Planning and Compulsory Purchase Act 2004
Town and Country Planning (Local Planning) (England) Regulations 2012

HABITATS REGULATIONS ASSESSMENT

Draft Cumbria Minerals and Waste Local Plan 2014 to 2029

STRATEGIC POLICIES, DEVELOPMENT CONTROL POLICIES, SITE ALLOCATIONS POLICIES AND POLICIES MAP

REGULATION 18 CONSULTATION

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CONTENTS

Summary and conclusions……..…1

1. The need for Habitats Regulations Assessment……..3
2. The Strategic Policies……...8
3. The Development Control Policies……..….13
4. The Site Allocations Policies……..16
5. Assessments of the proposed sites…….……20

Appendices

1. The types of waste management facilities……..….70
2. The location of sites in relation to European Wildlife Sites……..73
3. The conservation objectives of the European Wildlife Sites……....75

Maps of the European Wildlife Sites and locations of proposed sites……..104

SUMMARY AND CONCLUSIONS

This is a Habitats Regulations Assessment of the broad locations and sites that Cumbria County Council is proposing for waste management facilities, Preferred Areas and Areas of Search for extending quarries or other mineral workings and for safeguarding potential and existing rail facilities and wharves.

The conclusion of the Assessment is that the Cumbria Minerals and Waste Local Plan Policies will not adversely affect the integrity of any European Wildlife Site. At the stage when detailed development proposals are being considered, it is concluded that fourteen of the proposed sites are likely to require 'appropriate assessment'. This would be to assess the mitigation measures that could be needed to ensure that they do not adversely affect the integrity of a European Wildlife Site (EWS). However, none of the mitigations that are considered likely to be needed, set out in planning permission conditions or in Environment Agency permits, would involve measures that are not common practice.

The assessment adopts the precautionary approach. It uses existing information and is at a higher level than would be required for planning application proposals. A consequence is that it identifies more sites in the Plan, as being likely to have impacts on a European site, than subsequent assessments will, when details of specific proposals are known.

The main points to be drawn from the assessment are considered to be that:-

- none of the sites identified in the Plan are within a European Wildlife Site, therefore, none of them would result in direct on-site loss of habitat;
- where it seems likely that development of a proposed site could affect a European Wildlife Site, the measures that could be required, to mitigate the effects, would commonly be requirements of planning permissions, or of Environment Agency permits, for the developments that are proposed;
- none of the mitigation measures would involve scientific uncertainty about their effectiveness;
- most of the mitigation would involve 'avoidance' or 'cancellation' measures to eliminate the likelihood of effects on a European site or to cancel them out before they are felt;
- where the mitigation could be considered to involve 'reduction' measures to reduce the significance of any adverse effects, or make them unlikely to occur, other developments, which could lead to cumulative effects, have been identified;
- cumulative effects from other developments have been considered for all sites identified in the Plan;
- compensatory measures have not been taken into account in assessing the likelihood of adverse significant effects.

Maps of the sites are included with the assessments of the sites. The distances of the sites from the Special Area of Conservation and/or Special Protection Area/Ramsar that is/are relevant for them are shown in the table in Appendix 2. Maps showing the locations of the sites in relation to the European Wildlife Sites are included at the end of this report.

The sites have been assessed against the relevant conservation objectives of these European Sites. The conservation objectives are those published by Natural England[1]. These are set out in Appendix 3. The relevant objectives are those that relate to the reasons that the European Site has been designated. In making the assessments, consideration has also been taken of the conservation objectives for the SSSI that fall within the European Sites. Furthermore, because of their location, some sites have had to be assessed against more than one European Site.

[1] http://publications.naturalengland.org.uk/category/4582026845880320

CONCLUSIONS OF ASSESSMENT

Site		Type of development	Effect on European Wildlife Site if no mitigation
AL3	Oldside, Workington	Waste treatment and management	Likely effect
AL8	Lillyhall waste management centre, Workington	Waste treatment and management	No
AL18	Port of Workington	Waste treatment and management	Likely effect
AL18	Port of Workington	Rail sidings and wharves	N/A
AL32	Siddick, Workington	Railhead	No
AL37	Lillyhall Industrial Estate, Workington	Household Waste Recycling Centre	No
AL38	Innovia, Wigton	Rail sidings	N/A
AL39	Silloth Port	Wharves	N/A
M6	Overby and High House Quarries, Abbeytown	Quarrying	Likely effect
M24	Derwent Howe slag bank, Workington	Quarrying	Likely effect
BA26	Barrow Port	Rail sidings and wharves	N/A
M5	High Greenscoe Quarry, Barrow	Quarrying	No
M12	Roosecote Quarry extension, Barrow	Quarrying	No
CA11	Willowholme, Carlisle	Waste treatment and management	Likely effect
CA30	Kingmoor Road recycling centre	Waste treatment and management	Likely effect
CA31	Kingmoor Park East, Carlisle	Waste treatment and management	Likely effect
M8	Cardewmires Quarry, Dalston	Quarrying	No
M10	Silvertop Quarry, Brampton	Quarrying	No
M34	Kingmoor rail sidings	Rail sidings	N/A
CO11	Bridge End, Egremont	Waste treatment and management	Likely effect
CO32	Land adjacent to Sellafield	LLW and VLLW	Likely effect
CO35	Low Level Waste Repository	LLW	Likely effect
CO35	Low Level Waste Repository	Rail sidings	N/A
CO36	Sellafield	LLW and VLLW	Likely effect
CO36	Sellafield	Rail sidings	N/A
M15	Peel Place Quarry, Gosforth	Quarrying	No
M17	Ghyll Scaur Quarry, Millom	Quarrying	No
M31	Salthouse, Millom	Railhead	Likely effect
ED31	Flusco, Penrith	Waste treatment and management	No
M18	Stamphill, Long Marton	Gypsum mine	Likely effect
M35	Shap Beck Quarry	Rail sidings	N/A
M36	Shapfell Quarry	Rail sidings	N/A
M37	Shap Blue Quarry	Rail sidings	N/A
M38	Kirkby Thore plasterboard works	Rail sidings	N/A
SL1	Kendal Fell Quarry	Household Waste Recycling Centre	No
M14	Kirkby Slate Quarry	Quarrying	Likely effect
M16	Holmescales Quarry	Quarrying	No
M30	Roan Edge Quarry, New Hutton	Quarrying	No

1. The need for Habitats Regulations Assessment

1.1 The wildlife areas that are given the greatest level of protection from the impacts of development, by international and national legislation, are those that have been formally identified as European Wildlife Sites (EWS). These are designated as Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). Collectively, the SACs and SPAs form part of a European network of protected areas known as Natura 2000. Some of the SPAs were listed earlier under the Convention on Wetlands of International Importance; these are known as Ramsar sites.

1.2 As a matter of policy, the Government applies similar procedures in respect of Ramsar sites, candidate SACs and potential SPAs, even though these are not European sites as a matter of law.

1.3 All land use plans require Habitats Regulations Assessment in accordance with the Habitats Directive 92/43/EEC, enacted in the UK through the Conservation of Habitats and Species Regulations 2010. This is to identify any negative effects that they are likely to have on a European nature conservation site in view of its conservation objectives, either alone or in combination with other plans or projects *(Regulation 61).*

1.4 Assessments are required to consider whether the plan would be likely to have a significant effect on any European site. The European Court has held that this means that the risk of the effect occurring cannot be ruled out on the basis of objective information. A significant effect is one that could potentially undermine the site's conservation objectives.

The Minerals and Waste Local Plan (MWLP)

1.5 From 2004 to 2012, the development plan system required Local Authorities to produce a Local Development Framework; in Cumbria's case, this was the Minerals and Waste Development Framework (MWDF). This comprised a folder of local development documents, and its policies sat under the umbrella of national and regional policies. The Cumbria Minerals and Waste Development Framework Core Strategy that was adopted in 2009, under this system, set out the spatial vision and the strategic objectives and policies. It identified the European Wildlife Sites and showed them on the Key Diagram. The Generic Development Control Policies, also adopted in 2009, set out the policies to be used when planning applications were being considered. The draft MWDF Site Allocations Policies had been consulted upon between 2009 and 2012.

1.6 A new planning policy system came into force in April 2012, under which the Local Development Frameworks were replaced by Local Plans. The new Cumbria Minerals and Waste Local Plan is a single document with three parts – the Strategic Policies, the Development Control Policies and the Site Allocation Policies together with a Policies Map.

Assessment methodology

1.7 The County Council's Geographic Information System (GIS) has been used to display all the European Wildlife Sites (EWS) and all the specific site allocations in order to identify any EWSs that may be affected by the Local Plan policies.

Looking within a radius of 2km from each Local Plan site, account has also been taken of pathways from a site to an EWS. Examples of such pathways include river systems or feeding/loafing/nesting areas for birds outside an EWS, which could affect an EWS's designating features (the receptors). The broad locations for developments set out in the policies were not part of the assessment; this is because an assessment can only be carried out when a definite site for a proposed development has been defined. For each EWS, it was necessary to examine and understand their conservation objectives and their qualifying features.

1.8 The conservation objectives used in this assessment are those published by Natural England on their website[2]. These are written and updated by Natural England, and define the desired state for each site in terms of the features for which it has been designated. When these features are being managed in a way that maintains their nature conservation value, then they are said to be in 'favourable condition'. Standards for favourable condition are defined and listed in a table within the conservation objectives, with particular reference to the specific designated features.

1.9 It was necessary to consider whether the Local Plan policies, especially those that identify specific sites, would be likely to have a significant effect on any habitats or species (interest features) of each EWS; this is termed the Assessment of Significant Likely Effect. Likely effects may be direct or indirect. In this context 'likely' means probably, not merely a possibility, and 'significant' means not trivial, but an effect that is potentially relevant to the site's conservation objectives. This screening involved estimating the nature, magnitude, duration, location and spatial extent of effects, as far as they could be reasonably predicted at this stage.

1.10 It was also necessary to consider whether the Local Plan policies are likely to have a significant effect in combination with other projects and plans, directly or indirectly. For example, could land allocation proposals in Cumbria's District Local Plans, plus any County-level minerals and waste proposals, have a cumulative effect an EWS.

1.11 The assessment recorded a) those policies and proposals that will have no effect, b) where significant effects are likely or c) where it is uncertain that there would be significant effects on any EWS. If there is any doubt as to whether a European site may be affected, a precautionary approach has been adopted. The reason for each consideration is specified in tables 2.1, 3.1 and 4.1 (with regard to the Local Plan policies) and also in chapter 5 of this document (with regard to the specific Local Plan sites identified).

1.12 For those EWSs where it was not possible to conclude, at this stage, that there would be no likely significant effect, then the assessment has to be taken to the next step and a more detailed Appropriate Assessment carried out. The Appropriate Assessment assessed whether avoidance or mitigation measures could be proposed to avoid or reduce the effects of implementing the Local Plan policies.

[2] http://publications.naturalengland.org.uk/category/4582026845880320

1.13 Avoidance measures would be designed to eliminate the likelihood of any effects on an EWS; mitigation measures would be designed to reduce likely significant effects, perhaps to a level that is insignificant or in a way that makes them unlikely to occur. The Appropriate Assessment also considered whether any possible adverse effect on the integrity of any EWS could be avoided by changes to the Local Plan, such as an alternative policy or site.

1.14 Having carried out the screening and the Appropriate Assessment, the Habitats Regulations Assessment concluded that the Local Plan policies and any specific sites identified within them, would:

- ensure there is no adverse impact on the integrity of any European Site, or
- identify whether the proposal can be changed to avoid the impacts, or
- determine that the proposal is unacceptable.

1.15 This Habitats Regulations Assessment does not include land that the Council is proposing should be identified as Mineral Safeguarding Areas (MSA). This is because Mineral Safeguarding Areas do not imply that a mineral is likely to be worked, they show the extent of geological resources and these are sometimes within European Wildlife Sites. A Mineral Safeguarding Area is only an indication that the presence of the mineral should be taken into account when decisions are made about other forms of development. The guidance on identifying Mineral Safeguarding Areas is that environmental designations should not be used to define their boundaries[3]. One exception to this rule, is that site M24 Derwent Howe slag bank, which is identified as a Mineral Safeguarding Area for secondary aggregates, has been assessed under the Habitats Regulations. This is because the slag bank is a small, known, finite resource.

1.16 Habitats Regulations Assessment is particularly relevant for this Plan because Cumbria has so many, and such extensive, European Wildlife Sites, both within and adjacent to its boundaries. The fundamental principle of protecting European Wildlife Sites has been embedded in the MWLP from the start. Any development that would adversely affect the integrity of a European Wildlife Site, directly or indirectly, would not be in accordance with national policies or the Local Plan's Strategic Policies.

1.17 The main consideration for the Local Plan Policies is that they should not cause any detriment to the habitats and species for which EWSs are designated. They should also not cause harm to habitats and species outside a designated EWS that may adversely affect its integrity, or cause a significant decline in the size, distribution, structure or function of a population of a species for which the EWS was designated. Features outside an EWS may be ones upon which species, such as birds or fish, may depend or areas within which developments may be likely to have impacts on it, for example through impacts on water resources.

Potential effects

1.18 Mineral workings and waste management developments have the potential to affect European Sites in a range of ways, both positive and negative:-

[3] British Geological Survey – "Mineral Safeguarding in England: good practice guide" 2011

- causing habitat loss, fragmentation or damage, within or adjacent to the European Wildlife Site;
- creating additional habitats and linkages and enhancing existing ones;
- pollution, including water and air quality;
- changes to hydrology/hydrogeology (e.g. dewatering, lowering water tables, increasing runoff, silting, creating additional wetland features);
- disturbing mobile species such as fish and birds (e.g. migratory routes, flight lines, and for feeding, loafing, nesting and over wintering).

1.19 These effects could take place during the construction, operation or restoration phases of a development. In addition to national policies, the MWLP Strategic Policies require that these developments protect, maintain and enhance the overall quality of natural features, improve their settings, linkages and buffer zones around them, where this is appropriate, and realise the opportunities for expanding and increasing environmental resources.

1.20 In accordance with the Local Plan policies, the typical mitigation measures that would be required by planning permissions could include:-

- adequate drainage systems and settlement ponds to avoid run-off into sensitive areas and prevent accidental discharges;
- limits on noise levels;
- limits on quarry blasting;
- dust and litter control schemes;
- restrictions on lighting;
- screening;
- landscaping; and
- the timing of construction and restoration works to avoid bird breeding and nesting seasons.

1.21 With regard to air quality, the pollutants that are most relevant to biodiversity assets are dust, oxides of nitrogen, ammonia, sulphur dioxide and low-level ozone. None of the European Wildlife Sites, that are relevant to these policies, are identified as being near the critical limits for these pollutants in the UK Air Pollution Information System.[4]

1.22 Natural England's advice is that the Assessments for Local Plans can only be concerned with locally emitted and short range, locally acting pollutants. In addition to vehicles, the potential sources of the pollutants would be dust raised by landfill and quarrying operations and the stack emissions from Energy from Waste plants, landfill gas powered generators or flares and Mechanical and Biological Treatment plants.

1.23 Emissions from stacks are tightly controlled by the Environment Agency and dust control measures are normal requirements of planning permissions.

[4] www.apis.ac.uk

1.24 It is unlikely that grid infrastructure improvements, on a scale that would require Habitats Regulations Assessment themselves, would be needed for any of the sites put forward for energy generating facilities.

1.25 Examples of recent planning permissions for developments in close proximity to European Wildlife Sites are the redevelopment and extension of the Ormsgill Yard Household Waste Recycling Centre at Barrow-in-Furness and the temporary rail loading facility for Ghyll Scaur Quarry at Salthouse, near Millom. The mitigation measures included in the planning application proposals were regarded as satisfactory by Natural England.

1.26 Cumulative effects with other proposals or developments may also have impacts across a wider area than the environs of the development site itself. In accordance with the requirements of legislation and national policies, these effects have been taken into account. The Cumbria District Councils are in the process of revising their development plans. Some have adopted a Local Development Framework development plan document, others are preparing District Local Plans. At this point in time, it has been assessed that there are no adverse cumulative impacts of the proposals in their Local Development Frameworks/Local Plans on the MWLP as discussed in Chapter 5 of this document.

1.27 In addition to the requirements of the European Habitats Directive, the relevant Strategic Policies reflect those of the Natural Environment and Rural Communities Act 2006. This places a duty on planning authorities to have regard to the purpose of conserving biodiversity. This includes restoring or enhancing a population or habitat.

2. THE STRATEGIC POLICIES

2.1 Within the Strategic Policies section of the Local Plan, the long term spatial vision that is set out (see Box 2.1 of the Local Plan) is consistent with the Habitats Regulations. It includes protecting, maintaining and enhancing Cumbria's environmental assets by, among other things, siting developments in appropriate locations. The Local Plan's overall strategy (see Box 2.2 of the Local Plan) includes two relevant bullet points:-

- 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.

2.2 The Local Plan's Strategic Objectives (see Box 2.3 of the Local Plan) take account of the UK Government's five guiding principles of sustainable development, as well as the planning system's roles in sustainable development, as set out in the National Planning Policy Framework (NPPF). Strategic Objectives 1, 8 and 9 are relevant to the European Sites and consistent with the Habitats Regulations:-

- 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 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.

2.3 Chapter 8 of the Local Plan discusses its policy stance relating to Cumbria's environmental assets, including protecting, maintaining and enhancing wildlife sites. Within that chapter, Boxes 8.1 and 8.2 list those environmental assets that have been formally designated in accordance with European and national legislation, as well as others that are identified for their regional or local importance.

2.4 The text in Chapter 8 explains that the NPPF 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, geodiversity sites or landscape areas will be judged. Distinctions are required to be made between the hierarchy of internationally, nationally 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.

2.5 The Cumbria Minerals and Waste Local Plan recognises the importance of protecting environmental assets and a Strategic Policy on Environmental assets is included (see below).

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 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 only be granted 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, and that there are imperative reasons of over-riding 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 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.

Site 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 SSSI's.

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 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.

2.5 Although the Strategic Policies propose that additional waste management facilities should be built and that further areas will be identified for quarrying, the European Wildlife Sites cover less than 20% of the area of the county, so it is not inevitable that they would be affected by these new developments. The scale of the developments is also relatively small.

2.6 In support of the Habitats Regulations, Policy SP14 requires that if a development 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. It also requires that, where significant harm to biodiversity and geological interests cannot be prevented, or adequately mitigated against, appropriate compensation measures will be sought. If significant harm cannot be prevented, adequately mitigated against or compensated for, then planning permission will be refused.

2.7 The MWLP Strategic Policies do not propose specific sites for development because they comprise a high level strategy. They do, however, identify the waste capacity requirements over the Plan period for Cumbria and the broad locations and site location criteria for strategic waste management facilities (policy SP3); and specify strategic areas for some minerals (policy SP8). They also set out the strategic approach to planning for radioactive wastes (policies SP5 and SP6).

2.8 The strategic areas set out in policy SP8 are:

The **Kirkby Thore/Long Marton** area is identified as the location for further supplies of gypsum;

Land next to **High Greenscoe Quarry** is identified as the location for further supplies of mudstones;

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 **Homescales 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.

2.9 The Strategic Policies listed below, although based on sustainability and environmental considerations, do not specify locations, so are not directly relevant to this Habitats Regulations Assessment:

- SP1 Presumption in favour of sustainable development
- SP2 Provision for waste
- SP4 Use of best available technique
- SP5 Development criteria for low level radioactive wastes
- SP6 High and Intermediate Level radioactive waste treatment, management and storage
- SP7 Minerals provision and safeguarding
- SP9 Marine dredged aggregates
- SP10 Industrial limestones
- SP11 Peat
- SP12 Climate change mitigation and adaptation
- SP13 Economic benefit
- SP15 Restoration and afteruse

- SP16 Section 106 planning obligations and Community Infrastructure Levy
- SP17 Monitoring and enforcing planning control

2.10 The table below records those policies that it is considered will have no effect, where significant effects are likely or whether it is uncertain that there would be significant effects on any EWS.

Table 2.1 Habitats Regulations Assessment of the Strategic Policies

Effects on European Site	**SP Policies**	**Comments**
Reason why policy will have no effect on a European Site		
1. It will not itself lead to development	1, 12, 13, 15, 16, 17	
2. The location of the development would be determined in the Site Allocations Policies	2, 3, 8, 10	
3. The policy is intended to protect wildlife assets and will help to steer development away from a European Site and associated sensitive areas	11, 14	None of the policies can relate directly to European Sites because this would simply repeat national policy.
4. It would concentrate development in an existing site away from European Sites and associated sensitive areas	None	
Reason why policy could have an effect		
5. It may encourage new developments in an area that includes a European Site or where development may indirectly affect one	5, 6, 7, 9	With regard to Policy 5, the Repository that adjoins the Drigg Coast SAC has been identified for continued Low Level Waste storage/disposal. Safeguarding sites identified in accordance with Policy 7 could include such areas. Developments related to landing and distributing marine dredged aggregates are likely to be on the coast and could affect European Sites. With regard to the Liverpool Bay SPA, it is not considered that Policy 9 would encourage dredging in that area or that any sand dredged there would be landed in Cumbria.
6. Development which by reason of its scale and complexity would need to be Assessed	None	The Local Plan does not envisage developments of this scale.
Reason why policy would be likely to have a significant effect	None	

3. THE DEVELOPMENT CONTROL POLICIES

3.1 The Development Control Policies must conform to the Strategic Policies and help to deliver those policies, the vision, the overall strategy and the strategic objectives. The Development Control Policies are used when planning applications are considered; they provide the detailed criteria needed to control and manage minerals and waste developments relating to, for example, environmental impacts.

3.2 Within the Development Control Policies section of the Local Plan, chapter 13 sets out the policies for protecting the environment and communities, whilst enabling appropriate and essential minerals and waste management developments where they are needed. The chapter sets out criteria to be used to decide when planning consent for different types of developments should be granted; contains guidance on what information might be required with a planning application; guidance on what conditions or limitations may be placed on a planning consent; and states where additional guidance can be found. The policies and text require that development will only be permitted when it can be demonstrated that it would not cause unacceptable impacts, including to environmental assets.

3.3 Policy DC6 in chapter 13 is concerned with cumulative environmental impacts. These can derive from a number of developments with similar impacts being operational at the same time in an area, or from a number of concurrent developments in an area with different impacts, or from a succession of similar developments over time. In some cases, a proposed development may itself have multiple environmental impacts that would be acceptable on their own, but which may exacerbate impacts caused by other developments. The policy below takes account of the extent to which a particular environment can reasonably be expected to tolerate such cumulative impacts; this may involve mitigation of impacts or the timing of permissions and phasing of operations to make a proposal acceptable.

- DC6 Cumulative environmental impacts - *the parts of the policy that are relevant to this HRA are:-*

"Cumulative impacts of minerals and waste development proposals will be assessed in the light of other land-uses in the area. Considerations will include:

b. all environmental aspects including habitats and species, visual impact, landscape character, cultural heritage, noise, air quality, ground and surface water resources and quality, agricultural resources and flood risk;

d. the type, size and numbers of vehicles generated, from site preparation to final restoration and their potential impacts on the transport network, safety and the environment."

3.4 Chapter 16 of the Local Plan goes into more detail with regard to Cumbria's environmental assets. It explains that the assets include, but are not confined to, the nationally and internationally designated areas and their settings. There are also the local designations and additional areas where the wildlife habitats and species are highly valued.

3.5 The most directly relevant of the Development Control Policies to the Habitats Regulations Assessment is Policy DC16 (see below). This policy derives from Strategic Policy 14 and its supporting text, but includes more detailed policy criteria for local biodiversity and geodiversity resources, including County Wildlife Sites and Local Nature Reserves.

Policy DC16 Biodiversity and geodiversity

Proposals for minerals and waste developments, including ones for the renewal of existing planning permissions, will be required to identify:-

- their likely impacts on important biodiversity and geological conservation assets, as defined in the Strategic Policies and on functional ecological and green infrastructure networks, and
- their potential to enhance, restore or add to these resources, and
- to contribute to national and local biodiversity and geodiversity objectives and targets.

Proposals for developments within, or affecting the features or settings of such resources, should demonstrate that:-

a. the need for, and benefits of, the development and the reasons for locating the development in its proposed location and alternatives, have been considered;
b. appropriate measures to mitigate any adverse effects (direct, indirect and cumulative) have been identified and secured, and advantage has been taken of opportunities to incorporate beneficial biodiversity and geological conservation features; or
c. where adverse impacts cannot be avoided or mitigated for, that appropriate compensatory measures have been identified and secured; and
d. that all mitigation, enhancement or compensatory measures are compatible with the characteristics of, and features within, Cumbria.

3.6 Policy DC16 highlights the need not only to avoid significant harm to environmental assets, but also to enhance them where possible. This is reflected in the order in which criteria will be considered. Where harm cannot be avoided or mitigated for, compensatory measures must be provided, and these will need to be well considered and designed, with provision for long term management, where appropriate.

3.7 Developers are advised that ecological surveys are usually needed to establish whether protected species are present on prospective minerals and waste sites. Early attention needs to be given to these, as some surveys can only be done effectively at certain times of the year. Planning applications may not be able to be considered without the survey information and a criminal offence may be involved if harm is caused to the species or their habitat.

3.8 Development Control policy DC9 identifies the type of locations that may be appropriate for different types of waste management facilities. Development Control policy DC10 sets out the criteria for landfill and landraise sites. Policy DC11 sets out the criteria for proposals to use inert waste for agricultural improvement and policy DC12 the criteria for non-energy minerals developments.

3.9 The Development Control Policies listed below, although based on sustainability and environmental considerations, do not specify locations, so are not directly relevant to this Habitats Regulations Assessment:

- DC1 Traffic and transport
- DC2 General criteria
- DC3 Noise
- DC4 Quarry blasting
- DC5 Dust
- DC7 Energy from Waste
- DC8 Renewable energy use on minerals and waste sites
- DC13 Criteria for energy minerals
- DC14 Review of minerals permissions
- DC15 Minerals safeguarding
- DC17 Historic environment
- DC18 Landscape and visual impact
- DC19 Flood risk
- DC20 The water environment
- DC21 Protection of soil resources
- DC22 Restoration and afteruse

3.10 The table below records those policies that it is considered will have no effect, where significant effects are likely or whether it is uncertain that there would be significant effects on any EWS.

Table 3.1 Habitats Regulations Assessment of Development Control Policies

Effects on European Site	**DC Policies**	**Comments**
Reason why policy will have no effect on a European Site		
1. It will not itself lead to development	1, 2, 3, 4, 5, 14, 17, 18, 19, 20, 21, 22	
2. The location of the development would be determined in the Site Allocations Policies	7, 9, 10, 12, 13	
3. The policy is intended to protect wildlife assets and will help to steer development away from a European Site and associated sensitive areas	8, 11, 16	None of the policies can relate directly to European Sites because this would simply repeat national policy.
4. It would protect wildlife assets from cumulative impacts	6	
Reason why policy could have an effect		
5. It may encourage new developments in an area that includes a European Site or where development may indirectly affect one	15	Safeguarding sites identified in accordance with Policy 15 could include such areas.
Reason why policy would be likely to have a significant effect	None	

4. THE SITE ALLOCATIONS POLICIES

4.1 The Site Allocations Policies propose more specific development, more easily highlighting those sites that could potentially have impacts on a European Wildlife Site. Direct impacts may be more probable for mineral workings because of geology. Minerals can only be worked where they occur and the same geology can, quite literally, be one of the underlying reasons why an area is important for wildlife. Waste management developments tend to be more flexible in their siting requirements.

4.2 The Site Allocations Policies derive from the Strategic Policies, the most relevant one for this Habitats Regulations Assessment is Strategic Policy 14 Environmental Assets. The Site Allocations Policies and the accompanying Policies Map have to identify the sites and areas of land that will be required to implement the Minerals and Waste Local Plan's Strategic Policies for working and safeguarding minerals and for managing wastes. The Site Allocations Policies list the types of sites and areas of land that need to be identified.

4.3 In accordance with Strategic Policy 3, two sites should be identified for replacement Household Waste Recycling Centres (HWRCs) and 8 sites of between 2 and 4ha for additional waste recycling and treatment facilities. No new non-inert landfill sites are required during the plan period.

4.4 For minerals, the Strategic Policies require: Preferred Areas and/or Areas of Search to be identified for sand and gravel, brickmaking mudstones, gypsum, crushed rock and high and very high specification roadstones, and safeguarding and consultation areas for other minerals, resources of secondary aggregates and existing and potential railheads and wharves.

4.5 The Preferred Areas are areas of known resources where planning permission might reasonably be anticipated, but should not be presumed. The Areas of Search are broader areas, where knowledge about mineral resources may be less certain, but within which planning permission could be granted to meet any shortfalls in supply. Proposals would be considered against adopted policies. Planning applications for either of these proposed developments may still require Environmental Impact Assessment.

4.6 The Site Allocation Policies are set out below; assessment of the sites together with maps follow. The different types of waste management facilities and processes are described in Appendix 1.

SITE ALLOCATIONS POLICY 1	
Household Waste Recycling Centres (HWRC) (sites of around 0.5 to 1.0 ha)	
AL37	**Lillyhall Industrial Estate to replace the HWRCs at Clay Flatts, Workington, and at Frizington**
SL1B	**land adjacent to Kendal Fell Quarry, to replace the HWRC at Canal Head**

SITE ALLOCATIONS POLICY 2
Waste treatment and management facilities (sites of around 2 to 4 hectares)
AL3 Oldside, Workington
AL8 Lillyhall waste treatment centre, Workington
AL18 Port of Workington
CA11 Willowholme, Carlisle
CA30 Kingmoor Road recycling centre, Carlisle
CA31 Kingsmoor Park East, Carlisle
CO11 Bridge End Industrial Estate, Egremont
ED31 Flusco waste management site, near Penrith

SITE ALLOCATIONS POLICY 3
Low level radioactive wastes (LLW) treatment, management, storage and disposal
Safeguarded sites
Sellafield/Windscale complex
Low Level Waste Repository
Studsvik metal processing complex
Lillyhall landfill
Higher activity LLW
CO35 Low Level Waste Repository, near Drigg
Lower Activity LLW
CO35 Low Level Waste Repository, near Drigg, excluding disposal within highly engineered containment facilities
CO36 land within Sellafield
CO32 land adjacent to Sellafield

SITE ALLOCATIONS POLICY 4
Areas for minerals
Preferred Areas
M18 Stamphill, Long Marton, for gypsum
M12 Roosecote sand and gravel quarry
Areas of Search
M5 land adjacent to High Greenscoe Quarry for brickmaking mudstones
M6 land between Overby and High House sand and gravel quarries
M8 land adjacent to Cardewmires sand and gravel quarry
M10 land adjacent to Silvertop limestone quarry
M14 land adjacent to Kirkby Slate Quarry
M15 land adjacent to Peel Place sand and gravel quarry
M16 land adjacent to Holmescales high specification roadstone quarry
M17 land adjacent to Ghyll Scaur very high specification roadstone quarry
M30 land adjacent to Roan Edge high specification roadstone quarry

SITE ALLOCATIONS POLICY 5	
Mineral Safeguarding Areas	
M24	**Derwent Howe slag bank, Workington** ***(a resource of secondary aggregates)***

SITE ALLOCATIONS POLICY 6	
Safeguarding of existing and potential railheads and wharves	
Existing railheads and wharves	
AL18	**Port of Workington and railhead**
AL38	**Innovia rail sidings, Wigton**
AL39	**Silloth Port**
BA26	**Barrow Port and rail sidings**
CO35	**Low Level Waste Repository rail spur, Drigg**
CO36	**Sellafield site rail spur**
M34	**Kingmoor rail sidings, Carlisle**
M35	**Shap Beck Quarry rail sidings**
M36	**Shapfell Quarry rail sidings**
M37	**Shap Blue Quarry rail sidings**
M38	**Kirkby Thore gypsum works rail sidings**
Potential railheads	
AL32	**Siddick potential rail sidings**
M31	**Salthouse, near Millom, potential rail sidings for Ghyll Scaur Quarry**

4.7 The table below records those policies that it is considered will have no effect, where significant effects are likely or whether it is uncertain that there would be significant effects on any EWS.

Table 4.1 Habitats Regulations Assessment of Site Allocations Policies

Effects on European Site	**SAP Policies**	**Comments**
Reason why policy will have no effect on a European Site	None	
Reason why policy could have an effect		
1. It may encourage new developments in an area that includes a European Site or where development may indirectly affect one	1, 2, 3, 4, 5, 6	The specific locations in policies 1, 2, 3 and 4 could have effects on European Wildlife Sites, but Local Plan sites have been chosen as they represent those sites with the least potential effect or those where mitigation measures could avoid adverse impacts. The broader locations that are identified in Policy 6, could include such sites. With regard to Policy 3, the Repository that adjoins the Drigg Coast SAC has been identified for consideration for further Low Level Waste

		storage/disposal. The Sellafield site would concentrate development in an existing site away from European Sites and associated sensitive areas. Land adjacent to the Sellafield site could impact on the River Ehen SAC.
Reason why policy would be likely to have a significant effect	None	

5. ASSESSMENTS OF THE PROPOSED SITES

ALLERDALE

5.1 The Allerdale Local Plan (Part 1) – Core Strategy and General Development Management Polices was adopted in 2014. It replaces most of the policies in their 1999 Local Plan, and now forms a key element of the development plan for the area of Allerdale, outside the Lake District National Park, setting out the strategic and development management policies that will guide development up to 2029. The MWLP includes policies that will work alongside policies in Allerdale's Local Plan, including those on sustainable development, protection of environmental assets and amenity impacts; and those that make provision for the waste management facilities and supplies of minerals that will be needed. The scale of development set out by Allerdale is relatively modest, around 300 houses/year and 3ha of employment land/year. A consultation on the Allerdale Local Plan (Part 2) – Site Allocations Issues and Options Discussion Paper closed in September 2014 and work is continuing on their Preferred Options stage.

AL3 Oldside, Workington and AL18 Port of Workington

5.2 These two sites are adjacent and have potential for waste treatment and management facilities. The sites may be suitable for mixed recycling, materials recovery, transfer stations or thermal treatments, such as Energy from Waste.

5.3 The sites are approximately 1.2km from the nearest boundary of the River Derwent and Bassenthwaite Lake SAC. However, the Port adjoins the lower reach of the river and AL3 is around 250 metres from it. This part of the river is downstream of the SAC boundary.

5.4 The potential impact of these types of development is that there could be pollution of the river during their construction or when they are operating. Whilst not directly affecting the SAC, such pollution could have adverse impacts on the conservation objective of maintaining favourable habitat conditions for Atlantic Salmon, Sea and River Lamprey and Otters migrating along or using this length of river between the sea and the SAC.

