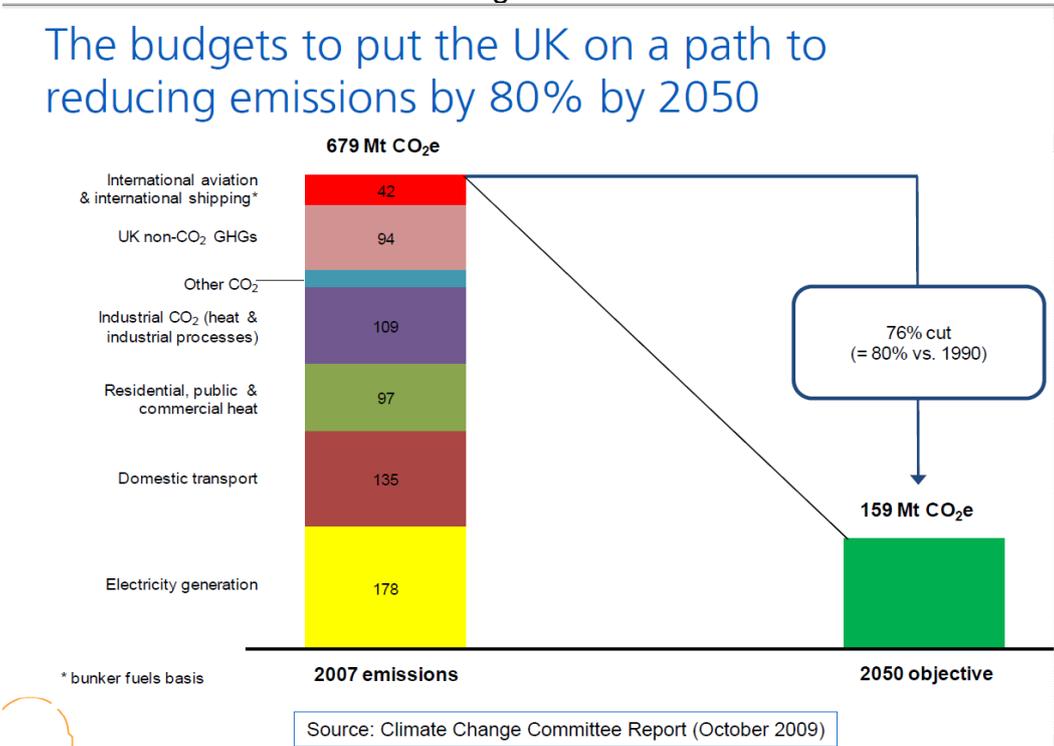
- 5.112 The cumulative impact of full commercial development on other land-uses, particularly residential areas and tourism, would need to be assessed for each proposal. If significant volumes of water are required, the cumulative impacts with other major development in the area, such as new nuclear build, and impacts on Cumbria's environmental assets would need to be considered, and future proposals for radioactive waste disposal should also be kept under review. The policy alternatives considered by the County Council largely related to the need to address all the potential types of hydrocarbon development at a practical level, which reflected experience and developing understanding of the potential issues.
- 5.113 As a result of these considerations, a single Development Control policy, DC13 Criteria for energy minerals, is proposed in chapter 15. This would include consideration of Underground Coal Gasification, which is also a possibility as conditional UCG licences (a separate process from PEDL) have been granted by the Coal Authority in offshore areas around Cumbria. Such development could follow underground mining development in some cases, but can currently only take place offshore. The mineral planning authority would, therefore, be involved only in associated onshore infrastructure or exploratory works, which may still give rise to a range of material planning considerations.

## 6. CLIMATE CHANGE

### Background

- 6.1 In 2006, Sir Nicholas Stern’s review<sup>112</sup> of the economics of climate change and development confirmed the serious global threat to world output, human life and on the environment posed by climate change. The UK Government responded to the need to limit global temperature rises, and enacted the Climate Change Act (2008), which requires the UK to achieve an 80% reduction in greenhouse gas emissions by 2050 relative to 1990 levels.
- 6.2 The size of the challenge in meeting this commitment is illustrated in Figure 6.1, which gives some indication of the urgent need to reduce the carbon intensity of electricity generation. Methane from landfills, sewage treatment and damaged or drying peat bogs are included in the category “UK non-CO<sub>2</sub> GHGs” (see Figure below), and also need to be addressed.

Figure 6.1



- 6.3 The best way to reduce greenhouse gas (GHG) emissions is to reduce energy usage, as explained in the energy hierarchy in Figure 6.2. In the context of minerals and waste developments, energy saving includes minimising transport (especially road transport) where possible.
- 6.4 Increasing the efficiency of processes and plant is the next priority, followed by replacing fossil fuels with low carbon energy sources. Reducing energy use can reduce energy costs rapidly and has both economic and environmental advantages, while generating low carbon energy from renewable sources, including waste, contributes to energy security and can also reduce costs over the longer term.

<sup>112</sup> Stern Review on the Economics of Climate Change, HM Treasury, October 2006

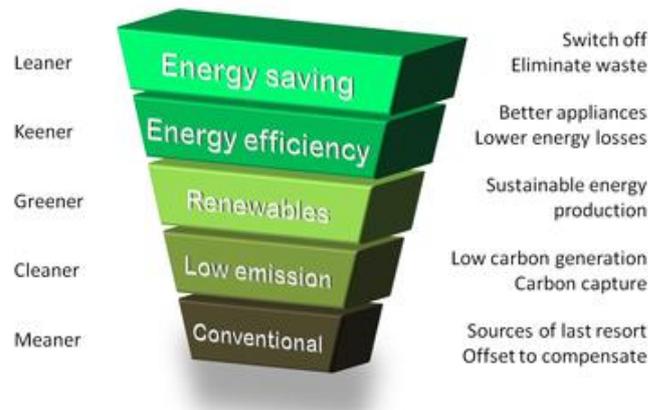


Figure 6.2: the Energy Hierarchy

- 6.5 The implementation of the waste hierarchy (see chapter 3) also reduces greenhouse gas emissions by reducing energy intensive extraction of, and production from, virgin materials. However, a balance is required between the benefits of increased recycling<sup>113</sup> and increased traffic and energy consumption at material recovery facilities.
- 6.6 Minimising use of fresh water, and consequent energy use in wastewater treatment, also has a significant role in reducing energy use and consequent greenhouse gas emissions. This can be relevant for oil and gas exploration, and other minerals and waste developments that use mains water supply or connect to public sewers.

### Where we are now

- 6.7 The Climate Change Act established a system of five-yearly carbon budgets, the first four of which have been set in law<sup>114</sup>. The first carbon budget (2008-12) was met<sup>115</sup> through a combination of the impact of the recession and low-carbon policies, and the UK is currently in the second carbon budget period (2013-17). The third carbon budget (2018-22) requires that emissions be reduced by 34% on 1990 levels and the fourth carbon budget (2023-27) requires a 50% reduction on 1990 levels during that period. The fifth carbon budget will also be relevant for this Plan, but the final level of that has not yet been set. The current UK strategy for achieving these budgets is the Carbon Plan<sup>116</sup>, and the Act also established the Committee on Climate Change to monitor progress.
- 6.8 The Committee on Climate Change also warns that steeper reductions may be required if increases in global temperature are to be limited sufficiently to avoid the most dangerous consequences. International aviation and shipping emissions, for example, have not yet been addressed in the UK budgets, ongoing emissions from food production will need to continue even if at a

<sup>113</sup> [http://www.esauk.org/esa\\_policies/carbon\\_management/](http://www.esauk.org/esa_policies/carbon_management/)

<sup>114</sup> The Carbon Budget Order, SI1603, 2011

<sup>115</sup> "Meeting Carbon Budgets – 2014 Progress Report to Parliament", Committee on Climate Change, July 2014 (Executive Summary, page 1)

<sup>116</sup> The Carbon Plan: Delivering our low carbon future, DECC, December 2011

reduced level, and some adjustments for historically undeveloped economies may need to be made.

