A57 Link Roads
TR010034
5.3 Habitats Regulations Assessment Screening Report

APFP Regulation 5(2)(g)

Planning Act 2008 Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

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Infrastructure Planning

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

A57 Link Roads Scheme

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5.3 HABITATS REGULATIONS ASSESSMENT SCREENING REPORT

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1. Introduction

1.1 Terms of Reference

1.1.1 This Habitats Regulations Assessment (HRA) Screening Report is for the A57 Link Roads Scheme (hereafter 'the Scheme'), which is part of a wider packed to upgrade the Trans-Pennine route between the Manchester and Sheffield City Regions, consisting of the A57, A628, and A61. The overall project and the Scheme are described in more detail in Section 2 below.

1.2 Background to HRA

1.2.1 HRA is required by Regulation 63 of the Habitats Regulations for all projects and plans which may have 'likely significant effects (LSE)' on a European Site and are not directly connected with or necessary to the management of the European Site. Regulation 84 of the Habitats Regulations states that Regulation 63 i.e. the assessment provisions, apply to applications for development consent under the Planning Act 2008.

1.2.2 The Scheme is not directly connected with, or necessary to, the nature conservation management of any European sites.

1.2.3 In line with DMRB LA115 and under UK Government policy[1], a HRA shall report the effects of a project on Special Protection Areas (SPAs), Special Areas of Conservation (SACs), potential/proposed SPAs (pSPAs), possible/proposed SACs (pSACs), candidate SACs (cSACs), Ramsar sites (wetlands of international importance) and proposed Ramsar sites (pRamsar). Hereafter, all of the above designated nature conservation sites are collectedly referred to as 'European Sites'.

1.2.4 The three stages of the HRA process, in line with UK government policy[2] and as outlined within Insert 1.1, are:

- **Stage 1 - Screening:** To test whether a Scheme either alone or in combination with other projects is likely to have a significant effect on a European Site
- **Stage 2 - Appropriate Assessment (AA):** To determine whether, in view of a European Site's conservation objectives, the Scheme (either alone or in combination with other projects) would have an adverse effect on the integrity of the site with respect to the site's structure, function and conservation objectives. If adverse impacts are anticipated, potential mitigation measures to alleviate impacts should be proposed and assessed
- Stage 3 – Derogation: allow exceptions:
- *Test 1 – Consider alternative solutions:* Where a Scheme is assessed as having an adverse impact (or risk of this) on the integrity of a European Site, there should be an examination of alternatives (e.g. alternative locations and designs of development)

[1] NPPF 2019 Available from: https://www.gov.uk/government/publications/national-planning-policy-framework--2
[2] https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site#screening

- *Test 2 – Consider Imperative Reasons of Overriding Public Interest (IROPI):* Assessment where no alternative solutions have been identified and where adverse impacts remain. In exceptional circumstance (e.g. where there are imperative reasons of overriding public interest), compensatory measures can be put in place to offset negative impacts.

1.2.5 This statement comprises Stage 1 of the HRA process: Screening.

1.2.6 The Design Manual for Roads and Bridges (DMRB) LA 115 'Habitats Regulations Assessments' (2020) illustrates the consequential stages that will be followed, with the outcomes reported using the relevant templates. With regards to Stage 1 (this report) and in relation to each site considered as part of the screening exercise, the report is required to demonstrate within the screening matrices that either:

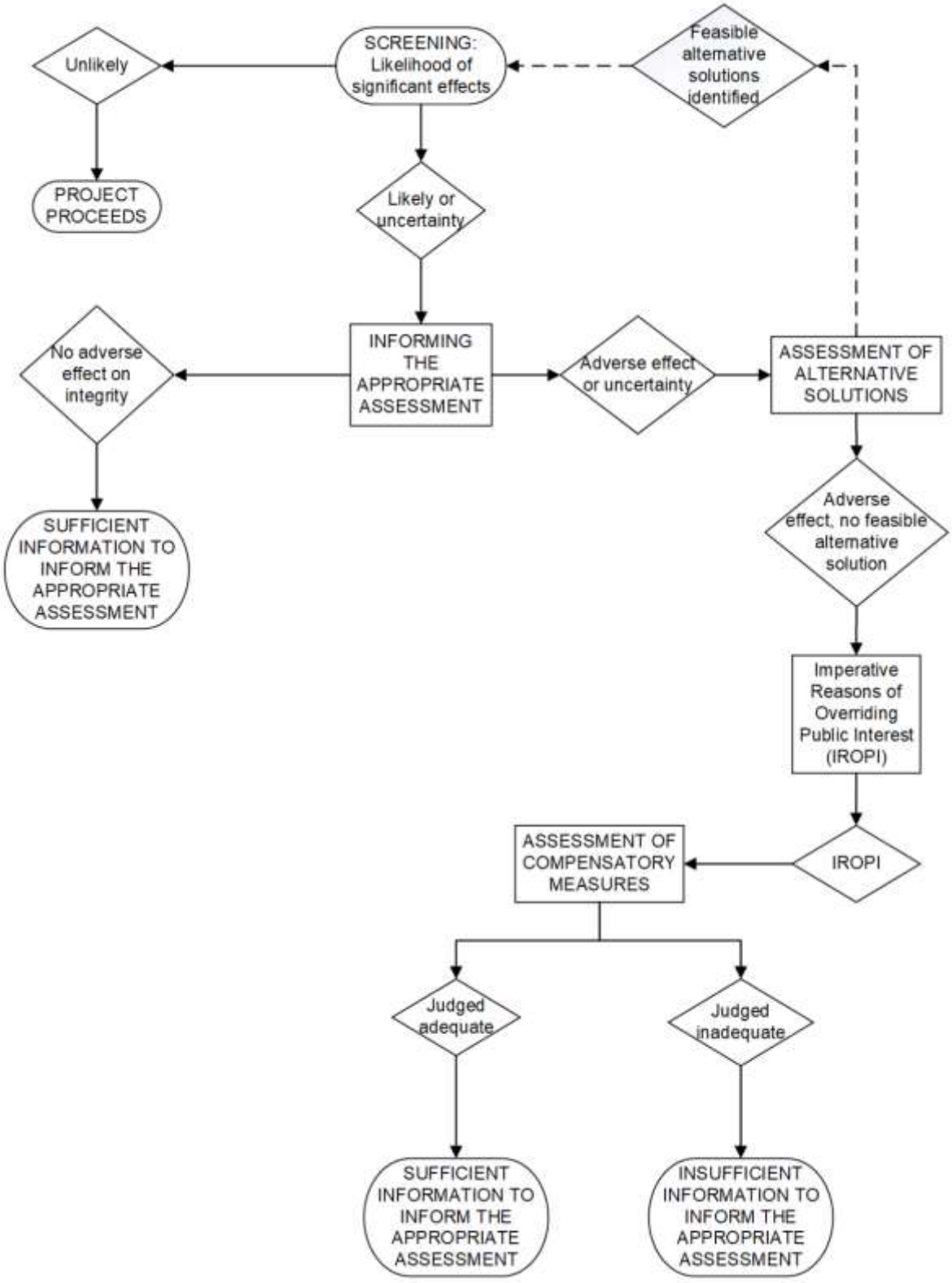
- There is an absence of LSE on the European Site(s), therefore, no further assessment is required; or
- There are LSE on the European Site(s), therefore, requiring an AA.

1.2.7 Under the Habitat Regulations, an effect is likely if:

- It cannot be excluded, in that it is capable of having an effect, on the basis of objective information; and
- it is likely to undermine the site's conservation objectives.

1.2.8 Where screening concludes that significant effects are likely (alone or in combination) or that sufficient uncertainty remains, then further HRA shall be undertaken.

Insert 1.1: Flow diagram showing the generic HRA process



Source: DMRB LA 115 Habitats Regulations assessment.

1.3 Habitats Regulations Assessment

1.3.1 This HRA report is intended to ensure compliance with the Conservation of Habitats and Species Regulations 2017 (as amended) (hereafter termed 'the Habitats Regulations') and to specifically provide a framework for assessment of the implications of the Scheme on European sites[3], where such sites are designated for nature conservation interests (i.e. they are part of the National Site Network).

1.3.2 Screening has been undertaken by the Applicant (Highways England) to accompany the design stages of the Scheme as it evolved, please refer to the Assessment of Alternatives chapter (Chapter 3) of the Environmental Statement (TR010034/APP/6.3) for further details. To-date, this has comprised the following:

- Option Identification stage - an initial screening report (AIES) was prepared in January 2017
- Option Selection stage – the AIES was developed further in August 2017
- In April 2019 the assessment undertaken at Option Selection stage was updated in light of Scheme changes and additional information.

1.3.3 The purpose of this HRA report is to provide an assessment of the Scheme now it is at Preliminary Design stage and seeks to determine whether, based on Scheme changes, the conclusions of the 2019 HRA of 'No Likely Significant Effects' as a result of the Scheme on sites listed within the National Site Network are still valid.

1.4 Approach to HRA

1.4.1 The implication of the Court of Justice of the European Union (CJEU) judgement referred to as People Over Wind (Peter Sweetman v Coillte Teoranta, Case C-323/17) is that competent authorities cannot take account of any *"measures that are intended to avoid or reduce the harmful effects of the envisaged project on the site concerned"*, when considering at the HRA screening stage whether the plan or project is likely to have an adverse effect on a European Site. The effect of this is that the screening stage must be undertaken on a precautionary basis with no regard to any proposed integrated or additional avoidance or reduction measures. Where the likelihood of significant effects cannot be excluded on the basis of objective information, the competent authority must proceed to carry out an Appropriate Assessment to establish whether the plan or project will affect the integrity of the European Site, which can include at that stage consideration of the effectiveness of the proposed avoidance or reduction measures.

1.4.2 The source and relevance of any uncertainty will be explained and reported at each relevant stage of assessment through applying the precautionary principle. Recourse to the precautionary principle may be relevant when there:

- are "potentially negative effects"; or

[3] Sites designated under EC Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive) or Directive 2009/147/EC on the Conservation of Wild Birds (the Birds Directive). Collectively, these European sites form the National Site Network which includes: Special Areas of Conservation (SACs), pSACs (possible SACs) and cSACs (candidate SACs), Special Protection Areas (SPAs) and pSPAs (potential SPAs), Sites of Community Importance (SCIs) and, as a matter of UK policy, Ramsar sites (wetland habitats of international importance).

- is "insufficiency of the data, which makes it impossible to determine with sufficient certainty the risk in question".

1.4.3 Where the assessment concludes that significant effects are likely (alone or in combination) or that sufficient uncertainty remains, then the subsequent stages of the HRA will be completed for the project or plan.

2. The Project

2.1 Overview of the Project

2.1.1 The Scheme has evolved over more than 50 years as different ideas have been explored. It has formerly been known as the Trans-Pennine Upgrade (TPU) and is also referred to as the "Mottram Moor Link Road and A57 Link Road project" in the Government's Roads Investment Strategy (RIS) 2015-2020[4]. The Scheme to which this DCO application and ES relates is known as the A57 Link Roads Scheme.

2.1.2 The Trans-Pennine route (A57(T), A628 and A616) between Manchester and Sheffield currently suffer from heavy congestion, creating unreliable journeys, which limits journey time reliability. This restricts economic growth due to the delays experienced by commuters and business users alike. The congestion also results in rat running through smaller towns and villages, as vehicles attempt to reduce queuing times.

2.1.3 Much of this heavy traffic travels through local roads, which disrupts the lives of communities and makes it difficult and potentially unsafe for pedestrians to cross the roads. It is expected that these issues will only get worse with time if significant improvements aren't made. Further detail on these baseline and future scenarios for congestion is provided within the Transport Assessment Report (TR010034/APP/7.4).

2.1.4 In 2017, after a wide consultation about a number of different options, a package of TPU work was announced, to improve the existing route connecting the M67 at Mottram in Longdendale to the M1, north of Sheffield.