5.5 It has been concluded that there are not likely to be significant adverse impacts on Lamprey and Salmon when they are in the sea, just off the coast, rather than in the river. However, this conclusion is, to a degree, uncertain because of the limited objective information about their life cycles and activity.

5.6 **Likely significant effect, mitigation expected to be required to ensure no adverse impact on the integrity of the SAC.**

Mitigation

5.7 Mitigation is expected to be required to ensure no adverse impact on the integrity of the SAC. The mitigation measures would be normal requirements of planning permissions or of Environment Agency permits for waste management facilities. They would include temporary measures during construction to prevent dirty water flowing off-site. For an operational facility, potentially contaminated water from surfaced areas would be required to drain to a foul sewer or to a storage

tank. It is likely that measures would be proposed to keep clean rainwater separate from potentially contaminated water; for example, by roofing waste storage areas and appropriate parts of the developments.

5.8 Waste treatment and management facilities could be within a building. For some waste processes, it is common practice for these to be maintained with a slight negative pressure to prevent fugitive emissions of dust. Any stack emissions would be tightly controlled by the Environment Agency to maintain air quality.

Appropriate assessment

5.9 Development proposals on these sites must incorporate detailed measures for managing clean and potentially contaminated surface water and foul sewage. The need for contingency measures in case of accidents or extreme conditions would need to be taken into account. **With these measures in place, it is considered that the integrity of the EWS would not be adversely affected**.

Cumulative impacts

5.10 There are regeneration initiatives for this part of Workington. It is not yet clear what developments these are likely to involve and what impacts they could have on the European Wildlife Sites. Planning application proposals for the regeneration schemes would have to address this issue. **Once details are known**, **and if they put measures in place to mitigate cumulative effects, it is considered that the integrity of the EWS would not be adversely affected**.

AL8 Lillyhall waste management centre, Workington

5.11 AL8 is a potential site for waste treatment and management facilities. The site may be suitable for mixed recycling, materials recovery, a transfer station or for thermal treatments, such as Energy from Waste.

5.12 The nearest European Wildlife Site is the River Marron, which is part of the River Derwent and Bassenthwaite Lake SAC, and is 3.4km from AL8. The site is not in the catchment of that river, any run-off would drain westwards towards the Distington Beck and the sewer, to treatment works at Parton.

5.13 The relevant conservation objectives of this SAC and, more specifically, the River Derwent and Tributaries SSSI, relate to maintaining in, or restoring to, favourable condition the habitats of rivers and streams, for Atlantic salmon, Brook and River lampreys, otters and floating water plantain. There are no pathways to the SAC that would affect the features for which it was designated.

5.14 The normal requirements of planning permissions and of Environment Agency permits would be for potentially contaminated water to drain to a foul sewer or to a storage tank. It is likely that measures would be proposed to keep clean rainwater separate from potentially contaminated water; for example, by roofing waste storage areas and appropriate parts of the developments.

5.15 Waste treatment and management facilities could be within a building. For some waste processes, it is common practice for these to be maintained with a slight

negative pressure to prevent fugitive emissions of dust. Any stack emissions would be tightly controlled by the Environment Agency to maintain air quality.

5.16 **It is considered that this site would not adversely affect the integrity of the SAC.**

Cumulative impacts

5.17 There is an Environmental Permit for the disposal of Very Low Level radioactive Waste (VLLW) at the adjacent Lillyhall landfill. In March 2014, Lillyhall landfill was granted planning permission for an extension of time, to continue landfilling operations until 2029. The permission also confirmed the waste types that the site could accept for disposal; this was to link the Environmental Permit for disposal of VLLW at the site with the planning permission. The Permit allows for the disposal of up to 582,000m^3 of VLLW at a rate of 26,000m^3 per year, in a dedicated cell, as part of a total waste disposal of 67,000m^3. This would account for around 20% of the site's overall capacity and would be sourced mainly from decommissioning works at Sellafield. Lillyhall is also a regional strategic employment site where further industrial developments will be encouraged. **There could, therefore, be potentially significant cumulative impacts, but it is considered that the integrity of the SAC would not be adversely affected by them**.

AL18 Port of Workington and rail sidings

5.18 As well as being allocated for waste treatment and management facilities (see paragraphs 5.2 to 5.10), this site is identified for safeguarding of its existing and functioning rail and wharf infrastructure. The safeguarding allocation would restrict development that would impact adversely on its existing and potential uses for the sustainable transport of waste or minerals.

5.19 The site is 1.2km 'as the crow flies' from the nearest boundary of the River Derwent and Bassenthwaite Lake SAC or 1.5km along the river. The site adjoins the lower reach of the river, which lies downstream of the SAC boundary. The potential impact of this type of development is that there could be pollution of the river during operation of its functions. Whilst not directly affecting the SAC, such pollution could have adverse impacts on the conservation objective of maintaining favourable habitat conditions for Atlantic Salmon, Sea and River Lamprey and Otters migrating along or using this length of river between the sea and the SAC.

5.20 This allocation does not propose any further development; the existing, normal requirements of planning permissions and of Environment Agency permits ensure that potentially contaminated water drains to a foul sewer or to a storage tank. As necessary, existing mitigation measures are in place, such as keeping clean rainwater separate from potentially contaminated water; for example, by roofing waste storage areas and appropriate parts of the developments.

5.21 Furthermore, provided use of the port and its associated rail sidings is limited to existing working hours (to avoid introducing new noise, light, traffic, etc., impacts on the surroundings) there are no evident, significant adverse impacts. Any

localised impacts in terms of additional traffic would be offset by greater benefits from reduced impacts across the county's road network.

5.22 **It is considered that this allocation would not adversely affect the integrity of the SAC**.

Cumulative impacts

5.23 This site is also identified for waste treatment and management facilities, as is the adjacent site at Oldside (AL3); there are also regeneration initiatives for this part of Workington. It is not yet clear what any of these developments are likely to involve and what impacts they could have on the European Wildlife Site. Planning application proposals would have to address this issue. **Once details are known**, **and if they put measures in place to mitigate cumulative effects, it is considered that the integrity of the EWS would not be adversely affected**.

AL32 Siddick, Workington

5.24 This is a coastal site, proposed to be safeguarded as a potential railhead. It is 2.4 km from the River Derwent and Bassenthwaite SAC, but natural drainage is to the sea and not to the river. The relevant conservation objectives of this SAC and, more specifically, the River Derwent and Tributaries SSSI, relate to maintaining in, or restoring to, favourable condition the habitats of rivers and streams, for Atlantic salmon, Brook and River lampreys, otters and floating water plantain. There are no pathways to the SAC that would affect the features for which it was designated.

5.25 It has been concluded that there are not likely to be significant adverse impacts on Lamprey and Salmon when they are in the sea, just off the coast, rather than in the river. However, this conclusion is, to a degree, uncertain because of the limited objective information about their life cycles and activity.

5.26 The normal requirements of planning permissions and of Environment Agency permits would be for potentially contaminated water to drain to a foul sewer or to a storage tank. It is likely that measures would be proposed to keep clean rainwater separate from potentially contaminated water; for example, by roofing waste storage areas and appropriate parts of the developments.

5.27 **It is considered that this site would not adversely affect the integrity of the SAC**.

Cumulative impacts

5.28 This site is near to existing major industrial developments and the town's sewage treatment works. It would add to the cumulative impacts of these but none of them have pathways to the SAC. **It is considered that the integrity of the SAC would not be adversely affected by cumulative impacts**.

AL37 Lillyhall Industrial Estate, Workington

5.29 This site is proposed as a replacement Household Waste Recycling Centre for the existing ones at Frizington and at Clay Flatts, Workington. The nearest European Wildlife Site is the River Marron, which is part of the River Derwent and Bassenthwaite Lake SAC, and is 3.4km from AL37. The site is not in the catchment of that river, any run-off would drain westwards towards the Distington Beck, some 820m away, and the sewer, to treatment works at Parton.

5.30 The relevant conservation objectives of this SAC and, more specifically, the River Derwent and Tributaries SSSI, relate to maintaining in, or restoring to, favourable condition the habitats of rivers and streams, for Atlantic salmon, Brook and River lampreys, otters and floating water plantain. There are no pathways to the SAC that would affect the features for which it was designated.

5.31 The normal requirements of planning permissions and of Environment Agency permits would be for potentially contaminated water to drain to a foul sewer or to a storage tank. It is likely that measures would be proposed to keep clean rainwater separate from potentially contaminated water; for example, by roofing waste storage areas and appropriate parts of the developments.

5.32 **It is considered that this site would not adversely affect the integrity of the SAC**.

Cumulative impacts

5.33 This site is on the Lillyhall industrial estate, which is a regional strategic employment site where further industrial developments will be encouraged. It is near to the existing Lillyhall landfill for non-inert waste, and there is an Environmental Permit for the disposal of Very Low Level radioactive Wastes (VLLW) at the landfill. In March 2014, Lillyhall landfill was granted planning permission for an extension of time, to continue landfilling operations until 2029. The permission also confirmed the waste types that the site could accept for disposal; this was to link the Environmental Permit for disposal of VLLW at the site with the planning permission. **There could, therefore, be potentially significant cumulative impacts but it is considered that the integrity of the SAC would not be adversely affected by them**.

AL38 Innovia rail sidings, Wigton

5.34 The Innovia complex manufactures polyethylene and polypropylene films for the packaging, labelling and over-wrapping industries. The existing, operational rail sidings are used to transport materials in and out of the complex. Large amounts of waste arise on site, so much so that Innovia previously put part of their complex forward in the Site Allocations for an Energy from Waste plant. It is not clear whether rail transport is currently used for waste arising on site, but the safeguarding allocation would restrict development that would impact adversely on its existing and potential uses for the sustainable transport of waste.

5.35 The nearest European Wildlife Site is the South Solway Mosses SAC, which is 3.5 km away. The Upper Solway Flats and Marshes SPA and Ramsar, plus the

Solway Firth SAC are 7.8km away. The potential impact of this type of development is that polluted water could drain to the European Sites. The area around the rail sidings drains to the Wiza Beck, a tributary of the River Wampool, which flows into the Solway EWSs some 18 km from the site, and although the South Solway Mosses SAC is closer, there are no apparent pathways between that SAC and AL38.

5.36 This allocation does not propose any further development; the existing, normal requirements of planning permissions and of Environment Agency permits ensure that potentially contaminated water drains to a foul sewer or to a storage tank. As necessary, existing mitigation measures are in place, such as keeping clean rainwater separate from potentially contaminated water.

5.37 Furthermore, provided use of the rail sidings is limited to existing working hours (to avoid introducing new noise, light, traffic, etc., impacts on the surroundings) there are no evident, significant adverse impacts. Any localised impacts in terms of additional traffic would be offset by greater benefits from reduced impacts across the county's road network.

5.38 **It is considered that this allocation would not adversely affect the integrity of the European Wildlife Sites**.

Cumulative impacts

5.39 No other proposed developments have been identified that would require consideration of cumulative impacts. **It is considered that the integrity of the SAC would not be adversely affected by cumulative impacts**.

AL39 Silloth Port

5.40 This site is identified for safeguarding of its existing and functioning wharf infrastructure. The safeguarding allocation would seek to restrict development that would impact adversely on its existing and potential uses for the sustainable transport of waste or minerals.

5.41 The port lies adjacent to the Solway Firth SAC and the Upper Solway Flats and Marshes SPA/Ramsar. The potential impact of this type of development is that there could be pollution of the harbour/sea during operation of its functions.

5.42 This allocation does not propose any further development; the existing, normal requirements of planning permissions and of Environment Agency permits ensure that potentially contaminated water drains to a foul sewer or to a storage tank. As necessary, existing mitigation measures are in place, such as keeping clean rainwater separate from potentially contaminated water; for example, by roofing waste storage areas and appropriate parts of the complex.

5.43 Furthermore, provided use of the port is limited to existing working hours (to avoid introducing new noise, light, traffic, etc., impacts on the surroundings) there are no evident, significant adverse impacts. Any localised impacts in terms of additional traffic would be offset by greater benefits from reduced impacts across the county's road network.

5.44 **It is considered that this allocation would not adversely affect the integrity of the European Sites**.

Cumulative impacts

5.45 The draft Allerdale Local Plan (Part 2) – Site Allocations Issues and Options identifies a site adjacent to the port for housing. It is not yet clear what that development is likely to involve and what impacts it could have on the European Wildlife Site. Planning application proposals would have to address this issue. **Once details are known**, **and if they put measures in place to mitigate cumulative effects, it is considered that the integrity of the EWSs would not be adversely affected**.

M6 Land between Overby and High House Quarries, Abbeytown

5.46 This land lies between the Overby and High House Quarries on the Abbeytown Ridge but, because of the permitted reserves at these two quarries, it is considered unlikely that development of this Area of Search for sand and gravel will be needed within the Plan period. However, in case demand increases or a problem is found with the permitted reserves, this Area of Search is identified.

5.47 The nearest European Wildlife Sites are the Upper Solway Flats and Marshes SPA, the Solway Firth SAC and the Upper Solway Flats and Marshes Ramsar, which all lie 4km away, at their closest point. The relevant conservation objectives of these European Sites and, more specifically, the Upper Solway Flats and Marshes SSSI, relate to maintaining in, or restoring to, favourable condition the habitats of estuaries, saltmarsh, sub-littoral sediment, intertidal mudflats and reefs, for Brook and Sea lampreys.

5.48 Any water run-off or silt laden water from the site has the potential to flow north to Tarns Dub, then into the field drainage ditch system between Newtown and Holme St Cuthbert, which could ultimately connect to the Solway Firth at Mawbray. Alternatively, it could flow south down to the moss at Mossend and travel to Holme Dub, then into the River Waver and into the Solway Firth at Moricambe Bay, some 6km away. There is no pathway between the site and South Solway Mosses SAC, around 7.9km away.

5.49 **Likely significant effect, mitigation expected to be required to ensure no adverse impact on the integrity of the SAC, SPA and Ramsar.**

Mitigation

5.50 Mitigation is expected to be required to ensure no adverse impact on the integrity of the SAC. The mitigation measures would be normal requirements of Environment Agency permits or planning permissions for an operational facility.

5.51 As with the existing planning permissions for these two quarries, normal planning conditions would require, throughout the period of working and restoration, provision to be made for the collection, treatment and disposal of all water entering or arising on the site, including an increased flow from the land, to ensure that there is no pollution of watercourses by the approved operations. Similarly, any storage of chemicals, oils or fuels would only take place on an

impervious base, protected from accidental damage and, if not within an internally bunded tank, surrounded by impervious bund walls, in order to avoid the pollution of any watercourse or groundwater resource.

Appropriate assessment

5.52 Development proposals on this site must incorporate detailed measures for managing clean and potentially contaminated surface water and foul sewage. The need for contingency measures in case of accidents or extreme conditions would need to be taken into account. **With these measures in place, it is considered that the integrity of the EWS's would not be adversely affected**.

Cumulative impacts

5.53 There are the cumulative impacts of the quarries themselves, which have not adversely affected the European Sites. No other proposed developments have been identified that would require consideration of cumulative impacts. **It is considered that the integrity of the SAC would not be adversely affected by cumulative impacts**.

M24 Derwent Howe slag bank, Workington

5.54 This site is already operational for secondary aggregate extraction and it is identified as a Mineral Safeguarding Area for secondary aggregates. The slag bank is located on the coast and has been operated as a quarry since the early 1990's. As well as slag extraction, the site is used for the deposit of inert waste materials and recycling of wastes.

5.55 The closest European Wildlife Site is the River Derwent and Bassenthwaite Lake SAC, which lies 2km away. However, the site lies around 340 metres from the harbour and the lower reaches of the River Derwent. This part of the river is downstream of the SAC boundary.

5.56 The potential impact of this type of development is that there could be pollution of the river due to water run-off, during its operation. Whilst not directly affecting the SAC, such pollution could have adverse impacts on the conservation objective of maintaining favourable habitat conditions for Atlantic Salmon, Sea and River Lamprey and Otters migrating along or using this length of river between the sea and the SAC.

5.57 It has been concluded that there are not likely to be significant adverse impacts on Lamprey and Salmon when they are in the sea, just off the coast, rather than in the river. However, this conclusion is, to a degree, uncertain because of the limited objective information about their life cycles and activity.

5.58 **Likely significant effect, mitigation expected to be required to ensure no adverse impact on the integrity of the SAC.**

Mitigation

5.59 Mitigation is expected to be required to ensure no adverse impact on the integrity of the SAC. The mitigation measures would be normal requirements of

Environment Agency permits or planning permissions for an operational facility. Throughout the period of working and restoration, provision should be made for the collection, treatment and disposal of all water entering or arising on the site, including an increased flow from the land, to ensure that there would be no pollution of watercourses by the approved operations.

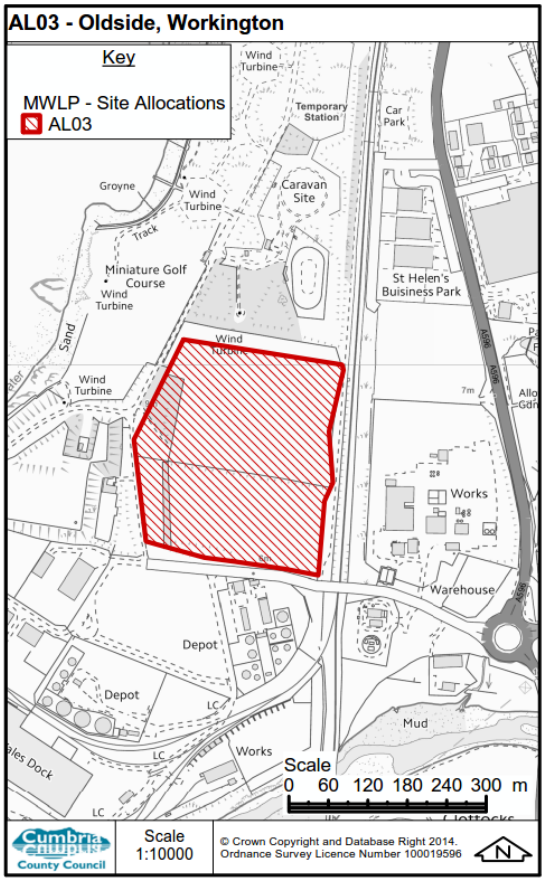
Appropriate assessment

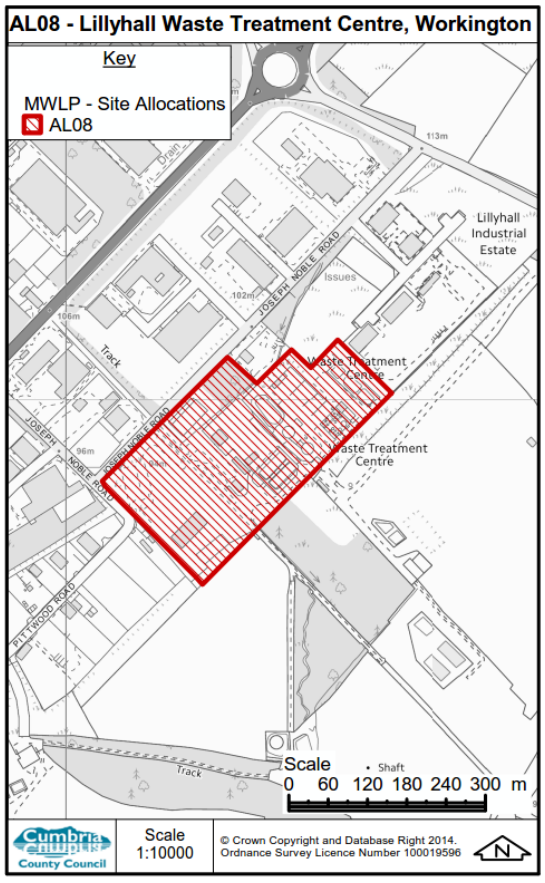
5.60 Development proposals on this site must incorporate detailed measures for managing clean and potentially contaminated surface water and foul sewage. The need for contingency measures in case of accidents or extreme conditions would need to be taken into account. **With these measures in place, it is considered that the integrity of the EWS would not be adversely affected**.

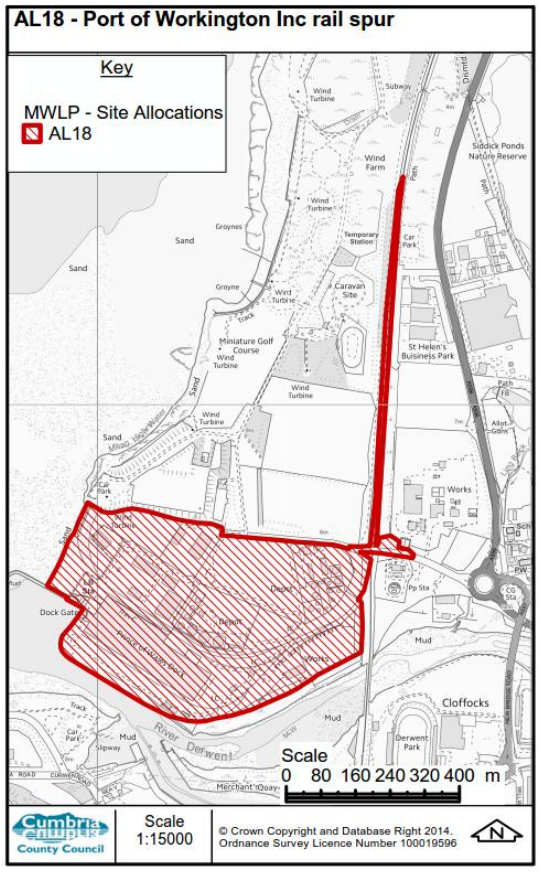
Cumulative impacts

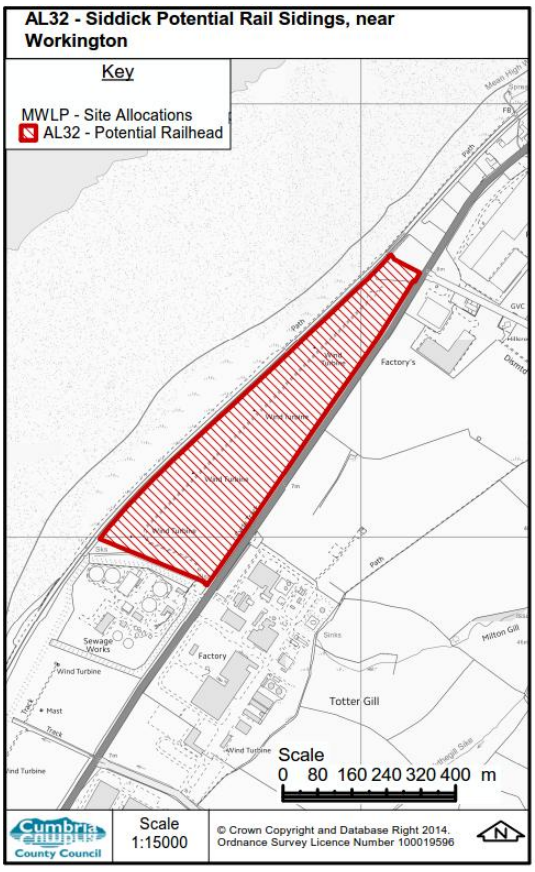
5.61 There are regeneration initiatives (Port Derwent) for nearby parts of Workington. It is not yet clear what developments these are likely to involve and what impacts they could have on the European Wildlife Sites. Planning application proposals for the regeneration scheme would have to address this issue. Once details are known, **and if they put measures in place to mitigate cumulative effects, it is considered that the integrity of the EWS would not be adversely affected**.

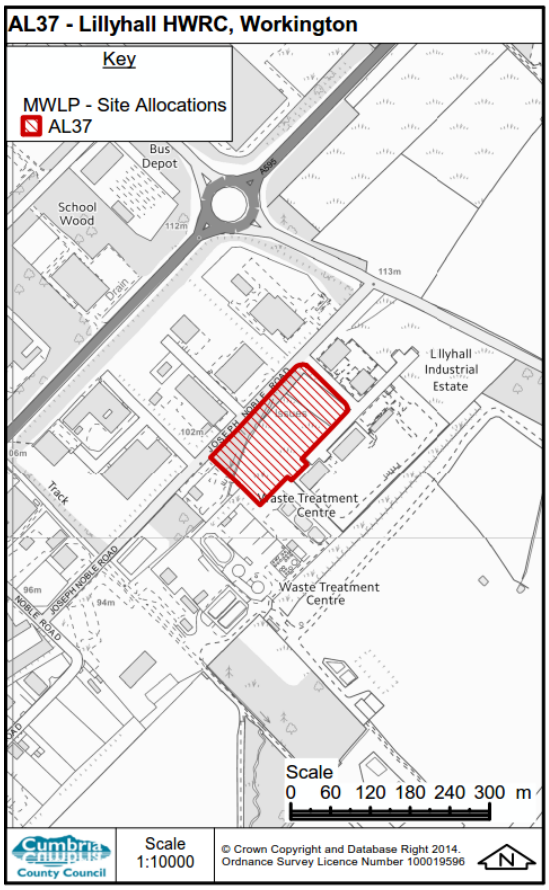
MAPS OF PROPOSED SITES IN ALLERDALE










AL37 - Lillyhall HWRC, Workington
Key
MWLP - Site Allocations
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School Wood
Lillyhall Industrial Estate
Waste Treatment Centre
Waste Treatment Centre
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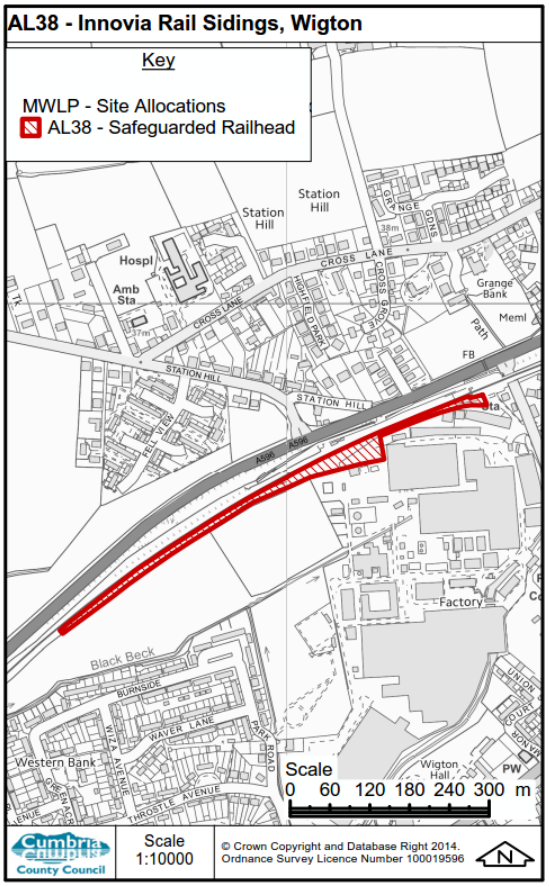
AL38 - Innovia Rail Sidings, Wigton
Key
MWLP - Site Allocations
AL38 - Safeguarded Railhead
Station Hill
Hospl
Amb Sta
CROSS LANE
Grange Bank
STATION HILL
Factory
Black Beck
Western Bank
Wigton Hall
Scale
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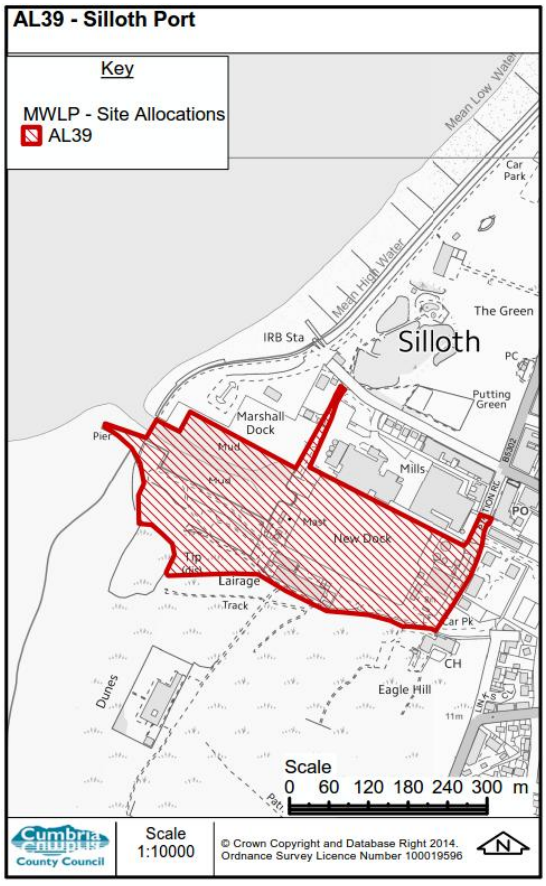
AL39 - Silloth Port
Key
MWLP - Site Allocations
AL39
Mean Low Water
Mean High Water
Car Park
The Green
Silloth
IRB Sta
PC
Putting Green
Marshall Dock
Pier
Mud
Mills
New Dock
PO
Lairage
Track
Car Pk
CH
Eagle Hill
Dunes
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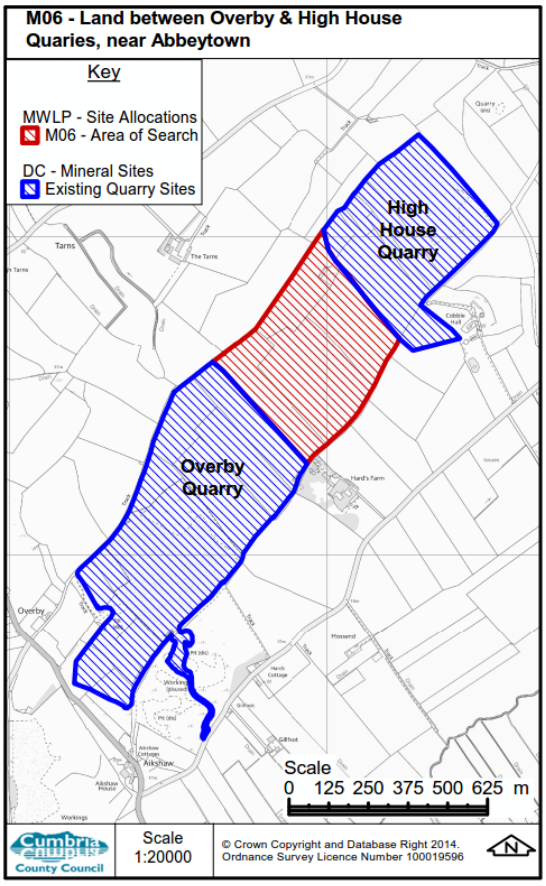
M06 - Land between Overby & High House Quaries, near Abbeytown
Key
MWLP - Site Allocations
M06 - Area of Search
DC - Mineral Sites
Existing Quarry Sites
High House Quarry
Overby Quarry
Tarns
Overby
Akshaw
Scale
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Cumbria County Council
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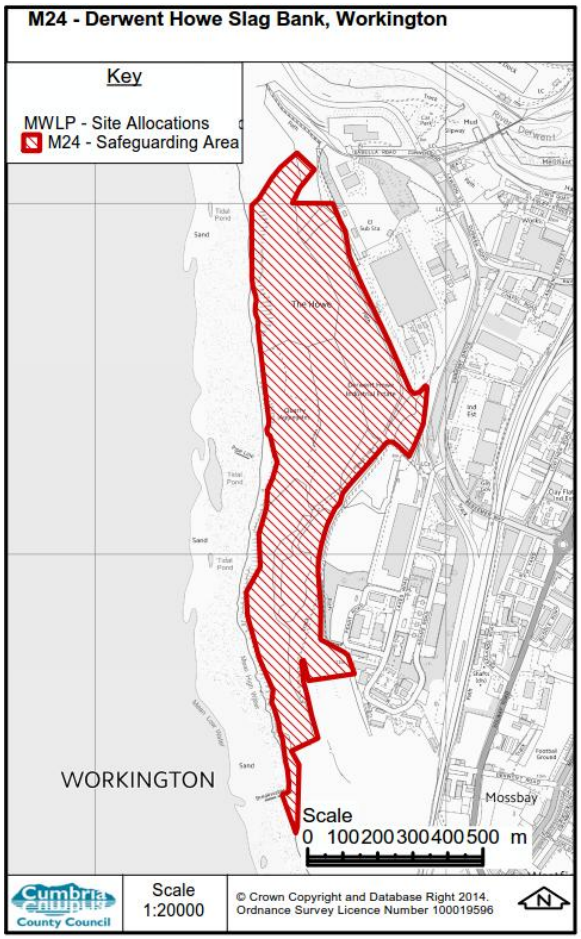
M24 - Derwent Howe Slag Bank, Workington
Key
MWLP - Site Allocations
M24 - Safeguarding Area
WORKINGTON
Mossbay
Scale
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Scale
1:20000
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N

BARROW

5.62 There is no up to date statutory development plan for the Borough. The Local Plan was adopted in 2001 and is for the period 1996 to 2006. The first draft of a new Local Plan, the Issues and Options draft, has been produced and a consultation was held in autumn 2014. This draft sets out the main issues facing the Borough, lists alternative policies that could address these issues and identifies potential sites that could be allocated for development; it also sets the proposed scale of development as 180 houses/year. A second round of Regulation 18 consultation for the new Barrow Borough Council Local Plan is programmed for summer 2015.

BA26 Barrow Port

5.63 This site is identified for the safeguarding of its existing and functioning rail and wharf infrastructure. The safeguarding allocation would restrict development that would impact adversely on its existing and potential uses for the sustainable transport of waste or minerals.

5.64 The site lies adjacent to the Morecambe Bay SAC, SPA and Ramsar. The potential impact of this type of development is that there could be pollution of the river during operation of its functions. This allocation does not propose any further development; the existing, normal requirements of planning permissions and of Environment Agency permits ensure that potentially contaminated water drains to a foul sewer or to a storage tank. As necessary, existing mitigation measures are in place, such as keeping clean rainwater separate from potentially contaminated water; for example, by roofing waste storage areas and appropriate parts of the developments.

5.65 Furthermore, provided use of the port and its associated rail sidings is limited to existing working hours (to avoid introducing new noise, light, traffic, etc., impacts on the surroundings) there are no evident, significant adverse impacts. Any localised impacts in terms of additional traffic would be offset by greater benefits from reduced impacts across the county's road network.

5.66 **It is considered that this allocation would not adversely affect the integrity of the European Sites**.