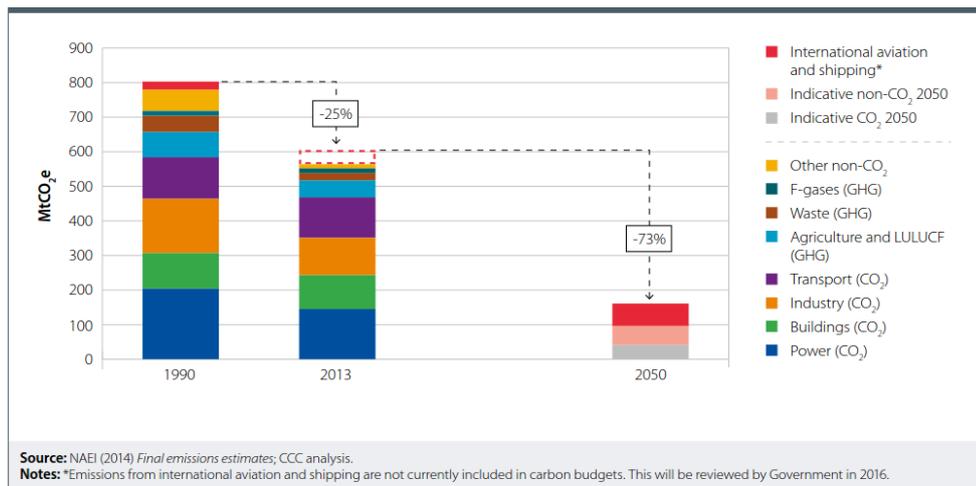


Figure 6.3: Greenhouse gases by sector 1990-2050<sup>117</sup>

- 6.9 The Carbon Plan includes a number of measures that affect the minerals and waste sectors directly. The minerals sector has engaged with the *Strategy for Sustainable Construction*<sup>118</sup>, which is increasing the use of recycled aggregates and reducing the disposal of construction waste to landfill. The Mineral Products Association quotes significant reductions in the carbon emissions per tonne of cement, partly achieved by the use of waste for energy generation and has created a Carbon Reduction Portal<sup>119</sup> for use by the industry.
- 6.10 British Gypsum completed one of the early Climate Change Agreements between the Government and energy intensive industries. A new rail delivery service to transport finished products from the Kirkby Thore plaster and plasterboard plant to customers in Scotland, removed an estimated 1.76 million lorry miles per year from the road network<sup>120</sup>. Supplies to the Kirkby Thore plant are now also imported by rail.
- 6.11 Measures affecting the waste sector have been important in the overall strategy, even though in 2012 waste management accounted for only 3.8% of UK greenhouse gas emissions<sup>121</sup>. This is because reducing waste and increasing recycling has an impact on emissions from every sector, and because of the methane emitted from biodegradable waste. In Cumbria, it has been estimated that 2.6% of total emissions are from waste management, combined with water supply and sewage<sup>122</sup>.
- 6.12 The Government's Waste Review published in June 2011 was followed in December 2013 by the Waste Prevention Plan<sup>123</sup>, which continues to progress

<sup>117</sup> "Meeting Carbon Budgets: 2014 Progress Report to Parliament", Committee on Climate Change, July 2014 (Executive Summary, page 21)

<sup>118</sup> Strategy for Sustainable Construction, BERR, June 2008

<sup>119</sup> <http://www.aggregatecarbonreduction.com/>

<sup>120</sup> <http://www.buildingdesign-news2008.co.uk/2008/25-British-Gypsum-Plaster-Plasterboard-and-Drylining-Systems-News-230608.asp>

<sup>121</sup> Table 6, 2013 UK Greenhouse Gas Emissions Provisional Figures, DECC

<sup>122</sup> The greenhouse gas footprint of Cumbria, Small World Consulting Ltd, September 2012

<sup>123</sup> Waste Prevention Plan, Defra, December 2013

policies such as the landfill tax and progressive restrictions on the disposal to landfill of specific waste types.

- 6.13 These policies have had considerable success and the Committee on Climate Change noted a 55% reduction of greenhouse gas emissions from the waste sector from 1990 to 2013<sup>124</sup>. This was due to a combination of factors, including improvements in the standards of landfilling, changes to the types of waste going to landfill (such as reducing the amount of biodegradable waste) and an increase in the amount of landfill gas being used for energy.
- 6.14 Progress made between 2007 and 2013 indicates that the minerals and waste sectors have already made significant reductions in the greenhouse gas emissions arising from their activities. The Mineral Products Association has shown the sector's commitment to contributing to both mitigation and adaptation, and provides useful advice for its members for the implementation of current best practice.
- 6.15 Major reductions in emissions from the waste sector have related to better landfill techniques, reduction of landfill volumes and diversion of biodegradable waste, as well as improved capture and utilisation of methane for energy generation. However, the development of the "circular economy", promoted by WRAP (Waste and Resources Action Programme) and supported by the industry body Environmental Services Association, considers the whole life cycle of products, and may change how products are designed and recycled, promising further reductions in waste and energy use.
- 6.16 As a result of both cost pressures and Government policies directed to industries, it is expected that this potential for resource efficiency will be increasingly realised, and minerals and waste management processes and technologies will develop to enable further reductions in greenhouse gas emissions.
- 6.17 The Environmental Services Association also estimates that the waste management industry within the UK provides a third of the country's renewable electricity<sup>125</sup>. The Government has encouraged the development of renewable energy, including from waste, by the use of financial incentives, thus the use of planning policies to require energy generation within developments, is no longer encouraged. However, there is considerable potential for energy generation from waste in Cumbria; animal biomass alone (slurry and manure) could provide up to 90 MW and sewage gas a further 4.9 MW<sup>126</sup>.
- 6.18 Cumbria County Council took part in an EU project to investigate potential for increased energy from waste development, and a Policy Tool and Cumbria Action Plan<sup>127</sup> were produced. Much of the potential highlighted has been realised, with the growth in both domestic and commercial use of biomass boilers absorbing suitable supplies of waste wood, and the development of a number of anaerobic digestion plants across the county utilising agricultural

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<sup>124</sup> 2014 Report to Parliament, Committee on Climate Change

<sup>125</sup> [http://www.esauk.org/esa\\_policies/carbon\\_management/](http://www.esauk.org/esa_policies/carbon_management/)

<sup>126</sup> Cumbria Renewable Energy Capacity and Deployment Study, Cumbria County Council, Aug 2011

<sup>127</sup> Evidence Base document reference LD213: Interreg IVc Action Plan, 2012

feedstocks, including slurry and manure. The Policy Tool<sup>128</sup> focused largely on municipal waste, which in Cumbria is now managed at two MBT plants that generate Refuse Derived Fuels (RDF). No energy from waste plants, with the ability to utilise these fuels, have yet been developed in Cumbria and the RDF is exported to plants in the UK and Europe. A number of commercial energy from waste plants have been proposed in the county, and the need for sites is discussed in chapter 3 of this Local Plan.