2.1.5 The TPU has since been split into two projects which are being delivered separately:

- Upgrades to the A61 Westwood roundabout near Sheffield; packaged with the A628 Safety and Technology improvements, including electronic signs and improved closure gates
- Creation of two new link roads at the western end of the A57/A628 route, to provide a dual carriageway bypass around Mottram in Longdendale

2.1.6 The A628 Safety and Technology improvements and A61 Westwood Roundabout were not considered to be NSIPs. Furthermore, following a review of the advice provided in 'Guidance on associated development applications for major infrastructure projects[5]' (DCLG, April 2013), neither were they considered to be associated development. Consequently, these developments are already being delivered by the Applicant. The Westwood Roundabout improvements were completed in March 2021, and the Safety and Technology improvements works are programmed to end in June 2021.

2.1.7 The two new link roads being delivered by this Scheme are as follows:

- Mottram Moor Link Road – a new dual carriageway from the M67 Junction 4 roundabout to a new junction on the A57(T) at Mottram Moor.

[4] https://www.gov.uk/government/publications/road-investment-strategy-for-the-2015-to-2020-road-period
[5] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/192681/Planning_Act_2008_-_Guidance_on_associated_development_applications_for_major_infrastructure_projects.pdf

- A57 Link Road – a new single carriageway link from the A57(T) at Mottram Moor to a new junction on the A57 in Woolley Bridge.

2.1.8 Further detail about the Scheme's history and its development is provided in the Assessment of alternatives chapter (Chapter 3) of the Environmental Statement (TR010034/APP/6.3).

2.1.9 The Scheme is a Nationally Significant Infrastructure Project ("NSIP") within Sections 14(1)(h) and 22(1) of the Planning Act 2008 (the "Act"). Under Section 22 an NSIP must fall within one of the three categories specified, which are expressly stated to be alternatives.

2.1.10 The Scheme is construction of a highway in a case within the meaning of Section 22(1)(a). The Scheme is wholly located in England and Highways England Company Ltd, being a strategic highways authority, will be the highway authority for the highway to be constructed as part of the Scheme.

2.1.11 The development therefore complies with the requirements of Section 22(2) and 22(4) of the Act. Whilst the Scheme includes some alteration and improvement of the existing A57, the new carriageway will follow a different alignment requiring construction of sections of new highway with a speed limit of 50 miles per hour over an area in excess of 12.5 hectares.

2.1.12 Therefore, the Applicant is required to apply for a 'Development Consent Order' (DCO). This application has been accompanied by an Environmental Statement (ES) (TR010034/APP/6.3) prepared in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (SI No. 572) (hereafter referred to as the 'EIA Regulations') and submitted to the Planning Inspectorate.

2.2 The Scheme

2.2.1 The Scheme, including the location of European sites considered as part of this assessment, is presented in Appendix A. The Scheme includes the following components:

- A new offline bypass of 1.12 miles (1.8 km) of dual carriageway road connecting the junction of the M67, A57(T) and A560 to Mottram Moor Junction.
- A new offline bypass of 0.81-mile (1.3 km) of single carriageway connecting the A57(T) Mottram Moor to the A57 Woolley Bridge.
- Creation of two new junctions, Mottram Moor Junction and Woolley Bridge Junction and improvement works to the existing M67 Junction 4.
- De-trunking, including safety from the M67 Junction 4 to Gun Inn junction, to be agreed with Tameside Metropolitan Borough Council (TBMC).
- Creation of five new structures (Old Hall Farm Underpass, Mottram Underpass, Carr House Lane Underpass, River Etherow Bridge and Roe Cross Road Bridge).
- One temporary construction compound area located close to the M67/A57(T)/A560 Junction.
- De-trunking, including safety measures from the M67 Junction 4 to Mottram Back Moor Junction, to be agreed with Tameside MBC.

2.2.2 Further detail description of the Scheme is provided within Chapter 2 (TR010034/APP/6.3).

2.2.3 The construction programme is based on a forecast start of works in autumn 2022, leading to the Scheme opening in spring 2025. This programme has been developed. The programme has been developed by a team of construction experts who have used past experience and industry benchmark data to both estimate durations and develop the logic for the programme. The construction activities and programme would be subject to modification during both the detailed design and the construction phases. The timings indicated are a best-estimate, based on the present situation. This section describes the provisional overall construction programme and the planned sequence of operations.

2.2.4 The construction programme for the main works would have a duration of approximately 28 months. At substantial completion, the works would be completed to a sufficient standard for the Scheme to be opened to live traffic. Some minor works may still be required following substantial completion (e.g. demobilization and landscaping works), which has been considered in the assessment of the opening year.

2.2.5 Associated works for temporary access, temporary lay-down, work areas and ancillary works will also be required. This section should be read alongside the Temporary Works Plans (TR010034/APP/2.8), which shows the location of the construction site compound, topsoil and material storage areas, structures worksites, construction traffic access routes, temporary road diversions, and temporarily footpath, footway and bridleway diversions. The compound would be returned to the previous land use after decommissioning, and restored to a condition equivalent to its original, in agreement with landowners. There would be an initial 5-year maintenance period for any construction defects that arise after commissioning and opening, as well as management of environmental landscaping and planting. Most impacts would occur in the construction phase and there would be few additional impacts during operation. The latter would be limited to an initial 52-week aftercare period in land restored to agriculture, during which time problems with settlement, compaction, surface stoniness and drainage will be rectified by the appointed Principal Contractor.

3. Methodology

3.1 The Scheme

3.1.1 All available information about the Scheme was gathered in order to assess whether the Scheme may have any LSE on European Sites. The assessment is limited to the construction of the Scheme as there will be no change to operational conditions following the works and no foreseen decommissioning to consider.

3.2 HRA Guidance

3.2.1 This report has been prepared in accordance with the DMRB LA 115 Habitats Regulations Assessments. In addition to the above, the additional following guidance documents have also been taken into consideration:

- PINS Advice Note 10: Habitats Regulations Assessment relevant to nationally significant infrastructure projects, Version 8, 2017.
- Tyldesley, D., and Chapman, C., (2013) The Habitats Regulations Assessment Handbook, September 2020 edition UK: DTA Publications Limited[6].

3.3 European Site Selection

3.3.1 In accordance with the DMRB LA 115 Habitats Regulations Assessments, all European Sites where potential direct, indirect, and in-combination impacts could reasonably be considered possible were selected for screening. DMRB LA 115 states that as a general guide, subject to professional judgement about potential effect pathways, consideration should be given to any European Site if the Scheme:

- Is within 2 km of a European Site or functionally linked land[7].
- Is within 30 km of a SAC, where bats are noted as one of the qualifying interests.
- Crosses or lies adjacent to, upstream or downstream of, a watercourse which is designated in part or wholly as a European site.
- Has potential hydrological or hydrogeological linkage to a European site with a groundwater dependent terrestrial ecosystem which triggers the criteria for assessment of European sites in accordance with LA 113[8].
- Has an affected road network (ARN) which triggers the criteria for assessment of European site in accordance with LA 105[9].

3.3.2 In line with DMRB LA 115, SSSI Impact Risk Zones (IRZ) have been used to support this HRA screening and specifically support the assessment of likely significant effects on the interest features of European sites.

[6] www.dtapublications.co.uk

[7] Functionally linked land is any land outside a European site boundary that is utilised by mobile species that are a qualifying interest feature of the European site. The land is therefore functionally linked to the European site and importance for the maintenance of the species e.g. fields use for grazing by birds from a nearby SPA.

[8] DMRB LA 113 Road drainage and the water environment, March 2020.

[9] DMRB LA 105 Air Quality, November 2019.

3.4 Obtaining Information on European Sites with the potential to be affected by the Scheme

3.4.1 Gathering the information on the European sites included in the Stage 1 Screening involved a desk-based review of the following sources:

- MAGIC (Multi-Agency Geographic Information for the Countryside)[10] for information on the location of the European sites.
- Joint Nature Conservation Committee (JNCC)[11] for data sheets and National Site Network Standard Data Forms.
- Natural England[12] for the citation, conservation objectives and supplementary advice on conservation objectives.

3.5 Obtaining Information on Other Projects and Plans

3.5.1 In accordance with the Habitats Regulations, there is a need to consider the potential for LSE of the project or plan 'in combination' with other projects and plans. Cumulative effects are more likely to occur if, when assessed alone, there is potentially a minor residual effect, or at AA if there was considered to be an LSE.

3.5.2 Details of any project or plan that has been assessed under the Habitats Regulations for potential impacts on the same European Sites has been obtained. This was undertaken through an internet search of local authority websites and planning portals, and the websites of other relevant organisations who may act as a Competent Authority, with requests for information by email when necessary.

3.5.3 A search was undertaken to identify other projects and plans that may have an in-combination effect with the Scheme. This included a search of local authority websites and planning portals.

3.5.4 A cumulative impact assessment, which identifies other committed development, as required by the Environmental Statement, has been undertaken and was reviewed in order to identify possible projects that may have also been assessed under the Habitats Regulations for potential impacts on the same European sites. At this stage this includes a high-level list of other committed developments, which will be assessed in more detail in the EIA.

3.5.5 The traffic modelling[13] and associated operational air quality assessments[13] inherently assess in-combination effects based on the inclusion of relevant committed developments, as collated for the cumulative impact assessment. The transport assessment also incorporates national forecast traffic growth within future traffic flows.

3.5.6 The National Infrastructure Planning website[14] was searched for information on other NSIPs in the same and adjoining regions (North West, Yorkshire and Humber and East Midlands) that may have been assessed for impacts on the same European sites under the Habitats Regulations.

[10] http://magic.defra.gov.uk
[11] http://jncc.defra.gov.uk
[12] http://publications.naturalengland.org.uk
[13] Traffic Assessment Report (Section 7.3 in ES Chapter 2) (Application document TR010034/APP/6.3).
[14] ES Chapter 05: Air Quality (Application document TR010034/APP/6.5).

3.5.7 The websites of the following sources were searched for information about other plans and projects:

- Barnsley Metropolitan Borough Council
- Calderdale Council
- Derbyshire County Council
- Derbyshire Dales District Council
- Greater Manchester Combined Authority
- High Peak Borough Council
- Kirklees Council
- Oldham Council
- Peak District National Park Authority
- Rochdale Borough Council
- Stockport Metropolitan Borough Council
- Sheffield City Council
- Tameside Metropolitan Borough Council

3.6 Screening for LSE of the Project 'Alone' and 'In-combination'

3.6.1 Following the gathering of information on the European sites an assessment has been undertaken to predict the LSE of the scheme 'alone' on each European Site. In order to inform this process, all parts of the Scheme were assessed to see whether they could result in LSE on each European Site.

3.6.2 The potential for LSE of the Scheme 'in-combination' with other projects and plans for each European Site has also been considered in this HRA. As part of this process HRAs that have been completed due to possible impacts on the European Sites included in this HRA were reviewed in order to determine whether there is the potential for in-combination effects.

3.6.3 LSE is assessed by reference to the conservation objectives of the qualifying features (interest features) of the European Site. Any project or plan that causes the cited interest features of a site to fall into unfavourable condition should be considered to have an LSE on the site. Furthermore, the vulnerabilities of the European Site (as detailed in the National Site Network Standard Data Form) have been taken into consideration as these indicate the sensitivities of the European Site and are potential pathways by which they may be affected. Stage 1 of the HRA process does not assess effects on the integrity of each European Sites, this forms Stage 2 of the HRA process.

3.6.4 Projects or plans can adversely affect a site by:

- Causing delays in progress towards achieving the conservation objectives of the site.
- Interrupting progress towards achieving the conservation objectives of the site.

- Disrupting those factors that help to maintain the favourable conditions of the site.
- Interfering with the balance, distribution and density of key species that are the indicators of the favourable condition of the site.