Cumulative impacts

5.67 This site is identified in the Barrow Port Area Action Plan to both retain and encourage the port's commercial use, as well as maximise opportunities for other development, such as the Marina Village and Waterfront Gateway. To date, progress on new development has been slow due to the recession, so it is not yet clear what any of these developments are likely to involve and what impacts they could have on the European Wildlife Sites. Planning application proposals would have to address this issue. **Once details are known**, **and if they put measures in place to mitigate cumulative effects, it is considered that the integrity of the EWSs would not be adversely affected**.

M5 Land adjacent to High Greenscoe Quarry, Barrow in Furness

5.68 The brickworks associated with the quarry has the capacity to produce 10.5 million bricks per annum and requires 21,500m^3 of mudstone per year to achieve this. Current production levels are significantly lower because of the recession, so a planning application for a time extension was considered in 2013 and an extension to 2028 granted. Bricks have been produced at Furnace Brick & Tile since 1900 and the brickworks is now the largest coal-fired traditional kiln operation in the country. This site has been identified as an Area of Search for extending the quarry within the Plan period, if sales increase and further resources are needed.

5.69 The closest European Wildlife Sites to this Area of Search are Duddon Estuary SPA, Morecambe Bay SAC and Duddon Estuary Ramsar, which all lie approximately 1.4km to the west. The relevant conservation objectives of these European Sites and, more specifically, the Duddon Estuary SSSI, relate to maintaining in, or restoring to, favourable condition the habitats of estuaries, saltmarsh, littoral and sub-littoral sediment and rock, shingle, sand dunes and lagoons.

5.70 This is an existing mineral operating site, with water management infrastructure. It is considered unlikely that silt laden water would flow from the quarry or that any restoration proposals for the site would have an adverse impact. There will be potential to enhance wildlife interests in a restoration scheme, especially in relation to the adjacent area of Ancient Woodland/UK Priority Habitat/County Wildlife Site.

5.71 **It is considered that this site would not adversely affect the integrity of the SAC, SPA or Ramsar.**

Cumulative impacts

5.72 Cumulative impacts include the continuing quarrying at this site, activity at the nearby brickworks and other waste management activities at a nearby former quarry. Having taken these into account, **it is considered that the integrity of the SAC, SPA or Ramsar would not be adversely affected by cumulative impacts**.

M12 Roosecote sand and gravel quarry, Barrow in Furness

5.73 The existing Roose sand quarry, which lies on the other side of the road to this proposed Preferred Area for its replacement, has a planning permission that expires in May 2029. However, land and mineral ownership issues have not been able to be resolved for the existing quarry, and the owner will only allow the operator a licence to extract on a year at a time basis; that is why the Preferred Area has been identified.

5.74 The site lies 870 metres from the Morecambe Bay SAC, SPA and Ramsar. The relevant conservation objectives of these European Wildlife Sites and, more specifically, the South Walney and Piel Channel Flats SSSI, relate to maintaining in, or restoring to, favourable condition the habitats of inlets and bays, saltmarsh, littoral sediments and rocks, shingle, sand dunes and lagoons.

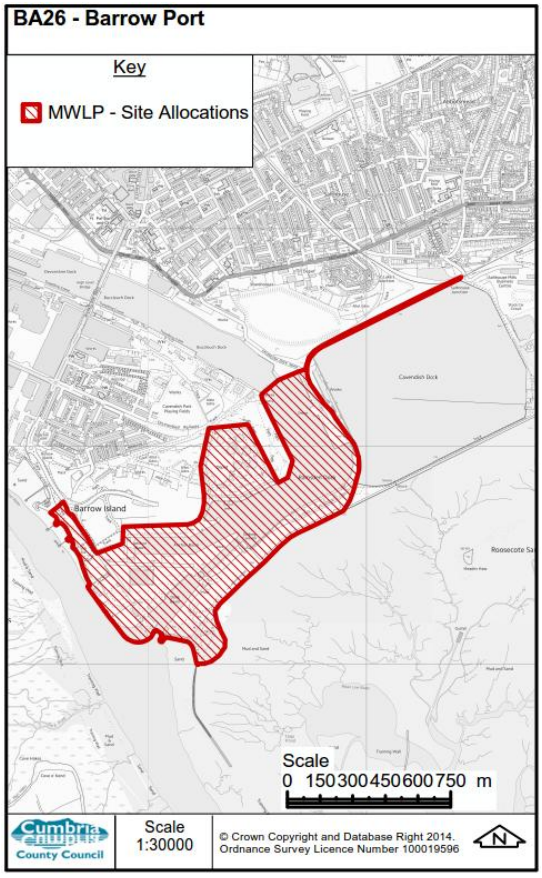
5.75 The built complex of a power station and gas terminals and the existing quarry lie between the Preferred Area and the European Sites. It is considered unlikely that silt laden water would flow from a new quarry or that any restoration proposals for the site would have an adverse impact. Any planning permission would be likely to include relevant requirements in relation to these matters. There would also be potential to enhance wildlife interests in a restoration scheme.

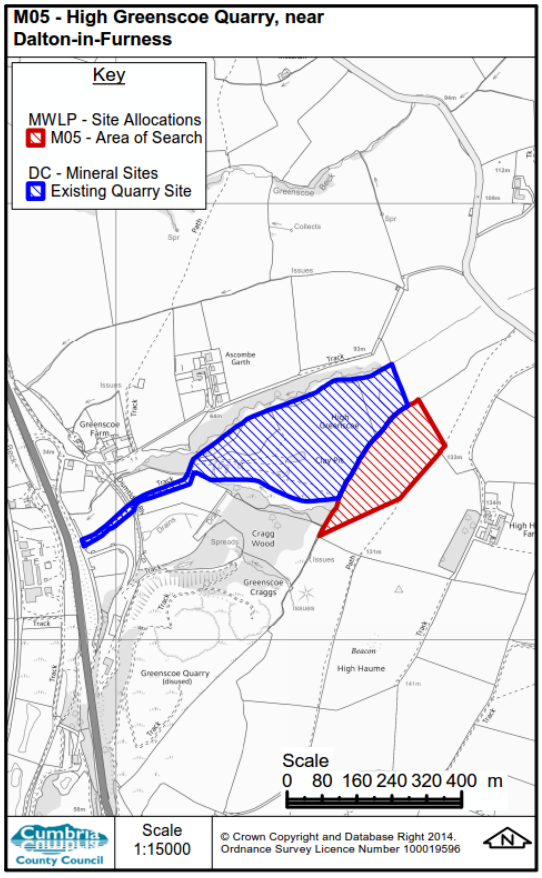
5.76 **It is considered that this site would not adversely affect the integrity of the SAC, SPA or Ramsar**.

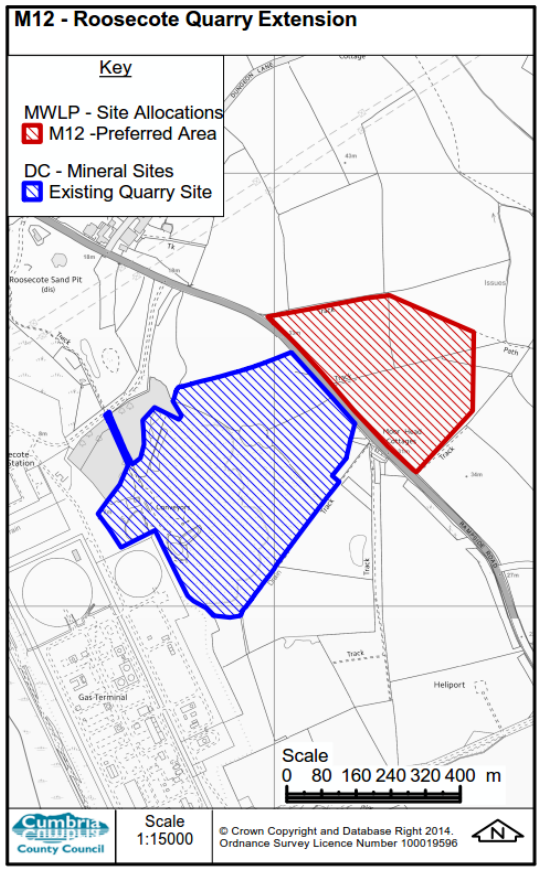
Cumulative impacts

5.77 There is continuing quarrying at the existing Roose site, and if the Preferred Area is quarried, there is likely to be a short overlap between the new quarry becoming established and the existing one ceasing production and entering restoration. A proposal was submitted to the Infrastructure Planning Commission in 2012 for a new, biomass power station, which would replace the nearby existing gas one. However, this proposal was withdrawn and the power station closed at the end of 2013; planning permission was granted in 2014 for its demolition. The Barrow in Furness Local Plan Review 1996 to 2006, identifies land around the gas terminal for energy industry related uses, but no proposals have been identified; in their Issues and Options paper in 2014, the Borough Council considered retaining this allocation. At the present time, no proposals have been identified that require consideration of cumulative impacts. **It is considered that the integrity of the SAC would not be adversely affected by cumulative impacts**.

MAPS OF PROPOSED SITES IN BARROW







CARLISLE

5.78 The Carlisle Local Plan 2001-2016 was adopted in 2008. Its policies seek to conserve scenic beauty, natural resources and the quality of the built environment from inappropriate development. Designated wildlife sites are given protection from development; it also aims to promote environmental protection and enhancement. No inconsistencies have been identified with the saved policies in the 2008 Carlisle Local Plan. The Minerals and Waste Local Plan includes policies on sustainable development, protection of environmental assets and amenity impacts and makes provision for the waste management facilities and supplies of minerals that will be needed. Publication of the Regulation 20 consultation for the new Carlisle Local Plan is programmed for March 2015.

CA11 Willowholme industrial estate, Carlisle

5.79 This site is identified for waste treatment and management facilities. It is located adjacent to the River Eden SAC, which has a length of approximately 410km. The relevant conservation objectives for this SAC and, more specifically, the River Eden and Tributaries SSSI, the boundary of which coincides with that of the SAC, are maintaining the quality of the river system and favourable habitat conditions for Atlantic Salmon, Sea, Brook and River Lamprey, Otters, Bullhead and White-Clawed Crayfish.

5.80 The potential impacts are loss of habitat, disturbance and that any pollution from the site could have adverse impacts on the features for which the SAC was designated.

5.81 **Likely significant effect, mitigation expected to be required to ensure no adverse impact on the integrity of the SAC.**

Mitigation

5.82 Mitigation is expected to be required to ensure no adverse impact on the integrity of the SAC. The mitigation measures would be normal requirements of planning permissions or of Environment Agency permits for waste treatment or management facilities. They would include temporary measures during construction to prevent dirty water flowing off-site. For an operational facility, potentially contaminated water from surfaced areas would be required to drain to a foul sewer or to a storage tank. It is likely that measures would be proposed to keep clean rainwater separate from potentially contaminated water; for example, by roofing waste storage areas and appropriate parts of the developments.

5.83 Waste treatment and management facilities could be within a building. For some waste processes, it is common practice for these to be maintained with a slight negative pressure to prevent fugitive emissions of dust. Any stack emissions would be tightly controlled by the Environment Agency to maintain air quality.

Appropriate assessment

5.84 In accordance with adopted policies, development proposals for the site should maintain and enhance otter habitat, possibly including a wildlife buffer along this stretch of the river, and, in order to prevent contaminated water flowing into the

river, would need to demonstrate appropriate measures for managing foul and surface water drainage and for containing waste materials. Planning application proposals would need to be accompanied by a flood risk assessment to demonstrate whether the details of the proposal are acceptable and compatible with its flood risk status. **With these measures in place, it is considered that the integrity of the EWS would not be adversely affected.**

Cumulative impacts

5.85 There are likely to be continued developments and redevelopment within this industrial estate. These seem unlikely to require consideration of cumulative impacts, other than matters that would be addressed in planning applications. **On the assumption that these detailed measures will be put in place to mitigate cumulative effects, it is considered that the integrity of the EWS would not be adversely affected**.

CA30 Kingmoor Road recycling centre

5.86 This site is identified for waste treatment and management facilities, though its location close to biodiversity designations and to housing is likely to preclude its use for an Energy from Waste plant.

5.87 The site was an operational recycling centre, accepting clean recyclables from local authority kerbside collections, Household Waste Recycling Centres and mixed commercial and industrial wastes. The recycling facility was destroyed in a fire in 2014 and operations have been temporarily transferred to an area within the Hespin Wood waste management site. The proposal is to reinstate the facility and, in time, create an extension to the activities at the site.

5.88 The entire site is brownfield, having previously been occupied by an engineering works. The operational area of the recycling facility occupied just under 2ha; the remaining area (of approximately 1ha) to the north west has not been redeveloped since the closure of the engineering works. The latter area is now vegetated and used for informal recreation to link between the two nature reserves to the west and east of the site. In the draft Carlisle Local Plan (2015), the whole site falls under two proposed designations - the existing recycling facility is within a Primary Employment Area; the remainder is within protected open space related to links between the adjacent Local Nature Reserves.

5.89 CA30 lies 690 metres from the River Eden SAC. The conservation objectives of this SAC and, more specifically, the River Eden and Tributaries SSSI, are maintaining the quality of the river system and favourable habitat conditions for Atlantic Salmon, Sea, Brook and River Lamprey, Otters, Bullhead and White-Clawed Crayfish. The potential impacts could be loss of habitat for otters and contaminated water flowing to the river during construction or when the development is operating.

5.90 Furthermore, the site adjoins Kingmoor Sidings Nature Reserve and mitigation/compensatory measures are likely to be needed for the European protected species of Great Crested Newt. The River Eden SAC has not been designated because of that particular wildlife interest and relevant conservation objectives would not be affected.

5.91 The site also lies 5 km from the Upper Solway Flats and Marshes SPA/Ramsar and Solway Firth SAC. The conservation objectives of these European Sites and, more specifically, the Upper Solway Flats and Marshes SSSI, relate to maintaining in, or restoring to, favourable condition the habitats of estuaries, saltmarsh, sub-littoral sediment, intertidal mudflats and reefs, for Brook and Sea lampreys. The potential impact of this type of development is that there could be pollution of the EWSs due to water run-off migrating upstream, during its construction and/or operation.

5.92 **Likely significant effect, mitigation expected to be required to ensure no adverse impact on the integrity of the EWSs.**

Mitigation

5.93 Mitigation is expected to be required to ensure no adverse impact on the integrity of the EWSs. The mitigation measures would be normal requirements of planning permissions or of Environment Agency permits for waste treatment or management facilities. They would include temporary measures during construction to prevent dirty water flowing off-site. For an operational facility, potentially contaminated water from surfaced areas would be required to drain to a foul sewer or to a storage tank. It is likely that measures would be proposed to keep clean rainwater separate from potentially contaminated water; for example, by roofing waste storage areas and appropriate parts of the developments.

5.94 Waste treatment and management facilities could be within a building. For some waste processes, it is common practice for these to be maintained with a slight negative pressure to prevent fugitive emissions of dust. Any stack emissions would be tightly controlled by the Environment Agency to maintain air quality.

Appropriate Assessment

5.95 In accordance with adopted policies, development proposals for the site should maintain and enhance great crested newt habitat, possibly including a wildlife buffer or corridor around the site. In order to prevent contaminated water flowing into the river system, the operator would need to demonstrate appropriate measures for managing foul and surface water drainage and for containing waste materials. **With these measures in place, it is considered that the integrity of the EWSs would not be adversely affected.**

Cumulative impacts

5.96 There are proposals for substantial developments to the north of Carlisle, to take advantage of the Northern Development Route road, which opened fully in 2012. So far, development has been small scale or is still in the initial stages and it is not possible to assess what cumulative impacts there could be. These are likely to be matters for planning application proposals. **On the assumption that usual measures would be required to be put in place for these developments to mitigate cumulative effects, it is considered that the integrity of the EWSs would not be adversely affected**.

CA31 Kingmoor Park East, Carlisle

5.97 This site is identified for waste treatment and management facilities, particularly for an Energy from Waste plant that would serve the whole complex of Kingmoor Park sites, which have a connected electricity supply. It lies 760 metres from the River Eden SAC and 3.7km from the Upper Solway Flats and Marshes SPA/Ramsar and Solway Firth SAC. The distance to the Solway EWSs is too great and there are no pathways along which contamination could travel. However, there are several springs and sinks on the proposed site, which connect to drains and flow into the River Eden SAC.

5.98 The potential impacts could be loss of habitat for otters and contaminated water flowing to the river during construction or when the development is operating. If that happened, it could have adverse impacts on the conservation objective of maintaining the quality of the river system and favourable habitat conditions for Atlantic Salmon, Sea, Brook and River Lamprey, Otters, Bullhead and White-Clawed Crayfish.

5.99 **Likely significant effect, mitigation expected to be required to ensure no adverse impact on the integrity of the River Eden SAC.**

Mitigation

5.100 Mitigation is expected to be required to ensure no adverse impact on the integrity of the SAC. The mitigation measures would be normal requirements of planning permissions or of Environment Agency permits for waste treatment and management facilities. They would include temporary measures during construction to prevent dirty water flowing off-site. For an operational facility, potentially contaminated water from surfaced areas would be required to drain to a foul sewer or to a storage tank. It is likely that measures would be proposed to keep clean rainwater separate from potentially contaminated water; for example, by roofing waste storage areas and appropriate parts of the developments.

5.101 Waste treatment and management facilities could be within a building; normal practice is for these to be maintained with a slight negative pressure to prevent fugitive emissions of dust. Stack emissions would be tightly controlled by the Environment Agency to maintain air quality.

Appropriate assessment

5.102 Habitat surveys for otters may be needed, with protection/enhancement measures, as appropriate, and development proposals would need to demonstrate satisfactory management of foul and surface water and for containing wastes. These would be normal measures expected in applications for planning permission and Environment Agency permits. **With these measures in place, it is considered that the integrity of the EWS would not be adversely affected.**

Cumulative impacts

5.103 There are proposals for substantial developments to the north of Carlisle, to take advantage of the Northern Development Route road, which opened fully in 2012. In the 2015 Carlisle draft Local Plan, this area is allocated for Primary

Employment and Employment Development. So far, development has been small scale or is still in the initial stages and it is not possible to assess what cumulative impacts there could be. These are likely to be matters for planning application proposals. **On the assumption that usual measures would be required to be put in place for these developments to mitigate cumulative effects, it is considered that the integrity of the EWS would not be adversely affected**.

M8 Land adjacent to Cardewmires Quarry, near Dalston

5.104 This quarry has an existing planning permission for wet-working of river-terrace sand and gravel until 31 December 2026. The material is mainly used for concreting and other building purposes. This site is identified as an Area of Search to extend the quarry, if needed within the Plan period.

5.105 Although the closest European Wildlife Site to this Area of Search is the River Eden SAC, which lies approximately 1.1km to the east, there is no pathway for silt-laden, or other contaminated, water to travel between the two. Cardewmires Quarry effectively forms the headwater of the River Wampool, which drains north westwards to the Solway Firth, and the South Solway Mosses SAC, over 11km away. The relevant conservation objectives of this SAC and, more specifically, the Wedholme Flow SSSI, relate to maintaining in, or restoring to, favourable condition the habitats of fen, marsh and swamp, in particular raised bogs.

5.106 It is considered unlikely that silt laden water would flow from the quarry or that any restoration proposals for the site would have an adverse impact. There will be potential to enhance wildlife interests in a restoration scheme, which is currently identified as nature conservation and recreation.

5.107 **It is considered that this site would not adversely affect the integrity of either SAC.**

Cumulative impacts

5.108 There is continuing quarrying at this site, but no other existing or proposed developments in the vicinity have been identified that will require consideration of cumulative impacts. **It is considered that the integrity of the SAC would not be adversely affected by cumulative impacts**.

M10 Land adjacent to Silvertop Quarry, near Brampton

5.109 This quarry has an existing planning permission for limestone extraction until February 2042. The site produces crushed rock products from various beds of Lower Carboniferous Limestone and is the only crushed rock quarry in the north of the county. This site has been identified as an Area of Search for extending the quarry within the Plan period, if needed, but an extension could only be justified if it secured overall landscape mitigation measures for the setting of the North Pennines Area of Outstanding Natural Beauty.

5.110 The closest European Wildlife Sites to this Area of Search are the North Pennine Moors SPA and the North Pennine Moors SAC, which both lie approximately

1.1km to the south. The relevant conservation objectives of these European Sites and, more specifically, the Geltsdale and Glendue Fells SSSI, relate to maintaining in, or restoring to, favourable condition the habitats of bogs, dwarf shrub upland heaths, fen, marsh and swamp, upland broadleaved, mixed and yew woodland, and inland rock for a mixed assemblage of moorland and woodland breeding birds.

5.111 The Area of Search is located on the opposite hillside to the SAC and SPA. Therefore, even without the usual mitigation measures, it is considered unlikely that any chemical, oil or diesel stored on site, or any foul or contaminated drainage from the site, could enter any groundwater or surface waters of the SAC or SPA, directly or via soakaways. It is also considered unlikely that any restoration proposals for the site would have an adverse impact. There will be potential to enhance wildlife interests in a restoration scheme.

5.112 **It is considered that this site would not adversely affect the integrity of the SAC or SPA.**

Cumulative impacts

5.113 There is continuing quarrying at this site, but no other existing or proposed developments in the vicinity have been identified that would require consideration of cumulative impacts. **It is considered that the integrity of the SAC would not be adversely affected by cumulative impacts**.

M34 Kingmoor rail sidings

5.114 This 83 hectare site is identified as a safeguarding area for existing and functional rail sidings. The site is currently owned and operated by Network Rail, who import large quantities of old rail ballast to the sidings, process it and then export the recycled aggregate around the UK.

5.115 The nearest European Wildlife Site is the River Eden SAC, which lies 400m away at the closest point. The Upper Solway Flats and Marshes SPA and Ramsar, plus the Solway Firth SAC are 1.2km away. The potential impact of this type of development is that polluted water could drain to the European Sites. A number of main rivers pass under the rail sidings via a series of culverts, which restrict the flow, and Environment Agency flood mapping shows that natural flooding occurs around the sidings.

5.116 This allocation does not propose any further development; the existing, normal requirements of planning permissions and of Environment Agency permits ensure that potentially contaminated water drains to a foul sewer or to a storage tank. As necessary, existing mitigation measures are in place, such as keeping clean rainwater separate from potentially contaminated water.

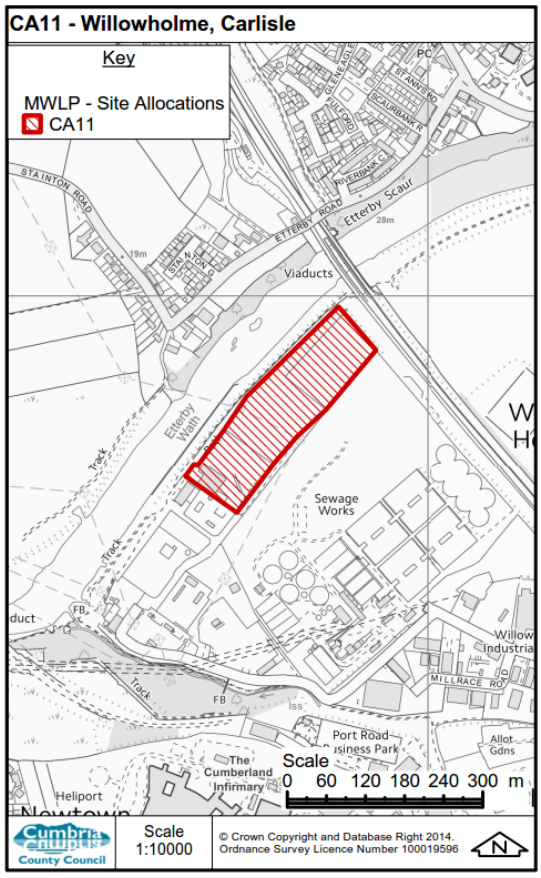
5.117 Furthermore, provided use of the rail sidings is limited to existing working hours (to avoid introducing new noise, light, traffic, etc., impacts on the surroundings) there are no evident, significant adverse impacts. Any localised impacts in terms of additional traffic would be offset by greater benefits from reduced impacts across the county's road network.

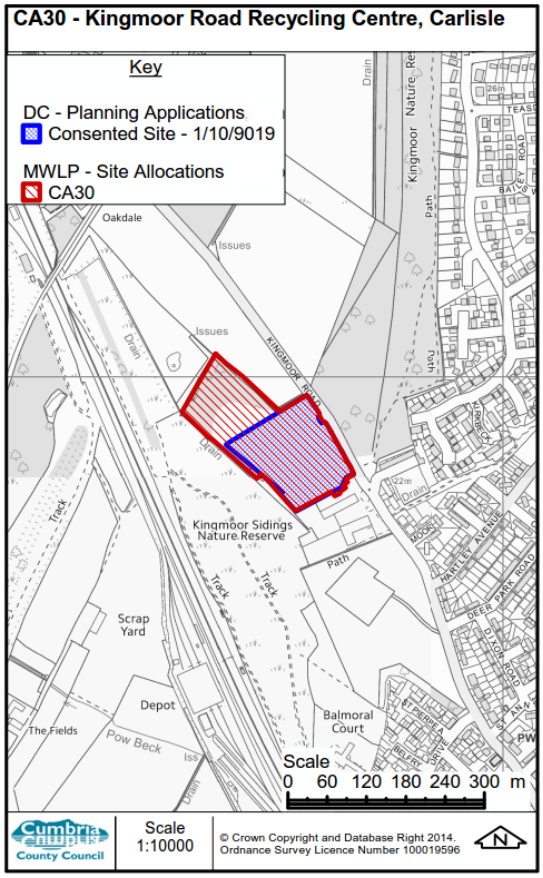
5.118 **It is considered that this allocation would not adversely affect the integrity of the European Wildlife Sites**.

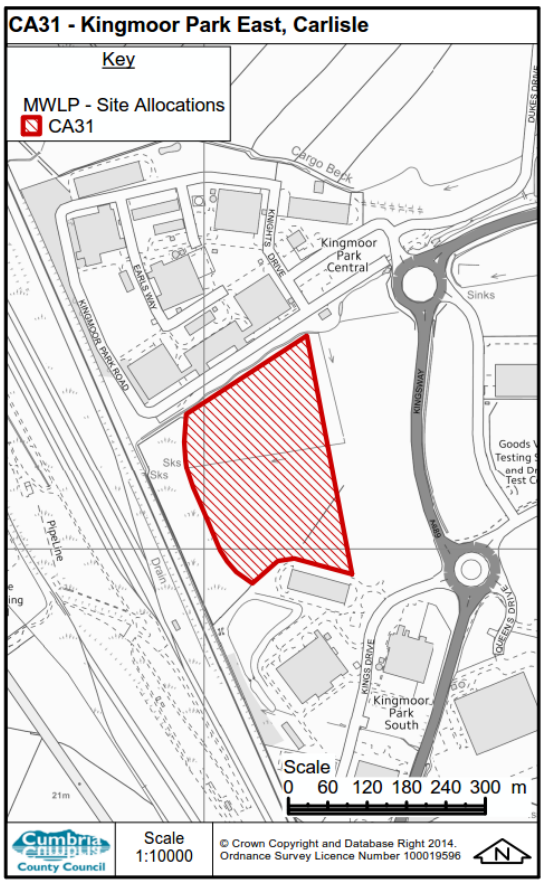
Cumulative impacts

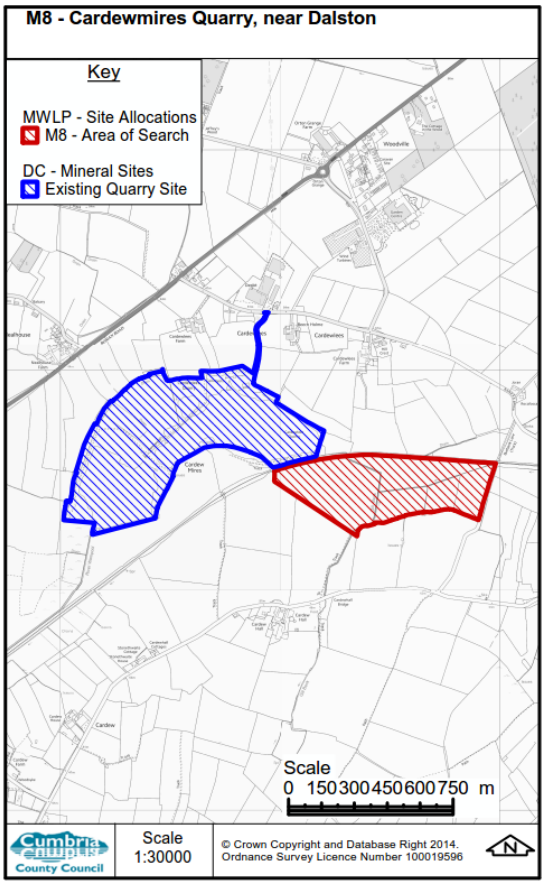
5.119 There are proposals for substantial developments to the north of Carlisle, to take advantage of the Northern Development Route road, which opened fully in 2012. In the 2015 Carlisle draft Local Plan, this area is allocated for Primary Employment and Employment Development. So far, development has been small scale or is still in the initial stages and it is not possible to assess what cumulative impacts there could be. These are likely to be matters for planning application proposals. **On the assumption that usual measures would be required to be put in place for these developments to mitigate cumulative effects, it is considered that the integrity of the EWSs would not be adversely affected**.

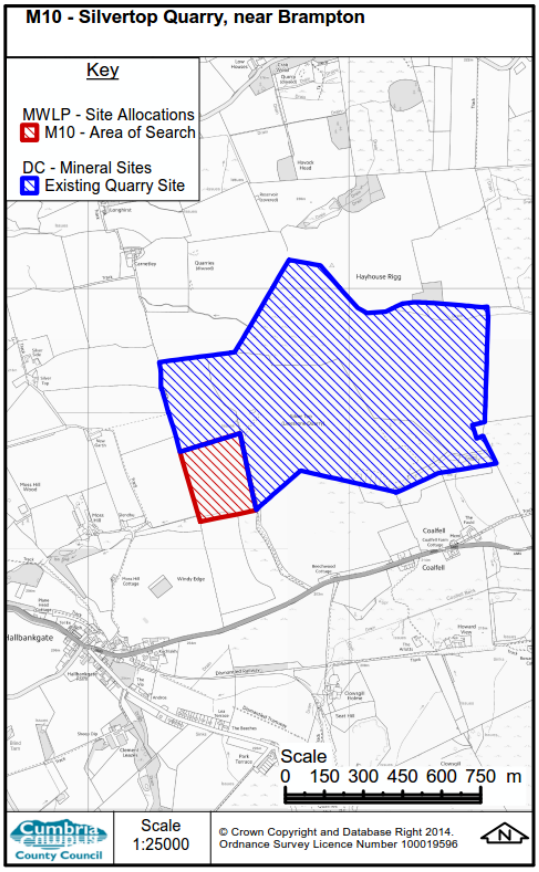
MAPS OF PROPOSED SITES IN CARLISLE










M10 - Silvertop Quarry, near Brampton
Key
MWLP - Site Allocations
M10 - Area of Search
DC - Mineral Sites
Existing Quarry Site
Scale
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Scale 1:25000
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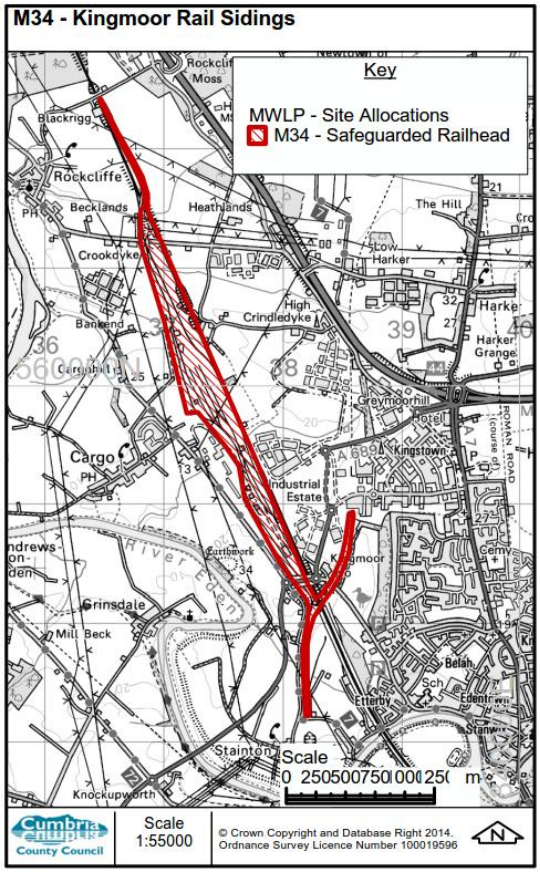
M34 - Kingmoor Rail Sidings
Key
MWLP - Site Allocations
M34 - Safeguarded Railhead
Rockcliffe
Blackrigg
Beckland
Heathlands
Crookdyke
Bankend
High Crindledyke
Low Harker
The Hill
Harker
Harker Grange
Greymoorhill
Kingstown
Industrial Estate
Cargo
Grinsdale
Mill Beck
Stainton
Knockupworth
Scale
Scale 1:55000
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COPELAND

5.120 The Copeland Local Plan 2013-2028 was adopted in December 2013. The Plan aims to protect and enhance landscapes, habitats and the built and natural environments. It also aims to promote recycling and waste minimisation and maintain and encourage sustainable economic development, with a special regard for the nuclear industry. The Copeland Local Plan projects a moderate scale of house building (between 230 and 300 dwellings per year). No inconsistencies have been identified between the Copeland Local Plan and the Minerals and Waste Local Plan. The MWLP includes policies on sustainable development, protection of environmental assets and amenity impacts, and makes provision for the waste management facilities and supplies of minerals that will be needed, and policies for radioactive wastes. Copeland Borough Council has prepared a Site Allocations and Policy Plan, with a Preferred Options consultation running from January to March 2015.

CO11 Bridge End industrial estate, Egremont

5.121 This site is identified for waste treatment and management facilities, within a building. It is not considered that this site would be suitable for an Energy from Waste facility.

5.122 It is 2.8 km from the River Ehen SAC. The site is a considerable distance down stream of the SAC. However, the conservation objectives for this SAC and, more specifically, the River Ehen (Ennerdale Water to Keekle Confluence) SSSI, include maintaining favourable habitat conditions, in particular for Atlantic Salmon, which would use the length of the river into which pollution from the site could flow.

5.123 It has been concluded that there are not likely to be significant adverse impacts on Salmon when they are in the sea, just off the coast, over 7km away, as any pollutants would have dissipated in the river. However, this conclusion is, to a degree, uncertain because of the limited objective information about their life cycle and activity.