- 6.19 The emission of greenhouse gases from peat bogs is a significant issue for Cumbria. The North Pennines AONB, part of which crosses into the east of the county, contains 900m<sup>2</sup> of peat bog, which fulfils an important role as a “carbon sink”. Lowland peat bog in the north of the county has historically been worked for horticultural peat but one of the sites is now under restoration. Degraded, eroded or drained peatlands emit almost 6% of global anthropogenic CO<sub>2</sub> emissions and represent almost 25% of emissions from the entire land use, land use change and forestry sector. Rising temperatures constitute a serious threat to the vast amounts of carbon sequestered in peat bogs and protection and restoration of peat bogs to halt emissions and increase carbon sequestration is an important policy goal. The Peatland Programme (formerly “Peatscapes”) is working successfully to restore degraded peat bog in the North Pennines AONB, which also has benefits for biodiversity, flood control and water quality.
- 6.20 In addition to measures targeted on specific sectors of the economy, the Government’s Carbon Plan includes measures to be implemented by Local Authorities, both as planning authorities and under other statutory duties. For the purposes of this Plan, the key measures are laid down in the National Planning Policy Framework (NPPF) and the accompanying Planning Practice Guidance suite (PPG).
- 6.21 In its role as local planning authority, the County Council is not required to measure and monitor emissions themselves, but to conform to the NPPF by adopting proactive strategies to mitigate and adapt to climate change, in line with the objectives and provisions of the Climate Change Act 2008<sup>129</sup>. PPG further states that in addition to the statutory requirement to take the Framework into account in the preparation of Local Plans, there is a statutory duty<sup>130</sup> on local planning authorities to include policies in their Local Plan designed to tackle climate change and its impacts<sup>131</sup>.
- 6.22 In addition to this role, the County Council also has wider responsibilities as the Lead Local Flood Authority, and has produced its Preliminary Flood Risk Assessment<sup>132</sup> and a Surface Water Management Plan. The Council is also required to reduce emissions from its own estate and activities, and respond to the challenges of climate change and extreme weather events. Therefore, the County Council has signed up to a non-mandatory programme called “Climate Local”, which is designed to support and run alongside statutory

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<sup>128</sup> Interreg IVc, Final Policy Tool, October 2011

<sup>129</sup> <http://www.legislation.gov.uk/ukpga/2008/27/contents>

<sup>130</sup> [Section 19 \(1A\) of the Planning and Compulsory Purchase Act 2004](#)

<sup>131</sup> PPG paragraph 003, chapter 6 Climate Change (ID: 6-003-20140612)

<sup>132</sup> Evidence Base document reference RD25: Preliminary Flood Risk Assessment, Cumbria County Council, June 2011

reporting duties such as those contained in the Climate Change Act, Civil Contingencies Act and Flood and Water Management Act. The programme will develop resilience, address fuel poverty, protect homes and businesses from flooding and other extreme weather events, and assist the local economy to benefit from renewable and other “green economy” options.

### **Where we need to be**

- 6.23 Section 10 of the NPPF explains the key role planning has in meeting the challenge of climate change, flooding and coastal change by minimising vulnerability and providing resilience to the impacts of climate change, and supporting the delivery of renewable and low carbon energy and associated infrastructure. The NPPF further states that this is central to the economic, social and environmental dimensions of sustainable development.
- 6.24 PPG lists a range of opportunities to incorporate climate change mitigation and adaptation into Local Plans and these are reflected in the Strategic Objectives of this Plan. Specific opportunities related to minerals and waste include: reducing energy use and transport (Strategic Objective 1); waste minimisation and recycling (Strategic Objective 2); managing waste close to its source; appropriate location of mineral extraction development (Strategic Objectives 3 and 4); prudent use of mineral resources; and encouraging re-use and recycling of minerals (Strategic Objective 5). This Local Plan also needs to ensure that: ongoing reductions in methane emissions from landfill continue; that minerals and waste developments make a significant contribution towards low carbon energy generation and do not adversely impact on greenhouse gas emissions from peat bogs; and that potential for improved flood storage and carbon sequestration in restoration schemes is realised.
- 6.25 The strategic policy for climate change and adaptation (SP12) provides six underpinning principles that are discussed below.
- 6.26 The County Council will require developers to demonstrate that energy management, resource efficiency and design have been determining factors for the proposal, and that the proposed solution provides an appropriate balance of energy and resource minimisation, and low carbon energy generation. The choice of technologies and most cost efficient methods for carbon reduction will change over the period of this Local Plan, and it would be counter-productive to impose specific requirements at this point in time. It is considered preferable to establish principles by which positive initiatives from industry and communities can be considered and assessed. Evidence should be submitted with a planning application, proportionate to the scale and scope of that development, to show how the development contributes to a carbon reduction strategy, or how the “whole life” emissions of the product or process would be reduced by the proposed development.
- 6.27 Wastewater treatment can require high energy inputs, which reductions in water use can help to decrease. Developments for wastewater treatment are matters for this Plan, but policies to encourage reductions in water use, consequent wastewater volumes and to minimise risks of future water shortages, are more appropriate for District Local Plans. However, minerals and waste developments can both use considerable volumes of water and

generate wastewater that requires specific treatment or is returned to public sewers. Where appropriate, minerals and waste developments should, therefore, demonstrate that this is minimised.

- 6.28 The County Council considers that minerals and waste developments should minimise traffic emissions by being optimally located in relation to the area they serve. For waste management facilities this will take into account the sources of the waste and the transport savings that may be realised by co-locating with other waste processes. Locational criteria for strategic waste developments are considered in chapter 3 and some sites allocated in chapter 18. Proposals on additional or alternative sites should demonstrate that they would enable recyclable waste to be sorted and processed close to its point of origin, or otherwise minimise transport emissions.
- 6.29 Minerals can only be worked where they occur and the approach, both in the site allocations chapter and in determining proposals, is to seek to minimise "mineral road miles" by meeting local demand from the nearest geological source or by use of non-road transport. Where the minerals are of regional or national importance, sustainability issues may also be relevant when considering the respective merits of extending an existing quarry compared with the development of a new one.
- 6.30 Policy SP12 also requires that developments that have the potential to remove or degrade peat bog should demonstrate that they will not release significant additional carbon emissions or damage the condition of remaining areas of peat bog. Loss of active peat bog would only be permitted in exceptional circumstances, although robust measures to mitigate for the loss by improving the condition of adjacent or nearby peat bogs would be considered.
- 6.31 The County Council will also seek to ensure increased sequestration of carbon in mineral and waste site restoration and afteruse schemes, through measures such as tree planting or peat restoration. Planting of trees for biofuels on such land could also have carbon benefits, especially where this is land that is unsuitable for other agricultural production. Flood storage to improve resilience and adaptation to climate change is also encouraged and supported where appropriate. Chapter 16 provides further information and detailed policy on how restoration and afteruse can enhance or create habitats for species threatened by changing climates.
- 6.32 Policy SP12 expresses the County Council's support in principle for generation of low carbon/renewable energy, either from residual waste or on minerals and waste sites where they would not adversely impact on the operations or restoration of the site. The assessment criteria for energy from waste facilities and other proposals are addressed in policy DC7 and policy DC8 in chapter 13.

## **POLICY SP12 Climate change mitigation and adaptation**

Proposals for minerals and waste management developments should demonstrate that:

- energy management, carbon reduction and resource efficiency have been determining design factors for the development; and
- water use and the requirement for wastewater treatment have been minimised; and
- their location will minimise, as far as is practicable, the "minerals or waste road miles" involved in supplying the minerals or managing the wastes, unless other environmental/sustainability and, for minerals, geological considerations override this aim; and
- where the development affects or is adjacent to peat bog, that carbon emissions would not be significantly increased and the condition of remaining peat bog would not be adversely affected; and
- where appropriate, restoration and afteruse proposals fulfil a role in helping to mitigate for or adapt to climate change.