3.6.5 In the case that an in-combination assessment is required, other plans and projects also assessed for impacts on the same European Sites need to be identified. Cumulative impacts or 'in-combination effects' occur where two or more plans or projects have similar impacts on the same interest feature.

3.7 Screening Matrices

3.7.1 The screening assessment has been undertaken using the DMRB LA 115 screening matrices, which are presented in full in Section 5. However, as this Scheme is an NSIP, the Planning Inspectorate Screening Matrices provided in PINS Advice note 10, have also been completed for the Scheme. These are provided in Appendix B.

3.8 Consultation

3.8.1 In line with DMRB LA 115, where screening concludes that significant effects are likely (alone or in combination) or that sufficient uncertainty remains then the opinion of the relevant Statutory Environmental Body (SEB) shall be sought.

3.8.2 Under Regulation 63(3) of the Habitats Regulations, the statutory nature conservation body, in this case Natural England (NE), must be consulted as part of HRA. Consultation is required at AA; however, NE can be contacted for advice and guidance with regard to screening, if necessary.

4. The European Sites

4.1 European Site Screened in for Assessment

4.1.1 No European sites have been identified within 2 km of the Scheme footprint, there are no SACs designated for which bats are a qualifying feature within 30 km[15], the Scheme does not cross or lie adjacent to, upstream or downstream of, a watercourse which is designated in part or wholly as a European site, nor is it hydrologically or hydro-geologically linked to a European site with a groundwater dependent terrestrial ecosystem.

4.1.2 The ARN for the air quality assessment for the operational phase of the Scheme has been determined in accordance with DMRB LA 105 (paragraph 2.1). The following traffic screening criteria have been applied based on the comparison between 'with Scheme' (Do Something (DS)) and 'without Scheme' (Do Minimum (DM)) traffic data as defined in DMRB LA 105:

- Road alignment will change by 5 m or more;
- Daily traffic flows (two way) will change by 1,000 annual average daily traffic (AADT) or more; or
- Heavy Duty Vehicle (HDV) flows (two way) will change by 200 AADT or more; or
- A change in speed band.

4.1.3 Within the European Sites, the A57 is the only road that meets the traffic screening criteria. Previously, the A628 had met the traffic screening criteria as outlined within the Preliminary Environmental Information Report (PEIR) published in November 2020. However, with updated traffic modelling, the A628 does not meet the traffic screening criteria and has been screened out (the with scheme traffic change on the A628 between New Road and the A6024 is +960 AADT however east of the A6024, where the European site boundary is roadside, the change reduces to +846 AADT).

4.1.4 The Scheme ARN includes sections of the A57 which pass through or are adjacent to the following European Sites:

- Peak District Moors (South Pennine Moors Phase 1) SPA.
- South Pennine Moors SAC.

4.1.5 As "air pollution and air-borne pollutants" are included within the site vulnerabilities of the South Pennine Moors SAC (as outlined within Table 4.2), and is adjacent to a Scheme ARN link, which triggers the need for assessment of European sites under DMRB LA 105, this site has been screened in for assessment.

4.1.6 Furthermore, the Peak District Moors SPA has been screened in, as the site is adjacent to a Scheme ARN link, which triggers the need for assessment of European sites under DMRB LA 105, and there is the potential for indirect impacts upon the qualifying features (due to changes in the composition of the habitat as a result of air pollution and air-borne pollutants).

[15] No SAC designated for bats were identified within 30 km of the Scheme or the ARN.

4.1.7 The location of the European Sites in relation to the Scheme and the ARN is shown in Figure 1 in Appendix A and on Figure 6.1, ES Volume 2. Screening matrix tables have been completed for these two sites and are present in Tables 3.2 and 3.3 below.

4.2 Information about the European Sites

4.2.1 Tables 4-1 and 4-2 provide information about the Peak District Moors (South Pennine Moors Phase 1) SPA and South Pennine Moors SAC, the designation status, location of the site, brief description of the site, its conservation objectives and vulnerabilities.

Table 4.1: Information about the Peak District Moors (South Pennine Moors Phase 1) SPA

Site Designation Status	Peak District Moors (South Pennine Moors Phase 1) SPA UK9007021
Location of European Site	Approximately 2.2 km north-east of the Scheme & within 200 m of the ARN[16]
Brief Description of the European Site	The site is an extensive tract of moorland and moorland-fringe habitat. It includes most of the unenclosed moorland areas of the north, eastern and south-western Peak District, where it also extends into enclosed farmland of wet rushy pasture, hay meadows and small wetlands in the valley bottoms. The moorland habitats include extensive tracts of blanket bog and dry heath, which together with wet heath, acid grassland, small flushes, gritstone edges and boulder slopes, streams and moorland reservoirs, fringing semi-natural woodland and enclosed farmland, represents the full range of upland vegetation characteristic of the South Pennines. The site supports several important species assemblages, including higher plants, lower plants and insects, as well as breeding birds.
Qualifying features[17]	ARTICLE 4.1 QUALIFICATION (79/409/EEC) During the breeding season the area regularly supports: • Short-eared owl *Asio flammeus* at least 2.2% of the GB breeding population Count, as at 1990 and 1998; • Merlin *Falco columbarius* at least 2.3% of the GB breeding population Count, as at 1990 and 1998; • Golden plover *Pluvialis apricaria* [North-western Europe - breeding] at least 1.9% of the GB breeding population Count, as at 1990 and 1998.
Vulnerabilities of the European Site[18]	• Fire and fire suppression; • Human induced changes in hydraulic conditions; • Reduced fecundity/ genetic depression; • Outdoor sports and leisure activities, recreational activities; • Hunting and collecting of wild animals (terrestrial), including damage caused by game (excessive density), and taking/ removal of terrestrial animals (including collection of insects, reptiles, amphibians, birds of prey, etc., trapping, poisoning, poaching, predator control, accidental capture (e.g. due to fishing gear), etc.).

[16] The study area as applicable to "air pollution and air-borne pollutants" is defined by Highways England as the area within 200 m of the roads meeting the traffic screening criteria within DMRB LA 105. The modelled nitrogen deposition rates presented herein is therefore based on model transect receptor points at 10 m intervals up to 200 m from the road. However, in the unusual case that potentially significant air quality impacts were identified at 200 m from the road, additional locations would be further modelled to inform the HRA.
[17] https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9007021.pdf
[18] https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9007021.pdf

Conservation Objectives of the European Site[19]	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.

Table 4.2: Information about the South Pennine Moors SAC

Site Designation Status	South Pennine Moors SAC UK0030280
Location of European Site	Approximately 2.2 km north-east of the Scheme.
Brief Description of the European Site[20]	This site covers the key moorland blocks of the Southern Pennines from Ilkley Moor in the north to the Peak District in the south. The moorlands are on a rolling dissected plateau formed from rocks of Millstone Grit at altitudes of between 300m – 600m and a high point of over 630m at Kinder Scout. The greater part of the gritstone is overlain by blanket peat with the coarse gravely mineral soils occurring only on the lower slopes. The moorlands as a whole support a breeding bird community of national and international importance.
Qualifying features[21]	Annex I habitats that are a primary reason for selection of this site • 4030 European dry heaths • 7130 Blanket bogs (*if active bog) *Priority feature • 91A0 Old sessile oak woods with Ilex and Blechnum in the British Isles Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site • 4010 Northern Atlantic wet heaths with *Erica tetralix* • 7140 Transition mires and quaking bogs
Vulnerabilities of the European Site[22]	• Air pollution, air-borne pollutants • Fire and fire suppression • Agriculture activities not referred to above • Human induced changes in hydraulic conditions • Outdoor sports and leisure activities, recreational activities
Conservation Objectives of the European Site	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 • The supporting processes on which the qualifying natural habitats rely

[19] Peak District Moors (South Pennine moors Phase I) SPA Conservation Objectives Supplementary Advice. Available from: http://publications.naturalengland.org.uk/publication/6145889668169728?category=4582026845880320
[20] South Pennine Moors SAC Citation. Available from: http://publications.naturalengland.org.uk/publication/4973604919836672?category=4582026845880320
[21] https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9007021.pdf
[22] https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9007021.pdf

5. HRA Stage 1 Screening Results

5.1 Scope of the Screening Assessment

5.1.1 Construction related emissions such as fugitive dust, vehicle emissions, surface water run-off and pollution events are considered highly unlikely to have any impacts on the European sites by virtue of the distance from the Scheme and the intervening topography (being of a higher altitude and upstream) and there being no hydrological links between the Scheme and the European Sites.

5.1.2 As the Scheme is located over 2 km from the European sites, the only potential source-impact pathway for significant effects is through an increase in atmospheric pollution via the ARN during operation.

5.1.3 The ARN passes through both the Peak District Moors (South Pennine Moors Phase 1) SPA and South Pennine Moors SAC, with the designated sites lying within the 200 m buffer zone of the ARN. Therefore, the screening assessment only considered the potential air quality impacts on the European sites.

5.1.4 All other potential impacts have been screened out.

5.2 Screening Matrices

5.2.1 The assessment of LSEs, both alone and in-combination, on the European sites have been completed in the screening matrices (Tables 5.1 and 5.2) below. The evidence for the findings of the in-combination assessment are provided in Section 5.3 below.

Table 5.1: Screening Matrix: Peak District Moors (South Pennine Moors Phase 1) SPA

<table>
<tr><th>Project</th><th colspan="3">A57 Link Roads</th></tr>
<tr><th>European Site under consideration</th><th colspan="3">Peak District Moors (South Pennine Moors Phase 1) SPA</th></tr>
<tr><th>Date</th><th colspan="2">Author (Name/Organisation)</th><th>Verified (Name/Organisation)</th></tr>
<tr><td>21/05/2021</td><td colspan="2">PW, Senior Ecologist, Atkins</td><td>AW, Associate Director, Atkins</td></tr>
<tr><td colspan="4">Description of Project</td></tr>
<tr><td colspan="4">Describe any likely direct, indirect or secondary impacts of the project) either alone or in combination with other plans and projects) on the European site by virtue of:</td></tr>
<tr><td>Size and scale (road type and probable traffic volume)</td><td colspan="3">This is a major infrastructure project (as outlined in Section 2 above) to provide a bypass of approximately 3.1 km along an existing A-road on the main trans-Pennine route between Manchester in the west and Sheffield and Leeds in the east.
The probable traffic volume on the A-road following construction i.e. during operation based on ‘Do Something’ option, will be as shown in the table below:
<table>
<tr><td rowspan="2">Road name</td><td rowspan="2">Link_ID</td><td colspan="3"></td></tr>
<tr><td>2025 AADT Do Minimum</td><td>2025 AADT Do Something</td><td>Change AADT</td></tr>
<tr><td rowspan="2">A57</td><td>40684_47101</td><td>6780</td><td>7952</td><td>+1172</td></tr>
<tr><td>46050_47101</td><td>3044</td><td>4209</td><td>+1165</td></tr>
</table></td></tr>
</table>