5.124 **Likely significant effect, mitigation expected to be required to ensure no adverse impact on the integrity of the SAC.**

Mitigation

5.125 Mitigation is expected to be required to ensure no adverse impact on the integrity of the SAC. The mitigation measures would be normal requirements of planning permissions or of Environment Agency permits for waste treatment and management facilities. They would include temporary measures during construction to prevent dirty water flowing off-site. For an operational facility, potentially contaminated water from surfaced areas would be required to drain to a foul sewer or to a storage tank. It is likely that measures would be proposed to keep clean rainwater separate from potentially contaminated water; for example, by roofing waste storage areas and appropriate parts of the developments.

5.126 Waste treatment and management facilities could be within a building. For some waste processes, it is common practice for these to be maintained with a slight

negative pressure to prevent fugitive emissions of dust. Any stack emissions would be tightly controlled by the Environment Agency to maintain air quality.

Appropriate assessment

5.127 Development proposals would need to demonstrate satisfactory management of foul and surface water and for containing wastes. These would be normal measures expected in applications for planning permission and Environment Agency permits. **With these measures in place, it is considered that the integrity of the EWS would not be adversely affected.**

Cumulative impacts

5.128 This site is on a small industrial estate on which developments can be expected. No other specific proposed developments have been identified that would require consideration of cumulative impacts. **It is considered that the integrity of the SAC would not be adversely affected by cumulative impacts**.

CO32 Land adjacent to Sellafield

5.129 This site is identified for the treatment, management, storage and/or disposal of Low Level radioactive wastes, principally arising from Sellafield. The site owner, the Nuclear Decommissioning Authority (NDA), carried out a review of the potential suitability for disposal of LLW/VLLW on or near to the Sellafield site. It is understood that land within the Sellafield site is unlikely to be available in the next couple of decades; but that a potential area for disposal may have been identified within allocation CO32.

5.130 It is 3.3km from the Drigg Coast SAC; the reasons for its designation, and more specifically of the Drigg Coast SSSI, are the saltmarsh and sand dune habitats, not specific species. The European protected species associated with these habitats are Great Crested Newts and Natterjack toads. There is no direct pathway from CO32 to this SAC across the land, because of its topography. There may be an indirect pathway down 1.9km of the River Calder and then a further 3km along the coast, but this seems unlikely.

5.131 CO32 is close to the River Calder, which joins the River Ehen near to where these rivers flow into the sea. The River Ehen SAC is over 10km upstream from the confluence. Despite this distance, the conservation objectives for this SAC and, more specifically, the River Ehen (Ennerdale Water to Keekle Confluence) SSSI, are relevant. This is because the objective of maintaining favourable river habitat conditions, for example for Atlantic Salmon, which depends in part on the condition of the River Ehen between the sea and the SAC. This could potentially be affected by water from CO32 entering the River Calder.

5.132 It has been concluded that there are not likely to be significant adverse impacts on Salmon when they are in the sea, just off the coast, 1.9km away. However, this conclusion is, to a degree, uncertain because of the limited objective information about their life cycle and activity.

5.133 **Potential significant effect, mitigation expected to be required to ensure no adverse impact on the integrity of the River Ehen SAC.**

Mitigation

5.134 Mitigation is expected to be required to ensure no adverse impact on the integrity of the River Ehen SAC via the River Calder. The mitigation measures would be normal requirements of planning permissions or of Environment Agency permits for waste treatment and management facilities. They would include temporary measures during construction to prevent dirty water flowing off-site. For an operational facility, potentially contaminated water from surfaced areas would be required to drain to a foul sewer or to a storage tank. It is likely that measures would be proposed to keep clean rainwater separate from potentially contaminated water; for example, by roofing waste storage areas and appropriate parts of the developments.

5.135 Waste treatment facilities would be within a building. For some waste processes, it is common practice for these to be maintained with a slight negative pressure to prevent fugitive emissions of dust. The Environment Agency and Office for Nuclear Regulation also have strict controls on radioactive waste management, which would have to be complied with.

Appropriate assessment

5.136 Development proposals would need to demonstrate satisfactory management of foul and surface water and for containing wastes, including radioactive wastes. These would be normal measures expected in applications for planning permission and Environment Agency permits. **With these measures in place, it is considered that the integrity of the SACs would not be adversely affected**.

Cumulative impacts

5.137 There will be continuing developments within the Sellafield complex in connection with nuclear decommissioning and the management of radioactive wastes. There are also proposals for building new nuclear power stations on land on the far side of the Sellafield complex from CO32. In view of the distances involved, it is not considered that nuclear new build will require consideration of cumulative impacts on the SACs. Developments within Sellafield would be subject to normal planning permission and/or Environmental Permit controls and can be expected to secure beneficial effects with regard to water quality. **It is considered that the integrity of the SACs would not be adversely affected by cumulative impacts**.

CO35 Low Level Waste Repository, near Drigg

5.138 This site is identified for a continued role in managing Low Level radioactive waste. The existing “vaults” at the Low Level Waste Repository have been designed for those High Activity Low Level radioactive wastes that require highly engineered disposal facilities. Currently, the site only has permission for temporary storage of these wastes in vault 9, until 2018, and with higher stacking of containers in vault 8, until 2017.

5.139 A planning application for changing vault 8 and vault 9 to disposal, as well as a further six vaults for disposal within CO35, was submitted to the County Council in June 2011, but this was withdrawn by LLWR Ltd in early 2015, with a view to submitting a revised application in the near future.

5.140 Part of the site adjoins the Drigg Coast SAC; the reasons for the designation of this SAC and, more specifically, the Drigg Coast SSSI, are the saltmarsh and sand dune habitats, not specific species. The European protected species associated with these habitats are Great Crested Newts and Natterjack toads.

5.141 The Drigg Stream runs through the existing site and into the SAC at the Rivert Irt, which then flows into the sea, further south. Vaults 8 and 9 lie furthest away from the Irt, with any subsequently proposed vaults becoming progressively closer, along the course of the stream.

5.142 During the construction phases of any further proposed developments, pollution from mobilised suspended solids would be the main concern, potentially causing increased sediment loads in the nearby surface watercourses. This may result from land clearance, movement and storage of materials to and from the site, and from other construction activities. Successful mitigation measures were put in place for major developments at the site in recent years, including Vault 9.

5.143 If the next application that is submitted contains similar proposals to the one that was withdrawn, other potential impacts could arise from: the deep cut off wall, which could alter the ground and surface water levels on the heath and slack features of the SAC; flocculants, on the estuary/marine environment; coastal erosion; and loss of SAC habitats/species.

5.144 There is potentially a large area of land for which habitat protection and enhancement measures could be incorporated into the development and restoration schemes.

5.145 **Likely significant effect, mitigation expected to be required to ensure no adverse impact on the integrity of the SAC.**

Mitigation

5.146 Mitigation is expected to be required to ensure no adverse impact on the integrity of the Drigg Coast SAC. The mitigation measures would be normal requirements of planning permissions or of Environment Agency permits for waste/radioactive waste management facilities.

5.147 In the recently withdrawn planning application, it was proposed that a settlement pond would be installed onto temporary drainage on the south of the development, suitably sized for each of the construction phases. In addition, where necessary, flocculants would be used to control suspended solids prior to discharge to the Drigg Stream. Changes to the catchment of the Drigg Stream during the construction and restoration phases, would be likely to alter flow dynamics in receiving watercourses; this would be mitigated by construction of an appropriately sized attenuation pond.

5.148 It may be necessary for LLWR Ltd to undertake studies on these and other aspects of any development proposal. The results of these studies, plus any

plans to deal with accidental pollution, would need to be documented and agreed with the Environment Agency prior to construction commencing.

Appropriate assessment

5.149 Previous proposals on CO35, that have been granted planning permission, have included mitigation measures to ensure that the integrity of the EWS would not be affected. If future development proposals are of a similar nature, then **with such appropriate measures in place, it is considered that the integrity of the SAC would not be adversely affected**.

Cumulative impacts

5.150 Apart from the proposals for LLW management at this site, no other proposed developments have been identified that would require consideration of cumulative impacts. **It is considered that the integrity of the SAC would not be adversely affected by cumulative impacts**. In the longer term, the worst case scenario for climate change/coastal erosion is that the EWS could be eroded in approximately 300 years' time.

CO35 Low Level Waste Repository rail sidings

5.151 The site allocation for CO35 also relates to safeguarding the Repository's existing and functioning rail spur from inappropriate development that would adversely affect any existing or potential use for the sustainable transport of waste or materials.

5.152 The nearest European Wildlife Site is the Drigg Coast SAC, which lies on the far side of the Repository site from the sidings, around 580m away. The potential impact of this type of development is that polluted water could drain to the European Site. The area around the rail sidings drains towards the coast and the River Irt (part of the SAC).

5.153 This allocation does not propose any further development; the existing, normal requirements of planning permissions and of Environment Agency permits ensure that potentially contaminated water drains to a foul sewer or to a storage tank. As necessary, existing mitigation measures are in place, such as keeping clean rainwater separate from potentially contaminated water.

5.154 Furthermore, provided use of the rail sidings is limited to existing working hours (to avoid introducing new noise, light, traffic, etc., impacts on the surroundings) there are no evident, significant adverse impacts. Any localised impacts in terms of additional traffic would be offset by greater benefits from reduced impacts across the county's road network.

5.155 **It is considered that this allocation would not adversely affect the integrity of the SAC**.

Cumulative impacts

5.156 A planning application for changing vaults 8 and 9 to disposal, as well as a further six vaults for disposal within CO35, was submitted to the County Council

in June 2011, but this was withdrawn by LLWR Ltd in early 2015, with a view to submitting a revised application in the near future. At present, it is not possible to assess what cumulative impacts there could be, and these are likely to be matters for any planning application proposals. **On the assumption that usual measures would be required to be put in place for these developments to mitigate cumulative effects, it is considered that the integrity of the SAC would not be adversely affected**.

CO36 land within Sellafield

5.157 This site is identified for managing Low Level Wastes arising from the complex. This is an existing civil nuclear site, which is mostly operational and partly being decommissioned. There is an approved landfill within the site for certain of Sellafield's own wastes (the CLESA), which has remaining capacity for Lower Activity Low Level Waste (LALLW) until around 2025. Sellafield Ltd commissioned a review of the potential suitability for disposal of LLW/VLLW on or near to the Sellafield site, with the intention of identifying a site for a replacement CLESA. This study concluded that land within the Sellafield site may not be available in the next couple of decades, but that potential areas for disposal have been identified on adjacent land to the east (see CO32).

5.158 CO36 lies 2.7km from the Drigg Coast SAC; the reasons for its designation and, more specifically, the Drigg Coast SSSI, are the saltmarsh and sand dune habitats, not specific species. The European protected species associated with these habitats are Great Crested Newts and Natterjack toads. There is no direct pathway from CO36 to this SAC across the land, because of its topography. There may be an indirect pathway from the mouth of the River Calder and then a further 3km along the coast, though this seems unlikely.

5.159 It also lies 8.4km downstream from the River Ehen SAC. Despite this distance, the conservation objectives for this SAC and, more specifically the River Ehen (Ennerdale Water to Keekle Confluence) SSSI, are relevant. This is because of the objective of maintaining favourable river habitat conditions between the sea and the SAC, in particular for Atlantic Salmon, which would use the stretch of water where the River Ehen meets the River Calder, into which pollution from the site could flow.

5.160 It has been concluded that there are not likely to be significant adverse impacts on Salmon when they are in the sea, just off the coast, rather than in the river. However, this conclusion is, to a degree, uncertain because of the limited objective information about their life cycle and activity.

5.161 **Likely significant effect, mitigation expected to be required to ensure no adverse impact on the integrity of the River Ehen SAC**.

Mitigation

5.162 Mitigation is expected to be required to ensure no adverse impact on the integrity of the River Ehen SAC due to pollution of the river between the SAC and the coast. The mitigation measures would be normal requirements of planning permissions or of Environment Agency permits for waste management facilities. They would include temporary measures during construction to prevent dirty

water flowing off-site. For an operational facility, potentially contaminated water from surfaced areas would be required to drain to a foul sewer or to a storage tank. It is likely that measures would be proposed to keep clean rainwater separate from potentially contaminated water; for example, by roofing waste storage areas and appropriate parts of the developments.

5.163 Waste treatment facilities would be within a building. For some waste processes, it is common practice for these to be maintained with a slight negative pressure to prevent fugitive emissions of dust. The Environment Agency and Office for Nuclear Regulation also have strict controls on radioactive waste management, which would have to be followed.

Appropriate assessment

5.164 Development proposals would need to demonstrate satisfactory management of foul and surface water and for containing wastes, including radioactive wastes. These would be normal measures expected in applications for planning permission and Environment Agency permits. **With these measures in place, it is considered that the integrity of the EWS would not be adversely affected.**

Cumulative impacts

5.165 There will be continuing developments within the Sellafield complex in connection with nuclear decommissioning and the management of radioactive wastes. There are also proposals for building new nuclear power stations on land on the north side of the Sellafield complex. In view of the distances involved, it is not considered that nuclear new build will require consideration of cumulative impacts on the SACs. Developments within Sellafield would be subject to normal planning permission and/or Environmental Permit controls and can be expected to secure beneficial effects with regard to water quality and the River Calder. **It is considered that the integrity of the SACs would not be adversely affected by cumulative impacts**.

CO36 Sellafield rail sidings

5.166 The site allocation for CO36 also relates to safeguarding the Sellafield site's existing and functioning rail spur from inappropriate development that would adversely affect any existing or potential use for the sustainable transport of waste or materials.

5.167 The nearest European Wildlife Sites to the sidings are the Drigg Coast SAC, around 3km away, and the River Ehen SAC, which lies 11km upstream. The potential impact of this type of development is that polluted water could drain to the European Sites. The area around the rail sidings drains towards the coast, where the mouth of the River Ehen meets the River Calder.

5.168 This allocation does not propose any further development; the existing, normal requirements of planning permissions and of Environment Agency permits ensure that potentially contaminated water drains to a foul sewer or to a storage tank. As necessary, existing mitigation measures are in place, such as keeping clean rainwater separate from potentially contaminated water.

5.169 Furthermore, provided use of the rail sidings is limited to existing working hours (to avoid introducing new noise, light, traffic, etc., impacts on the surroundings) there are no evident, significant adverse impacts. Any localised impacts in terms of additional traffic would be offset by greater benefits from reduced impacts across the county's road network.

5.170 **It is considered that this allocation would not adversely affect the integrity of the SACs**.

Cumulative impacts

5.171 The Sellafield complex is undergoing decommissioning and will be for some years; this will necessitate both demolition and building on site. At present, it is not possible to assess what cumulative impacts there could be, and these are likely to be matters for any planning application proposals. **On the assumption that usual measures would be required to be put in place for these developments to mitigate cumulative effects, it is considered that the integrity of the SAC would not be adversely affected**.

M15 Peel Place Quarry, Holmrook

5.172 This quarry has an existing planning permission for sand and gravel extraction until 26 April 2015; sales have been slower than expected due to the recession, and an application for a time extension has been submitted. It is an important source of sand and gravel in this part of the county, as the identified alternative sources are around 65km away. This quarry is the largest supplier of washed concrete sand to manufacturing plants, principally in west Cumbria and Furness, including to the Sellafield nuclear licensed site. This site is identified as an Area of Search for extending the quarry, should it be needed within the Plan period.

5.173 The closest European Wildlife Site to this Area of Search is the Drigg Coast SAC, which lies approximately 2.5km to the south west. The relevant conservation objectives of this SAC and, more specifically, the Drigg Coast SSSI, relate to maintaining in, or restoring to, favourable condition the habitats of estuary, littoral sediment, saltmarsh and sand dunes.

5.174 It is considered unlikely that silt laden water would flow from the quarry to the SAC or that any restoration proposals for the site would have an adverse impact. There will be potential to enhance wildlife interests in a restoration scheme, which is currently identified as predominantly agriculture, but with a significant proportion of features to provide nature conservation interest.

5.175 **It is considered that this site would not adversely affect the integrity of the SAC.**

Cumulative impacts

5.176 There is continuing quarrying at this site, but no other existing or proposed developments in the vicinity have been identified that would require consideration of cumulative impacts. **It is considered that the integrity of the SAC would not be adversely affected by cumulative impacts**.

M17 Ghyll Scaur Quarry, Millom

5.177 This quarry has an existing planning permission for the extraction of very high skid resistance roadstone until 31 December 2021. The quarry produces higher Polished Stone Value (PSV) roadstone than any other in England. The only other potential sources of comparable quality stone are a dormant quarry in the West Midlands and another in Wales. This makes the mineral produced from Ghyll Scaur nationally important; it supplies markets in all parts of the country. This site is identified as an Area of Search for extending the quarry, should it be needed within the Plan period.

5.178 The closest European Wildlife Sites to this Area of Search are the Duddon Estuary SPA, the Morecambe Bay SAC and the Duddon Estuary Ramsar, all of which lie approximately 1.8km to the east. The relevant conservation objectives of these European Sites and, more specifically, the Duddon Estuary SSSI, relate to maintaining in, or restoring to, favourable condition the habitats of estuaries, saltmarsh, littoral and sub-littoral sediment and rock, shingle, sand dunes and lagoons, for breeding and non-breeding birds, and for natterjack toads.

5.179 It is considered unlikely that silt laden water would flow from the quarry to any of the European Sites or that any restoration proposals for the site would have an adverse impact. There would be potential to enhance wildlife interests in a restoration scheme.

5.180 **It is considered that this site would not adversely affect the integrity of the SAC, SPA or Ramsar.**

Cumulative impacts

5.181 There is continuing quarrying at this site. The only other existing or proposed development in the vicinity that has been identified that will require consideration of cumulative impacts is M31 Salthouse, below. **It is considered that the integrity of the SAC would not be adversely affected by cumulative impacts**.

M31 Salthouse, Millom

5.182 This site is identified for safeguarding as a potential railhead to serve Ghyll Scaur Quarry. The quarry has an existing planning permission until 31 December 2021. A night time rail loading facility, with access track and hard surfaced area for aggregate storage, had permission for the same period, and operated at Salthouse from 2008 to 2013. Since then, the site has been restored, as Network Rail withdrew their permission for live loading on the track. However, the site could be reinstated in the future, should crushed rock from Ghyll Scaur Quarry be required for any major Britain's Energy Coast projects.

5.183 M31 lies 300 metres from the Morecambe Bay SAC and the Duddon Estuary SPA/Ramsar. The relevant conservation objectives for these European Sites and, more specifically, the Duddon Estuary SSSI, relate to maintaining in, or restoring to, favourable condition the habitats of estuaries, saltmarsh, littoral and sub-littoral sediment and rock, shingle, sand dunes and lagoons, for breeding and non-breeding birds, and for natterjack toads.

5.184 When this site was operational the storage area and loading facility were located on the other side of the railway line to the SAC, SPA and Ramsar. Any chemical, oil or diesel stored on site and used in the generator (lighting is required for the night time activity) was safeguarded from run-off by 'plant nappies'. If the rail loading facility were to be reinstated, it is considered unlikely that any foul or contaminated drainage from the site, could enter any groundwater or surface waters of the SAC or SPA, directly or via soakaways.

5.185 M31 also lies 3.3km from Duddon Mosses SAC. The relevant conservation objectives for the SAC and, more specifically, Duddon Mosses SSSI, relate to maintaining in, or restoring to, favourable condition the habitats of raised bogs. It is considered highly unlikely that any pathway exists between M31 and this SAC along which polluted water could travel. Although the estuary is tidal and polluted run-off could travel up towards the SAC, it would then have to travel quite a distance upstream to the mosses.

5.186 **Likely significant effect, mitigation expected to be required for any further planning permission, to ensure no adverse impact on the integrity of the EWSs.**

Mitigation

5.187 With the ecological mitigation measures that were in place when the site was operational, Natural England considered that the development would not affect the European Wildlife Sites. If there is a proposal to reinstate the facility, mitigation is expected to be required to ensure no adverse impact on the integrity of the SAC, SPA or Ramsar. The mitigation measures would be normal requirements of planning permissions or of Environment Agency permits, including prevention of dirty water flowing off-site.

Appropriate assessment

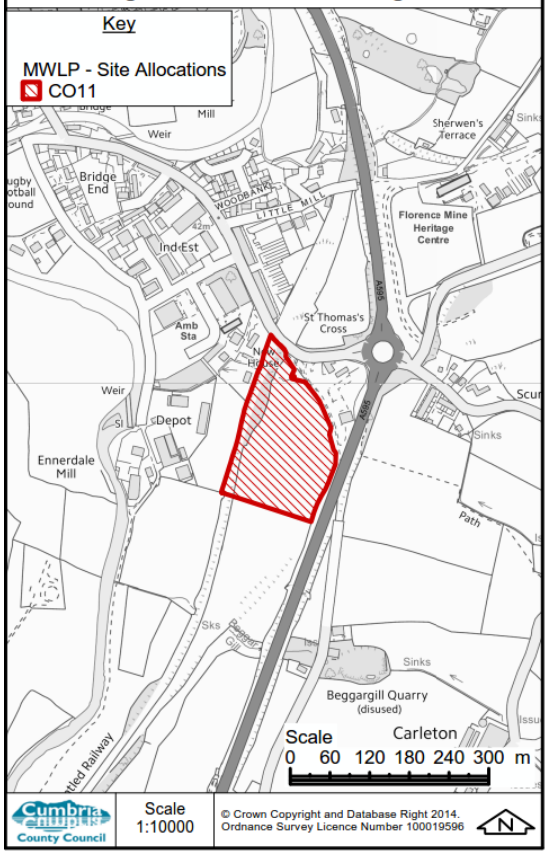
5.188 Similar mitigation measures to those that were adopted when the temporary facility was operational, are likely to be required. **With these measures in place, it is considered that the integrity of the EWSs would not be adversely affected.**

Cumulative impacts

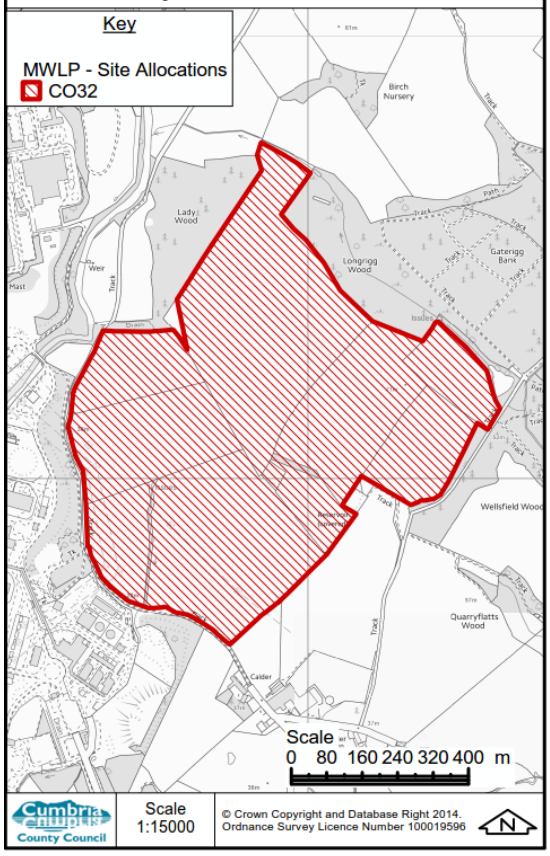
5.189 No other proposed developments have been identified that would require consideration of cumulative impacts. **It is considered that the integrity of the EWSs would not be adversely affected by cumulative impacts**.

MAPS OF PROPOSED SITES IN COPELAND

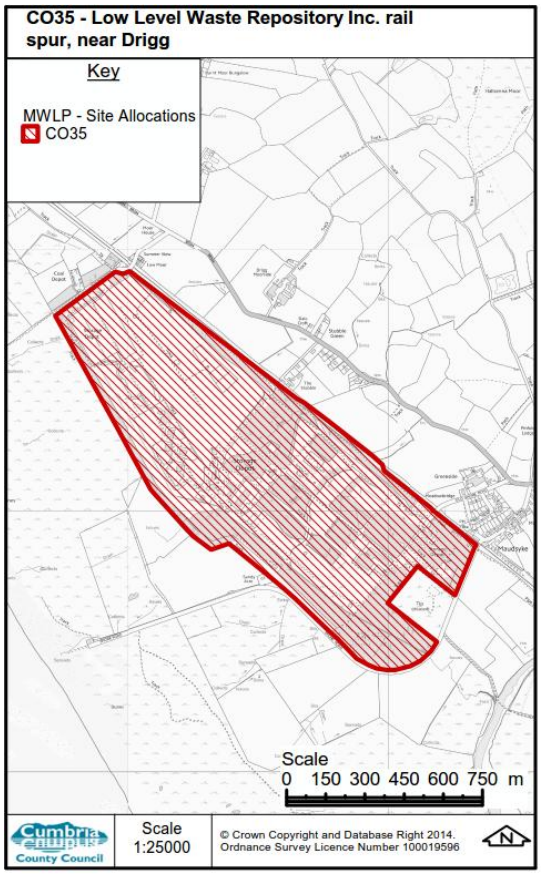
CO11 - Bridge End Industrial Estate, Egremont



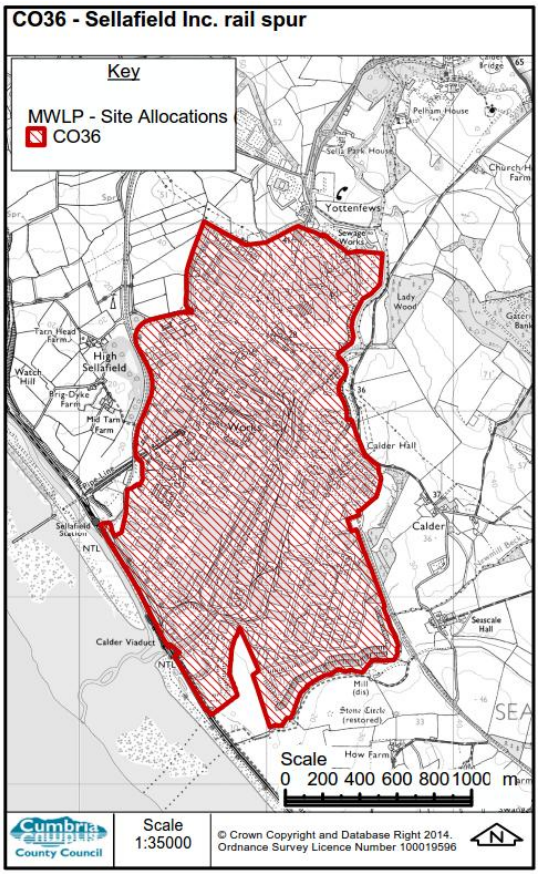
CO32 - Land adjacent to Sellafield



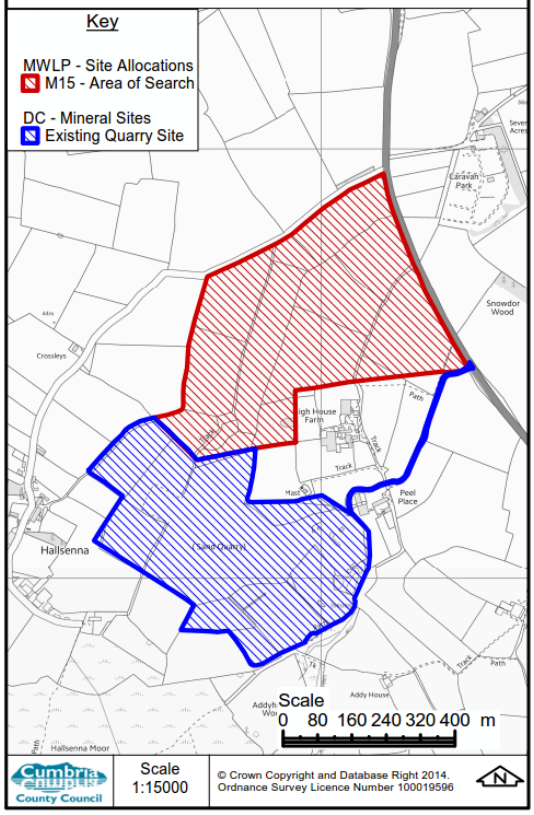
CO35 - Low Level Waste Repository Inc. rail spur, near Drigg



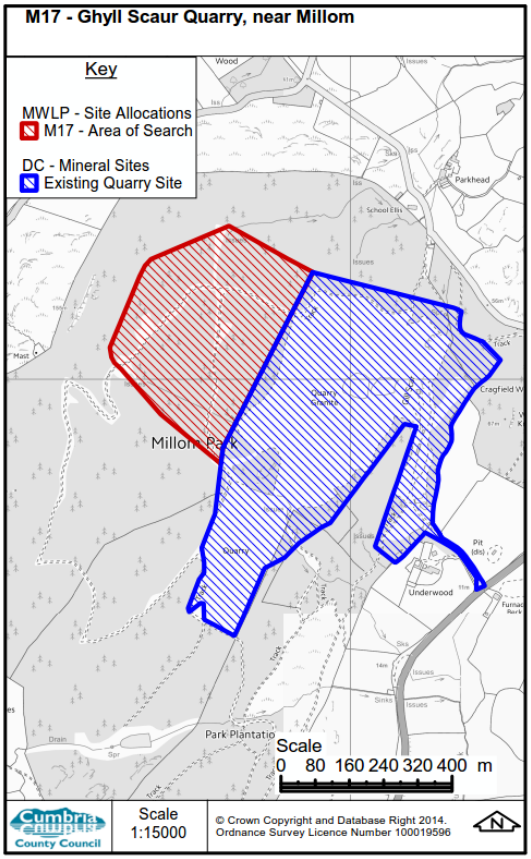
CO36 - Sellafield Inc. rail spur



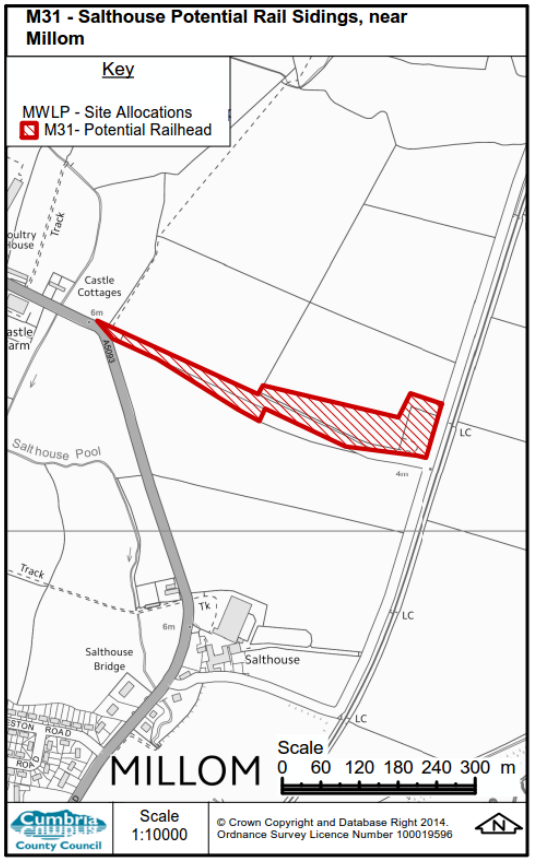
M15 - Peel Place Quarry, near Gosforth



M17 - Ghyll Scaur Quarry, near Millom



M31 - Salthouse Potential Rail Sidings, near Millom



EDEN

5.190 The Eden Local Development Framework Core Strategy was adopted in 2010. Its locational strategy is to focus new development mainly in urban extensions to Penrith and at the other Key Service Centres of Alston, Appleby and Kirkby Stephen. The scale of developments is relatively modest, around 240 houses/year and 3ha of employment land/year. Its Policy CS16 relates to the natural environment and is consistent with Cumbria's MWLP policies. The Strategy is not site specific. Eden has begun work on its new Local Plan and a Preferred Options consultation was carried out in 2014.

ED31 Flusco waste management centre, near Penrith

5.191 This site is identified for waste treatment and management facilities. It is 2.6km south 'as the crow flies' to the closest section of the River Eden SAC. However, drainage from ED31 is to the north, towards the River Petteril, which joins the River Eden SAC some 30km away at Carlisle.

5.192 The relevant conservation objectives for the SAC and, more specifically, the River Eden and Tributaries SSSI, are maintaining the quality of the river system and favourable habitat conditions for Atlantic Salmon, Sea, Brook and River Lamprey, Otters, Bullhead, White-Clawed Crayfish, breeding and non-breeding and wintering birds. With the distances involved, it is considered unlikely that any pollution from the site could have adverse impacts on those features for which the EWS was designated.

5.193 This is an existing waste management complex with water management infrastructure. The normal requirements of planning permissions and of Environment Agency permits would include temporary measures during any necessary construction to prevent dirty water flowing off-site. Once operational, potentially contaminated water from surfaced areas would be required to drain to a foul sewer or to a storage tank. It is likely that measures would be proposed to keep clean rainwater separate from potentially contaminated water; for example, by roofing waste storage areas and appropriate parts of the developments.

5.194 Waste treatment and management facilities could be within a building. For some waste processes, it is common practice for these to be maintained with a slight negative pressure to prevent fugitive emissions of dust. Any stack emissions would be tightly controlled by the Environment Agency to maintain air quality.

5.195 **It is considered that this site would not adversely affect the integrity of the SAC.**

Cumulative impacts

5.196 One of the cumulative impacts to be considered, is that of the adjacent Flusco landfill, which has planning permission to 2032. The nearby Blencowe Quarry has planning permission for a caravan/lodge park, but it is not considered that this would cause relevant cumulative impacts. **It is considered that the integrity of the SAC would not be adversely affected by cumulative impacts**.

M18 Stamphill, Long Marton

5.197 This is a Preferred Area for a gypsum mine to replace the Birkshead mine. This would have to be opencast working because the gypsum is too shallow to be worked by underground mining.

5.198 M18 lies 480 metres from the River Eden SAC. The relevant conservation objectives for this SAC and, more specifically, the River Eden and Tributaries SSSI, are maintaining the quality of the river system and favourable habitat conditions for Atlantic Salmon, Sea, Brook and River Lamprey, Otters, Bullhead, White-Clawed Crayfish, breeding and non-breeding and wintering birds.

5.199 Examples of potential impacts could be direct loss of otter habitat, such as near the Keld Syke and, for Brook Lampreys, that contaminated water, pumped out of the excavations, could flow to the Trout Beck section of the River Eden SAC.

5.200 The Preferred Area also lies 3.3km from the North Pennine Moors SPA and Moor House-Upper Teesdale SAC. However, there is no pathway from M18 to the SAC and SPA, as they lie on much higher ground, over 100 metres higher.