Proposals for low carbon renewable energy will be supported where they conform to other policies in this Plan and either:

- a. use residual waste as part of the feedstock; or
- b. are located within a proposed or existing mineral or waste site and do not adversely affect the operations, restoration or aftercare of the site.

6.33 Additional policies that support the measures in SP12 and make a positive contribution to reducing greenhouse gas emissions are included elsewhere in the Plan, as shown in the table below.

<b>Measures</b>	<b>Policies</b>
Continue to require landfill gas collection and management systems that, wherever practicable, use the gas to generate electricity	DC10
Identify sufficient sites in suitable locations for bio-degradable waste streams to be diverted from landfill	SAP2
Identify sufficient sites in suitable locations for recyclable waste (including construction and demolition waste) to be sorted and processed close to their point of origin, and for minerals to be worked or recycled/reused close to their point of origin	SAP2 SAP4
Encourage minerals and waste developments to locate optimally in relation to their source/markets	DC1
Secure woodland planting and flood storage in restoration schemes	DC19 DC22
Minimise loss of sequestered carbon in peat bogs	SP11
Safeguard existing and potential rail and wharf facilities	SAP6
Identify positive criteria for assessment of energy from waste proposals	DC7
Identify positive criteria for assessment of renewable energy proposals on minerals and waste sites	DC8

Table 6.1: Other measures in the Plan to address climate change

## **7. ECONOMIC AND COMMUNITY BENEFITS**

### **Background**

- 7.1 The National Planning Policy Framework (NPPF) requires the County Council to play an economic role, in which it must contribute 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, in order to support growth and innovation. To support economic growth, the Local Plan's main priority is to ensure that we can maintain a reliable and adequate supply of minerals, in order to build and repair our homes, businesses and roads, and also manage our waste effectively and efficiently.
- 7.2 The minerals and waste management industries are essential to the county's and wider economies. In addition to the jobs they provide directly and indirectly, the county's communities and economy could not function without them and the environment would be degraded.

### **Economic benefits**

- 7.3 Bearing in mind the very serious social and economic problems experienced in parts of Cumbria, it is particularly important that best local advantage is taken of investments in minerals and waste management developments. This can include jobs in the construction/development stage, as well as when a development is operational.
- 7.4 Whilst recyclables are separated out from waste streams, very little actual waste recycling takes place within Cumbria. There should be development opportunities with potential to "add value" to the Cumbria economy by handling and processing recyclables and compost.
- 7.5 There is scope for local industries to take advantage of reduced energy costs through combined heat and power plants, using fuel that has been derived from waste. Several companies have already expressed interest in using the fuel (Refuse Derived Fuel) that is produced as an end product of the management of the county's municipal waste. To date, none of these proposals have come to fruition.
- 7.6 The Council's engagement with the EU-funded waste to energy project and other information sources, have demonstrated the range of possibilities that there are for regarding discarded materials as a low carbon energy resource rather than as a waste. The techniques and technologies range from "mining" old landfills to anaerobic digestion, gasification, pyrolysis and incineration of residual wastes. End-products can include electricity, heat, synthesis gas, bio-fuels, alternative aggregates and even aviation fuel. Reusing or selling waste as recovered materials represents an economic development opportunity.
- 7.7 National planning policy advises local planning authorities to take account of the economic (and other) benefits of Best and Most Versatile agricultural land when considering the location of developments. Poorer quality land should be sought, where practicable, which would protect those economic benefits as well as provide a more sustainable approach to development.

- 7.8 Restored minerals and waste sites may have some economic benefits for the local areas, particularly where such sites are used in the longer term for tourism and recreational uses. The provision of employment and opportunities for inward investment associated with recreation and tourism may be possible in some instances.
- 7.9 Economic benefits could, therefore, include:-
- jobs provided in, or supported by, mineral extraction, processing and utilisation;
  - jobs provided at waste management facilities;
  - jobs provided during the construction or lead-in stages of minerals and waste management developments;
  - enhanced viability of local industries through supply chain benefits and due to reduced fuel costs by using combined heat and power energy from waste plants;
  - recovery of waste for re-use;
  - protection of Best and Most Versatile agricultural land;
  - restoration to tourism or recreation afteruses.
- 7.10 Policy SP13 seeks to optimise economic benefits, which implies a balancing exercise with other interests. However, there is no intent to place economic benefit before other interests, where this is not practicable. For example, as minerals can only be worked where they are found, there should be no conflict between identifying Mineral Safeguarding Areas and achieving economic benefit. In some instances, it may be necessary to consider the overall economic impact of mineral or waste proposals.

**POLICY SP13 Economic benefit**

Proposals for new minerals and waste developments should demonstrate that they would realise their potential to provide economic benefit. This will include such matters as the number of jobs directly or indirectly created or safeguarded and the support that proposals give to other industries and developments.

Relevant adverse economic impacts on other industries, or on regeneration and development initiatives, will be weighed against the overall economic benefits of the proposal.

**Community benefits**

- 7.11 A Community Benefit is “a payment in money or in kind to a local community in recognition and/or reward for hosting a development that, whilst delivering national benefits, imposes a particular environmental, financial or other burden upon the locality where it is sited”<sup>133</sup>.

<sup>133</sup> <http://www.nuleaf.org.uk/wp-content/uploads/2014/04/Briefing-Paper-26-Community-benefits-position-paper-and-framework.pdf>

- 7.12 It is a voluntary contribution by a developer to support communities affected by a development. In this circumstance, the County Council would expect developers to offer a Community Benefits package to host communities in order to positively contribute to the sustainable development of an area and the well-being of the local community. It is considered reasonable to expect that proportionate benefits packages should be secured and that the relevant Cumbrian local authorities will work jointly on such matters.
- 7.13 Historically, such off-setting packages of community benefits have been considered only in the context of the nuclear industry, but they are equally relevant for mineral, waste management and renewable energy developments. Where appropriate, the County Council will also seek to secure Community Benefits through Nationally Significant Infrastructure Projects on which it is consulted.
- 7.14 Community benefits schemes are separate from the planning process; they are not a material planning consideration and will not be taken into account by the County Council during the planning application process. Any Community Benefits package will be in addition to any mitigation secured through a legal agreement (e.g. s106 or s278 Agreements).
- 7.15 The County Council can provide advice on who is best placed to receive a Community Benefits package, and any community benefits that are secured will be set out in the County Council's Minerals and Waste Annual Monitoring Reports.