Project	A57 Link Roads	
European Site under consideration	**Peak District Moors (South Pennine Moors Phase 1) SPA**	
Date	**Author (Name/Organisation)**	**Verified (Name/Organisation)**
	Traffic data for the ARN within the European sites is provided in Appendix C. Further details of the traffic modelling undertaken are set out in the Traffic Assessment Report (TAR) (TR010034/APP/7.5).	
Land-take	There will be no land-take within the SPA.	
Distance from the European Site or key feature of the site (from edge of the project assessment corridor)	The SPA is located approximately 2.2 km north-east of the project boundary at its closest point but lies within the assessment study area for air quality as defined by the ARN along the A57.	
Resource requirements (from the European Site or from areas in proximity to the site, where of relevance to consideration of impacts)	No resources will be required from the European site or from areas in proximity to the European site.	
Emissions (e.g. polluted surface water runoff – both soluble and insoluble pollutants, atmospheric pollution)	Construction related emissions such as fugitive dust, vehicle emissions, surface water run-off and pollution events are considered highly unlikely to have any impacts on the SPA by virtue of the distance from Scheme and the topography of the SPA (being of a higher altitude and upstream). Operational increases in atmospheric pollution as a result of increased traffic on the ARN may result in localised air quality impacts on habitats within 200 m of the ARN.	
Excavation requirements (e.g. impacts of local hydrogeology)	No major excavation is required as part of the Scheme as much of the works as possible will be at grade. Impacts on local hydrogeology are not anticipated.	
Transportation requirements	Construction traffic, including delivery and removal of materials, will access the DCO boundary using the existing road network. Any new access created associated with work compounds, etc. will be highly localised. The transportation requirements of the Scheme are not anticipated to have a discernible effect on the SPA.	
Duration of construction, operation, etc.	The current implementation strategy proposes the following key dates, subject to the DCO being approved by the Secretary of State in Autumn 2022: • Start of construction works – 2023 • First full year of opening – 2025 An indefinite design life has been assumed.	
Other	N/A	
Description of avoidance and/or mitigation measures		
Describe any assumed (plainly established and uncontroversial) mitigation measures, including information on:		
Nature of proposals	N/A	

Project	A57 Link Roads	
European Site under consideration	**Peak District Moors (South Pennine Moors Phase 1) SPA**	
Date	**Author (Name/Organisation)**	**Verified (Name/Organisation)**
Location	N/A	
Evidence for effectiveness	N/A	
Mechanism for delivery (legal conditions, restrictions or other legally enforceable obligations)	N/A	
Characteristics of European Site(s)		
A brief description of the European site to be produced, including information on:		
Name of European Site and its EU code:	Peak District Moors (South Pennine Moors Phase 1) SPA UK9007021	
Location and distance of the Europeans Site from the proposed works	Approximately 2.2 km north-east	
European site size	45300.54 ha	
Key features of the European Site including primary reasons for selection and any other qualifying interests	ARTICLE 4.1 QUALIFICATION (79/409/EEC)[23] During the breeding season the area regularly supports: • Short-eared owl *Asio flammeus* at least 2.2% of the GB breeding population Count, as at 1990 and 1998 • Merlin *Falco columbarius* at least 2.3% of the GB breeding population Count, as at 1990 and 1998 • Golden plover *Pluvialis apricaria* [North-western Europe - breeding] at least 1.9% of the GB breeding population Count, as at 1990 and 1998.	
Vulnerabilities of the European Site – any information available from the standard data forms on potential effect pathways	• Fire and fire suppression • Human induced changes in hydraulic conditions • Reduced fecundity/ genetic depression • Outdoor sports and leisure activities, recreational activities • Hunting and collecting of wild animals (terrestrial), including damage caused by game (excessive density), and taking/ removal of terrestrial animals (including collection of insects, reptiles, amphibians, birds of prey, etc., trapping, poisoning, poaching, predator control, accidental capture (e.g. due to fishing gear), etc.).	
European Site conservation objectives	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	

[23] https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9007021.pdf

Project	A57 Link Roads	
European Site under consideration	Peak District Moors (South Pennine Moors Phase 1) SPA	
Date	Author (Name/Organisation)	Verified (Name/Organisation)

- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features
- The distribution of the qualifying features within the site.

The assessment has been made with reference to the Supplementary Advice of Conservation Objectives[24], which include the following specific target for air quality impacts on supporting habitat for all qualifying species:

- Restore as necessary the concentrations and deposition of air pollutants to at-or-below the site-relevant Critical Load or Level values given for the supporting habitats for this feature of the site on the APIS.

Assessment criteria

Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the European Site.

The only potential for significant effect on the SPA with the Scheme is through an increase in atmospheric pollution. During operation of the Scheme, there is the potential for changes in nitrogen deposition as a result of changes in emissions from vehicle movements. It is predicted that there will be an increase in traffic on the A57, which lie immediately adjacent to the SPA boundary on both sides of the road in some places. The SPA lies within 200 m of the ARN along approximately 10 km of the A57. The air quality assessment within the ES (Application document TR010034/APP/6.3) has estimated nitrogen deposition rates for relevant habitats at receptor points within the SPA, both with and without the Scheme. These are calculated for 2025, when the Scheme is first expected to be operational. The nitrogen deposition rates are derived from the estimated changes in nitrogen dioxide concentrations. The result of the air quality assessment for the SPA are given in the table below (also provided in Appendix D). It has been shown that the maximum change in nitrogen deposition is 0.21 kg N/ha/yr and is, therefore, not significant.

Designated Habitat	Habitat	Lowest Critical Load (kg N/ha/yr)	Background nitrogen deposition (5 km average deposition from APIS (kg N/ha/yr)	Nitrogen deposition threshold (kg N/ha/yr) resulting in potential theoretical loss of 1 species (threshold)	Maximum change in N deposition (kg N/ha/yr) between Do Minimum and Do Something experienced by the designated habitat
Peak District Moors (SPA)	Montane habitats	5	31.9	0.4	0.21

An initial consideration in assessing the significance of nitrogen deposition on designated sites is whether the total nitrogen deposition is less than the applicable lower critical load. If not, then the change in nitrogen deposition with and without the project needs to be less than 1% of the lower critical load. In this case the change in nitrogen deposition is 0.21 kg N/ha/yr, which is higher than a 1% change, which equates to 0.05 kg N/ ha/yr.

[24] UK9007021_PeakDistrictMoors (SPM1)SPA_Formal Published 11 Feb 19.pdf

Project	A57 Link Roads	
European Site under consideration	Peak District Moors (South Pennine Moors Phase 1) SPA	
Date	Author (Name/Organisation)	Verified (Name/Organisation)
A potentially significant effect can be considered where there is an exceedance of the relevant critical load and an increase in the nitrogen deposition rate of 0.4 kg N/ha/yr or greater as a result of the Scheme, when compared against predictions without the Scheme taking place (as stated in LA 105[25]). An increase in nitrogen deposition may affect nitrogen sensitive habitats within the SPA upon which the qualifying species indirectly rely. According to the APIS website, the qualifying species have a sensitivity by virtue of the broad habitats they inhabit. They are listed in order of sensitivity to nitrogen with merlin most sensitive, followed by golden plover and short-eared owl. However, looking at the detail, neither merlin or short-eared owl are anticipated to be affected by impacts on their broad habitat, dwarf shrub heath. Golden plover, however, is classed as sensitive due to potential negative impacts on its broad habitats (bogs, dwarf shrub heath, montane) and a potential positive impact on the species' food supply[26]. However, the air quality assessment has shown that the change is below the threshold that would be likely to have an effect on habitat composition. As the habitat is unlikely to be significantly affected by the change in air quality, it would continue to potentially support the prey species of the qualifying features (voles for short-eared owls, small birds for merlin and mainly invertebrates for golden plover) and thus, there would be no indirect effect on SPA qualifying species by virtue of habitat degradation. All of the qualifying species require open moorland habitat, where key prey species are present, for hunting/ foraging. It is considered that the roadside habitat is unlikely to be an important feeding area for the qualifying species given the presence of the road. Therefore, it is concluded that the increase in traffic on the ARN and subsequent increase in nitrogen deposition would not have an LSE on the qualifying features of the SPA by virtue of impacts on the habitats supporting prey species and reduction in extent of foraging habitat. Other effects linked to traffic such as noise disturbance and the collision of vehicles with birds are considered unlikely to result in significant effects due to these being existing roads already with a high level of use. In-combination effects could be had with other schemes that increase the amount of traffic on these roads. The traffic assessment considered potential increases in traffic with respect to committed developments. The committed developments identified as part of the cumulative impact assessment were considered as part of the HRA in-combination assessment. No other projects or plan were identified that could have an in-combination effect with the Scheme with regard to potential air quality impacts (see Section 5.3 below). The remaining SPA site vulnerabilities have been taken into consideration. As the Scheme is for road infrastructure only, it is not considered likely that the Scheme would result in an increase in fire/fire suppression, reduced fecundity/genetic depression, outdoor sports/recreational activities, or hunting.		
Initial assessment		
The key characteristics of the site and the details of the European Site to be considered in identifying potential impacts. Describe any likely changes to the site arising as a result of:		
Reduction in habitat area	None.	
Disturbance to key species	None.	
Habitat or species fragmentation	None.	

[25] DMRB LA 105 Air quality. Available at: https://www.standardsforhighways.co.uk/dmrb/search/10191621-07df-44a3-892e-c1d5c7a28d90
[26] Select a Feature | Air Pollution Information System (apis.ac.uk)

Project	A57 Link Roads	
European Site under consideration	Peak District Moors (South Pennine Moors Phase 1) SPA	
Date	Author (Name/Organisation)	Verified (Name/Organisation)
Reduction in species density	None.	
Changes in key indicators of conservation value (water quality etc.)	Increase in nitrogen deposition but this considered not to result in an LSE for the reasons discussed above.	
Climate change	The purpose of the A57 Link Road is to address longstanding issues, including congestion. Therefore, in the short-term, the relief of congestion is anticipated to improve local air quality in the vicinity of the Scheme. Although, this is not the case for the ARN, the change has been shown to be not significant (see discussion above). In the medium-term, traffic levels may increase as the route reliability and safety has improved. However, as vehicles are becoming cleaner and more efficient, there will be a general trend of air quality improvement over time. Overall, it is considered that the Scheme will not measurably cause any changes to the SPA as a consequence of climate change.	
Describe any likely impacts on the European Site as a whole in term of:		
Interference with the key relationships that define the structure of the site	None.	
Interference with the key relationships that define the function of the site	None.	
Indicate the significance as a result of the identification of impacts set out above in terms of:		
Reduction of habitat area	No change.	
Disturbance to key species	Not significant.	
Habitat or species fragmentation	No change.	
Loss	No change.	
Fragmentation	No change.	
Disruption	No change.	
Disturbance	Not significant.	
Change to key elements of the site (e.g. water quality, hydrological regime etc.)	Not significant for air quality.	
Describe from the above those elements of the project, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts is not known.		

Project	A57 Link Roads	
European Site under consideration	**Peak District Moors (South Pennine Moors Phase 1) SPA**	
Date	**Author (Name/Organisation)**	**Verified (Name/Organisation)**
No impacts likely to be significant.		
Outcome of screening stage (delete as appropriate)	Not likely to be significant effects	
Are the appropriate statutory environment bodies in agreement with this conclusion (delete as appropriate and attach relevant correspondence)	Yes – Natural England were consulted on 28 May 2021 via phone conference regarding updates to the Scheme and the HRA Screening Report including the air quality assessment methodology and results. Headline results and methodology as outlined within this HRA Screening Report were sent to Natural England prior to the meeting. Natural England concurred with the headline methodology and results (No LSE concluded) and agreed that there was no requirement to go through to Stage 2 of the HRA process during the call.	

Table 5.2: Screening Matrix: South Pennine Moors SAC

Project	A57 Link Road	
European Site under consideration	**South Pennine Moor SAC**	
Date	**Author (Name/Organisation)**	**Verified (Name/Organisation)**
04/12/2020	PW, Senior Ecologist, Atkins	AW, Associate Director, Atkins
Description of Project		
Describe any likely direct, indirect or secondary impacts of the project) either alone or in combination with other plans and projects) on the European site by virtue of:		
Size and scale (road type and probable traffic volume)	This is a major infrastructure project (as outlined in Section 2 above) to provide a bypass of approximately 3.1 km along an existing A-road on the main trans-Pennine route between Manchester in the west and Sheffield and Leeds in the east. The probable traffic volume on the A-road following construction i.e. during operation based on 'Do Something' option, will be as shown in the table below:	

Road name...	Link_ID			
		2025 AADT Do Minimum	2025 AADT Do Something	Change AADT
A57	40684_47101	6780	7952	+1172
	46050_47101	3044	4209	+1165

Traffic data for the ARN within the European sites is provided in Appendix C.