5.201 **Likely significant effect, mitigation expected to be required to ensure no adverse impact on the integrity of the River Eden SAC. The other SAC and the SPA are on much higher ground than the site, and their integrity could not be affected.**

Mitigation

5.202 Mitigation is expected to be required to ensure no adverse impact on the integrity of the River Eden SAC. The mitigation measures would be normal requirements of planning permissions or of Environment Agency permits, including prevention of dirty water flowing off-site.

Appropriate assessment

5.203 In accordance with adopted policies, development proposals for the site should maintain and enhance otter habitat. This may include keeping a wildlife corridor along Keld Syke, as in a previous planning permission that is no longer valid. A restoration scheme for the site, similar to the one that was previously approved would secure substantial habitat enhancement measures. A planning application would have to include detailed measures for the management of water within the site, including settlement lagoons. **With these measures in place, it is considered that the integrity of the EWS would not be adversely affected and could be enhanced in the longer term.**

Cumulative impacts

5.204 No problems have been identified that result from the discharge of water from the nearby Birkshead underground mine. No other proposed developments have been identified that would require consideration of cumulative impacts. **It is considered that the integrity of the SAC would not be adversely affected by cumulative impacts**.

M35 Shap Beck Quarry rail sidings

5.205 This site allocation is to safeguard the quarry's existing and functioning rail spur from inappropriate development that would adversely affect any existing or potential use for the sustainable transport of waste or minerals.

5.206 The nearest European Wildlife Sites to the sidings are the River Eden SAC, around 1.35km away, and the Asby Complex SAC, which lies 4.4km away. The potential impact of this type of development is that polluted water could drain to the European Sites. The area around the rail sidings drains towards Shap Beck and then to the River Eden SAC.

5.207 This allocation does not propose any further development; the existing, normal requirements of planning permissions and of Environment Agency permits ensure that potentially contaminated water drains to a foul sewer or to a storage tank. As necessary, existing mitigation measures are in place, such as keeping clean rainwater separate from potentially contaminated water or provision of settling ponds.

5.208 Furthermore, provided use of the rail sidings is limited to existing working hours (to avoid introducing new noise, light, traffic, etc., impacts on the surroundings) there are no evident, significant adverse impacts. Any localised impacts in terms of additional traffic would be offset by greater benefits from reduced impacts across the county's road network.

5.209 **It is considered that this allocation would not adversely affect the integrity of the SACs**.

Cumulative impacts

5.210 There is continuing quarrying at this site, but no other existing or proposed development in the vicinity has been identified that will require consideration of cumulative impacts. **It is considered that the integrity of the SACs would not be adversely affected by cumulative impacts**.

M36 Shapfell Quarry rail sidings

5.211 This site allocation is to safeguard the quarry's existing and functioning rail spur from inappropriate development that would adversely affect any existing or potential use for the sustainable transport of waste or minerals.

5.212 The nearest European Wildlife Sites to the sidings are the Asby Complex SAC, which lies 620m away, the River Eden SAC, around 700m away, the North Pennines Dales Meadows SAC, 1.5km away, and the Lake District High Fells SAC, 2km away. The potential impact of this type of development is that polluted water could drain to the European Sites. The area around the rail sidings drains towards the River Eden SAC, but there are uncertainties about the relationship of the quarry (not the sidings) with the groundwater that supplies the Asby Complex SAC.

5.213 This allocation does not propose any further development; the existing, normal requirements of planning permissions and of Environment Agency permits ensure that potentially contaminated water drains to a foul sewer or to a storage tank. As necessary, existing mitigation measures are in place, such as keeping clean rainwater separate from potentially contaminated water or provision of settling ponds.

5.214 Furthermore, provided use of the rail sidings is limited to existing working hours (to avoid introducing new noise, light, traffic, etc., impacts on the surroundings) there are no evident, significant adverse impacts. Any localised impacts in terms of additional traffic would be offset by greater benefits from reduced impacts across the county's road network.

5.215 **It is considered that this allocation would not adversely affect the integrity of the SACs**.

Cumulative impacts

5.216 There is continuing quarrying at this site. The quarry operator submitted proposals some years ago for deepening the quarry, but no progress has been made as Natural England have required further study on the groundwater relationship between the quarry and the Asby Complex SAC. At present, it is not possible to assess what cumulative impacts there could be, and these are likely to be matters for the planning application proposals. **On the assumption that usual measures would be required to be put in place for these developments to mitigate cumulative effects, it is considered that the integrity of the SACs would not be adversely affected**.

M37 Shap Blue Quarry rail sidings

5.217 This site allocation is to safeguard the quarry's existing and functioning rail spur from inappropriate development that would adversely affect any existing or potential use for the sustainable transport of waste or minerals.

5.218 The nearest European Wildlife Sites to the sidings are the Asby Complex SAC, which lies 300m away, the Lake District High Fells SAC, 690m away, the River Eden SAC, around 840m away, and the North Pennines Dales Meadows SAC, 1.3km away. The potential impact of this type of development is that polluted water could drain to the European Sites. The area around the rail sidings drains towards Wickers Gill and then to the River Eden SAC.

5.219 This allocation does not propose any further development; the existing, normal requirements of planning permissions and of Environment Agency permits ensure that potentially contaminated water drains to a foul sewer or to a storage tank. As necessary, existing mitigation measures are in place, such as keeping clean rainwater separate from potentially contaminated water or provision of settling ponds.

5.220 Furthermore, provided use of the rail sidings is limited to existing working hours (to avoid introducing new noise, light, traffic, etc., impacts on the surroundings) there are no evident, significant adverse impacts. Any localised impacts in terms

of additional traffic would be offset by greater benefits from reduced impacts across the county's road network.

5.221 **It is considered that this allocation would not adversely affect the integrity of the SACs**.

Cumulative impacts

5.222 There is continuing quarrying at this site, but no other existing or proposed development in the vicinity has been identified that will require consideration of cumulative impacts. **It is considered that the integrity of the SACs would not be adversely affected by cumulative impacts**.

M38 Kirkby Thore gypsum rail sidings

5.223 This site allocation is to safeguard the plaster and plasterboard work's existing and functioning rail spur from inappropriate development that would adversely affect any existing or potential use for the sustainable transport of waste or minerals.

5.224 The nearest European Wildlife Sites to the sidings are the River Eden SAC, around 1.6km away, and the North Pennine Moors SPA, 4km away. The potential impact of this type of development is that polluted water could drain to the European Sites. The area around the rail sidings drains towards the Trout Beck section of the River Eden SAC.

5.225 This allocation does not propose any further development; the existing, normal requirements of planning permissions and of Environment Agency permits ensure that potentially contaminated water drains to a foul sewer or to a storage tank. As necessary, existing mitigation measures are in place, such as keeping clean rainwater separate from potentially contaminated water or provision of settling ponds.

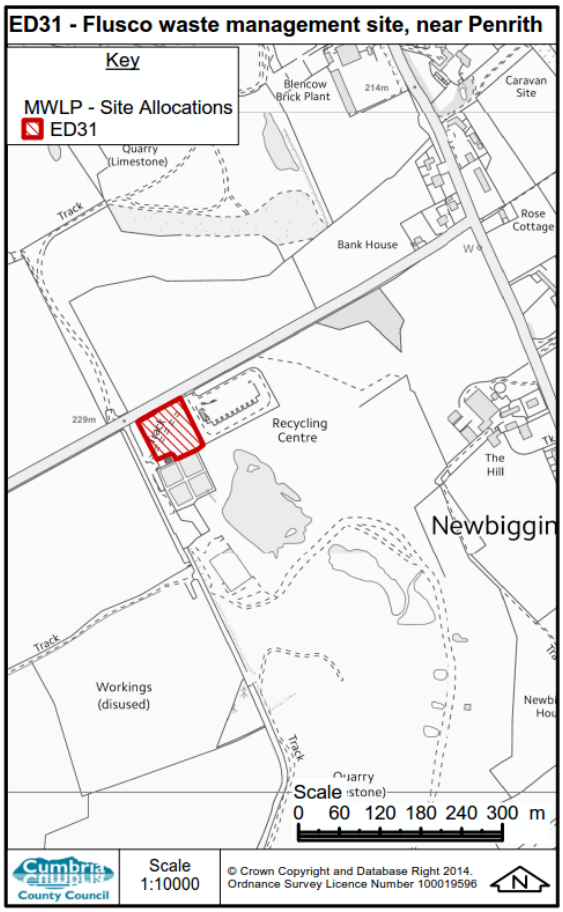
5.226 Furthermore, provided use of the rail sidings is limited to existing working hours (to avoid introducing new noise, light, traffic, etc., impacts on the surroundings) there are no evident, significant adverse impacts. Any localised impacts in terms of additional traffic would be offset by greater benefits from reduced impacts across the county's road network.

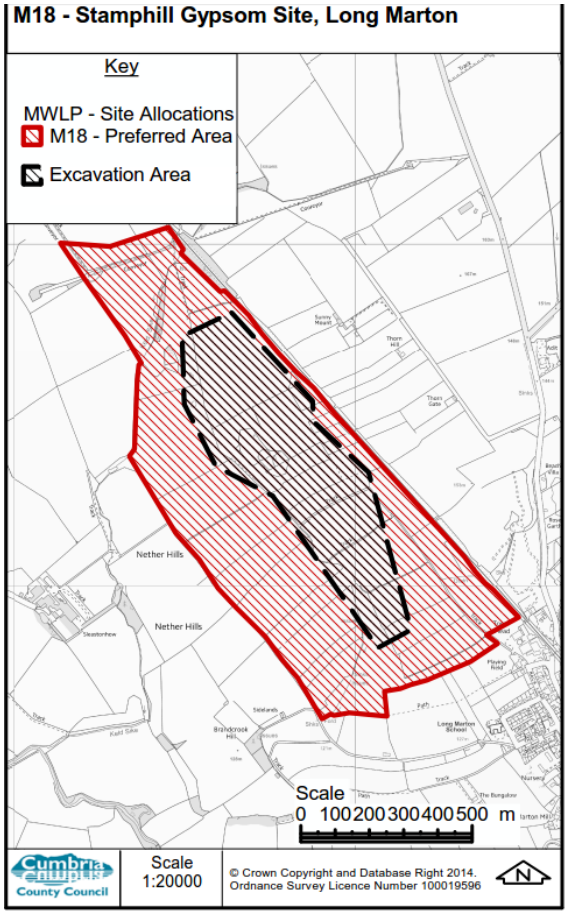
5.227 **It is considered that this allocation would not adversely affect the integrity of the SAC or SPA**.

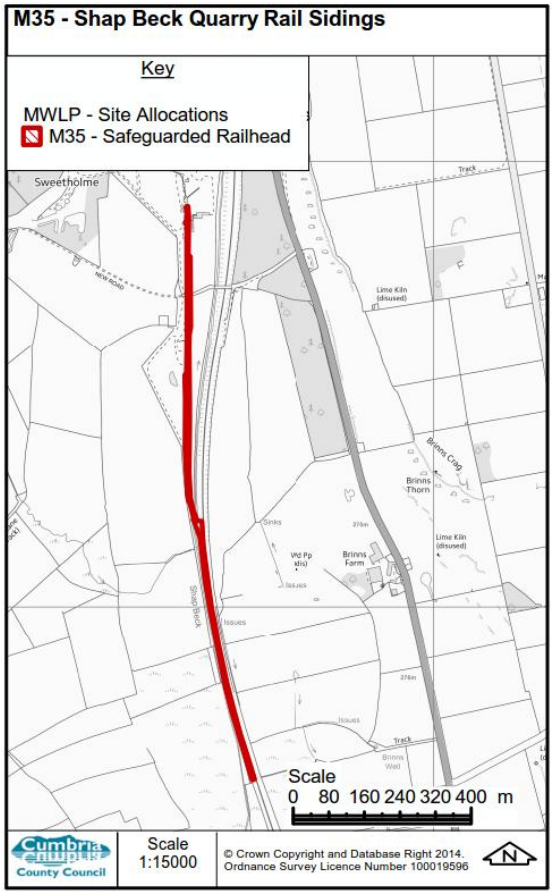
Cumulative impacts

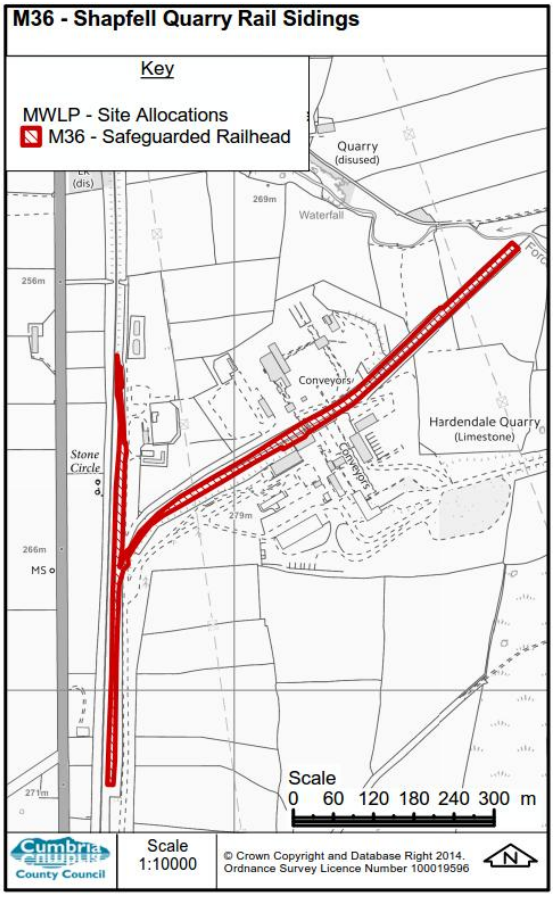
5.228 There are continuing operations at this site, but no other existing or proposed development in the vicinity has been identified that will require consideration of cumulative impacts. **It is considered that the integrity of the SAC or SPA would not be adversely affected by cumulative impacts**.

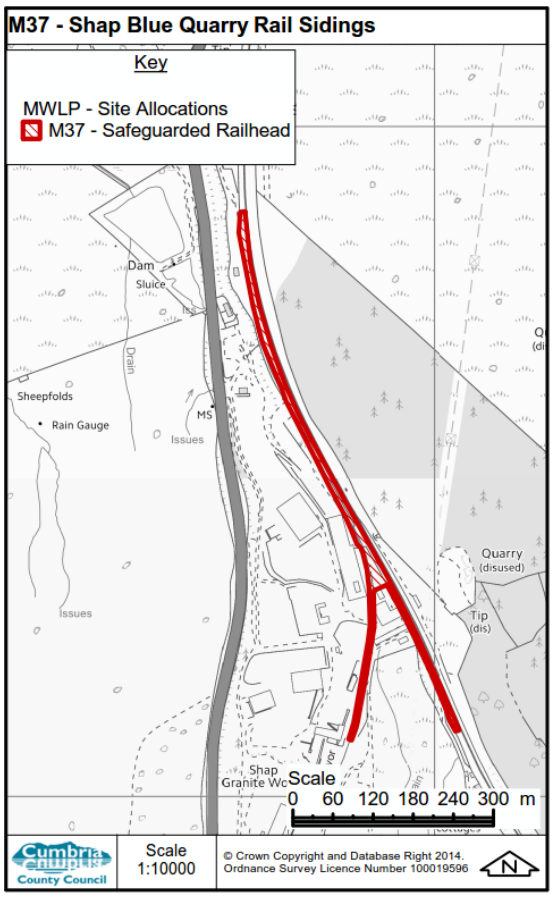
MAPS OF PROPOSED SITES IN EDEN










M37 - Shap Blue Quarry Rail Sidings
Key
MWLP - Site Allocations
M37 - Safeguarded Railhead
Dam
Sluice
Drain
Sheepfolds
Rain Gauge
MS
Issues
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Shap Granite Wo
Scale
0 60 120 180 240 300 m
Cumbria County Council
Scale 1:10000
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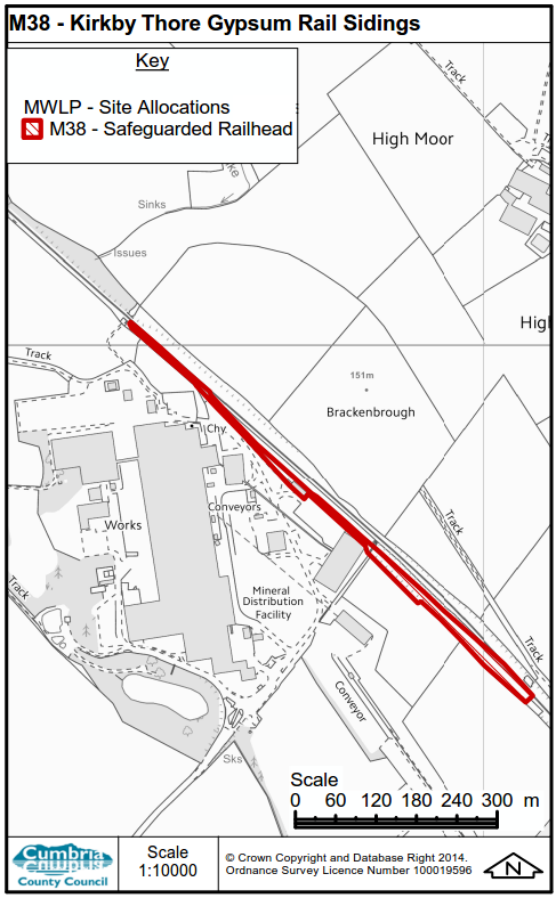
M38 - Kirkby Thore Gypsum Rail Sidings
Key
MWLP - Site Allocations
M38 - Safeguarded Railhead
High Moor
Track
Sinks
Issues
151m
Brackenbrough
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Conveyors
Works
Mineral Distribution Facility
Conveyor
Sks
Scale
0 60 120 180 240 300 m
Cumbria County Council
Scale 1:10000
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SOUTH LAKELAND

5.229 The South Lakeland Local Plan Core Strategy was adopted in 2010. Its locational strategy is to focus new development mainly in the Principal Service Centres of Kendal and Ulverston, at the Key Service Centres of Milnthorpe, Grange-over-Sands and Kirkby Lonsdale, followed by a number of designated Local Service Centres throughout the rural hinterland. There is a target for housing development, set at 468 houses/year, and a target of 4 hectares of employment land/year. Their Local Plan policies relating to the natural and historic environment are consistent with Cumbria's MWDF and MWLP policies. The Local Plan Land Allocations document was adopted in December 2013; there are no obvious cumulative impacts that this Habitats Regulations Assessment needs to take into account.

SL1 Kendal Fell quarry, Kendal

5.230 Land adjacent to the quarry is identified for a Household Waste Recycling Centre (HWRC), to replace the one at Canal Head in Kendal – this is allocation SL1B. The infrastructure required for the closed landfill, waste transfer station and other developments are also situated adjacent to the quarry. Previously, the quarry floor, which lies mostly within the Lake District National Park Authority area, was identified for waste treatment facilities, excluding Energy from Waste – this was allocation SL1A. The mineral rights lease holder has relinquished any interest in the quarry and the land and mineral rights owners are preparing a masterplan for the quarry and surrounding land. Therefore, the quarry floor is no longer allocated.

5.231 In the Lake District National Park Authority adopted Allocations of Land document, that part of Kendal Fell Quarry that falls within the Park, is identified for "waste management and treatment facility"; this was to reflect the MWLP's former allocation for waste treatment facilities (see above). In the South Lakeland District Council Local Plan Land Allocations document, the Council states that they support the development of this area for employment purposes in principle.

5.232 The proposed HWRC site is 900 metres from the Morecambe Bay Pavements SAC. The relevant conservation objectives for this SAC and, more specifically, the Scout and Cunswick Scars SSSI, relate to maintaining in, or restoring to, favourable condition the habitats of broadleaved woodland, calcareous grassland, lowland heath and standing open water. This SAC is situated on higher ground than SL1, so there is no pathway between them.

5.233 SL1B also lies 1km from the River Kent SAC. The relevant conservation objectives of this SAC and, more specifically, the River Kent and Tributaries SSSI, relate to maintaining the river system quality for White-clawed Crayfish, freshwater pearl mussels and Bullhead. The potential impacts could be contaminated water flowing to the river.

5.234 The land adjacent to the quarry is part of an existing waste management complex, including a closed landfill, with water management infrastructure. The normal requirements of planning permissions and of Environment Agency permits would include temporary measures during any necessary construction

and, once operational, potentially contaminated water from surfaced areas would be required to drain to a foul sewer or to a storage tank. It is likely that measures would be proposed to keep clean rainwater separate from potentially contaminated water; for example, by roofing waste storage areas and appropriate parts of the developments.

5.235 **It is considered that this site would not adversely affect the integrity of the SACs.**

Cumulative impacts

5.236 Planning permissions have been granted for commercial development on adjacent land and further developments in this part of Kendal may be anticipated given the housing allocation to the South of Underbarrow Road in the South Lakeland Local Plan Land Allocation Document. A development brief is being prepared by South Lakeland, to guide development of the site. It seems unlikely that these developments would lead to relevant cumulative impacts on European Wildlife Sites, because of distance and/or the nature of the wildlife interests. **It is considered that the integrity of the SAC would not be adversely affected by cumulative impacts**.

M14 Kirkby Slate Quarry, Kirkby-in-Furness

5.237 This quarry has an existing planning permission until February 2042. It is the only quarry that produces the distinctive Burlington blue/grey slate for which it is famous. The slate is used by architects and designers around the world, as well as being used extensively in Cumbria where it helps to maintain vernacular architectural styles.

5.238 Existing operations at the quarry comprise the extraction of slate, tipping of overburden, rock and slate waste, slate processing, aggregates processing and walling stone extraction from the old tips. In order to continue to extract workable slate from the quarry, there is a need to amend the current approved working and phasing plans. The proposed solution is to deepen the quarry, which will result in the need to also extend laterally in a southerly direction, into Kirkby Moor. This area is, therefore, identified as an Area of Search to extend the quarry.

5.239 Although not designated as a European Wildlife Site, Kirkby Moor is designated as a SSSI, primarily for its heather moorland, a habitat restricted on an international basis to Northern Europe and a scarce habitat within South Cumbria.

5.240 The closest European Wildlife Site to this Area of Search is the Subberthwaite, Blawith and Torver Low Commons SAC, which lies 1km away. The relevant conservation objectives of this SAC and, more specifically, the Subberthwaite, Blawith and Torver Low Commons SSSI, relate to maintaining or restoring the qualifying natural habitat of transition mires and quaking bogs. There is no apparent pathway between the site and this SAC.

5.241 The Morecambe Bay SAC, the Duddon Estuary SPA and Ramsar, all lie 1.5km to the west. The relevant conservation objectives for these European Sites and,

more specifically, the Duddon Estuary SSSI, relate to maintaining in, or restoring to, favourable condition the habitats of estuaries, saltmarsh, littoral and sub-littoral sediment and rock, shingle, sand dunes and lagoons, for breeding and non-breeding birds, and for natterjack toads. There is potential for silt laden or polluted water to flow from the quarry via the river system and into these European Sites.

5.242 The Duddon Mosses SAC lies 1.9km away. The relevant conservation objectives for this SAC and, more specifically, Duddon Mosses SSSI, relate to maintaining in, or restoring to, favourable condition the habitats of raised bogs. It is considered unlikely that any pathway exists between the quarry and this SAC, along which polluted water could travel.

5.243 **Likely significant effect, mitigation expected to be required to ensure no adverse impact on the integrity of the Morecambe Bay SAC and Duddon Estuary SPA/Ramsar.**

Mitigation

5.244 Mitigation is expected to be required to ensure no adverse impact on the integrity of the Morecambe Bay SAC, the Duddon Estuary SPA and Ramsar. The mitigation measures would be normal requirements of planning permissions or of Environment Agency permits, including prevention of dirty water flowing off-site.

Appropriate Assessment

5.245 Development proposals would need to demonstrate satisfactory management of foul and surface water and for containing wastes. These would be normal measures expected in applications for planning permission and Environment Agency permits. **With these measures in place, it is considered that the integrity of the EWS would not be adversely affected.**

Cumulative impacts

5.246 There is continuing quarrying at this site, but no other existing or proposed developments have been identified in the vicinity that would require consideration of cumulative impacts. **It is considered that the integrity of the SAC would not be adversely affected by cumulative impacts**.

M16 Holmescales Quarry, New Hutton

5.247 This quarry has an existing planning permission until February 2042; however, reserves are almost exhausted and the quarry has been mothballed for several years. The quarry produced high skid resistance roadstone for a regional market; the nearest alternative sources of similar high specification aggregate are at Roan Edge Quarry and in the Yorkshire Dales National Park. This site is identified as an Area of Search to extend the quarry.

5.248 M16 lies 4.7km from the River Kent SAC. The relevant conservation objectives of this SAC and, more specifically, the River Kent and Tributaries SSSI, relate to maintaining the river system quality for White-clawed Crayfish, freshwater pearl mussels and Bullhead. There is no apparent pathway between the site and this SAC.

5.249 The site also lies 6km from the Morecambe Bay Pavements SAC. The relevant conservation objectives of this SAC and, more specifically, the Scout and Cunswick Scars SSSI, relate to maintaining in, or restoring to, favourable condition the habitats of broadleaved woodland, calcareous grassland, lowland heath and standing open water. There is no apparent pathway between the site and this SAC; although silt laden or polluted water could flow down the river system from the quarry, this SAC is then situated on ground higher than the river.

5.250 The quarry is also 8km (as the crow flies) from the Morecambe Bay SAC, SPA and Ramsar. The relevant conservation objectives for these European Sites and, more specifically, the Duddon Estuary SSSI, relate to maintaining in, or restoring to, favourable condition the habitats of estuaries, saltmarsh, littoral and sub-littoral sediment and rock, shingle, sand dunes and lagoons, for breeding and non-breeding birds, and for natterjack toads. There is potential for silt laden or polluted water to flow from the quarry via the river system and into these European Sites; however, this would entail a journey of some 15.5km.

5.251 **It is considered that this site would not adversely affect the integrity of the SACs.**

Cumulative impacts

5.252 If quarrying resumes at this site, there are no other existing or proposed developments that have been identified in the vicinity that would require consideration of cumulative impacts. **It is considered that the integrity of the SAC would not be adversely affected by cumulative impacts**.

M30 Roan Edge Quarry, New Hutton

5.253 This quarry has an existing planning permission until 30 December 2038. It produces high skid resistance roadstone. Rock extracted from the quarry is currently crushed on site (using mobile plant) and screened to produce different sized aggregate for use in road construction. This site is identified as an Area of Search to extend the quarry, should it be needed within the Plan period.

5.254 The closest European Wildlife Site to this Area of Search is 3.8 km to the River Mint, which is part of the River Kent SAC. The relevant conservation objectives of this SAC and, more specifically, the River Kent and Tributaries SSSI, relate to maintaining the river system quality for White-clawed Crayfish, freshwater pearl mussels and Bullhead. There is no apparent pathway between the site and this SAC.

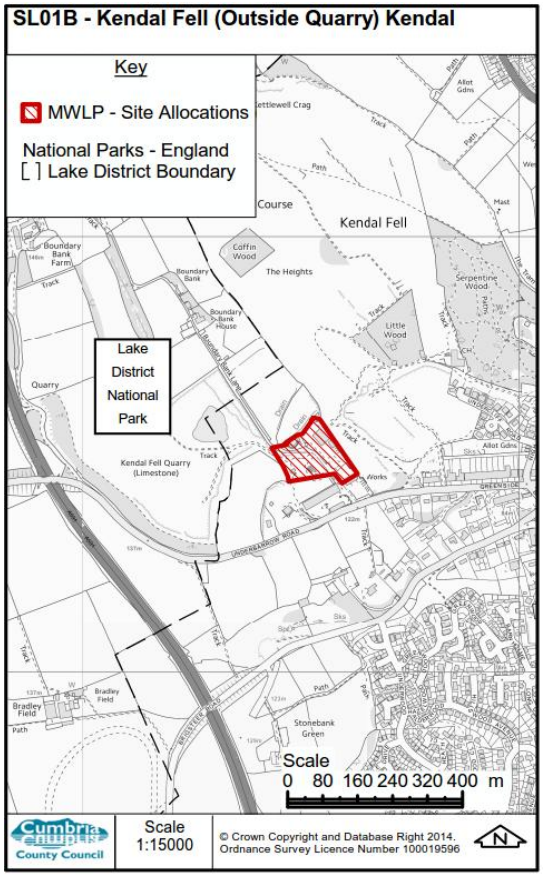
5.255 The Morecambe Bay Pavements SAC, lies approximately 8.4km to the west. The relevant conservation objectives of this SAC and, more specifically, the Scout and Cunswick Scars SSSI, relate to maintaining in, or restoring to, favourable condition the habitats of broadleaved woodland, calcareous grassland, lowland heath and standing open water. It is considered unlikely that silt laden water would flow from the quarry or that any restoration proposals for the site would have an adverse impact. There will be potential to enhance wildlife interests in a restoration scheme, which is currently identified as creating a flooded valley to integrate into surrounding agricultural grazing land and to create new habitat features.

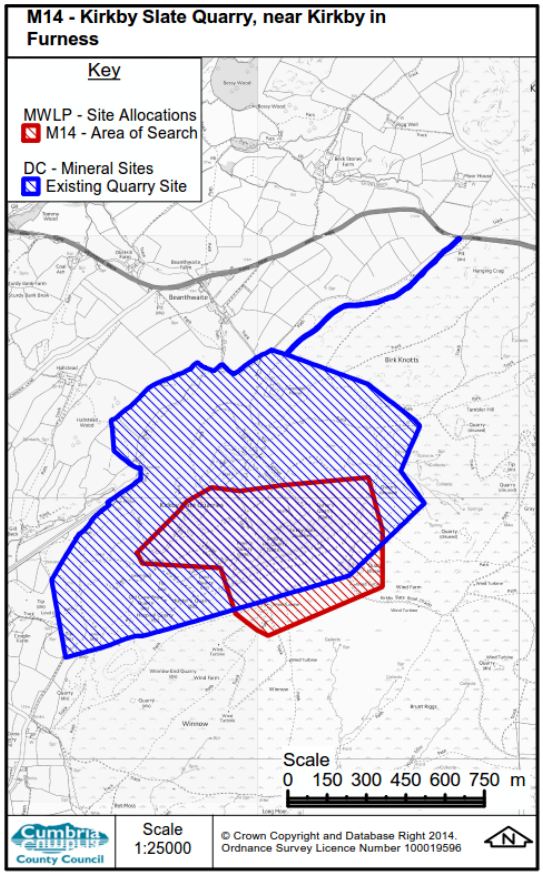
5.256 **It is considered that this site would not adversely affect the integrity of the SACs.**

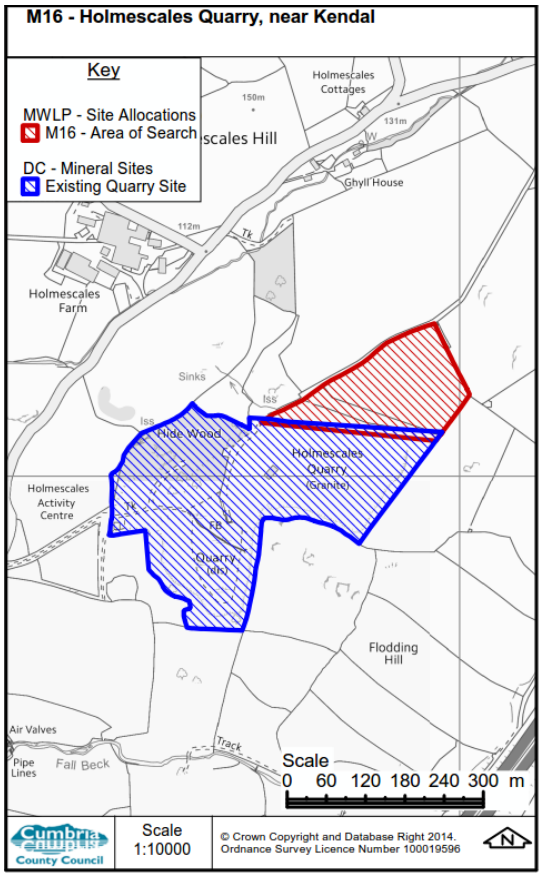
Cumulative impacts

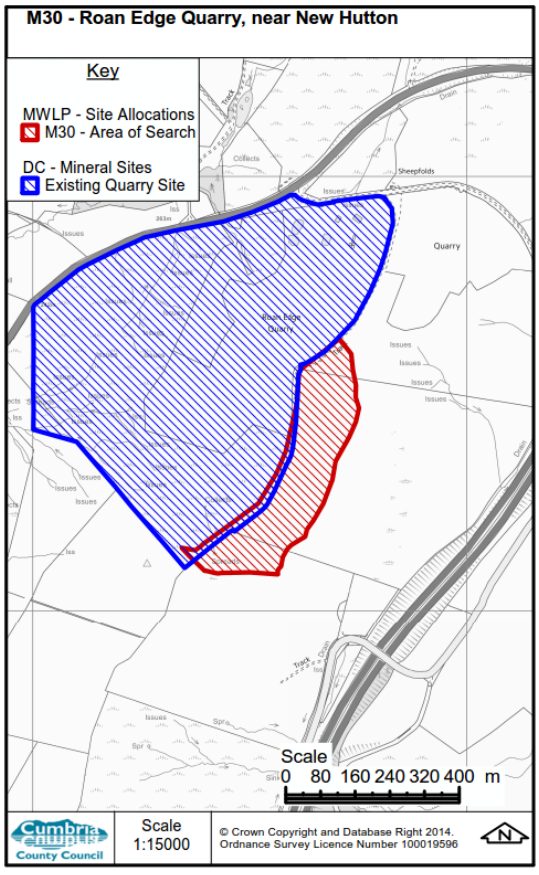
5.257 There is continuing quarrying at this site, but no other existing or proposed developments have been identified in the vicinity that would require consideration of cumulative impacts. **It is considered that the integrity of the SAC would not be adversely affected by cumulative impacts**.

MAPS OF PROPOSED SITES IN SOUTH LAKELAND









APPENDIX 1

TYPES OF WASTE MANAGEMENT FACILITIES

Household Waste Recycling Centres

These are provided by the County Council in its role as the waste disposal authority. Modern ones comprise a number of covered bays where people can take bulky household items and recyclable and non-recyclable materials that are not collected by the bin lorries or kerbside collections. Sites of approximately one hectare are usually needed.

Types of waste treatment facilities

These are usually within buildings and would be likely to require sites between 2 and 3 hectares.