## 8. ENVIRONMENTAL ASSETS

### Background

- 8.1 Cumbria is richly endowed with fine landscapes, wildlife, buildings and features of archaeological and historic importance. These resources are valuable environmental assets that underpin the tourism industry, attract business and investment into the area, and contribute to the quality of life of local communities.
- 8.2 Environmental conservation can also generate significant economic activity. The health of the ecosystem is of vital importance to everyone, it provides outputs or outcomes that directly and indirectly affect human well-being. These services that benefit people, which are provided by the natural environment, are known as ecosystem services (see Glossary).
- 8.3 The benefits that arise from the ecosystem are wide ranging. For example, the formation of a range of soil types will influence whether crops can be grown to feed people and their farmed animals or if 'wild food' grows naturally that supports wild animals (some of whom are eaten as game) and invertebrates, such as bees, who are vital to pollinate crops. Other examples of benefits provided by the ecosystem are: minerals, which are used to build our roads and homes; raw materials, such as timber or animal skins; energy, in the form of hydropower or biomass fuel; areas of peat, which are important for carbon storage and sequestration; flood regulation, in the form of floodplains; and recreational, health or educational benefits.
- 8.4 A number of projects in Cumbria have been or are being undertaken, which seek to assess, conserve or enhance particular ecosystem services in the county. The Coast to Coast Bee Roads Project, part of the wider B-Lines Initiative run by Buglife, is developing a UK-wide network of wildflower-rich meadows and grasslands by linking existing bee and other insect pollinator 'motorways'. The project is being taken forward in partnership with the Cumbria Local Nature Partnership<sup>134</sup> and will help to support and protect the many pollinating insects that contribute to our food production and the diversity of our environment.
- 8.5 In December 2009, Cumbria County Council and Natural England commissioned an analysis of the Bassenthwaite catchment area as a case study<sup>135</sup> in the role of ecosystem services and green infrastructure in economic development, regeneration and growth in Cumbria. The results of the study are applicable to all of Cumbria's rural communities, not just Bassenthwaite. For example, more effective relationships between tourism infrastructure and environmental projects could deliver higher value activity, such as quality hotels, shops, food and drink, and experiences that are capable of sustaining higher value employment. The economic challenge for landscape and biodiversity is to turn these assets into experiences that people want to take part in and spend money on.

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<sup>134</sup> <https://www.buglife.org.uk/coast-coast-bee-roads#sthash.rYdN49mp.dpuf>

<sup>135</sup> Bassenthwaite Vital Uplands programme

## Source data

8.6 At the international or European level, bodies such as the United Nations Educational, Scientific and Cultural Organisation (UNESCO) or the European Union (EU) designate heritage, geodiversity and biodiversity assets in the UK. These are then notified, managed or data held by national organisations: the remit of Natural England covers nature and wildlife conservation, plus landscape protection, whilst English Heritage is responsible for cultural and built heritage.

### *Biodiversity*

8.7 Under the EU Habitats Directive, European Wildlife Sites were designated to protect threatened or valuable habitats and species, whilst internationally important wetlands were designated under the Ramsar Convention. Collectively termed Natura 2000 sites, their Conservation Objectives are maintained and updated by Natural England.

8.8 Natural England also maintain and update the (single) Conservation Objective for Marine Conservation Zones and are responsible for notifying Sites of Special Scientific Interest (SSSIs). They formally designate Areas of Outstanding Natural Beauty (AONBs) and define Heritage Coasts in agreement with the relevant maritime local authorities. Standing advice is provided jointly by Natural England and the Forestry Commission on ancient woodland and veteran trees.

8.9 The majority of National Nature Reserves are managed by Natural England (in Cumbria, a very small minority are managed by the National Trust or Cumbria Wildlife Trust) and the relevant data is held on their website. Information on Local Nature Reserves is hosted by them, but they are managed by a range of organisations in Cumbria, including the District Councils, the County Council and National Park Authorities. There are also a number of RSPB-managed reserves, specifically for their bird interest.

8.10 At the local level, the Cumbria Biodiversity Data Centre<sup>136</sup> has the detailed representation of current knowledge of Cumbria's biodiversity. Its evidence base includes species and habitat statements, habitat targets, planning considerations and enhancement opportunities. Further work for the biodiversity evidence base will include identifying the networks of natural habitats required by national policies, mapping biodiversity opportunities and defining the landscape features that are of major importance for migration, dispersal and genetic exchange. This is an iterative process that will continue to inform the policy and thus any necessary updates.

8.11 Extensive lengths of rivers and of coast comprise some of the most important wildlife sites within the county. A characteristic of these is that the notified site often does not include crucial areas of adjacent land. However, some associated areas that are important to species, especially birds, have been identified and these include goose/swan flyways. The above work on habitat networks will be particularly important to address this issue.

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<sup>136</sup> <http://data.nbn.org.uk/organisation/organisation.jsp?orgKey=10700>

- 8.12 There is a Key Species list for Cumbria<sup>137</sup> of around 300 wildlife species. These are species that have the status of being specifically protected or are UK Priority and/or Cumbria Biodiversity Framework (Action Plan) species. Further work is continuing to relate these species to appropriate habitat types, functional ecological networks and to geographic areas of the county.
- 8.13 Ongoing projects in Cumbria continue to inform the Cumbria Biodiversity Evidence Base, increasing the knowledge of habitats and species, especially those under threat. Nature Improvement Areas (NIA) were established by Government in April 2012, as a 3-year project to create joined up and resilient ecological networks at a landscape scale. The Morecambe Bay limestones and wetlands NIA programme is being delivered by Morecambe Bay Local Nature Partnership, with Arnside & Silverdale AONB Partnership acting as the lead. In West Cumbria, the Small Blue Butterfly Conservation Network<sup>138</sup> is progressing a Conservation Strategy for this declining species. The butterfly is restricted to small, localised colonies in the coastal strip, mainly on naturalised brownfield land, which is often under threat from regeneration. It needs high quality core habitat areas and connected habitat corridors, considerations that could be built into development proposals.

#### *Geodiversity*

- 8.14 The European Geoparks Network was created with the support of the EU and in co-operation with UNESCO in 2000. In 2003, the North Pennines AONB became the first area in Britain to be awarded the status of European Geopark, where special effort is made to make the most of its geology (or Earth heritage) through interpretation, education, conservation and nature-based tourism.
- 8.15 Regionally Important Geological and Geomorphological Sites (RIGS) are currently the most important places for geology and geomorphology outside statutorily protected land, such as SSSI's, and are equivalent to local wildlife sites and other non-statutory wildlife designations. Cumbria GeoConservation Group, an affiliated member of UK RIGS, is a voluntary geological conservation group that records, monitors and reviews RIGS in the county. They are also affiliated to Cumbria Wildlife Trust.
- 8.16 At the local level, Limestone Pavement Orders were designated by the Local Authority, based on information provided by Natural England. Information and mapping regarding each LPO is hosted on the Natural England website

#### *Historic environment*

- 8.17 UNESCO's World Heritage Committee decides which places can be considered of outstanding universal value to humanity and then designates worthy World Heritage Sites. English Heritage<sup>139</sup> is responsible for managing those World Heritage Sites that are situated in England, and information is hosted on the English Heritage website. The organisation also maintains the

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<sup>137</sup> <http://www.lakelandwildlife.co.uk/biodiversity/keyspecies.aspx>

<sup>138</sup> a voluntary network of Local Authorities, conservation organisations and local businesses

<sup>139</sup> In April 2015 English Heritage will be split into two organisations and Historic England will assume the responsibilities outlined in this paragraph

registers of listed buildings, historic parks and gardens, registered battlefields and scheduled monuments (formerly scheduled ancient monuments). Conservation Areas are designated and managed by the Local Authorities.

- 8.18 At the local level, the Cumbria County Historic Environment Record (HER) is a database of all known archaeological sites and monuments for the county, outside the areas of the National Parks. The database contains over 20,000 records, linked to a GIS interface. The HER (formerly the Sites and Monuments Record or SMR) has been maintained by Cumbria County Council since the mid-1970s. The database was computerised between 1983 and 1985, and has been expanded significantly since that time. Maintenance of an HER is required by paragraph 169 of the National Planning Policy Framework.