Land-take	There will be no land-take within the SAC.
Distance from the European Site or key feature of the	The SAC is located approximately 2.2 km north-east of the project boundary at its closest point but lies within the assessment study are for air quality as defined by the ARN along the A57.

Project	A57 Link Road	
European Site under consideration	**South Pennine Moor SAC**	
Date	**Author (Name/Organisation)**	**Verified (Name/Organisation)**
site (from edge of the project assessment corridor)		
Resource requirements (from the European Site or from areas in proximity to the site, where of relevance to consideration of impacts)	No resources will be required from the European site or from areas in proximity to the European site.	
Emissions (e.g. polluted surface water runoff – both soluble and insoluble pollutants, atmospheric pollution)	Construction related emissions such as fugitive dust, vehicle emissions, surface water run-off and pollution events are considered highly unlikely to have any impacts on the SAC by virtue of the distance from the Scheme and the topography of the SAC (being of a higher altitude and upstream). Operational increases in atmospheric pollution as a result of increased traffic on the ARN may result in localised air quality impacts on habitats within 200 m of the ARN.	
Excavation requirements (e.g. impacts of local hydrogeology)	No major excavation is required as part of the Scheme as much of the works as possible will be at grade. Impacts on local hydrogeology are not anticipated.	
Transportation requirements	Construction traffic, including delivery and removal of materials, will access the site using the existing road network. Any new access created associated with work compounds etc. will be highly localised. The transportation requirements of the Scheme are not anticipated to have a discernible effect on the SAC.	
Duration of construction, operation, etc.	The current implementation strategy proposes the following key dates, subject to the DCO being approved by the Secretary of State in Autumn 2022: • Start of construction works – 2023 • First full year of opening – 2025 An indefinite design life has been assumed.	
Other	N/A	
Description of avoidance and/or mitigation measures		
Describe any assumed (plainly established and uncontroversial) mitigation measures, including information on:		
Nature of proposals	N/A	
Location	N/A	
Evidence for effectiveness	N/A	

Project	A57 Link Road	
European Site under consideration	**South Pennine Moor SAC**	
Date	**Author (Name/Organisation)**	**Verified (Name/Organisation)**
Mechanism for delivery (legal conditions, restrictions or other legally enforceable obligations)	N/A	
Characteristics of European Site(s)		
A brief description of the European site to be produced, including information on:		
Name of European Site and its EU code:	South Pennine Moors SAC UK0030280	
Location and distance of the Europeans Site from the proposed works	Approximately 2.2 km north-east	
European site size	65,024.32 ha	
Key features of the European Site including primary reasons for selection and any other qualifying interests	Annex I habitats that are a primary reason for selection of this site • 4030 European dry heaths • 7130 Blanket bogs (*if active bog) *Priority feature • 91A0 Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site • 4010 Northern Atlantic wet heaths with *Erica tetralix* • 7140 Transition mires and quaking bogs	
Vulnerabilities of the European Site – any information available from the standard data forms on potential effect pathways	• Air pollution, air-borne pollutants • Fire and fire suppression • Agriculture activities not referred to above • Human induced changes in hydraulic conditions • Outdoor sports and leisure activities, recreational activities	
European Site conservation objectives	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 The assessment has been made with reference to the Supplementary Advice of Conservation Objectives[27], which include the following specific	

[27] UK0030280_South Pennine MoorsSAC_COSA_Formal Published 11 Feb 19.pdf

Project	A57 Link Road	
European Site under consideration	South Pennine Moor SAC	
Date	Author (Name/Organisation)	Verified (Name/Organisation)
	target for air quality under supporting processes for H4030, H7130, H91A0 and H4010 qualifying habitats: • Restore as necessary the concentrations and deposition of air pollutants to at-or-below the site-relevant Critical Load or Level values given for the supporting habitats for this feature of the site on the APIS. The following target for H7140 qualifying habitat: • Maintain as necessary, the concentrations and deposition of air pollutants to at or below the site-relevant Critical Load or Level values given for this feature of the site on the APIS. In addition to the above, H4030, H7130 and H4010 also have the following additional target: • As a staged recovery the target for South Pennine Moors SAC should be to transition to the next lower class of critical load exceedance i.e., for acidity, reduce deposition to 0.5-1.0 keq/ha/yr and for nutrient Nitrogen, reduce deposition to between 7-14 kgN/ha/yr.	
Assessment criteria		
Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the European Site.		
The only potential for significant effect on the SAC with the Scheme is through an increase in atmospheric pollution which is listed as a vulnerability. During operation of the Scheme, it is predicted that there will be an increase in traffic on the A57, which lie immediately adjacent to the SAC boundary on both sides of the road, approximately 5.2 km along the A57. The SAC lies within 200 m of the ARN along approximately 10 km of the A57 and is therefore, susceptible to air quality changes associated with traffic levels in these areas. The air quality assessment[28] has estimated nitrogen deposition rates for relevant habitats at receptor points within the SAC, both with and without the Scheme. These are calculated for 2025, when the Scheme is first expected to be operational. The nitrogen deposition rates are derived from the estimated changes in nitrogen dioxide concentrations. The result of the air quality assessment for the SAC are given in the table below (also provided in Appendix D). It has been shown that the maximum change in nitrogen deposition is 0.21 kg N/ha/yr for the SAC habitats (European dry heaths and blanket bogs[29]) and is, therefore, not significant. Raised and blanket bog is the most sensitive qualifying feature to nitrogen deposition according to the APIS website[30]. The SAC site vulnerabilities have been taken into consideration. However, as the Scheme is for the creation of road infrastructure only, it is not anticipated that the Scheme would result in an increase in fire/fire suppression, is not related to agricultural activities, or likely to cause a significant increase in outdoor sports, leisure activities, or recreational activities.		

[28] ES Chapter 05: Air Quality.

[29] No old sessile oak woodland has been identified within 200 m of the ARN, but it is possible that the other SAC habitats are present such as European dry heaths and blanket bogs. Northern Atlantic wet heaths with *Erica tetralix* and transition mires and quaking bogs are also qualifying habitat of the SAC but make up 6.7% and 0.4% respectively[29] and so are less likely to be present in the area potentially affect by the Scheme ARN.

[30] http://www.apis.ac.uk/srcl/select-a-feature?site=UK0030280&SiteType=SAC&submit=Next

Project	A57 Link Road
European Site under consideration	South Pennine Moor SAC

Date	Author (Name/Organisation)	Verified (Name/Organisation)

Designated Habitat	Habitat	Lowest Critical Load (kg N/ha/yr)	Background nitrogen deposition (5 km average deposition from APIS (kg N/ha/yr)	Nitrogen deposition threshold (kg N/ha/yr) resulting in potential theoretical loss of 1 species (threshold)	Maximum change in N deposition (kg N/ha/yr) between Do Minimum and Do Something experienced by the designated habitat
South Pennine Moors (SAC)	Raised and blanket bogs	5	32.5	0.4	0.21

An initial consideration in assessing the significance of nitrogen deposition on designated sites is whether the total nitrogen deposition is less than the applicable lower critical load, if no, is the change in nitrogen deposition with and without the project less than 1% of the lower critical load? In this case the change in nitrogen deposition is 0.21 kg N/ha/yr, which is higher than a 1% change, which equates to 0.05 kg N/ ha/yr.

A potentially significant effect can be considered where there is an exceedance of the relevant habitat critical load and an increase in the nitrogen deposition rate of 0.4 kg N/ha/yr or greater as a result of the Scheme, when compared against predictions without the Scheme taking place (as stated in DMRB LA 105[31]).

The background nitrogen deposition across the South Pennine Moors are known to exceed the relevant critical load thresholds for harm (given as 5-10 kg N/ha/yr for blanket bog[32]) due to a long history of nitrogen deposition, so any further increase in nitrogen deposition could be considered to be harmful. However, the air quality impacts from the road will always be confined to the existing road corridor i.e. the extent of habitat already affected by the road. The air quality assessment for the Scheme has not only shown that the estimated increases in nitrogen deposition within the SAC are not significant, but that the change in nitrogen deposition declines rapidly with distance from the road. Also, the long-term trend for national fleet emissions is one of improvement over time. Therefore, despite the anticipated increase in traffic on the A57, any impacts will be confined to the existing road corridor and are considered unlikely to have a significant effect on the qualifying features of the SAC.

In-combination effects could be had with other schemes that increase the amount of traffic on the ARN. The traffic assessment considered potential increases in traffic with respect to committed developments, as identified as part of the cumulative impact assessment and also considered as part of the in-combination assessment. No other projects or plan were identified that could have an in-combination effect with the Scheme with regard to potential air quality impacts (see Section 5.3 below).

Initial assessment	
The key characteristics of the site and the details of the European Site to be considered in identifying potential impacts. Describe any likely changes to the site arising as a result of:	
Reduction in habitat area	None.

[31] DMRB LA 105 Air quality. Available at: https://www.standardsforhighways.co.uk/dmrb/search/10191621-07df-44a3-892e-c1d5c7a28d90
[32] http://www.apis.ac.uk/node/964

Project	A57 Link Road	
European Site under consideration	South Pennine Moor SAC	
Date	Author (Name/Organisation)	Verified (Name/Organisation)
Disturbance to key species	None.	
Habitat or species fragmentation	None.	
Reduction in species density	None.	
Changes in key indicators of conservation value (water quality etc.)	Increase in nitrogen deposition but this considered not to result in an LSE for the reasons discussed above.	
Climate change	The purpose of the A57 Link Road Scheme is to address longstanding issues, including congestion. Therefore, in the short-term the relief of congestion is anticipated to improve local air quality in the vicinity of the Scheme. Although, this is not the case for the ARN, the change has been shown to be not significant (see discussion above). In the medium-term traffic levels may increase as the route reliability and safety has improved. However, as vehicles are becoming cleaner and more efficient there will be a general trend of air quality improvement over time. Overall, it is considered that the Scheme will not measurably cause any changes to the SAC as a consequence of climate change.	
Describe any likely impacts on the European Site as a whole in term of:		
Interference with the key relationships that define the structure of the site	None.	
Interference with the key relationships that define the function of the site	None.	
Indicate the significance as a result of the identification of impacts set out above in terms of:		
Reduction of habitat area	No change.	
Disturbance to key species	No change.	
Habitat or species fragmentation	No change.	
Loss	No change.	
Fragmentation	No change.	
Disruption	No change.	

Project	A57 Link Road	
European Site under consideration	**South Pennine Moor SAC**	
Date	**Author (Name/Organisation)**	**Verified (Name/Organisation)**
Disturbance	No change.	
Change to key elements of the site (e.g. water quality, hydrological regime etc.)	Not significant for air quality.	
Describe from the above those elements of the project, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts is not known.		
No impacts likely to be significant.		
Outcome of screening stage (delete as appropriate)	Not likely to be significant effects	
Are the appropriate statutory environment bodies in agreement with this conclusion (delete as appropriate and attach relevant correspondence)	Yes – Natural England were consulted on 28 May 2021 via phone conference regarding updates to the Scheme and the HRA Screening Report including the air quality assessment methodology and results. Headline results and methodology as outlined within this HRA Screening Report were sent to Natural England prior to the meeting. Natural England concurred with the headline methodology and results (No LSE concluded) and agreed that there was no requirement to go through to Stage 2 of the HRA process during the call.	

5.3 In-combination Effects

5.3.1 The results of the in-combination assessment for the Peak District Moors (South Pennine Moors Phase 1) SPA and South Pennine Moors SAC are presented in Table 5.3 below.

5.3.2 Information about the HRAs of the following plans and projects could not be obtained prior to the completion of reporting:

- Derbyshire Minerals Plan
- Derbyshire Waste Plan
- Emerging Sheffield Plan Issues and Options
- Greater Manchester Joint Waste Development Plan
- Sheffield Adopted Local Plan
- Rochdale Core Strategy.