Waste Transfer and Bulking Stations

These are where waste is delivered for bulking up before being sent to a larger facility or where it is sorted prior to being transferred somewhere else for recycling, treatment or disposal.

Materials Recovery Facility (MRF)

This is a dedicated facility for the sorting and separation of recyclable materials. It can be expected to handle around 50,000 tonnes/year. At present these are primarily for municipal waste. However, they are likely to be needed for the much larger commercial and industrial waste streams.

Mechanical and Biological Treatment (MBT)

This is a generic term for mechanical sorting and separation used in conjunction with biological treatment processes such as composting. They dry out and reduce the bulk of the waste and separate it into recyclables such as metals and glass, an organic fraction, and sometimes biogas or a refuse derived fuel or a soil conditioner. There is also usually a reject fraction, which will require landfill disposal. The refuse derived fuel can be used in an Energy from Waste Plant or may be able to be used in an existing industrial process such as a cement kiln, but not in power stations.

MBT plants would probably have modules of around 50.000 tonnes/year. Their buildings could be 140 metres long and 30 metres wide.

Anaerobic digestion

Biodegradable waste is placed in an enclosed vessel and encouraged to break down in the absence of oxygen. The end products are a solid or liquid digestate, which may be able to be used as a soil conditioner or a bio-fertiliser, a concentrated liquor, which can be re-circulated, or may be able to be used as a fertiliser or disposed through sewage treatment works, and a methane rich biogas. This gas can be burnt to generate electricity and counts as a renewable fuel.

Energy from waste plants (EfW)

These are usually within buildings on sites of between 2 and 4.5 hectares

There are several different technologies for these. They burn residual waste in controlled conditions to generate heat and/or electricity, after targeted levels of recyclables and biodegradable wastes have been removed. Ideally, these plants should be combined heat and power plants and be located near a development that would use the waste heat (normally steam), and where the electricity generated can be fed into the National Grid. They could have capacities ranging from 20,000 to 200,000 tonnes/year. Anaerobic digestion, described above, can also involve energy generation.

Advanced thermal treatment plants

These incorporate advanced or emerging technologies. They include pyrolysis where organic materials are broken down by heat in the absence of oxygen. The process produces a synthetic gas or pyrolysis oil, which can be used to generate electricity. A solid char is also produced, which may need specialist disposal or additional processing.

An alternative is gasification, which operates at a higher temperature than pyrolysis and with oxygen or air and added water. It produces a synthetic gas with a higher hydrogen content than pyrolysis. A solid residue is produced which usually requires landfill disposal.

Mechanical Heat Treatment is another generic option. It can involve pre-treating waste prior to separation by heat or steam, for example in an autoclave. It can be part of the MBT process. It can produce a refuse derived fuel as well as the recyclables. There will be a residue that requires landfill disposal.

There are also other advanced thermal treatment technologies.

Landfill

After the removal of recyclables and compostable materials, there is still usually a residual fraction of waste that has to be landfilled.

Aerobic digestion

This is a biological process in which biodegradable wastes are decomposed by micro-organisms in the presence of air. It is usually described as composting, which can be either in open windrows or within an enclosed vessel (see below). The residue may be used as a soil conditioner or mulch or sold as a compost.

Open windrow composting

This is a process in which garden wastes are piled in rows, usually in the open air but sometimes inside a building. It produces a stabilised compost, water and carbon dioxide. It cannot be used for food wastes. Sites should not be located close to sensitive properties because of odour problems.

In-vessel composting

This composts garden and kitchen wastes in an enclosed vessel or tunnel. It is more controlled than open windrows and can achieve the temperatures needed to destroy bacteria to prevent health risks in accordance with the Animal By-products Regulations. These plants are much less likely than open windrows to cause odour problems, but they cannot be guaranteed not to produce odours.

Composting facilities vary in size, but can be expected to handle around 25,000 to 30,000 tonnes/year.

Green Resource Recovery Parks or Green Energy Parks

There may be advantages in locating several waste management and re-use/recycling facilities on the same site. These could incorporate Energy from Waste plants, Materials Recovery Mechanical and Biological Treatment, Waste Transfer and Household Waste Recycling Centres. Sites of around 10 to 15 ha could be needed to accommodate these. At present it seems unlikely that any of these will be proposed in Cumbria.

APPENDIX 2

THE LOCATION OF SITES IN RELATION TO EUROPEAN WILDLIFE SITES

The distances of the sites from the European Wildlife Sites are given in the following table. Their locations and the boundaries of the European Wildlife Sites are shown on the maps at the end of this document.

Allocated Site	Distance	European Wildlife Site
CA11 Willowholme, Carlisle	adjacent	River Eden SAC
M34 Kingmoor rail sidings	400m	
M18 Stamphill gypsum mine	480m	
CA30 Kingmoor Road recycling centre	690m	
M36 Shapfell Quarry rail sidings	700m	
CA31 Kingmoor Park East, Carlisle	760m	
M37 Shap Blue Quarry rail sidings	840m	
M8 Cardewmires Quarry	1.1km	
M35 Shap Beck Quarry rail sidings	1.35km	
M38 Kirkby Thore rail sidings	1.6km	
ED31 Flusco waste management	2.6km	
CO35 LLWR	adjacent	Drigg Coast SAC
M15 Peel Place Quarry	2.5km	
CO36 Sellafield	2.7km	
CO32 Land adjacent to Sellafield	3.3km	
M31 rail sidings, Millom	300m	Morecambe Bay SAC, Duddon Estuary SPA/Ramsar
M5 High Greenscoe Quarry	1.4km	
M14 Kirkby Slate Quarry	1.5km	
M17 Ghyll Scaur Quarry	1.8km	
BA26 Barrow Port and rail sidings	adjacent	Morecambe Bay SAC/SPA/ Ramsar
M12 Roosecote Quarry extension	870m	
M16 Holmescales Quarry	8km	
AL39 Silloth Port	adjacent	Upper Solway Flats & Marshes SPA/Ramsar, Solway Firth SAC
M34 Kingmoor rail sidings	1.2km	
CA31 Kingmoor Park East, Carlisle	3.7km	
M6 Overby and High House Quarries	4km	
CA30 Kingmoor Road recycling centre	5km	
AL38 Innovia rail sidings	7.8km	
AL18 Port of Workington	1.2km	River Derwent and Bassenthwaite Lake SAC
AL3 Oldside, Workington	1.2km	
M24 Derwent Howe slag bank	2km	
AL32 Siddick rail sidings	2.4km	
AL8 Lillyhall waste management centre	3.4km	
AL37 Lillyhall Industrial Estate	3.4km	
M18 Stamphill gypsum mine	3.3km	North Pennine Moors SPA, Moor House – Upper Teesdale SAC
M10 Silvertop Quarry	1.1km	North Pennine Moors SAC/SPA
M38 Kirkby Thore rail sidings	4km	
SL1 Kendal Fell Quarry	900m	Morecambe Bay Pavements SAC
M16 Holmescales Quarry	6km	
M30 Roan Edge Quarry	8.4km	

CO11 Bridge End Industrial Estate	2.8km	River Ehen SAC
CO36 Sellafield	8.4km	
CO32 Land adjacent to Sellafield	10km	
SL1 Kendal Fell Quarry	1km	River Kent SAC
M30 Roan Edge Quarry	3.8km	
M16 Holmescales Quarry	4.7km	
M37 Shap Blue Quarry rail sidings	1.3km	North Pennine Dales Meadows SAC
M36 Shapfell Quarry rail sidings	1.5km	
M14 Kirkby Slate Quarry	1.9km	Duddon Mosses SAC
M31 Salthouse, Millom	3.3km	
AL38 Innovia rail sidings	3.5km	South Solway Mosses SAC
M8 Cardewmires Quarry	11km	
M37 Shap Blue Quarry rail sidings	300m	Asby Complex SAC
M36 Shapfell Quarry rail sidings	620m	
M35 Shap Beck Quarry rail sidings	4.4km	
M37 Shap Blue Quarry rail sidings	690m	Lake District High Fells SAC
M36 Shapfell Quarry rail sidings	2km	
M14 Kirkby Slate Quarry	1km	Subberthwaite, Blawith and Torver Low Commons SAC

APPENDIX 3

CUMBRIA MINERALS AND WASTE LOCAL PLAN

HABITATS REGULATIONS ASSESSMENT

REGULATION 18

STRATEGIC POLICIES, DEVELOPMENT CONTROL POLICIES AND SITE ALLOCATIONS POLICIES AND POLICIES MAP

THE CONSERVATION OBJECTIVES OF THE EUROPEAN WILDLIFE SITES

76

THE CONSERVATION OBJECTIVES OF THE EUROPEAN WILDLIFE SITES

Part 1 European Sites and Features – SACs

[1] This is the approximate central point of the SAC - in the case of large, linear or composite sites, this may not represent the location where a feature occurs within the SAC

* Priority feature

EUROPEAN SITE	GRID REF[1]/ AREA	REASON(S) FOR DESIGNATION	CONSERVATION OBJECTIVES	SITE ALLOCATIONS
Asby Complex SAC	NY598112 3122.23 ha	Qualifying Features • Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*) • *Molinia* meadows on calcareous, peaty or clayey silt-laden soils (*Molinion caeruleae*) • Petrifying springs with tufa formation (*Cratoneurion*) * • Alkaline fens • Limestone pavements * • Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp. • European dry heaths • Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* * • Geyer's whorl snail *Vertigo geyeri* • Slender green feather-moss *Drepanocladus* (*Hamatocaulis*) *vernicosus*	The extent and distribution of qualifying natural habitats and habitats of qualifying species: • The structure and function (including typical species) of qualifying natural habitats • The structure and function of the habitats of qualifying species • The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely • The populations of qualifying species, and • The distribution of qualifying species within the site	Site **M37 Shap Blue Quarry** is identified for **safeguarding of its rail sidings** and lies 300m from the SAC Site **M36 Shapfell Quarry** is identified for **safeguarding of its rail sidings** and lies 620m from the SAC Site **M35 Shap Beck Quarry** is identified for **safeguarding of its rail sidings** and lies 4.4km from the SAC
Bolton Fell Moss SAC	NY490688 374.74 ha)	Qualifying Features • Active raised bogs * • Degraded raised bogs still capable of natural regeneration	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring: • The extent and distribution of qualifying natural habitats • The structure and function (including typical species) of qualifying natural habitats, and • The supporting processes on which the qualifying natural habitats rely	NONE
Border Mires, Kielder – Butterburn SAC	NT684013 11851.77 ha cross border with Northumbria	Qualifying Features • Blanket bogs * • Transition mires and quaking bogs • Northern Atlantic wet heaths with *Erica tetralix* • European dry heaths • Petrifying springs with tufa formation	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring: • The extent and distribution of qualifying natural habitats • The structure and function (including typical species) of qualifying natural habitats, and	NONE

		(*Cratoneurion*)*****	• The supporting processes on which the qualifying natural habitats rely	
Borrowdale Woodland Complex SAC	NY235129 667.83 (ha)	Qualifying Features • Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles • Siliceous rocky slopes with chasmophytic vegetation • Bog woodland *	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring: • The extent and distribution of qualifying natural habitats • The structure and function (including typical species) of qualifying natural habitats, and • The supporting processes on which the qualifying natural habitats rely	NONE
Clints Quarry SAC	NY161357 12.03 (ha)	Qualifying Features • Great crested newt *Triturus cristatus*	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring: • The extent and distribution of the habitats of qualifying species • The structure and function of the habitats of qualifying species • The supporting processes on which the habitats of qualifying species rely • The populations of qualifying species, and • The distribution of qualifying species within the site	NONE
Cumbrian Marsh Fritillary Site SAC	NY400409 22.96 (ha)	Qualifying Features • Marsh fritillary butterfly *Euphydryas* (*Eurodryas*, *Hypodryas*) *aurinia*	The extent and distribution of the habitats of qualifying species: • The structure and function of the habitats of qualifying species • The supporting processes on which the habitats of qualifying species rely • The populations of qualifying species, and • The distribution of qualifying species within the site	NONE
Drigg Coast SAC	SD071960 1397.44 (ha)	Qualifying Features • Estuaries • Atlantic decalcified fixed dunes (*Calluno-Ulicetea*) • Dunes with *Salix repens* ssp. *argentea* (*Salicion arenariae*) • Mudflats and sandflats not covered by seawater at low tide • *Salicornia* and other annuals colonising mud and sand • Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)	The extent and distribution of qualifying natural habitats and habitats of qualifying species: • The structure and function (including typical species) of qualifying natural habitats • The structure and function of the habitats of qualifying species • The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely • The populations of qualifying species, and • The distribution of qualifying species within the site In relation to **Drigg Coast SSSI** – subject to natural change, to maintain the following habitats and geological features in	Site **CO35 Low Level Waste Repository** near Drigg is identified for the **management of low level radioactive waste** and **safeguarding of its rail sidings**, and lies adjacent to the SAC.

		• Embryonic shifting dunes • Shifting dunes along the shoreline with *Ammophila arenaria* (`white dunes`) • Fixed dunes with herbaceous vegetation (`grey dunes`) * • Humid dune slacks	favourable condition, with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages, etc.) for which the land is designated. **Habitat Types represented (Biodiversity Action Plan categories)** o Saltmarsh o Sand dune (vegetated shingle, fixed dune grassland, humid dune slacks, strandline, embryo and mobile dunes, dune heathland) **Species represented** o Amphibian Assemblage o Natterjack Toad o Wintering ringed plover o Vascular plant assemblage o *Odonata* Assemblage **SAC habitats represented** o Atlantic decalcified fixed dunes o Atlantic salt meadows o Dunes with creeping willow o Embryonic shifting dunes o Estuaries o Fixed dunes with herbaceous vegetation o Humid dune slacks o Mudflats and sandflats not covered by seawater at low tide o *Salicornia* and other annuals colonising mud and sand o Shifting dunes along the shoreline with *Ammophilia arenaria*	Site **M15 Peel Place Quarry** is identified as an **Area of Search** for sand and gravel, and lies 2.5km from the SAC. Site **CO36 land within Sellafield** is identified for the **management of low level radioactive waste** and **safeguarding of its rail sidings**, and lies 2.7km from the SAC. Site **CO32 land adjacent to Sellafield** is identified for the **management of low level radioactive waste**, and lies 3.3km from the SAC.
Duddon Mosses SAC	SD223853 313.07 (ha)	<u>Qualifying Features</u> • Active raised bogs * • Degraded raised bogs still capable of natural regeneration	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring: • The extent and distribution of qualifying natural habitats • The structure and function (including typical species) of qualifying natural habitats, andThe supporting processes on which qualifying natural habitats rely In relation to **Duddon Mosses SSSI** - subject to natural change, to maintain the following habitats and geological features in favourable condition, with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages, etc.) for which the land is designated.	Site **M14 Kirkby Slate Quarry**, is identified as an **Area of Search** for slate, and is 1.9km from the SAC Site **M31 Salthouse, near Millom**, is identified as a **potential railhead to be safeguarded** for Ghyll Scaur Quarry, and lies 3.3km from the SAC.

			Habitat Types represented (Biodiversity Action Plan categories) ○ Fen, Marsh and Swamp: Lowland raised bog ○ Fen, Marsh and Swamp: Lowland soligenous fen **Species represented** ○ Invertebrate assemblage	
Helbeck and Swindale Woods SAC	NY784164 136.38 (ha)	Qualifying Features • *Tilio-Acerion* forests of slopes, screes and ravines*	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring: • The extent and distribution of qualifying natural habitats • The structure and function (including typical species) of qualifying natural habitats, and • The supporting processes on which qualifying natural habitats rely	NONE
Lake District High Fells SAC	NY303318 26999.36 (ha)	Qualifying Features • Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelietea uniflorae* and/or of the *Isoëto-Nanojuncetea* • Northern Atlantic wet heaths with *Erica tetralix* • European dry heaths • Alpine and Boreal heaths • *Juniperus communis* formations on heaths or calcareous grasslands • Siliceous alpine and boreal grasslands • Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels • Blanket bogs * • Siliceous scree of the montane to snow levels (*Androsaoetalia alpinae* and *Galeopsietalia ladani*) • Siliceous rocky slopes with chasmophytic vegetation • Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles • Species-rich *Nardus* grassland, on siliceous substrates in mountain areas (and submountain areas in continental Europe) ***** • Alkaline fens • Calcareous rocky slopes with chasmophytic vegetation • Slender green feather-moss *Drepanocladus* (*Hamatocaulis*) *vernicosus*	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of qualifying natural habitats and habitats of qualifying species • The structure and function (including typical species) of qualifying natural habitats • The structure and function of the habitats of qualifying species • The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely • The populations of qualifying species, and • The distribution of qualifying species within the site	Site **M37 Shap Blue Quarry**, is identified for **safeguarding of its rail sidings**, and is 690m from the SAC. Site **M36 Shapfell Quarry**, is identified for **safeguarding of its rail sidings** and is 2km from the SAC.

Shell Flat and Lune Deep SCI (pSAC)	14,019 ha cross border with Lancashire	Qualifying Features • Reefs • Sandbanks which are slightly covered by seawater all the time	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of qualifying natural habitats • The structure and function (including typical species) of qualifying natural habitats, and • The supporting processes on which the qualifying natural habitats rely	NONE
Moor House – Upper Teesdale SAC	NY799358 38795.99 (ha) cross border with Durham	Qualifying Features • Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp*;* Calcium-rich nutrient-poor lakes, lochs and pools • Alpine and Boreal heaths; Alpine and subalpine heaths • *Juniperus communis* formations on heaths or calcareous grasslands; Juniper on heaths or calcareous grasslands • Calaminarian grasslands of the *Violetalia calaminariae;* Grasslands on soils rich in heavy metals • Siliceous alpine and boreal grasslands; Montane acid grasslands • Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*); Dry grasslands and scrublands on chalk or limestone • *Molinia* meadows on calcareous, peaty or clayey silt-laden soils (*Molinion caeruleae*); Purple moor-grass meadows • Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels • Mountain hay meadows • Blanket bogs * • Petrifying springs with tufa formation (*Cratoneurion*); Hard-water springs depositing lime * • Alkaline fens; Base rich fens • Alpine pioneer formations of the *Caricion bicoloris-atrofuscae;* High-altitude plant communities associated with areas of water seepage * • Siliceous scree of the montane to snow levels (*Androsacetalia alpinae and Galeopsietalia*	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of qualifying natural habitats and habitats of qualifying species • The structure and function (including typical species) of qualifying natural habitats • The structure and function of the habitats of qualifying species • The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely • The populations of qualifying species, and • The distribution of qualifying species within the site In relation to **Appleby Fells SSSI** – subject to natural change, to maintain the following habitats and geological features in favourable condition, with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages, etc.) for which the land is designated. **Habitat Types represented (Biodiversity Action Plan categories)** ○ Bogs ○ Calcareous grassland ○ Dwarf shrub heath – upland ○ Montane habitats (montane and boreal heaths) ○ Fen, Marsh & Swamp ○ Upland mosaic ○ Inland Rock (Ledge communities) **Species represented** ○ Breeding bird assemblage ○ Vascular plant assemblage ○ *Gentiana verna* ○ *Saxifraga hirculus*	Site **M18 Stamphill gypsum mine** is identified as a **Preferred Area** for gypsum extraction and lies 3.3km from the SAC.

		ladani); acidic scree • Calcareous and calcshist screes of the montane to alpine levels (*Thlaspietea rotundifolii*); Base rich scree • Calcareous rocky slopes with chasmophytic vegetation; Plants in crevices in base-rich rocks • Siliceous rocky slopes with chasmophytic vegetation; Plants in crevices on acid rocks • European dry heaths • Limestone pavements * • Round mouthed whorl snail *Vertigo genesii* • Marsh saxifrage *Saxifraga hirculus*	**Geological features (Geological Site Types)** ○ Mines and mine dumps ○ Inland exposures ○ Caves and Karst	

Morecambe Bay SAC	SD371697 61506.22 (ha) cross border with Lancashire	Qualifying Features • Estuaries • Mudflats and sandflats not covered by seawater at low tide • Large shallow inlets and bays • Perennial vegetation of stony banks • *Salicornia* and other annuals colonising mud and sand • Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) • Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes') • Fixed dunes with herbaceous vegetation ('grey dunes'} * • Humid dune slacks • Sandbanks which are slightly covered by sea water all the time • Coastal lagoons ***** • Reefs • Embryonic shifting dunes • Atlantic decalcified fixed dunes (*Calluno-Ulicetea*)***** • Dunes with *Salix repens* ssp. *argentea* (*Salicion arenariae*); Dunes with creeping willow • Great crested newt *Triturus cristatus*	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of qualifying natural habitats and habitats of qualifying species • The structure and function (including typical species) of qualifying natural habitats • The structure and function of the habitats of qualifying species • The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely • The populations of qualifying species, and • The distribution of qualifying species within the site In relation to **Duddon Estuary SSSI** - subject to natural change, to maintain the following habitats and geological features in favourable condition, with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages, etc.) for which the land is designated. **Habitat Types represented (Biodiversity Action Plan categories)** ○ Estuary ○ Saltmarsh ○ Littoral sediment ○ Inshore sublittoral sediment ○ Littoral rock ○ Inshore sublittoral rock ○ Coastal vegetated shingle ○ Sand dune (Strandline, embryo and mobile dunes, Fixed dune grassland, Humid dune slacks, Dune heath) ○ Coastal lagoon **Species represented** ○ Aggregation of breeding sandwich tern (Annex 1 species) ○ Breeding bird assemblage ○ Aggregations of non-breeding birds ○ Natterjack toad ○ Invertebrate assemblage ○ Vascular plant assemblage **Geological features (Geological Site Types)** ○ Active process geomorphological (IA)	Site **M31 Salthouse, near Millom**, is identified for **safeguarding as a potential railhead**, and lies 300m from the SAC. Site **M5 High Greenscoe Quarry** is identified as an **Area of Search** for brick making mudstones, and lies 1.4km from the SAC. Site **M14 Kirkby Slate Quarry**, is identified as an **Area of Search** for slate, and is 1.5km from the SAC. Site **M17 Ghyll Scaur Quarry** is identified as an **Area of Search** for very high specification roadstone, and lies 1.8km from the SAC.

			In relation to **South Walney & Piel Channel Flats SSSI** - subject to natural change, to maintain the following habitats and geological features in favourable condition, with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages, etc.) for which the land is designated. **Habitat Types represented (Biodiversity Action Plan categories)** ○ Inlets and bays ○ Littoral sediment ○ Sublittoral sediment ○ Littoral rock ○ Sublittoral rock ○ Shingle ○ Saltmarsh ○ Sand dune (Strandline, embryo and mobile dunes, fixed dune grassland) ○ Coastal Lagoon **Species represented** ○ Aggregation of breeding birds (sandwich tern (Annex 1 species)) ○ Aggregations of breeding birds ○ Aggregations of non-breeding birds ○ Invertebrate assemblage ○ Vascular plant assemblage **Geological features (Geological Site Types)** ○ Active process - geomorphological (IA)	Site **M12 Roosecote Quarry** is identified as a **Preferred Area** for sand and gravel, and lies 870m from the SAC.
Morecambe Bay Pavements SAC	SD440869 2609.69 (ha) cross border with Lancashire	<u>Qualifying Features</u> • Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp. • *Juniperus communis* formations on heaths or calcareous grasslands • Semi-natural dry grasslands and scrubland facies; on calcareous substrates (*Festuco-Brometalia*) • Limestone pavements * • *Tilio-Acerion* forests of slopes, screes and ravines* • *Taxus baccata* woods of the British Isles * • European dry heaths • Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* ***** • Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles • Narrow-mouthed whorl snail *Vertigo angustior*	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of qualifying natural habitats and habitats of qualifying species • The structure and function (including typical species) of qualifying natural habitats • The structure and function of the habitats of qualifying species • The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely • The populations of qualifying species, and • The distribution of qualifying species within the site In relation to **Scout and Cunswick Scars SSSI** - subject to natural change, to maintain the following habitats and geological features in favourable condition, with particular	Site **SL1 Kendal Fell Quarry** is identified for a **Household Waste Recycling Centre**, and lies 900m from the SAC. Site **M16 Holmescales Quarry**, is identified as an **Area of Search** for high specification roadstone, and is 6km from the SAC.

			reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages, etc.) for which the land is designated. **Habitat Types represented (Biodiversity Action Plan categories)** ○ Broadleaved, mixed and yew woodland ○ Calcareous grassland ○ Marl lake	Site **M30 Roan Edge Quarry** is identified as an **Area of Search** for high specification roadstone, and lies 8.4km from the SAC.
Naddle Forest SAC	NY494144 360.89 (ha)	Qualifying Features • Old sessile oak woods with *Ilex and Blechnum* in the British Isles • North Atlantic wet heath with *Erica tetralix* • European dry heaths	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of the qualifying natural habitats • The structure and function (including typical species) of the qualifying natural habitats, and • The supporting processes on which the qualifying natural habitats rely	NONE
North Pennine Dales Meadows SAC	NY931256 497.09 (ha) cross border with Durham; Lancashire; North Yorkshire; Northumbria	Qualifying Features • Mountain hay meadows • *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*); Purple moor-grass meadows	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of qualifying natural habitats • The structure and function (including typical species) of qualifying natural habitats, and • The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely	Site **M37 Shap Blue Quarry**, is identified for **safeguarding its rail sidings**, and is 1.3km from the SAC. Site **M36 Shapfell Quarry**, is identified for **safeguarding its rail sidings**, and is 1.5km from the SAC.
North Pennine Moors SAC	SE137749 103109.42 (ha) cross border with Durham; Northumbria; North Yorkshire	Qualifying Features • European dry heaths • *Juniperus communis* formations on heaths or calcareous grasslands • Blanket bogs * • Petrifying springs with tufa formation (*Cratoneurion*) • Siliceous rocky slopes with chasmophytic vegetation • Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles • Northern Atlantic wet heaths with *Erica tetralix* • Calaminarian grasslands of the *Violetalia calaminariae*	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of qualifying natural habitats and habitats of qualifying species • The structure and function (including typical species) of qualifying natural habitats • The structure and function of the habitats of qualifying species • The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely • The populations of qualifying species, and • The distribution of qualifying species within the site	Site **M10 Silvertop Quarry** is identified as an **Area of Search** for limestone, and lies 1.1km from the SAC. Site **M38 Kirkby Thore**, is identified for **safeguarding its rail sidings**, and is 4km from the SAC.

		• Siliceous alpine and boreal grasslands • Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*) • Alkaline fens • Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*) • Calcareous rocky slopes with chasmophytic vegetation • Marsh saxifrage *Saxifraga hirculus*	• The distribution of the qualifying features within the site	
River Derwent & Bassenthwaite Lake SAC	NY262207 1832.96 (ha)	Qualifying Features • Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea* • Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation • Marsh fritillary butterfly *Euphydryas* (*Eurodryas*, *Hypodryas*) *aurinia* • Sea lamprey *Petromyzon marinus* • Brook lamprey *Lampetra planeri* • River lamprey *Lampetra fluviatilis* • Atlantic salmon *Salmo salar* • Otter *Lutra lutra* • Floating Water-plantain *Luronium natans*	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of qualifying natural habitats and habitats of qualifying species • The structure and function (including typical species) of qualifying natural habitats • The structure and function of the habitats of qualifying species • The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely • The populations of qualifying species, and • The distribution of qualifying species within the site In relation to **River Derwent and Tributaries SSSI** - subject to natural change, to maintain the following habitats and geological features in favourable condition, with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages, etc.) for which the land is designated. **Habitat Types represented (Biodiversity Action Plan categories)** o Rivers and Streams o Standing Open Water (oligotrophic to mesotrophic) o Fen, marsh and swamp o Wet woodland **Species represented** o Floating water plantain *Luronium natans* o Vascular plant assemblage o Atlantic salmon *Salmo salar* o River lamprey *Lampetra fluviatilis* o Brook lamprey *Lampetra planeri* o Sea lamprey *Petromyzon marinus*	Site **AL18 Port of Workington** is identified for a **waste treatment and management facility** and is also identified for **safeguarding of its wharves and rail sidings**, and lies 1.2km from the SAC. Site **AL3 Oldside, Workington**, is identified for a **waste treatment and management facility**, and lies 1.2km from the SAC. Site **M24 Derwent Howe slag bank**, Workington, is identified as a **Mineral Safeguarding Area for secondary aggregates** and lies 2km from the SAC. Site **AL32 Siddick**, Flimby, is identified as a **potential railhead to be safeguarded** if required in connection with mineral working or waste management proposals, and lies 2.4km from the

			○ Vendace *Coregonus albula* ○ Arctic charr *Salvelinus alpinus* ○ Otter *Lutra lutra* ○ Invertebrate assemblage of fast flowing water ○ Invertebrate assemblage of mineral marsh and open water ○ Invertebrate assemblage of litter-rich fluctuating wetlands	SAC. Site **AL8 Lillyhall waste management centre** is identified for a **waste treatment and management facility**, and lies 3.4km from the SAC. Site **AL37 Lillyhall Industrial Estate** is identified for a **Household Waste Recycling Centre**, and lies 3.4km from the SAC.
River Eden SAC	NY462237 2463.23 (ha)	Qualifying Features • Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea* • Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation • Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*) * • White clawed (or Atlantic stream) crayfish *Austropotamobius pallipes* • Sea lamprey *Petromyzon marinus* • Brook Lamprey *Lampetra planeri* • River lamprey *Lampetra fluviatilis* • Atlantic salmon *Salmo salar* • Bullhead *Cottus gobio* • Otter *Lutra lutra*	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of qualifying natural habitats and habitats of qualifying species • The structure and function (including typical species) of qualifying natural habitats • The structure and function of the habitats of qualifying species • The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely • The populations of qualifying species, and • The distribution of qualifying species within the site In relation to **River Eden and Tributaries SSSI** - subject to natural change, to maintain the following habitats and geological features in favourable condition, with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages, etc.) for which the land is designated. **Habitat Types represented (Biodiversity Action Plan categories)** ○ Rivers and Streams ○ Broadleaved, mixed and yew woodland (Wet woodland) ○ Fen, marsh and swamp (Lowland wetland) ○ Standing Open Water	Site **CA11 Willowholme**, Carlisle, is identified for a **waste treatment and management facility** and lies adjacent to the SAC. Site **M34 Kingmoor rail sidings**, is identified for **safeguarding the rail sidings**, and is 400m from the SAC. Site **M18 Stamphill gypsum mine** is identified as a **Preferred Area** for gypsum extraction and lies 480m from the SAC. Site **CA30 Kingmoor Road recycling centre**, is identified for a **waste treatment and management facility**, and is 690m from the SAC.

			Species represented ○ Atlantic salmon *Salmo salar* ○ River lamprey *Lampetra fluviatilis* ○ Brook lamprey *Lampetra planeri* ○ Sea lamprey *Petromyzon marinus* ○ Bullhead *Cottus gobio* ○ White-Clawed crayfish *Austropotamobius pallipes* ○ Schelly *Coregonus lavaretus* ○ Otter *Lutra lutra* ○ Invertebrate Assemblage ○ Breeding bird assemblage ○ Sand martins (breeding) **Geological features (Geological SiteTypes)** ○ Karst (IK)	Site **M36 Shapfell Quarry**, is identified for **safeguarding of its rail sidings**, and is 700m from the SAC. Site **CA31 Kingmoor Park East**, Carlisle, is identified for a **waste treatment and management facility**, and lies 760m from the SAC. Site **M37 Shap Blue Quarry**, is identified for **safeguarding of its rail sidings**, and is 840m from the SAC. Site **M8 Cardewmires Quarry** is identified as an **Area of Search** for sand and gravel, and lies 1.1km from the SAC. Site **M35 Shap Beck Quarry**, is identified for **safeguarding of its rail sidings**, and is 1.35km from the SAC. Site **M38 Kirkby Thore works**, is identified for **safeguarding of its rail sidings**, and is 1.6km from the SAC. Site **ED31 Flusco waste management**, near Penrith, identified for a **waste treatment and management facility** and lies 2.6km from SAC.