### *Landscape*

- 8.19 In order to reflect the principles of the European Landscape Convention<sup>140</sup>, Cumbria County Council, in partnership with the Cumbrian Local Planning Authorities, prepared the Cumbria Landscape Character Guidance and its associated Toolkit<sup>141</sup>. The Guidance contains a landscape character assessment, which maps, classifies and describes the elements and features that characterise the different landscape types across the county, setting out what makes the landscape distinctive now. It acknowledges that landscapes are dynamic and have been, and will continue to be, shaped by natural and man-made forces and actions. It also includes a series of guidelines to help encourage and plan action that will protect, manage, enhance, restore and create landscapes that will be able to adapt to change over time but still retain the characteristics that make them distinctive. The Landscape Character Toolkit provides detailed advice on applying the Cumbria Landscape Characterisation Assessment.
- 8.20 Cumbria's historic landscape is varied and greatly appreciated; its characterisation can be used to inform the preparation of the county's future strategies for the historic environment, landscape and sustainability. It is a useful tool when undertaking environmental assessment at the strategic level to inform minerals planning policies. In partnership with the Lake District National Park Authority, a programme of work sponsored by English Heritage was undertaken to map the elements of Cumbria's historic landscape. The result was a series of interactive GIS-based maps that characterise the distinctive, historic dimension of today's environment in Cumbria and an associated handbook<sup>142</sup>.

### **Environmental assets**

- 8.21 This Local Plan identifies Cumbria's environmental assets (see Boxes 8.1 and 8.2), in order to recognise their extent and significance to the planning system in Cumbria. They include assets that have been formally designated in accordance with European and national legislation and others that are

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<sup>140</sup> [http://www.coe.int/t/dg4/cultureheritage/heritage/Landscape/default\\_en.asp](http://www.coe.int/t/dg4/cultureheritage/heritage/Landscape/default_en.asp)

<sup>141</sup> Evidence Base document reference LD196: Cumbria County Council, March 2011

<sup>142</sup> Guide to Using the Cumbria Historic Landscape Character Database for Cumbria's Planning Authorities, Cumbria County Council, July 2009: <http://www.cumbria.gov.uk/planning-environment/countryside/historic-environment/histlandcharacter.asp>

identified for their regional or local importance. In order to identify those assets that are of particular county importance, reference has been made to the relevant databases, as described above.

#### **BOX 8.1**

**The areas and features located wholly or partly within Cumbria (outside the Lake District and Yorkshire Dales National Parks) that are formally identified as being of national and international importance are:-**

- internationally important Wildlife Sites (**Ramsar sites, Special Areas of Conservation and Special Protection Areas**) - Upper Solway Flats and Marshes/Solway Firth; South Solway Mosses; Border Mires, Kielder and Butterburn; Irthinghead Mires; Duddon Estuary; Duddon Mosses; Drigg Coast; Asby Complex; North Pennine Moors; Morecambe Bay; Morecambe Bay Pavements; Walton Moss; Clints Quarry; Cumbrian Marsh Fritillary Site; Helbeck and Swindale Woods; Lake District High Fells; Moor House - Upper Teesdale; North Pennine Dales Meadows; River Derwent; River Ehen; River Eden; River Kent; Tyne and Nent; Roudsea Wood and Mosses; Bolton Fell Moss;
- **World Heritage Site** - "Frontiers of the Roman Empire: Hadrian's Wall";
- **European and Global Geopark** – North Pennines;
- **Areas of Outstanding Natural Beauty** - Solway Coast; Arnside and Silverdale; and North Pennines;
- **Heritage Coast** - St Bees Head;
- **Sites of Special Scientific Interest**;
- **Marine Conservation Zone** – Drigg Coast;
- **Nature Improvement Area** – Morecambe Bay limestones and wetlands;
- **National Nature Reserves** – Clawthorpe Fell; Cliburn Moss; Drumburgh Moss; Duddon Mosses; Finglandrigg Woods; Gowk Bank; Great Asby Scar; Hallsenna Moor; High Leys; Hutton Roof; Moor House-Upper Teesdale; North Walney; Roudsea Wood and Mosses; Sandscale Haws; South Solway Mosses; Thornhill Moss and Meadows; Walton Moss;
- statutorily protected wildlife species;
- habitats and species of principal importance that are included in the England Biodiversity List (published by the Secretary of State under Section 41 of the Natural Environment and Rural Communities Act 2006) and in the UK Biodiversity Framework (Action Plan);
- **ancient woodlands**;
- **Limestone Pavements** protected by Orders;
- nationally important archaeological sites whether Scheduled or not;
- **Registered Historic Battlefield** – Solway Moss;
- **Registered Historic Parks and Gardens** – Appleby Castle; Corby Castle; Dallam Tower; Dalston Road Cemetery; Holker Hall; Hutton-in-the-Forest; Levens Hall; Sizergh Castle; Workington Hall;
- **listed buildings**.

## **BOX 8.2**

**Wildlife, geological, geomorphological, landscape and historic environment areas and features that are of particular County importance, or which make a contribution to biodiversity and geological conservation include:-**

- Local Nature Reserves – Cowraik Quarry; Harrington Reservoir; Holme Park Quarry; Kingmoor Sidings; Millom Ironworks; Siddick Pond;
- RSPB Nature Reserves – Campfield Marsh; Geltsdale; Hodbarrow; St Bees Head;
- Local Sites (these are County Wildlife Sites and Regionally Important Geological and Geomorphological Sites);
- Cumbria Biodiversity Framework (Action Plan) habitats and species and additional ones of conservation importance for the North West that occur within Cumbria;
- areas of regional or local importance identified by the Local Nature Partnerships;
- Cumbria Geodiversity Action Plan sites;
- Conservation Areas and their settings;
- the settings of the Lake District, Yorkshire Dales and Northumberland National Parks, of the Areas of Outstanding Natural Beauty, of the World Heritage Site (Visual Impact Zone), of Heritage Coast, of Registered Historic Parks and Gardens and of Scheduled Monuments;
- landscape attributes and features essential to local landscape character;
- landscape features of major importance for wild flora and fauna that are essential for migration, dispersal and genetic exchange and which encourage the protection, conservation and expansion of the general ecological fabric (i.e. habitat networks, wildlife corridors, stepping stones, sites, etc.);
- soil resources, including best and most versatile agricultural land
- veteran and other substantial trees, hedgerows and woodlands;
- lakes, tarns and rivers;
- undeveloped coast;
- locally listed archaeological sites, monuments and buildings.

## **Strategy and development principles**

- 8.22 Both national and European legislation place duties on the County Council to protect and enhance the environment, which need to be reflected in this Plan. In the context of minerals and waste management developments, it is vital that people's quality of life and the other environmental assets and their settings are protected; policies are needed that attach appropriate levels of protection to them. Government revoked the North West Regional Spatial Strategy (RSS) in April 2013. Its former Policy EM1 – 'Integrated enhancement and protection of the Region's environmental assets', set out details on how environmental assets in the North West of England should be identified, protected, enhanced and managed, with particular regard to (A) landscape, (B) the natural environment, (C) the historic environment and (D) trees, woodlands and forests. This valuable policy sought a "step change" to

increase the North West's biodiversity resources. It has, therefore, been necessary to consider how the revoked policy should be reflected in this Local Plan.

- 8.23 The spatial objectives and priorities of the former policy fall within the responsibility of the District Councils and will mainly be delivered through their Local Plans, which have a wider remit than this Minerals & Waste Local Plan. However, aspects of the policy that relate to conserving and enhancing areas, sites, features and species are relevant to this Plan.