5.3.3 Information about the HRA of the following documents could only be found within Planning Inspectorate examination reports; the actual HRA documents could not be obtained. These documents are still included in the results table below, but the limited information available allow for ambiguity in the assessment:

- Greater Manchester Joint Waste Development Plan Document
- ES supporting the Hope Valley Capacity TWAO.

Table 5.3: In-combination Assessment Results

Document Details	Summary of risks to the European sites from the proposed project or plan	In-combination effect?
Habitats Regulations Assessment for the Peak District National Park Management Plan 2018-23[33]	The Peak District National Park Management Plan provides a framework that encourages everyone to work together to achieve national park purposes. The HRA screened the 14 'intentions' of the plan on European sites, including the Peak District Moors (South Pennine Moors Phase 1) SPA and South Pennine Moors SAC. All intentions were screened out in one form or another.	No. None of the intentions are likely to result in air quality impacts on the European sites. There is no indication of any possible residual effects and, therefore, it is considered that there cannot be any in-combination effects.
Peak District Core Strategy Submission Draft Habitats Regulations Assessment[34]	The Peak District National Park Authorities Core Strategy is the overarching planning policy document for the National Park and forms part of the Local Development Framework. The HRA assessed whether options within the strategy might have an LSE on nine European sites, which included the Peak District Moors (South Pennine Moors Phase 1) SPA and South Pennine Moors SAC. A total of 35 policies covering a range of topic areas were screened; 20 were considered likely to have an LSE and taken forward to AA. Adverse effects on site integrity of the Peak District Moors (South Pennine Moors Phase 1) SPA and South Pennine Moors SAC were classed as 'uncertain' for 13 policies. Potential for in-combination effects were considered. For both the South Pennine Moors SAC and Peak District Moors (South Pennine Moors Phase 1) SPA this generally included: • combined air quality impacts (from housing developments, transport policies and renewable energy policies in the region and with A628 Mottram-Tintwistle Bypass); • combined recreational impacts from increased numbers of visitors; and • impacts from promotion of low carbon energy generation/ wind farm developments. The following potential impacts were discussed at AA (for the SAC and SPA) with mitigation (comprising additional text within certain policies to specifically protected the European sites) proposed: air quality, human activity and small-scale wind turbine development.	No. Air quality impacts are considered within the HRA of the Peak District Core Strategy and therefore there is scope for in-combination effects. The road is already subject to significant volumes of traffic and thus potential air quality impact on the SPA and SAC and the area potentially affected by a change in air quality is very small in relation to the SPA and SAC and therefore any changes would be imperceptible and unlikely to result in an LSE. No LSE has been identified as a result of Scheme (based on the changes in N/kg/ha/yr required to trigger a change >loss of 1 species) and therefore no in-combination efface have been identified.

[33] https://www.peakdistrict.gov.uk/__data/assets/pdf_file/0023/83057/Habitats-Regulations-Assessment-for-National-Park-Management-Plan-2018-23-inc-rational-table.pdf
[34] https://www.peakdistrict.gov.uk/__data/assets/pdf_file/0022/46138/ldf-a004-habitatsassessmentappraisal.pdf

Document Details	Summary of risks to the European sites from the proposed project or plan	In-combination effect?
	With hydrology impacts also discussed for the Peak District Moors South Pennine Moors Phase 1) SPA but mitigated through current actions by Yorkshire Water, United Utilities and Severn Trent to address over-abstraction and the Environment Agency to review licensing arrangements. The HRA concludes that it should be entirely possible to avoid and mitigate any adverse impacts on European sites as a result of the Core Strategy, alone and in-combination with other plans and projects.	
High Peak Local Plan Revised Preferred Options Draft Habitat Regulations Assessment[35] and Addendum[36]	The HRA identified potential for LSE on both the Peak District Moors (South Pennine Moors Phase 1) SPA and South Pennine Moors SAC as a result of the High Peak Local Plan. The key impacts included the effect of employment development on air quality, recreational impacts, urban effects and wind turbine impacts. The conclusion lists air quality as a result of employment development close to European sites as a potential impact and yet the SPA and the SAC are not discussed under air quality in the main body of the report. The HRA proceeded to AA where adverse effects could not be ruled out. A later addendum was produced which was able to conclude no adverse effects on European sites, both alone and in combination, following amendments to policy wording.	No. There is scope for combined air quality impacts on the SPA and SAC, particularly as the A57 falls within the High Peak borough. However, the policy relating to employment land now commits to HRA being undertaken as, at Natural England's request, the following text has been added to Policy EQ9: Pollution Control and Unstable Land '*Any increase in traffic flows resulting from proposed development may lead to increases in atmospheric pollutants at levels which could cause adverse impacts upon the European designated sites in the area. Such development should therefore be subject to assessment under the Habitats Regulations.*' The policy has also been amended to ensure that any proposal that adversely affects a European site will not be given planning permission. Therefore, with the controls in the local plan and the Scheme impacts, which are deemed to not be significant, any combined air quality impacts should they arise are unlikely to be significant.

[35] https://www.highpeak.gov.uk/media/961/Habitats-regulation-assessment-March-2014/pdf/Habitats_Regulation_Assessment_March_20141.pdf?m=1480336771423
[36] https://www.highpeak.gov.uk/media/3186/Habitats-Regulations-Assessment-Addendum-to-the-Submission-Version-August-2014/pdf/F5_High_Peak_Local_Plan_Addendum_to_Submission_Version_HRA_Report_Addendum_August_2014.pdf?m=1528718125780

Document Details	Summary of risks to the European sites from the proposed project or plan	In-combination effect?
Habitats Regulations Assessment Screening (Stage 1) of the Greater Manchester Minerals Development Plan Document (DPD)[37]	The HRA considered the impact of policies within the minerals DPD on Peak District Moors (South Pennine Moors Phase 1) SPA and South Pennine Moors SAC. All of the policies were screened out for LSE on the European sites, largely because of the overarching provision of Policy 1 which refers to avoiding or mitigating any impacts on European sites, plus additional requirements in other policies for individual minerals extraction applications to be subject to HRA or clear demonstration that it is environmentally acceptable.	No. The HRA did not identify any potential air quality impacts within the minerals DPD and, therefore, there is no scope for in-combination effect with the Scheme.
Habitats Regulations Assessment of the Impact on European Protected Sites of Tameside Council's Joint Core Strategy & Development Management policies (Preferred Options)[38]	The screening indicates that there is some potential for development in the borough of Tameside to have an LSE on the Peak District Moors (South Pennine Moors Phase 1) SPA and South Pennine Moors SAC. A number of potential impacts on European sites from a number of key strategic sites and core strategy policies were considered. Only the following were not screened out due to lack of impact pathway: • pollution, including atmospheric pollutants and NO_x • species disturbance • recreational activities • drainage • introduction of alien species • increased predator populations • extraction of minerals including peat, topsoil and subsoil • construction or removal of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks or the laying or removal of pipelines and cables • erection of permanent structures including wind turbines • use of vehicles likely to damage the vegetation The HRA provides some further assessment of the potential impacts from the Key Strategic Sites but acknowledges the need for further assessment of the policies once full policy wordings are available. The HRA, therefore, does not contain a formal AA, but a re-assessment of significance is made for the	No. All of the strategic sites are only predicted to have an air quality impact because of the location within the M60/M67 corridor. This is outside the Scheme's ARN. With mitigation provided within the plan and given that the Scheme impacts are deemed to not be significant, it is considered that any combined air quality impacts would not have an LSE.

[37] https://www.tameside.gov.uk/strategicplanning/ldf/gmjointmineralsdpd/hraminerals.pdf
[38] https://www.tameside.gov.uk/plan/habitats.pdf

Document Details	Summary of risks to the European sites from the proposed project or plan	In-combination effect?
	Key Strategic Sites after mitigating plans, policies and strategies have been considered. For all Key Strategic Sites, it was considered that provided recommendations were followed, it should be entirely possible to avoid and mitigate any adverse impacts identified. This includes incorporating policies related to reducing and avoiding atmospheric pollution, particularly from traffic, within the plan.	
Screening opinion on the Impact of the Residential Design Supplementary Planning Document (SPD) on the South Pennine Moors Special Area of Conservation (SAC), South Pennine Moors Special Protection Area (SPA) and Rochdale Canal SAC[39]	The role of the Residential Design SPD is to ensure new residential developments and extensions are of the highest possible design quality. The SPD forms part of the Tameside Local Development Framework. The SPD applies across the borough but does not give geographical locations for developments that may fall under it. However, taking into account other policies (such as greenbelt policy) and the location of the European sites, there will be no development affected by the SPD within 2 km of a European site, including South Pennine Moors SAC and Peak District Moors (South Pennine Moors Phase 1) SPA. The HRA states that airborne pollution is unlikely to be generated by any proposals within the jurisdiction of the SPD, and therefore, the SPD has no impact of the SAC and SPA.	No. The SPD will not result in any air quality impacts on the SAC and SPA. Therefore, there is no scope for an in-combination effect.
Routes to Market – Delivery Integration Partnership, Safety and Technology Scheme, Habitat Regulations Assessment - Stage 1 Screening Report[40]	This HRA covers the provision of nine Variable Messaging Signs (VMS) and three automated closure gates associated with the trans-Pennine route. The works are proposed to be undertaken between August 2020 and February 2021. Both the South Pennine Moors SAC and the Peak District Moors (South Pennine Moors Phase 1) SPA were included in the assessment. No LSE were identified alone or in-combination as a result of the proposed Routes to Market scheme on either the SAC or the SPA.	No. The Routes to Market scheme is not predicted to have any air quality impacts associated with traffic emissions. Air quality impacts from dust have also been ruled out.
Derbyshire Local Transport Plan 3 Habitat Regulations Assessment: Screening Report[41] and Derbyshire Local Transport Plan 3 2011-2026, Habitats	The HRA screening of the Local Transport Plan (LTP) 3 considers impacts on South Pennine Moors SAC and Peak District Moors (South Pennine Moors Phase 1) SPA as they lie partially within Derbyshire and could be affected by proposals under the LTP. The pre-screening in the report identified three potential impacts likely to arise from the plan and examined them in more details. These are:	No. The screening of the LTP 3 has considered the potential for air quality impacts on the SAC and SPA and could, therefore, have an in-combination effect with the Scheme. However, the detailed consideration of air quality impacts within the LTP has shown that the trend is for air quality

[39] https://www.tameside.gov.uk/planning/rds/spd/habitats.pdf
[40] HE551473-BBA-EEC-TECH_AL_SCHEME-RP-LE-000003
[41] https://www.derbyshire.gov.uk/site-elements/documents/pdf/transport-roads/transport-plans/ltp3/env-assessments/habitats-regulations-assessment-screening-report-june-2010.pdf

Document Details	Summary of risks to the European sites from the proposed project or plan	In-combination effect?
Regulations Assessment Statement[42] and Derbyshire Local Transport Plan 3 2011-2026, Habitats Regulations Assessment Supplementary Evidence: Nitrogen Deposition[43]	• Disturbance due to visitor and tourism pressure; • Air quality; and • Water quality. Following more detailed examination, impacts were determined to be not significant and the assessment concluded at screening. The screening assessment was followed by a HRA statement, which considered nitrogen deposition in more detail. It was assumed that the LTP could have a positive impact on nitrogen deposition by seeking a reduction in use of motorised vehicles, containing many measures to help reduce the rate of traffic growth and to encourage the use of more sustainable modes of transport. A further HRA supplementary evidence document was released, which provides the evidence in support to the conclusion that nitrogen deposition as a result of the LTP would not have an LSE on the European sites in question. Air quality modelling showed that NO_2 emissions from traffic are currently below threshold levels for vegetation and biodiversity across the county road network. Plus, despite a predicted growth in traffic, NO_2 emissions will continue to reduce by the end of the plan period (2026). Consequently, it was concluded that impacts arising within European sites as a result of vehicle related nitrogen deposition will reduce within the plan period. Therefore, no LSE is concluded.	improvement despite traffic growth and the policies may actually have a positive impact. The air quality assessment for the Scheme does not anticipate any significant air quality impacts on the SPA and SAC. Given this, it is considered unlikely that, should any in-combination effects occur, that they would be significant.
Habitats Regulations Assessment (screening) of the Oldham Town Centre Conservation Area Appraisal and Management Plan Supplementary Planning Document[44]	This HRA considers the South Pennine Moors SAC and Peak District Moors (South Pennine Moors Phase 1) SPA. However, as they are located 9 km from Oldham town centre/ the plan area and the plan does not propose to increase development or any significant changes in the land-use, it was concluded that implementation of the plan would have no LSE.	No. No specific impact pathways between the plan and the SAC and SPA have been identified. Consequently, there is no scope for an in-combination effect with the Scheme.