River Ehen SAC	NY031144 24.39 (ha)	Qualifying Features • Freshwater pearl mussel *Margaritifera margaritifera* • Atlantic salmon *Salmo salar*	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of the habitats of qualifying species • The structure and function of the habitats of qualifying species • The supporting processes on which the habitats of qualifying species rely • The populations of qualifying species, and • The distribution of qualifying species within the site In relation to **River Ehen (Ennerdale Water to Keekle Confluence) SSSI** - subject to natural change, to maintain the following habitats and geological features in favourable condition, with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages, etc.) for which the land is designated. **Habitat Types represented (Biodiversity Action Plan categories)** o Rivers and streams (supporting fresh water pearl mussel) **Species represented** o Fresh water pearl mussel *Margaritifera margaritifera* **SAC Species represented** o Atlantic Salmon *Salmo salar*	Site **CO11 Bridge End Industrial Estate**, Egremont, is identified for a **waste treatment and management facility**, and lies 2.8km from the SAC. Site **CO36 land within Sellafield** is identified for the **management of low level radioactive waste**, and lies 8.4km from the SAC. Site **CO32 land adjacent to Sellafield** is identified for the **management of low level radioactive waste**, and lies 10km from the SAC.
River Kent SAC	SD508953 109.12 (ha)	Qualifying Features • Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation • White clawed (or Atlantic stream) crayfish *Austropotamobius pallipes* • Freshwater pearl mussel *Margaritifera margaritifera* • Bullhead *Cottus gobio*	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of qualifying natural habitats and habitats of qualifying species • The structure and function (including typical species) of qualifying natural habitats • The structure and function of the habitats of qualifying speciesThe supporting processes on which qualifying natural habitats and the habitats of qualifying species relyThe populations of qualifying species, andThe distribution of qualifying species within the site In relation to **River Kent and Tributaries SSSI** - subject to natural change, to maintain the following habitats and geological features in favourable condition, with particular	Site **SL1 Kendal Fell Quarry** is identified for a **Household Waste Recycling Centre**, and lies 1km from the SAC. Site **M30 Roan Edge Quarry**, is identified as an **Area of Search** for high specification roadstone, and is 3.8km from the SAC.

			reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages, etc.) for which the land is designated. **Habitat Types represented (Biodiversity Action Plan categories)** ○ Rivers and Streams **Species represented** ○ White Clawed Crayfish *Austropotamobius pallipes* ○ Fresh water pearl mussel *Margaritifera margaritifera* ○ Bullhead *Cottus gobio*	Site **M16 Holmescales Quarry**, is identified as an **Area of Search** for high specification roadstone, and is 4.7km from the SAC.
Roudsea Wood and Mosses SAC	SD347807 470.45 (ha)	Qualifying Features • Active raised bogs * • Degraded raised bogs still capable of natural regeneration • *Tilio-Acerion* forests of slopes, screes and ravines; Mixed woodland on base-rich soils associated with rocky slopes • *Taxus baccata* woods of the British isles; Yew-dominated woodland	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of qualifying natural habitats • The structure and function (including typical species) of qualifying natural habitats, and • The supporting processes on which qualifying natural habitats rely	NONE
Solway Firth SAC	NY144648 43636.72 (ha) cross border with Dumfries and Galloway	Qualifying Features • Sandbanks which are slightly covered by seawater all the time • Estuaries • Mudflats and sandflats not covered by seawater at low tide • *Salicornia* and other annuals colonising mud and sand; Glasswort and other annuals colonising mud and sand • Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) • Reefs • Perennial vegetation of stony banks • Fixed dunes with herbaceous vegetation (`grey dunes`); Dune grassland * • Sea lamprey *Petromyzon marinus* • River lamprey *Lampetra fluviatilis*	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of qualifying natural habitats and habitats of qualifying species • The structure and function (including typical species) of qualifying natural habitats • The structure and function of the habitats of qualifying species • The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely • The populations of qualifying species, and • The distribution of qualifying species within the site In relation to **Upper Solway Flats & Marshes SSSI** - subject to natural change, to maintain the following habitats and geological features in favourable condition, with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages, etc.) for which the land is designated. **Habitat Types represented (Biodiversity Action Plan categories)** ○ Estuaries	Site **AL39 Silloth Port**, is identified for **safeguarding of its wharves**, and is adjacent to the SAC. Site **M34 Kingmoor rail sidings**, is identified for **safeguarding of its sidings**, and is 1.2km from the SAC. Site **CA31 Kingmoor Park East**, Carlisle, is identified for a **waste treatment and management facility** and lies 3.7km from the SAC. Site **M6 land between Overby and High House quarries** is identified as an **Area of Search** for

			○ Inshore sublittoral sediment ○ Intertidal mudflats and sandflats ○ Reefs ○ Saltmarsh including pioneer saltmarsh ○ Dune grassland ○ Coastal shingle vegetation ○ Maritime cliff woodland (in Scotland only) **Geological features (Geological Site Types)** ○ Active process geomorphological (IA) **Species represented** ○ Aggregations of breeding birds ○ Aggregations of non-breeding birds ○ Assemblage of non-breeding birds ○ Breeding bird assemblage ○ Natterjack Toad ○ Great crested newt ○ Vascular Plant assemblage ○ Invertebrate assemblage	sand and gravel, and lies 4km from the SAC. Site **CA30 Kingmoor Road recycling centre**, is identified for a **waste treatment and management facility**, and is 5km from the SAC. Site **AL38 Innovia rail sidings**, is identified for **safeguarding of its sidings**, and is 7.8km from the SAC.
South Solway Mosses SAC	NY203597 1962.36 (ha)	Qualifying Features • Active raised bogs * • Degraded raised bogs still capable of natural regeneration	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of qualifying natural habitats • The structure and function (including typical species) of qualifying natural habitats, and • The supporting processes on which qualifying natural habitats rely	Site **AL38 Innovia rail sidings**, is identified for **safeguarding of its sidings**, and is 3.5km from the SAC. Site **M8 Cardewmires Quarry**, is identified as an **Area of Search** for sand and gravel, and is 11km from the SAC.
Subberthwaite, Blawith & Torver Low Commons SAC	SD269896 1865.17 (ha)	Qualifying Features • Transition mires and quaking bogs; Very wet mires often identified by an unstable' quaking' surface • Depressions on peat substrates of the *Rhynchosporion*	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of the qualifying natural habitats • The structure and function (including typical species) of the qualifying natural habitats, and • The supporting processes on which the qualifying natural habitats rely	Site **M14 Kirkby Slate Quarry**, is identified as an **Area of Search** for slate, and is 1km from the SAC.
Tarn Moss SAC	NY400274 17.03 (ha)	Qualifying Features • Transition mires and quaking bogs	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of the qualifying natural habitats	NONE

			• The structure and function (including typical species) of the qualifying natural habitats, and • The supporting processes on which the qualifying natural habitats rely	
Tyne & Nent SAC	NY715448 36.84 (ha)	Qualifying Features • Calaminarian grasslands of the *Violetalia calaminariae; Grasslands on soils rich in heavy metals*	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of the qualifying natural habitats • The structure and function (including typical species) of the qualifying natural habitats, and • The supporting processes on which the qualifying natural habitats rely	N/A – nearest site is M18 Stamphill gypsum mine, which lies 18.5km away.
Ullswater Oakwoods SAC	NY400128 123.41 (ha)	Qualifying Features • Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of the qualifying natural habitats • The structure and function (including typical species) of the qualifying natural habitats, and • The supporting processes on which the qualifying natural habitats rely	N/A – nearest site is ED31 Flusco waste management, which lies 9km away.
Walton Moss SAC	NY504665 285.89 (ha)	Qualifying Features • Active raised bogs * • Degraded raised bogs still capable of natural regeneration	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of the qualifying natural habitats • The structure and function (including typical species) of the qualifying natural habitats, and • The supporting processes on which the qualifying natural habitats rely	NONE
Wastwater SAC	NY164062 286.21 (ha)	Qualifying Features Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea;* Clear-water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of the qualifying natural habitats • The structure and function (including typical species) of the qualifying natural habitats, and • The supporting processes on which the qualifying natural habitats rely	N/A – nearest site is CO35 Low Level Waste Repository, near Drigg, which lies 10km away.

Witherslack Mosses SAC	SD457826 486.53 (ha)	Qualifying Features • Active raised bogs * • Degraded raised bogs still capable of natural regeneration	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of the qualifying natural habitats • The structure and function (including typical species) of the qualifying natural habitats, and • The supporting processes on which the qualifying natural habitats rely	N/A – nearest site is SL1 Kendal Fell Quarry, which lies 8.5km away.
Yewbarrow Woods SAC	SD347872 112.89 (ha)	Qualifying Features • *Taxus baccata* woods of the British Isles * • *Juniperus communis* formations on heaths or calcareous grasslands • Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of qualifying natural habitats • The structure and function (including typical species) of qualifying natural habitats, and • The supporting processes on which qualifying natural habitats rely	N/A – nearest site is SL1 Kendal Fell Quarry, which lies 15km away.

Part 2 – European Sites and Features – SPAs

SITE	LOCATION /AREA	REASON(S) FOR DESIGNATION	CONSERVATION OBJECTIVES	SITE ALLOCATIONS
Duddon Estuary SPA	03 15 24 W 54 10 39 N 6806.3 (ha)	Qualifying Features • sandwich tern *Sterna sandvicensis* (during the breeding season, supports 1.5% of the GB population - Article 4.1) • pintail *Anas acuta* (over winter, supports 2.7% of the population - Article 4.2) • knot *Calidris canuta* (over winter, supports 1.3% of the population - Article 4.2) • redshank *Tringa totanus* (over winter, supports 0.9% of the population - Article 4.2) • over winter, the area regularly supports an internationally important assemblage of 31,505 individual water fowl - Article 4.2	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring; • The extent and distribution of the habitats of the qualifying features • The structure and function of the habitats of the qualifying features • The supporting processes on which the habitats of the qualifying features rely • The population of each of the qualifying features, and • The distribution of the qualifying features within the site In relation to **Duddon Estuary SSSI** - subject to natural change, to maintain the following habitats and geological features in favourable condition, with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages, etc.) for which the land is designated. **Habitat Types represented (Biodiversity Action Plan categories)** o Estuary o Saltmarsh o Littoral sediment o Inshore sublittoral sediment o Littoral rock o Inshore sublittoral rock o Coastal vegetated shingle o Sand dune (Strandline, embryo and mobile dunes, Fixed dune grassland, Humid dune slacks, Dune heath) o Coastal lagoon **Species represented** o Aggregation of breeding sandwich tern (Annex 1 species) o Breeding bird assemblage o Aggregations of non-breeding birds o Natterjack toad o Invertebrate assemblage o Vascular plant assemblage **Geological features (Geological Site Types)** Active process geomorphological (IA)	Site **M31 Salthouse, near Millom**, is identified as a **potential railhead to be safeguarded** for Ghyll Scaur Quarry, and lies 300m from the SPA. Site **M5 High Greenscoe Quarry** is identified as an **Area of Search** for brick making mudstones, and lies 1.4km from the SPA. Site **M14 Kirkby Slate Quarry** is identified as an **Area of Search** for slate, and lies 1.5km from the SPA. Site **M17 Ghyll Scaur Quarry** is identified as an **Area of Search** for very high specification roadstone, and lies 1.8km from the SPA.

SITE	LOCATION /AREA	REASON(S) FOR DESIGNATION	CONSERVATION OBJECTIVES	SITE ALLOCATIONS
Leighton Moss SPA	02 47 31 W 54 10 03 N 128.61 (ha)	Qualifying Features • bittern *Botaurus stellaris* (during the breeding season, supports 20% of the GB population - Article 4.1)	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring; • The extent and distribution of the habitats of the qualifying features • The structure and function of the habitats of the qualifying features • The supporting processes on which the habitats of the qualifying features rely • The population of each of the qualifying features, and • The distribution of the qualifying features within the site	N/A – nearest site is SL1 Kendal Fell Quarry, which lies 16.5km away.
Liverpool Bay SPA	03 13 16 W 53 36 30 N 197504.24 ha	Qualifying Features • red-throated diver *Gavia stellata* (over winter, supports 28.7% of the GB population) • common scoter *Melanitta nigra* (over winter, supports 3.3% of the GB population) • waterbird assemblage		NONE
Morecambe Bay SPA	02 57 21 W 54 07 19 N 37404.6 (ha)	Qualifying Features • sandwich tern *Sterna sandvicensis* (during the breeding season, supports 3% of the GB population - Article 4.1) • pink-footed goose *Anser brachyrhynchus* (over winter, supports 1.1% of the world population - Article 4.2) • pintail *Anas acuta* (over winter, supports 4.7% of the NW European population - Article 4.2) • shelduck *Tadorna tadorna* (over winter, supports 2.1% of the NW European population - Article 4.2) • knot *Calidris canutus* (over winter, supports 8.5% of the East Atlantic Flyway population - Article 4.2) • oystercatcher *Haematopus ostralegus* (over winter, supports 5.4% of the East Atlantic Flyway population - Article 4.2) • curlew *Numenius arquata* (over winter, supports 3.9% of the East Atlantic Flyway population - Article 4.2) • dunlin *Calidris alpina* (over winter, supports 3.8% of the East Atlantic Flyway population - Article 4.2) • redshank *Tringa totanus* (over winter, supports 3.6% of the East Atlantic Flyway population - Article 4.2)	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring; • The extent and distribution of the habitats of the qualifying features • The structure and function of the habitats of the qualifying features • The supporting processes on which the habitats of the qualifying features rely • The population of each of the qualifying features, and • The distribution of the qualifying features within the site In relation to **South Walney & Piel Channel Flats SSSI** - subject to natural change, to maintain the following habitats and geological features in favourable condition, with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages, etc.) for which the land is designated. **Habitat Types represented (Biodiversity Action Plan categories)** ○ Inlets and bays ○ Littoral sediment ○ Sublittoral sediment	Site **BA26 Barrow Port** is identified for **safeguarding of its wharves and rail sidings**, and lies adjacent to the SPA. Site **M12 Roosecote Quarry**, Barrow, is identified as a **Preferred Area** for sand and gravel, and lies 870m from the SPA. Site **M16 Holmescales Quarry** is identified as an **Area of Search** for high specification roadstone, and lies 8km from the SPA.

SITE	LOCATION /AREA	REASON(S) FOR DESIGNATION	CONSERVATION OBJECTIVES	SITE ALLOCATIONS
		• bar tailed godwit *Limosa lapponica* (over winter, supports 2.6% of the East Atlantic Flyway population - Article 4.2) • turnstone *Arenaria interpres* (over winter, supports 2.4% of the East Atlantic Flyway population - Article 4.2) • grey plover *Pluvialis squatarola* (over winter, supports 1.1% of the East Atlantic Flyway population - Article 4.2) • ringed plover *Charadrius hiaticula* (on passage, supports 1.5% of the international population – Article 4.2) • during the breeding season, the area regularly supports an internationally important assemblage of 61,858 individual seabirds – Article 4.2 • over winter, the area regularly supports an internationally important assemblage of 210,668 individual water fowl - Article 4.2	○ Littoral rock ○ Sublittoral rock ○ Shingle ○ Saltmarsh ○ Sand dune (Strandline, embryo and mobile dunes, fixed dune grassland) ○ Coastal Lagoon **Species represented** ○ Aggregation of breeding birds (sandwich tern (Annex 1 species)) ○ Aggregations of breeding birds ○ Aggregations of non-breeding birds ○ Invertebrate assemblage ○ Vascular plant assemblage **Geological features (Geological Site Types)** ○ Active process - geomorphological (IA)	
North Pennine Moors SPA	02 14 49 W 54 39 24 N 147246.41 (ha) cross border with Durham, North Yorks, Northumbria	Qualifying Features • merlin *Falco columbarius* (during the breeding season, supports 10.5% of the GB population - Article 4.1) • golden plover *Pluvialis apricaria* (during the breeding season, supports 6.2% of the GB population - Article 4.1) • hen harrier *Circus cyaneus* (during the breeding season, supports 2.2% of the GB population - Article 4.1) • peregrine *Falco peregrinus* (during the breeding season, supports 1.3% of the GB population - Article 4.1)	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring; • The extent and distribution of the habitats of the qualifying features • The structure and function of the habitats of the qualifying features • The supporting processes on which the habitats of the qualifying features rely • The population of each of the qualifying features, and • The distribution of the qualifying features within the site In relation to **Appleby Fells SSSI** – subject to natural change, to maintain the following habitats and geological features in favourable condition, with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages, etc.) for which the land is designated. **Habitat Types represented (Biodiversity Action Plan categories)** ○ Bogs ○ Calcareous grassland	Site **M18 Stamphill gypsum mine** is identified as a Preferred Area for **gypsum extraction** and lies 3.3km from the SPA. Site **M10 Silvertop Quarry** is identified as an **Area of Search** for limestone, and lies 1.1km from the SPA. Site **M38 Kirkby Thore works** is identified for **safeguarding of its rail sidings**, and lies 4km from the SPA.

SITE	LOCATION /AREA	REASON(S) FOR DESIGNATION	CONSERVATION OBJECTIVES	SITE ALLOCATIONS
			○ Dwarf shrub heath – upland ○ Montane habitats (montane and boreal heaths) ○ Fen, Marsh & Swamp ○ Upland mosaic ○ Inland Rock (Ledge communities) **Species represented** ○ Breeding bird assemblage ○ Vascular plant assemblage ○ *Gentiana verna* ○ *Saxifraga hirculus* **Geological features (Geological Site Types)** ○ Mines and mine dumps ○ Inland exposures ○ Caves and Karst	
Upper Solway Flats & Marshes SPA	03 25 27 W 54 54 20 N 43636.73 (ha) cross border with Dumfries & Galloway	Qualifying Features • barnacle goose *Branta leucopsis* (over winter, supports 12.2% of the GB population – Article 4.1) • bar-tailed godwit *Limosa lapponica* (over winter, supports 4.5% of the GB population – Article 4.1) • golden plover *Pluvialis apricaria* (over winter, supports 2.4% of the GB population – Article 4.1) • whooper swan *Cygnus cygnus* (over winter, supports 2.1% of the GB population – Article 4.1) • pink-footed goose *Anser brachyrhynchus* (over winter, supports 7.1% of the population – Article 4.2) • oystercatcher *Haematopus ostralegus* (over winter, supports 4% of the population – Article 4.2) • pintail *Anas acuta* (over winter, supports 3.8% of the population – Article 4.2) • knot *Calidris canuta* (over winter, supports 3.6% of the population – Article 4.2) • shelduck *Tadorna tadorna* (over winter, supports 3% of the GB population – Article 4.2) • dunlin *Calidris alpina* (over winter, supports 2.7% of the GB population – Article 4.2) • grey plover *Pluvialis squatarola* (over winter, supports 2.4% of the GB population – Article 4.2) • curlew *Numenius arquata* (over winter, supports 1.7% of the population – Article 4.2) • redshank *Tringa totanus* (over winter, supports 1.7% of the GB population – Article 4.2)	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring; • The extent and distribution of the habitats of the qualifying features • The structure and function of the habitats of the qualifying features • The supporting processes on which the habitats of the qualifying features rely • The population of each of the qualifying features, and • The distribution of the qualifying features within the site In relation to **Upper Solway Flats & Marshes SSSI** - subject to natural change, to maintain the following habitats and geological features in favourable condition, with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages, etc.) for which the land is designated**.** **Habitat Types represented (Biodiversity Action Plan categories)** ○ Estuaries ○ Inshore sublittoral sediment ○ Intertidal mudflats and sandflats ○ Reefs ○ Saltmarsh including pioneer saltmarsh ○ Dune grassland ○ Coastal shingle vegetation	Site **AL39 Silloth Port** is identified for **safeguarding of its wharves**, and lies adjacent to the SPA. Site **M34 Kingmoor rail sidings** is identified for **safeguarding of its sidings**, and lies 1.2km from the SPA. Site **CA31 Kingmoor Park East**, Carlisle, is identified for an **Energy from Waste plant**, and lies 3.7km from the SPA. Site **M6 land between Overby and High House quarries** is identified as an **Area of Search** for sand and gravel, and lies 4km from the SPA.

SITE	LOCATION /AREA	REASON(S) FOR DESIGNATION	CONSERVATION OBJECTIVES	SITE ALLOCATIONS
		• goldeneye *Bucephala clangula* (over winter, supports 1.1% of the GB population – Article 4.2) • teal *Anas crecca* (over winter, supports 0.9% of the GB population – Article 4.2) • turnstone *Arenaria interpres* (over winter, supports 0.9% of the GB population – Article 4.2) • sanderling *Calidris alba* (over winter, supports 0.9% of the GB population – Article 4.2) • shoveler *Anas clypeata* (over winter, supports 0.5% of the GB population – Article 4.2) • scaup *Aythya marila* (over winter, supports 0.5% of the population – Article 4.2) • over winter, the area regularly supports an internationally important assemblage of 133,440 individual water fowl - Article 4.2	○ Maritime cliff woodland (in Scotland only) **Geological features (Geological Site Types)** ○ Active process geomorphological (IA) **Species represented** ○ Aggregations of breeding birds ○ Aggregations of non-breeding birds ○ Assemblage of non-breeding birds ○ Breeding bird assemblage ○ Natterjack Toad ○ Great crested newt ○ Vascular Plant assemblage ○ Invertebrate assemblage	Site **CA30 Kingmoor Road recycling centre** is identified for a **waste treatment and management facility**, and lies 5km from the SPA. Site **AL38 Innovia rail sidings** is identified for **safeguarding of its sidings**, and lies 7.8km from the SPA.

Part 3 – European Sites and Features – RAMSAR

SITE	LOCATION/ AREA	REASON(S) FOR DESIGNATION	CONSERVATION OBJECTIVES	SITE ALLOCATIONS
Duddon Estuary Ramsar	03 15 24 W 54 10 39 N 6806.3 (ha)	Criterion 2 supports nationally important numbers of the rare natterjack toad *Bufo calamita*, near the northwestern edge of its range (an estimated 18-24% of the British population). Supports a rich assemblage of wetland plants and invertebrates - at least one nationally scarce plant and at least two British Red Data Book invertebrates. Criterion 4 supports nationally important numbers of waterfowl during spring and autumn passage Criterion 5 over winter, supports an internationally important assemblage of 26,326 waterfowl Criterion 6 over winter, supports internationally important populations of northern pintail, red knot and common redshank	In relation to **Duddon Estuary SSSI** - subject to natural change, to maintain the following habitats and geological features in favourable condition, with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages, etc.) for which the land is designated. **Habitat Types represented (Biodiversity Action Plan categories)** o Estuary o Saltmarsh o Littoral sediment o Inshore sublittoral sediment o Littoral rock o Inshore sublittoral rock o Coastal vegetated shingle o Sand dune (Strandline, embryo and mobile dunes, Fixed dune grassland, Humid dune slacks, Dune heath) o Coastal lagoon **Species represented** o Aggregation of breeding sandwich tern (Annex 1 species) o Breeding bird assemblage o Aggregations of non-breeding birds o Natterjack toad o Invertebrate assemblage o Vascular plant assemblage **Geological features (Geological Site Types)** o Active process geomorphological (IA)	Site **M31 Salthouse, near Millom**, is identified as a **potential railhead to be safeguarded** for Ghyll Scaur Quarry, and lies 300m from the Ramsar. Site **M5 High Greenscoe Quarry** is identified as an **Area of Search** for brick making mudstones, and lies 1.4km from the Ramsar. Site **M14 Kirkby Slate Quarry** is identified as an **Area of Search** for slate, and lies 1.5km from the Ramsar. Site **M17 Ghyll Scaur Quarry** is identified as an **Area of Search** for very high specification roadstone, and lies 1.8km from the Ramsar.
Esthwaite Water Ramsar	02 59 06 W 54 21 37 N 137.4 (ha)	Criterion 1 a particularly good example of a mesotrophic lake, with a well developed hydrosere at the northern end Criterion 2 supports a rich assemblage of pondweed species and is the only known locality in England and Wales for slender naiad *Najas flexilis*. The diverse aquatic invertebrate fauna includes a number of species with restricted distributions in Britain.		N/A – nearest site is SL1 Kendal Fell Quarry, which lies 13.5km away.

SITE	LOCATION/ AREA	REASON(S) FOR DESIGNATION	CONSERVATION OBJECTIVES	SITE ALLOCATIONS
Irthinghead Mires Ramsar	02 30 43 W 55 04 46 N 792.08 (ha) cross border with Northumbria	Criterion 1 supports an outstanding example of undamaged blanket bogs, characteristic of the vegetation of upland north-western Britain. Most English blanket bogs have been extensively degraded by afforestation, burning, agricultural drainage and overgrazing. The Irthinghead Mires are one of few examples of this vegetation type in a near-natural state. There is also good representation of different topographic mire type and surface patterning. Criterion 2 notable variety of *Sphagnum* mosses Criterion 3 Butterburn Flow has several rare plants, whilst a rare spider, *Eboria caliginosa*, has been recorded at Coom Rogg Moss		NONE
Leighton Moss Ramsar	02 47 31 W 54 10 03 N 128.61 (ha) cross border with Lancashire	Criterion 1 reedbeds, of particular importance as a northern outpost for breeding populations of great bittern *Botaurus stellaris*, Eurasian marsh harrier *Circus aeruginosus* and bearded tit *Panurus biarmicus*. Criterion 3 as well as supporting a range of breeding birds, also supports species occurring in nationally important numbers outside the breeding season, including northern shoveler *Anas clypeata* and water rail *Rallus aquaticus*		N/A – nearest site is SL1 Kendal Fell Quarry, which lies 16.5km away.
Morecambe Bay Ramsar	02 57 21 W 54 07 19 N 37404.6 (ha) cross border with Lancashire	Criterion 4 staging area for migratory waterfowl including internationally important numbers of passage ringed plover *Charadrius hiaticula*. Criterion 5 over winter, supports an internationally important assemblage of 223,709 waterfowl Criterion 6 wide range species/populations occurring at levels of international importance	In relation to **South Walney & Piel Channel Flats SSSI** - subject to natural change, to maintain the following habitats and geological features in favourable condition, with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages, etc.) for which the land is designated. **Habitat Types represented (Biodiversity Action Plan categories)** o Inlets and bays o Littoral sediment o Sublittoral sediment o Littoral rock o Sublittoral rock o Shingle	Site **BA26 Barrow Port** is identified for **safeguarding of its wharves and rail sidings**, and lies adjacent to the Ramsar. Site **M12 Roosecote Quarry**, Barrow, is identified as a **Preferred Area** for sand and gravel, and lies 870m from the Ramsar.

SITE	LOCATION/ AREA	REASON(S) FOR DESIGNATION	CONSERVATION OBJECTIVES	SITE ALLOCATIONS
			○ Saltmarsh ○ Sand dune (Strandline, embryo and mobile dunes, fixed dune grassland) ○ Coastal Lagoon **Species represented** ○ Aggregation of breeding birds (sandwich tern (Annex 1 species)) ○ Aggregations of breeding birds ○ Aggregations of non-breeding birds ○ Invertebrate assemblage ○ Vascular plant assemblage **Geological features (Geological Site Types)** • Active process - geomorphological (IA)	Site **M16 Holmescales Quarry** is identified as an **Area of Search** for high specification roadstone, and lies 8km from the Ramsar.
Upper Solway Flats & Marshes Ramsar	03 25 27 W 54 54 20 N 43636.73 (ha)	Criterion 2 supports over 10% of the British population of natterjack toad *Bufo calamita* Criterion 5 over winter, supports an internationally important assemblage of 135,720 waterfowl Criterion 6 wide range species/populations occurring at levels of international importance	In relation to **Upper Solway Flats & Marshes SSSI** - subject to natural change, to maintain the following habitats and geological features in favourable condition, with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages, etc.) for which the land is designated**.** **Habitat Types represented (Biodiversity Action Plan categories)** ○ Estuaries ○ Inshore sublittoral sediment ○ Intertidal mudflats and sandflats ○ Reefs ○ Saltmarsh including pioneer saltmarsh ○ Dune grassland ○ Coastal shingle vegetation ○ Maritime cliff woodland (in Scotland only) **Geological features (Geological Site Types)** ○ Active process geomorphological (IA) **Species represented** ○ Aggregations of breeding birds ○ Aggregations of non-breeding birds ○ Assemblage of non-breeding birds ○ Breeding bird assemblage ○ Natterjack Toad ○ Great crested newt ○ Vascular Plant assemblage ○ Invertebrate assemblage	Site **AL39 Silloth Port** is identified for **safeguarding of its wharves**, and lies adjacent to the Ramsar. Site **M34 Kingmoor rail sidings** is identified for **safeguarding of its sidings**, and lies 1.2km from the Ramsar. Site **CA31 Kingmoor Park East**, Carlisle, is identified for an **Energy from Waste plant**, and lies 3.7km from the Ramsar. Site **M6 land between Overby and High House quarries** is identified as an **Area of Search** for sand and gravel, and lies 4km from the Ramsar.

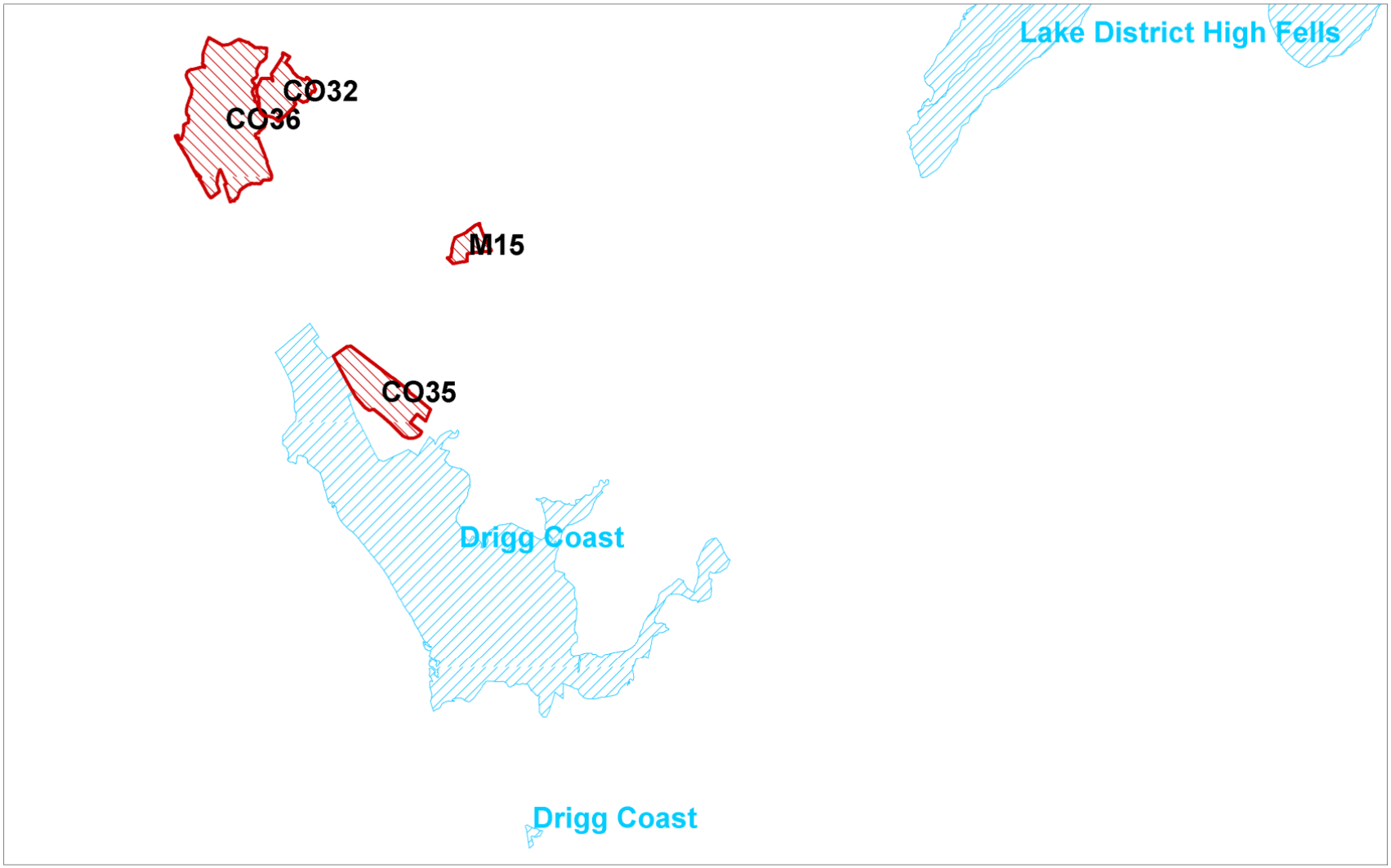
SITE	LOCATION/ AREA	REASON(S) FOR DESIGNATION	CONSERVATION OBJECTIVES	SITE ALLOCATIONS
				Site **AL38 Innovia rail sidings** is identified for **safeguarding of its sidings**, and lies 7.8km from the Ramsar.