### **Opportunities**

- 8.24 Cumbria is already favoured with an exceptionally high quality natural environment. Nevertheless, there are still many opportunities for enhancing, expanding and linking wildlife sites and enhancing the general ecological fabric. This is recognised in the identification of the Morecambe Bay limestones and wetlands Nature Improvement Area (NIA)<sup>143</sup>, which is the only NIA that has been identified in the north of England.
- 8.25 Quarries and landfill sites can offer significant opportunities to deliver sustainability objectives. The Nature after Minerals<sup>144</sup> initiatives focus on former workings, but it is not just those that are important; some of the working quarries in Cumbria have demonstrated very successful enhancement of wildlife habitats. Several active quarries are particularly important as habitats for great crested newts and botanically rich vegetation has naturally regenerated on some of the limestone quarry waste tips. Successful maintenance and further enhancement of some of these habitats is much easier and more likely to happen whilst a quarry is working than when it is closed.
- 8.26 The restoration schemes for quarries and landfill sites can also provide significant opportunities to deliver benefits to ecosystem services. For example, native woodland creation can provide habitat or food for wildlife, it can boost carbon storage, it can lessen soil erosion or the washing of gravel into streams, which in turn may improve water quality and wildlife.
- 8.27 A study<sup>145</sup> was carried out by Cranfield University, supported by the Mineral Products Association and Nature After Minerals, which researched an ecosystem services approach to quarry restoration. The report shows how such an approach could offer a systematic framework to enhance, structure and communicate the benefits that restored land provides to society. The report makes recommendations to the mineral industry that would further these aims; it would be useful to consider the lessons from the study when in dialogue with quarry operators regarding sustainable restoration schemes.

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<sup>143</sup> <http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/funding/nia/projects/morecambebay.aspx>

<sup>144</sup> Evidence Base document reference LD48 and <http://www.afterminerals.com/index.aspx>

<sup>145</sup> Introducing an ecosystem services approach to quarry restoration, Helen King, Cranfield University, 2013

## **Planning policy**

- 8.28 The National Planning Policy Framework requires local planning authorities to plan for biodiversity at a landscape scale, across local authority boundaries, and to set criteria based policies against which proposals for any development on or affecting protected wildlife or geodiversity sites or landscape areas will be judged. The NPPF also requires that the planning system recognises the wider benefits of ecosystem services<sup>146</sup>.
- 8.29 Local planning authorities should work with Local Nature Partnerships (LNPs) in ensuring that policies and decisions are based on up-to date data relating to assets and ecological networks. In Cumbria, the three existing LNPs are 'Cumbria', 'Morecambe Bay' and the 'Northern Upland Chain'.
- 8.30 Distinctions are required to be made between the hierarchy of international, national and locally designated sites. This is 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.
- 8.31 For the historic environment, local planning authorities are required to set out in Local Plans a positive strategy for the conservation and enjoyment of the historic environment. This requirement is relevant to this Plan, but is most directly relevant to District plans.
- 8.32 The scale of the minerals and the waste management developments, that are likely to be needed or proposed in Cumbria, is relatively small. It should be possible in most cases to avoid major adverse impacts on environmental assets and to focus on enhancement. There may be exceptions with some minerals, where the geological resource is a major contributing factor to the environmental interest. The Habitats Regulations Assessment identifies potentially sensitive locations in relation to Local Plan policies.

## **Policy approach**

- 8.33 The policy approach in SP14 is not only that development should not result in significant harm to Cumbria's environmental assets, but also that development incorporates the enhancement measures to secure a 'step-change' increase in biodiversity resources that were in RSS Policy EM1(B). The policy also incorporates measures relating to green infrastructure that were in revoked RSS Policy EM3. Green infrastructure is defined as the network of green and blue spaces that lies between cities, towns and villages and which provides multiple social, economic and environmental benefits.
- 8.34 If a particular proposal cannot reasonably be located on any alternative sites, that would result in less or no harm, adequate mitigation measures should be put in place before development is started. Where significant harm to biodiversity and geological interests cannot be prevented, or adequately mitigated against, appropriate compensation measures will be sought.
- 8.35 If significant harm cannot be prevented, adequately mitigated against or compensated for, then planning permission will be refused. The

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<sup>146</sup> NPPF, paragraph 109

environmental assets include the normal residential and workplace amenities for quality of life and those areas and features listed in Boxes 8.1 and 8.2.

- 8.36 Having taken account of the above matters, the focus of this Plan's policy, in addition to protection, will be to maintain and enhance landscape character, the historic environment, biodiversity and geological conservation interests.

#### **POLICY SP14 Environmental assets**

Minerals and waste management developments, including restoration and afteruse, should aim to:

- protect, maintain and enhance people's overall quality of life and the natural, historic and other distinctive features that contribute to the environment of Cumbria and to the character of its landscapes and places;
- improve the settings of these features;
- improve the linkages between these features and buffer zones around them, where this is appropriate;
- realise the opportunities for expanding and increasing environmental resources, including adapting and mitigating for climate change;
- help to secure a 'step-change' increase in biodiversity resources by protecting, enhancing, expanding and linking areas for wildlife within and between the locations of highest biodiversity resources and encouraging the conservation and expansion of the ecological fabric elsewhere;
- help to create new green infrastructure, and to conserve and manage where it is existing, and enhance its functionality, quality, connectivity and accessibility.

There are national policies for areas and features that are identified to be of international or national importance, as set out below.

#### **Areas of Outstanding Natural Beauty**

Major developments in these designated areas will only be granted planning permission in exceptional circumstances and where it can be demonstrated that they are in the public interest, in accordance with paragraph 116 of the National Planning Policy Framework.

#### **Ramsar and European Wildlife Sites**

Planning permission will be granted only if Habitats Regulations Assessment can determine that a proposal will not have an adverse effect on the integrity of the Site. The only exceptions are where there are no alternative solutions that would have no (or a lesser) effect, or that there are imperative reasons of overriding public interest, in accordance with paragraphs 25 to 32 of ODPM Circular 06/2005 (Defra Circular 01/2005).

In accordance with NPPF paragraph 118, this policy also applies to potential Special Protection Areas, possible Special Areas of Conservation and proposed Ramsar sites where the Government has initiated the relevant public consultation, and for sites identified, or required, as compensatory measures for adverse effects on European or Ramsar Sites, including the potential,

possible or proposed ones.

### **Sites of Special Scientific Interest (SSSI)**

In accordance with paragraphs 56 to 73 of ODPM Circular 06/2005, and the general and overarching duty placed on local planning authorities, to take reasonable steps to further the conservation and enhancement of the features for which sites are of special interest:-

- Planning permission will not normally be granted for development within or outside an SSSI, which is likely to have an adverse effect on it, individually or in combination with other development.
- Exceptions will only be made where the benefits of the development, at the proposed site, clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of SSSIs.

### **Environmental assets not protected by national or European legislation**

Where not otherwise protected by national or European legislation, great weight will be given to conserving habitats of principal importance, ancient woodlands and veteran trees outside of ancient woodlands. In accordance with NPPF paragraph 118, planning permission will be refused for development resulting in the loss or deterioration of such irreplaceable habitats unless the need for, and benefits of, the development in that location clearly outweigh the loss.

Planning permission will not be granted for development that would have an unacceptable impact on the environmental assets, on its own or in combination with other developments, unless it is demonstrated that:-

- there is an overriding need for the development, and
- it cannot reasonably be located on any alternative site that would result in less or no harm, and then,
- the effects can be adequately mitigated, or if not,
- the effects can be adequately and realistically compensated for through offsetting actions.

All proposals would also be expected to demonstrate that they include reasonable measures to secure the opportunities that they present for enhancing Cumbria's environmental assets.

Information on environmental assets and guidance on implementing parts of this policy are provided by the Landscape Character Toolkit, the Guide to using the Cumbria Historic Landscape Character database, the Cumbria Biodiversity Evidence Base and the Cumbria Historic Environment Record.