[42] https://www.derbyshire.gov.uk/site-elements/documents/pdf/transport-roads/transport-plans/ltp3/env-assessments/habitats-regulations-assessment-statement-october-2010.pdf
[43] https://www.derbyshire.gov.uk/site-elements/documents/pdf/transport-roads/transport-plans/ltp3/env-assessments/habitats-regulations-assessment-supplementary-note-nitrogen-deposition-february-2011.pdf
[44] https://www.oldham.gov.uk/downloads/file/5722/habitats_regulations_assessment_2018

Document Details	Summary of risks to the European sites from the proposed project or plan	In-combination effect?
Oldham Metropolitan Borough Council, Local Development Framework, Habitats Regulations Assessment for the Core Strategy and Development Control Policies Development Plan Document, Issues and Options[45]	The Issues and Options is the first formal stage in the preparation of the Core Strategy, it describes the key challenges facing the Borough and the possible choices to address these. As a plan it needs to be assessed under the Habitats Regulations. The screening identified that the spatial options presented could potentially have an impact on the South Pennine Moors SAC/ SPA. It was considered that potential urban development under the plan would be too distant for direct effects, but indirect impacts such as increased recreational pressure may have an effect. It was recommended the Plan should be subjected to further, more detailed Screening Opinions and/or AA at the Preferred Options Stage of plan development. Mitigation comprised appropriate safeguards in the aims, objectives and policy wording of the Core Strategy and Development Control Policies DPD to avoid harm to European sites and ensure HRA is undertaken.	No. The HRA of the Core Strategy and Development Control Policies DPD has been undertaken at a high strategic level. No potential impacts are outlined at this stage and, therefore, it is not possible to determine if there are likely to be any in-combination effects.
Habitat Regulations Assessment (HRA) of the Impact on European Protected Sites of Oldham Council's Broad Locations for Preferred Options for the Local Development Framework[46]	The Core Strategy forms part of the emerging Local Development Framework and lays out broad strategic direction to guide future development in Oldham. Six possible broad locations have been identified and only the broad type and scale of preferred development is being assessed. The impact pathways identified by which the plan could have an effect includes water pollution; air pollution; direct land-take; shading; and increased recreational pressure. Both the South Pennine Moors SAC and SPA have been included in the assessment. All potentially damaging effects (operations that may damage) on the European sites arising from the six broad locations have been screened out; they are considered unlikely due to distance and the nature of the proposed development. Additional notes on pollution and recreational impacts indicate that only air borne pollutants were considered to have potential to affect the SAC/ SPA, but that potential development sites were sufficiently distant and air borne pollutants of a type and scale such that significant impacts on the SAC/ SPA would be unlikely to result in significant impacts on the vegetation.	No. The HRA of the Broad Locations for Preferred Options has acknowledged potential air quality impacts but concluded no LSE on the SPA and SAC. The air quality impacts potentially arising from the Broad Locations are considered to be from construction activities and not operational traffic volume. Therefore, an in-combination effect with the Scheme is considered unlikely.

[45] https://www.oldham.gov.uk/downloads/file/1909/habitats_regulations_assessment
[46] https://www.oldham.gov.uk/download/downloads/id/1918/habitats_regulations_assessment.pdf

Document Details	Summary of risks to the European sites from the proposed project or plan	In-combination effect?
Oldham Metropolitan Borough Council, Local Development Framework, Habitats Regulations Assessment for the Draft Open Space, Sport and Recreation Provision Supplementary Planning Document[47]	This Supplementary Planning Document provides information to assist with the implementation of policies on how the Council will seek open space, sport and recreation provision where it may be lost through alternative development or sought as part of a residential development. The HRA considers the South Pennine Moors SAC, but not the SPA. The impact on the SAC has been assessed by virtue of operations that are potentially damaging to the SAC. Potential impacts and mitigation were discussed for the following potentially damaging operations: • Drainage; • Construction or removal of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks or the laying or removal of pipelines and cables; • Erection of permanent structures; • Pollution. It was concluded that new or replacement open space, sports or recreation provision is likely to be located close to existing communities and, therefore, unlikely to be within the SAC. Policies in the Oldham Unitary Development Plan require that use of sport and recreation facilities will not harm nature conservation and biodiversity interests. In view of this, no significant damaging effects arising from the plan on the SAC was concluded.	No. A generic pollution impact which may arise from development was discussed but it did not include traffic sources of air pollution. Development is not guaranteed as a result of the plan, rather the plan is guidance for arising development affecting the loss and provision of open space, sport and recreation provision. As such it is considered unlikely that any in-combination effects with the Scheme will occur.
Barnsley Local Plan Habitat Regulations Assessment 2016[48]	The South Pennine Moors SAC and Peak District Moors (South Pennine Moors Phase 1) SPA both partially lie within Barnsley and are therefore included in the HRA. The Local Plan will supersede the Core Strategy and become the statutory development plan for Barnsley, together with the Joint Waste Plan. The screening considered impacts within a 5 km buffer pf the SAC/ SPA due to the potential for functionally linked land. Screening identified a potential LSE from the following policies: • LG2 the location of growth; • H2 the distribution of new homes; • E2 the distribution of new employment sites; and • MIN1 Minerals.	No. The Barnsley Local Plan does not specifically consider potential air quality impacts on the SPA/ SAC and there are no specific transportation plans or proposals for the A628 within the Local Plan. However, transport modelling undertaken confirmed that the increase in traffic generated by the Local Plan (using the A628 west of Millhouse Green) will be negligible. Given the above it is considered there is some limited scope for an in-combination effect but it is unlikely to be significant.

[47] https://www.oldham.gov.uk/downloads/file/1054/draft_habitat_regulations_assessment
[48] https://www.barnsley.gov.uk/media/4536/sd16-habitats-regulations-assessment-submission-2016.pdf

Document Details	Summary of risks to the European sites from the proposed project or plan	In-combination effect?
	All other policies within the Local Plan were screened out. The potential effects were considered to be loss of habitat, increased housing numbers, which may lead to more visitor or recreational disturbance, and the possibilities of increased traffic and its effect on air pollution. Policies were taken to AA and considered before and after mitigation. Only 'LG2 the location of growth' and 'H2 the distribution of new homes' were considered to potentially have an adverse effect on site integrity without mitigation. All other policies were determined to have no adverse effects at AA. The mitigating effects of other proposals by neighbouring boroughs and the Peak District National Park Authority regards management and provision of recreation are considered. Overall, it is concluded that the policies and proposed sites within the Local Plan would have no adverse effect on the European sites, subject to proposed mitigation.	
Publication Draft Kirklees Local Plan Habitats Regulations Assessment Report[49]	The HRA for the local plan assessed potential impacts upon both the South Pennine Moors SAC and the Peak District Moors (South Pennine Moors Phase 1) SPA. Potential effects that could not be ruled out are as follows for the SAC and SPA. South Pennine Moors SAC • Physical loss of habitat (onsite); • Air pollution and recreation; and • Urban impacts. Peak District Moors (South Pennine Moors Phase 1) SPA • Physical loss of habitat (onsite), including functionally linked land (offsite); • Non-physical disturbance (noise, vibration and light pollution); • Air pollution and recreation; and • Urban impacts. It is considered that some of the potential effects could be mitigated through the implementation of other policies in the plan itself and that national legislation and guidance for the protection of European sites will be adhered to. The HRA states that none of the policies or site allocations are considered likely to result in significant effects on the European sites.	No. In the AA it was argued that air quality impacts on the SPA would be unlikely to have an adverse effect as only the M62 is forecast to have an increase in traffic volume in the lifetime of the local plan, with the change exceeding screening criteria (greater than 1000 AADT), which triggers further assessment. Therefore, it is unlikely that the plan will result in combined air quality impacts within the ARN of the Scheme. The M62 also passes through the SAC/ SPA but is approximately 22 km north of the Scheme ARN. Given the above, any in-combination effects are unlikely to be significant.

[49] https://www.kirklees.gov.uk/beta/planning-policy/pdf/Kirklees-Publication-Draft-Local-Plan-Habitats-Regulations-Assessment-November-2016.pdf

Document Details	Summary of risks to the European sites from the proposed project or plan	In-combination effect?
	Policies not leading to development were screened out. However, for a number of the local plan proposals effects were uncertain and, therefore, were considered to have an LSE and taken forward to AA. It was concluded that with policy safeguards there would be no adverse effect on site integrity of the SPA and the SAC.	
Kirklees Local Flood Risk Management Strategy Habitats Regulations Assessment Report[50]	The Local Flood Risk Management Strategy (LFRMS) sets out a vision for the management of flood risk, including the risk management authorities and their functions, assessment of local flood risk, objectives for management, how and when measure will be implemented and when the strategy is to be reviewed. The HRA of the LFRMS identified the following potential impacts that could result from implementation of the strategy: physical loss of habitat from development of flood defence structure; physical damage from flood defences, dredging and watercourse maintenance; non-physical disturbance from construction activities; water table/ availability from drainage interception or increased discharge; toxic contamination from discharge/ runoff; non-toxic contamination as a result of flood defences; and, biological disturbance from introduction of non-native species or changes in land-use and management. The majority of the 32 measures in the LFRMS were screened out; however, for 7 measures the effects were uncertain. It was recommended that additional wording be added (to measure 6.2) clearly stating that when implementing the measures set out in the LFRMS due regard will be given to the need to identify and avoid potential adverse effects on the integrity of Europeans site in and around Kirklees, in particular the South Pennine Moors SAC/ SPA (Phases 1 and 2). Based on this it was concluded that an AA was not required.	No. The HRA of the LFRMS does not consider air pollution from vehicular traffic as a potential source of impact and, therefore, there is no scope for in-combination effects with the strategy.
Calderdale Local Plan Habitats Regulations Assessment (HRA) – Appropriate Assessment Report[51] Appendices 1-4[52]	Calderdale Council's Local Plan HRA considered potential impacts upon both the South Pennine Moors SAC and Peak District Moors (South Pennine Moors Phase 1) SPA. Potential effects that could not be ruled out are as follows for the SAC and SPA. South Pennine Moors SAC • Physical loss of habitat (onsite);	No. The air quality assessment for the plan concluded that there would be a reduction in N-deposition therefore there will be no in-combination effect as a result of changes in air quality.