Part 4 – European Sites and Features within adjoining authorities

SITE	PRIMARY FEATURES
Craven Limestone Complex SAC	Active raised bogs, alkaline fens Petrifying springs Limestone pavements Molinia meadows, semi-natural dry grasslands and scrubland Hard oligo-mesotrphic waters with benthic vegetation
Ingleborough Complex SAC	Large stands of Juniper Alkaline fens Calcareous rocky slopes Limestone pavements
Ox Close SAC	Calaminarian grasslands
Roman Wall Loughs SAC	Natural eutrophic lakes, pondweeds
Tyne and Allen River Gravels SAC	Calaminarian grasslands

MAPS OF THE EUROPEAN WILDLIFE SITES AND LOCATIONS OF PROPOSED SITES

Drigg Coast SAC



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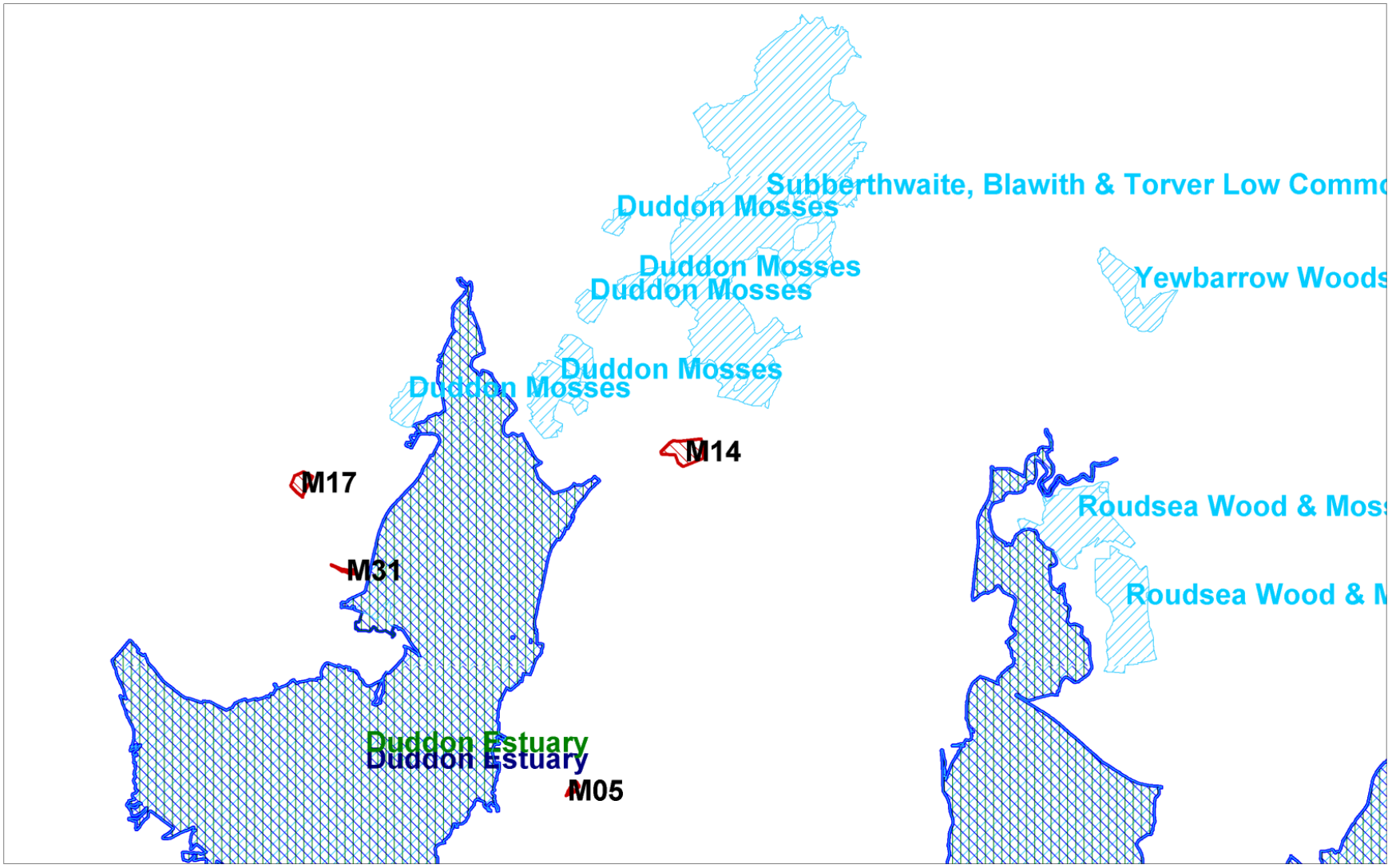
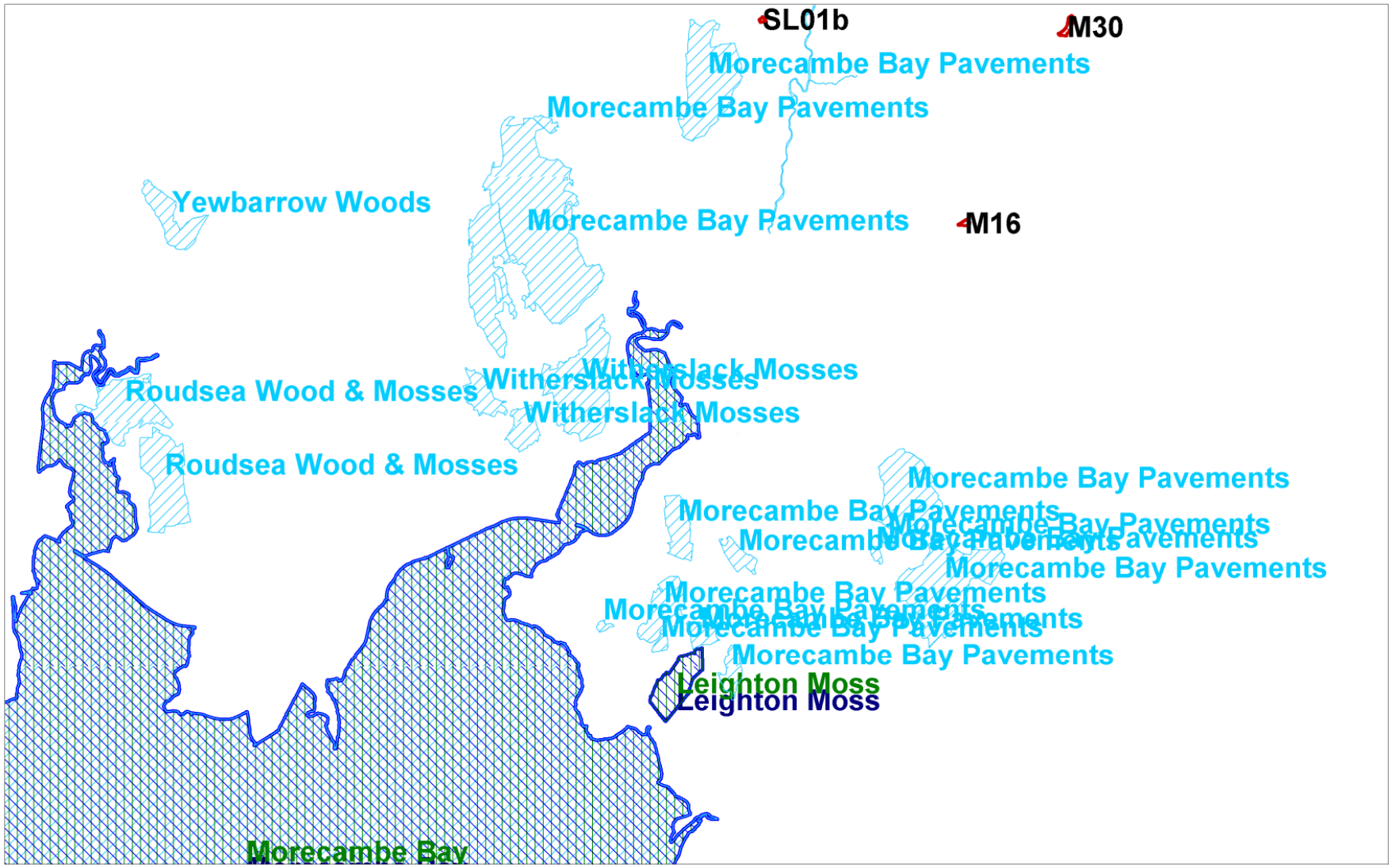
Duddon European Wildlife Sites



Morecambe Bay Wildlife Sites - east



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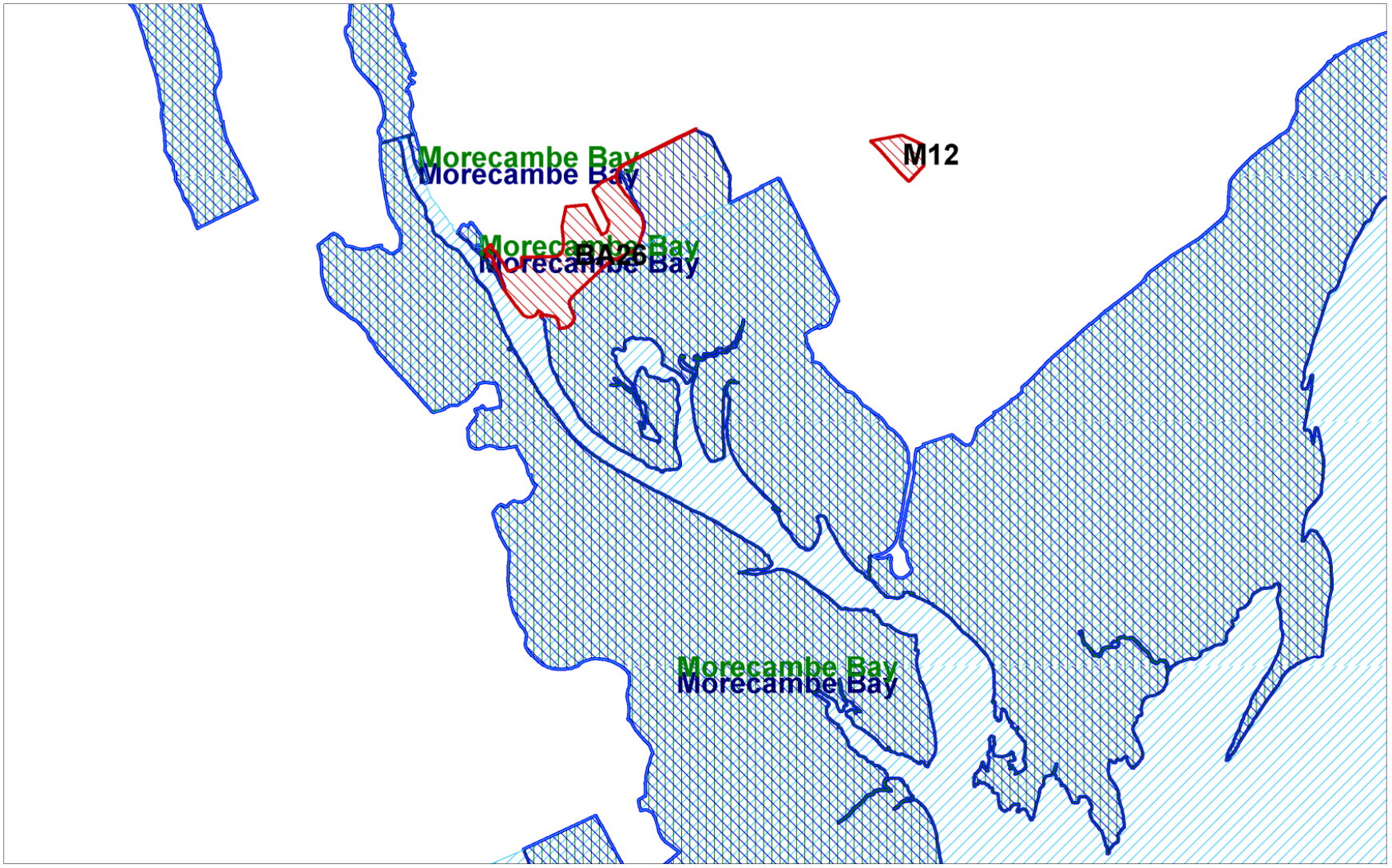

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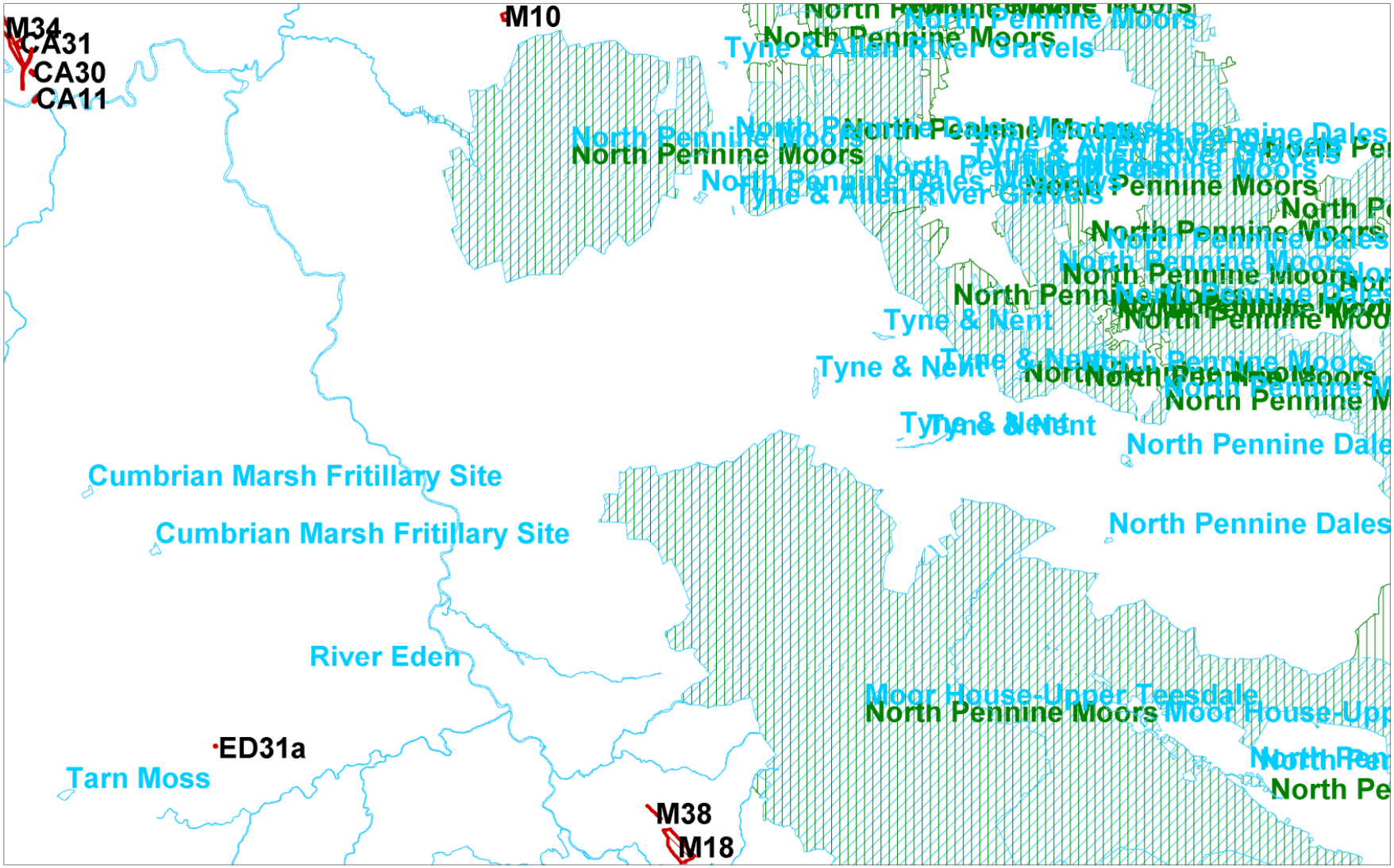
N Pennine Wildlife Sites - north



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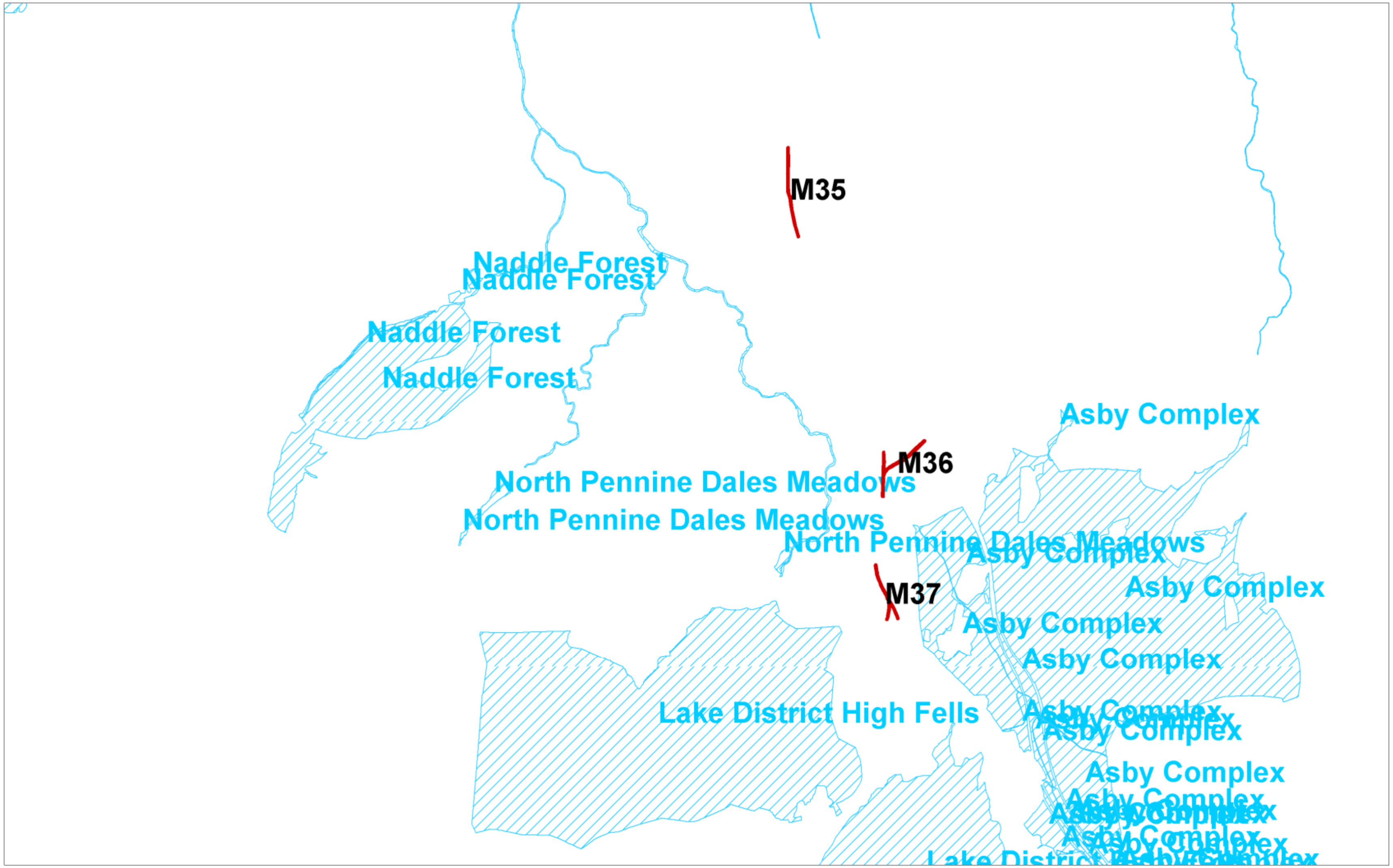
N Pennine Wildlife Sites - south

Cumbria County Council



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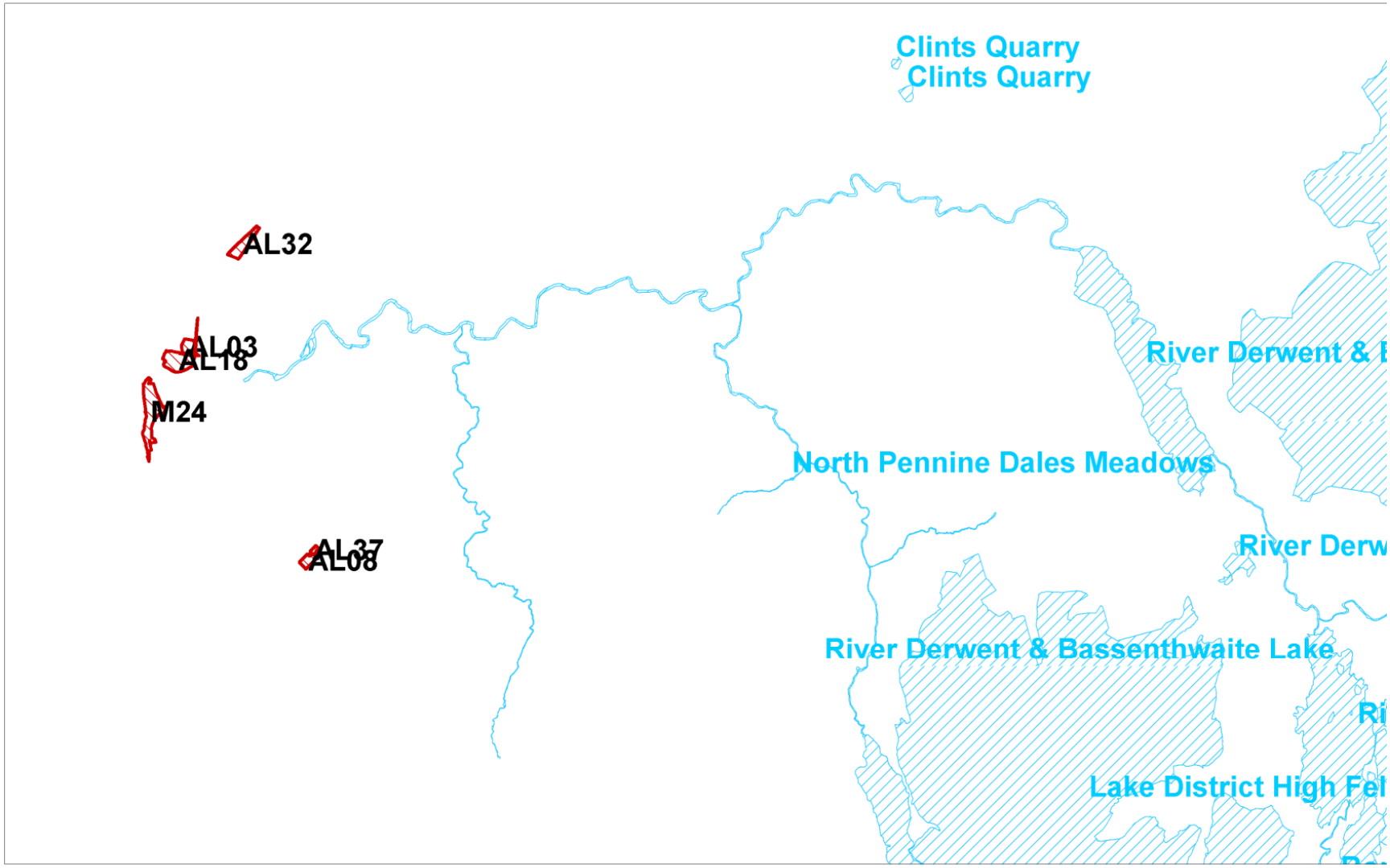
River Derwent & Bassenthwaite Lake SAC



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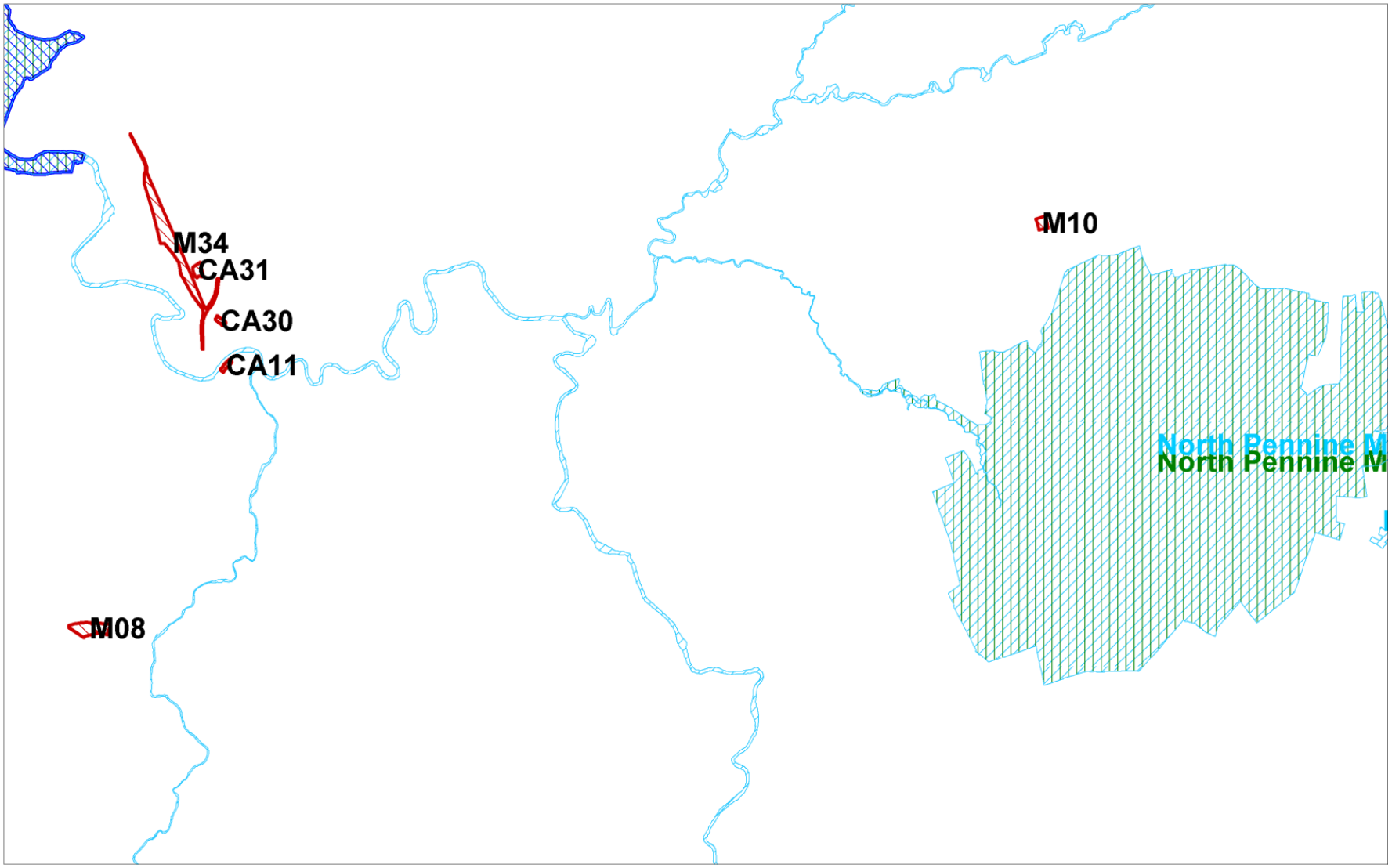
River Eden SAC - north



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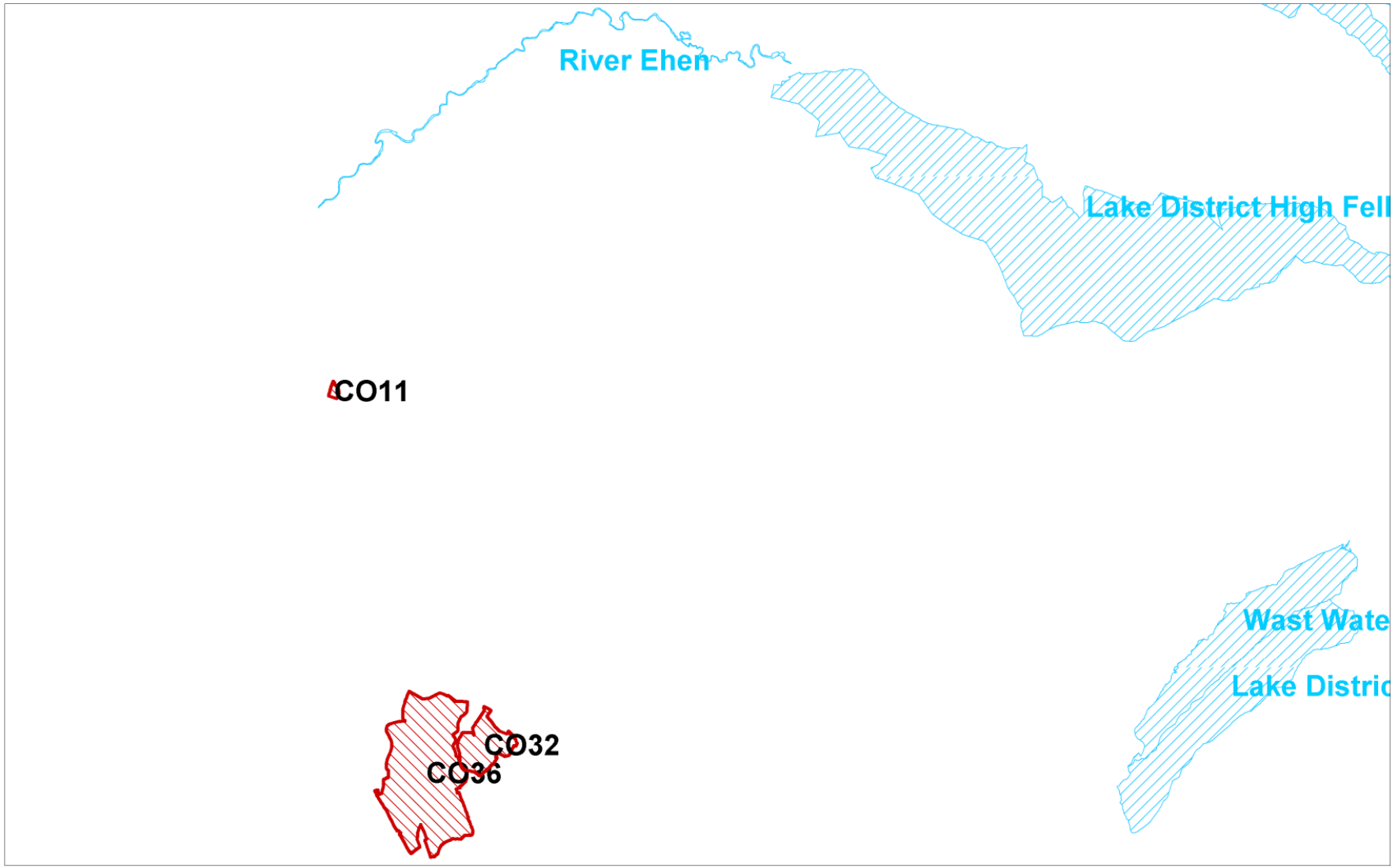
River Ehen SAC



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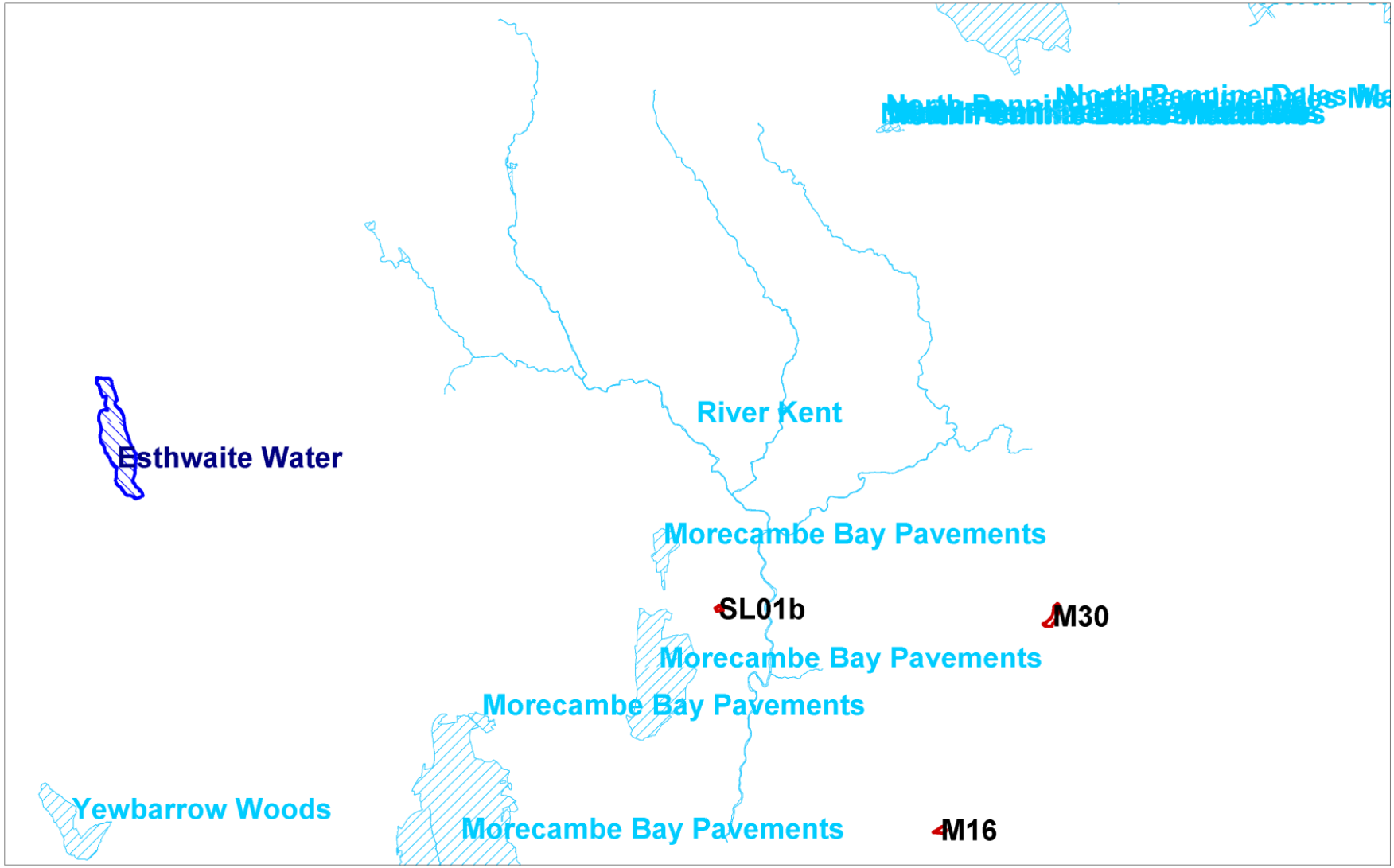
River Kent SAC



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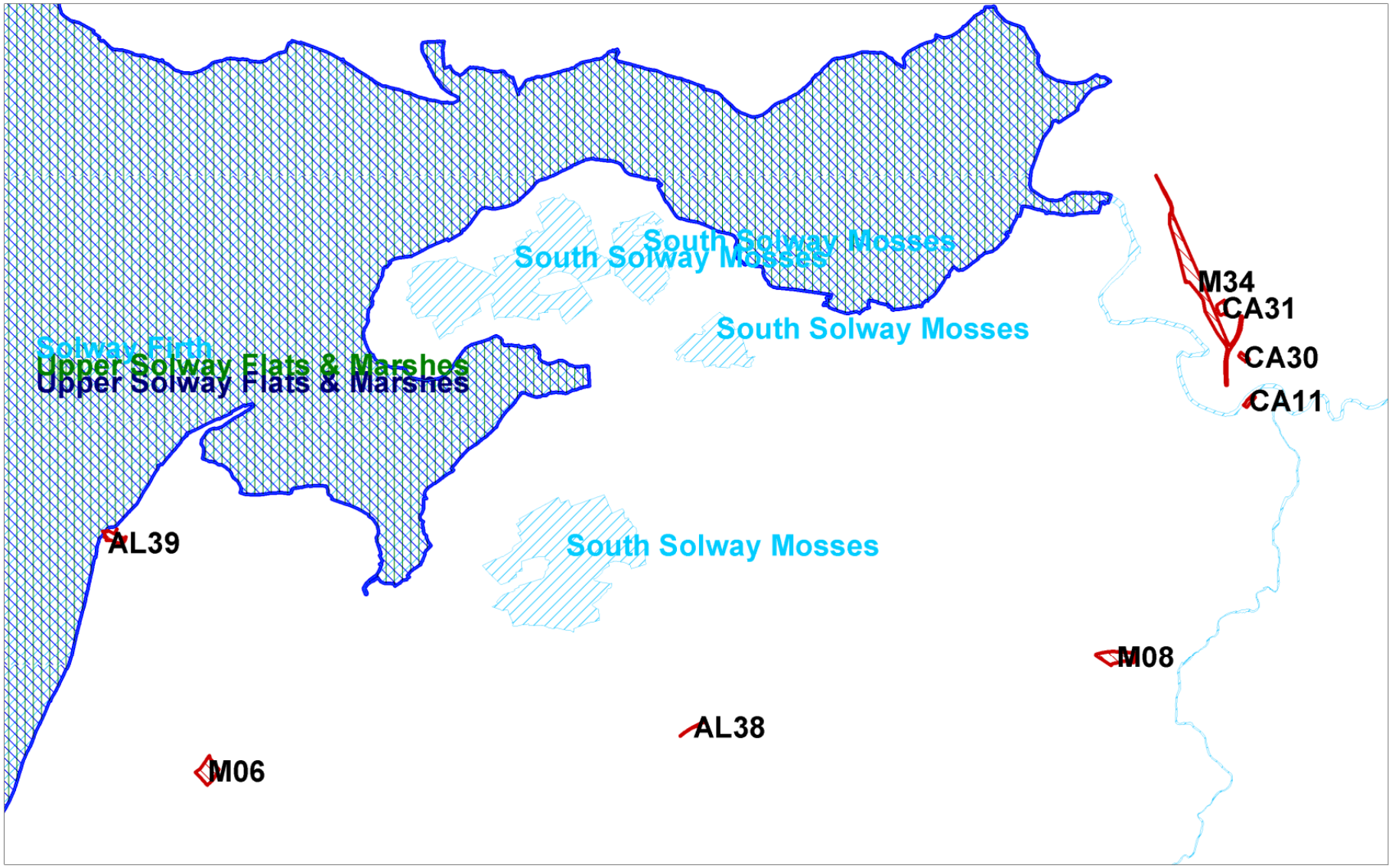
Solway Firth European Wildlife Sites



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