## 9. RESTORATION AND AFTERUSE

- 9.1 Restoration and aftercare schemes for mineral working and waste management sites, such as landfills, provide opportunities to secure the increase in biodiversity resources that is required by policy SP14. Such schemes should help to deliver Biodiversity Framework (Action Plan) objectives; should take account of the key habitats and species lists; the Cumbria Landscape Character Toolkit; functional ecological networks and of associated guidance. The ecological frameworks and networks will be developed in District Local Plans.
- 9.2 In addition to biodiversity, there can be other important restoration objectives, such as landscape enhancement, flood risk mitigation and reinstatement of Best and Most Versatile agricultural land. There may also be opportunities where built development is an appropriate and practicable afteruse, which can deliver social and economic benefits. Policy SP15 contains a non-exhaustive list of issues to be considered in restoration, afteruse and aftercare schemes.
- 9.3 Appropriate and thorough restoration may also be needed for some sites to secure the phased restoration of large sites, to address land contamination and secure land stability and to reduce future liability for public safety arising from previous mineral and waste developments. When formulating restoration and aftercare schemes, cross reference should be made to policy SP12 Climate change mitigation and adaptation and to policy SP14 Environmental assets.

### **POLICY SP15 Restoration and afteruse**

Restoration, afteruse and aftercare schemes for mineral working and waste management sites should demonstrate that best practicable measures have been taken to secure full advantage of their potential to help deliver the sustainability objectives of this Plan. This should include consideration of the potential for biodiversity and landscape enhancement, flood risk mitigation and water quality, maintaining agricultural land quality, ameliorating contaminated land and securing land stability.

## **10. PLANNING OBLIGATIONS AND COMMUNITY INFRASTRUCTURE LEVY**

- 10.1 Section 106 of the Town and Country Planning Act 1990 makes provision for local planning authorities and developers to enter into planning obligations or undertakings. Their purpose is to secure measures to mitigate the impacts of proposed development which cannot be secured through conditions on a planning permission. The statutory test for a planning obligation is that it can only constitute a reason for granting planning permission if it is:-
- a) necessary to make the development acceptable in planning terms;
  - b) directly related to the development; and
  - c) fairly and reasonably related in scale and kind to the development.
- 10.2 This test is set out in Regulation 122 of the Community Infrastructure Regulations 2010 and is repeated in National Planning Policy Framework paragraph 204. From April 2014, restrictions have also been placed on the local use of planning obligations for pooled contributions towards items that may be funded via the Community Infrastructure Levy (Regulation 123). In some instances, this could impact on the ability to seek planning obligations where five or more schemes are contributing to an infrastructure project or type of infrastructure.
- 10.3 The Community Infrastructure Levy (CIL) came into force in April 2010. It allows local authorities in England and Wales to raise funds from developers undertaking new building projects in their area through a standard charging schedule. The role of CIL is to secure contributions to fund strategic infrastructure that is needed to support the growth of an area.
- 10.4 The responsibility for developing a CIL is a discretionary one and it lies with the District Councils and not with the County Council. It is anticipated that CIL will have limited direct application to most minerals and waste management developments, but there may be overlaps between the types of infrastructure to be funded by the Levy and those required in connection with minerals and waste developments. Examples of the strategic infrastructure and improvements that could be deliverable include road schemes, green infrastructure and flood defence schemes. Where a piece of infrastructure is secured through CIL, a section 106 will not be used for this mitigation measure.
- 10.5 Notwithstanding the emergence of CIL, planning obligations are likely to continue to have an important role in mitigating adverse impacts of minerals and waste management developments.
- 10.6 Previously, the Local Plan contained both a Strategic and a Development Control policy concerning planning obligations. It was considered that a single policy would provide greater clarity, so they have been combined into one policy, SP16.

## **POLICY SP16 Section 106 planning obligations**

Where it is not possible to achieve the necessary control or outcome through the use of planning conditions, the County Council will require appropriate mitigation to be secured through Section 106 planning obligations that ensure that development proposals:-

1. Secure long term management of relevant environmental assets.
2. Provide financial guarantees, including with parent companies, where appropriate for restoration works, except where a national industry guarantee fund will remain in place.
3. Provide necessary infrastructure such as highway and transport improvements, flood and surface water management schemes and green infrastructure.

Where planning obligations or legal agreements are required in order to achieve the necessary control of a development, provision for the following may be included in a planning obligation:

- a. highways and access improvements;
- b. traffic management measures;
- c. the undertaking of landscape improvements;
- d. the implementation of long term monitoring, mitigation and enhancement measures for environmental assets, before, during and after development;
- e. the provision for archaeological investigation, analysis, reporting, publication and archive deposition;
- f. the long term restoration and afteruse of sites (including financial guarantees to ensure restoration and long term maintenance is undertaken);
- g. the provision of, maintenance of, and improvements to the public rights of way network;
- h. the long term management of, and public access to, sites restored for amenity purposes;
- i. the off-site monitoring of watercourses, groundwater levels and water supply abstractions;
- j. the provision of facilities to compensate local communities for the loss of amenity; or
- k. any other improvements deemed necessary by Cumbria County Council.

## **11. MONITORING AND ENFORCING PLANNING CONTROL**

- 11.1 The purpose of monitoring and enforcing planning control is to protect people, the environment, the public interest, transport systems and the amenity of the area. The service of formal enforcement notices is a discretionary function, which will only be exercised when it is for the above purposes; it is not to punish offenders for the sake of doing so.
- 11.2 The principal planning enforcement effort of the Authority is directed towards avoiding infringements through proactive monitoring. It is, nevertheless, inevitable that breaches and offences will occur and the purpose of this policy is to ensure that they are resolved in a consistent, transparent, proportionate and fair manner. Where unauthorised development or breach of conditions occur, the County Council will seek to remedy the injury in the first instance by negotiation and persuasion. This may include inviting retrospective planning applications, in appropriate circumstances.
- 11.3 It is not uncommon for persons committing planning breaches to give assurances of ceasing activities or carrying out remedial works within reasonable timescales, but thereafter fail to comply with the agreed timescale. In all negotiations and decisions to resolve planning breaches within a particular timescale, or for a planning application to be submitted, the Authority will have regard to a person's history of compliance or otherwise with planning legislation and any previous informal agreements, without reasonable excuse. As a general rule, very little weight will be given to assurances made by persons who have previously given assurances of compliance, but subsequently have failed to carry out those assurances.

### **POLICY SP17 Monitoring and enforcing planning control**

The County Council, in exercising its function of ensuring compliance with planning control, will:

1. where there is serious harm caused to amenity or potentially irreparable harm to the environment, take practicable immediate action against a breach of planning control to stop further damage;
2. in all other instances, seek to resolve any problems within a reasonable timescale by discussion and negotiation without the need to resort to legal action;
3. only take enforcement action where it is necessary to do so to protect people, the environment, the public interest, transport systems and the amenity of the area, in accordance with the provisions of the development plan;
4. ensure that action is always commensurate with the breach of planning control;
5. give due regard to current legislation, policy framework, instructions, appeal decisions and relevant judicial authority;
6. take account of comments made by the general public and consultees;
7. enable sustainable development to take place, even though it may initially have been unauthorised;

8. maintain the integrity of sites having interests of acknowledged historical or environmental importance and their surroundings;
9. where appropriate, maintain liaison and contact with the general public, and mineral and waste management operators;
10. where a planning application is submitted to address a breach of planning control, only take formal enforcement action in exceptional circumstances, until such time as the application has been determined.