[50] https://www.kirklees.gov.uk/beta/flooding-and-drainage/pdf/FloodRiskHabitatsRegulationsAssessment.pdf
[51] https://www.calderdale.gov.uk/v2/sites/default/files/Local-Plan-Appropriate-Assessment-Report-updated-2019.pdf
[52] https://www.calderdale.gov.uk/v2/sites/default/files/Local-Plan-Report-Appendix-1-4-updated-2019.pdf

Document Details	Summary of risks to the European sites from the proposed project or plan	In-combination effect?
Appendix 5[53] and Addendum to Calderdale Local Plan Habitats Regulations Assessment[54] and Calderdale Local Plan Habitats Regulations Assessment – Air Quality Results Table[55]	• Air pollution; and • Recreation and urban impacts. Peak District Moors (South Pennine Moors Phase 1) SPA • Air pollution; and • Recreation and urban impacts. Adverse effects on site integrity of South Pennine Moor SAC and Peak District Moors (South Pennine Moors Phase 1) SPA resulting from recreational use and air quality could not be ruled out. It was identified that effects would be mitigated to a degree through the implementation of certain designations (green space) and certain policies, with broad proposals made for other mitigation. It was concluded at AA that, provided that the mitigation and avoidance measures recommended are adopted, the plan is unlikely to result in significant adverse effects to any of the identified European sites in relation to physical loss of land (including off-site functionally connected land), non-physical disturbance and impacts on water quality and quantity. However, it is still uncertain at this stage as to whether some elements of the plan have the potential to result in significant adverse effects to the South Pennine Moors SAC. This is the result of the impact of air pollution from traffic and recreational impact on the moor. An addendum has been produced to address matters raised by Natural England, these are 1) an additional description of recreational use and urban edge impacts, including taking account of neighbouring authorities housing allocations within 7 km of the SAC/ SPA which are contiguous with Calderdale; 2) consideration of People over Wind judgement; and 3) to address air quality implications of traffic growth, specifically in-combination effects with the M62 and other A-roads. It was calculated that increased numbers of visitors to the South Pennines from Calderdale would be relatively small and unlikely to result in adverse effects. The HRA required some rewording in light of the People Over Wind judgement.	

[53] https://www.calderdale.gov.uk/v2/sites/default/files/Local-Plan-Report-Publication-appendix-5.pdf
[54] https://www.calderdale.gov.uk/v2/sites/default/files/CC05-HRA-Addendum-June-2019-Draft.pdf
[55] https://www.calderdale.gov.uk/v2/sites/default/files/Habitats-Regulations-Assessment-Air-quality-results-table.pdf

Document Details	Summary of risks to the European sites from the proposed project or plan	In-combination effect?
	Air quality assessment and traffic modelling undertaken supplementary to the HRA indicates that development associated with the Local Plan will contribute a negligible amount to N-deposition, even at roadside locations. In comparison to 2017, the impacts of the Local Plan are predicted to cause a reduction in N-deposition. Critical load ranges are predicted to be exceeded at all transect points, but this is attributed to the existing high N-deposition rates.	
Derbyshire Dales Local Plan – Submission Habitats Regulations Report[56] and Derbyshire Dales Local Plan – Post-Submission Modifications Habitats Regulations Report[57] and Derbyshire Dales Local Plan – Post-Submission Modifications Screening of Modifications in relation to Sustainability Appraisal and Habitats Regulations Assessment[58]	The HRA identified LSEs on both the South Pennine Moors SAC and Peak District Moors (South Pennine Moors Phase 1) SPA as a result of the potential allocation sites within the local plan. Five policies were also screened in for further assessment due to potential for LSE on the European sites by virtue of one or more of the following impacts: • increased recreational pressure; • air pollution; • construction impacts; • water effects. The AA discussed the potential impact of increased traffic on air quality, increased recreational pressure and urban effects. The air quality assessment focussed on the A621 and A625. It was concluded that the policies in the local plan will not result in an adverse effect on the SAC or SPA, alone or in-combination. Overall, the AA concluded no adverse effect on site integrity. The Post-Submission Modification Report is an update of the HRA following three rounds of modifications, two following consultation (one to the plan policies including new allocation site and one to amend the wording of policies and supporting text), and a third following submission to the Secretary of State and an Examination in Public. All modifications have been screened for LSEs and none identified, so the conclusions of the HRA are unaltered.	No. The plan assessment concluded that the policies within the plan provide sufficient protection to the SPA and SAC. As such any policies resulting in development will need to show they do not effect the integrity of the SPA or SAC alone and in-combination with other projects and plans. As such any plans will need to be assessed in-combination with the Scheme.
Stockport Metropolitan Borough Council Core Strategy DPD	The HRA identified the following potential impact pathways for the South Pennine Moors SAC and SPA:	No.

[56] https://www.derbyshiredales.gov.uk/images/documents/L/Local%20Plan%20Examination%20Library/SD06%20HRA%20Submission%20December%202016.pdf
[57] https://www.derbyshiredales.gov.uk/images/documents/D/Derbyshire%20Dales%20SA%20Report%20Modifications%20Submission%20Part%201-3%20FINAL.pdf
[58] https://www.derbyshiredales.gov.uk/images/documents/L/Local%20Plan%20Examination%20Library/SA_HRA_Screening_of_Main_Modifications_FINAL.pdf

Document Details	Summary of risks to the European sites from the proposed project or plan	In-combination effect?
Habitats Regulations Assessment Screening Report[59]	• hydrological links to Stockport; • air mass movement; • commuters; • visitors from Stockport; • proximity means new species migration is possible. The significance of the potential impacts caused by the Core Strategy Policies by virtue of the potential pathways is then considered for each European site. For the South Pennine Moors SAC and SPA, potentially significant effects were identified or could not be ruled out for a number of policies, including: • Providing a decent home • Accommodating economic development • Access to services • Transport In summary, the following impacts were thought to be of significance: • Disturbance – delivery of relief roads could increase traffic level and access to the site resulting in direct disturbance. • Emissions – increased traffic levels from the relief road delivery and potential associated increase in traffic levels on other routes could impact on the site. • Water levels & quality – the level of new housing required could impact on drainage patterns surrounding the site, with run off from the new relief road potentially creation pollution issues. The assessment considered that the proposed mitigation adequately addresses the concerns raised about potentially significant effects and therefore no further stages of assessment are required.	Air quality impact potentially arising from the plan are predominantly associated with a proposed relief road and associated road network. The South East Manchester Multi Modal Strategy (SEMMMS) involves three phases, one of which is complete (A6 to Manchester Airport relief road), with Poynton relief road (under construction: awarded 2019, completion by 2022) and A6 to M60 relief road (business case stage). The closest of these is the A6 to M60 relief road, located approximately 14 km from the ARN of the Scheme located within 200 m of the SAC/ SPA. Therefore, although there is scope for traffic associated air quality impacts to have an in-combination effect. Given the information above, any effect is unlikely to be significant.
Habitats Regulations Assessment of the Greater Manchester Spatial Framework[60]	The following policies were screened in for further assessment with respect to potential impacts on the South Pennine Moors SAC and SPA: • GM-Strat 6 Northern Areas – air pollution, water pollution and recreational disturbance;	No. The assessment concluded that any plans will need to be assessed at a lower tier as they are developed. Therefore, any plan coming forward

[59] https://s3-eu-west-1.amazonaws.com/live-iag-static-assets/pdf/LDF/AdoptedPlans/Habitats+Regulations+Assessment+Screening+Report.pdf
[60] GMEU (2020) Habitats Regulations Assessment of the Greater Manchester Spatial Framework. Greater Manchester Combined Authority. October 2020.

Document Details	Summary of risks to the European sites from the proposed project or plan	In-combination effect?
	• GM-Strat 7 M62 North-East Corridor – diffuse air pollution along the M62 corridor and potential recreational impacts; • GM-Strat 9 Southern Areas – increased travel to/from airport resulting in potential increases in air pollution and increased recreational use of European sites; • GM-Strat 10 Manchester Airport – increased travel to/from airport resulting in potential increases in diffuse air pollution; • GMP-1 – potential increases in diffuse air and water pollution, recreational disturbance; • GM-P 2 to 4 – potential increases in diffuse air pollution; • GM-H 1 - potential increases in diffuse air pollution. All of the Strategic Area (Allocations) were screened in for further assessment because of the potential cumulative effects from air pollution caused by traffic. The assessment assumes there will be in-combination effects with other plans and projects and recommends mitigation which will address in-combination effects in addition to the plan alone. The traffic modelling discussed at AA indicated that the South Pennine Moors SAC shows a decrease in traffic flows to 2025 with the plan in operation. For the period to 2040 the South Pennine Moors SAC could be affected by an increase in traffic but only on the A672 south of J22 M62. The South Pennine Moors Phase 1 SPA is not discussed. The South Pennine Moors SAC is taken forward for further assessment. It is shown that nitrogen oxide concentrations have fallen sharply in recent years, thought to result from fleet improvements. Despite this trend, to allow for in-combination effects, mitigation is recommended. At a high level Policy GMS6 of the plan provides specific protection for European sites and at a lower tier, there is a need to ensure project-level analysis of air quality impacts (and mitigation).	will need to show they do not effect the integrity of the SPA or SAC alone and in-combination with other projects and plans. As such any plans will need to be assessed in-combination with the Scheme.
Habitats Regulations Assessment Screening (Stage 1) of the Greater Manchester Minerals DPD[61]	The HRA screening of the Minerals DPD included the South Pennine Moors SAC and Peak District Moors (South Pennine Moors Phase 1) SPA. Possible effects arising from: • minerals operations include land take;	No. Although air pollution is listed as a potential effect, it relates to localised effects associated with mineral sites and is highly unlikely to result in

[61] https://www.manchester.gov.uk/downloads/download/5550/greater_manchester_joint_minerals_development_plan_documents#feedback

Document Details	Summary of risks to the European sites from the proposed project or plan	In-combination effect?
	• localised air pollution including dust and odour; • noise; • light spill; • human presence/ disturbance; • emissions to water (surface or groundwater) containing pollutants, groundwater depression or flow interception; • decrease in surface water run-off e.g. interception and shading (Rochdale Canal SAC only). According to the screening assessment the following policies could have a potential negative effect (on the South Pennine Moors SAC and SPA), but were screened out for the reasons given below: • Policy 5 – Unconventional gas resources: covered by the overarching provisions of Policy 1 (avoiding or mitigating any impacts on European sites); • Policy 9 – Reworking of colliery spoil tips: covered by the overarching provisions of Policy 1; • Policy 10 – Protecting existing minerals sites/ infrastructure: while there is potential for conflict of interest between works for conservation purposes and continuation of mineral working or the continued operation of mineral infrastructure, it is considered that the wording of Policy 10 is sufficiently robust to protect the interest of the SPA. Overall, it was concluded that none of the policies will have a potentially damaging effect on any European site (alone or in-combination).	increased traffic on the ARN of the Scheme. Therefore, it is considered that there will be no in-combination effects between the Scheme and the Greater Manchester Joint Minerals DPD.
The Sheffield Plan Integrated Impact Assessment – Scoping Report[62] and The Sheffield Plan Interim Integrated Impact Assessment Sustainability Appraisal/ Strategic Environmental	The HRA assesses the potential for three spatial options to deliver nearly 40,000 new homes over the plan period (2020 to 2038) to impact upon the South Pennine Moors SAC and Peak District Moors (South Pennine Moors Phase 1) SPA. Any homes within the central area (inner ring road plus Kelham Island and Neepsand) or in the rest of the urban area were considered unlikely to impact the European sites. However, Option B and Option C, which include new homes within the green belt, were considered to have an uncertain effect due to the potential for recreational pressures	No. The AA element of the assessment has not been completed and therefore it is not possible to assess in-combination effects. Therefore, it will be necessary for the The Sheffield Plan AA to consider in-combination effects with the Scheme.

[62] https://www.sheffield.gov.uk/content/dam/sheffield/docs/planning-and-development/sheffield-plan/Issues%20and%20Options%20Sept%202020%20Integrated%20Impact%20Assessment%20SA%20SEA%20-%20Scoping%20Report%202.pdf

Document Details	Summary of risks to the European sites from the proposed project or plan	In-combination effect?
Assessment of the Issues and Options Report – Main Report[63]	and increased air pollution. It was concluded that an AA was required and this would be undertaken to accompany the Publication Draft Sheffield Plan in 2021. It is noted that Sheffield Council's provisional view is that the majority of Sheffield's Green Belt, particularly on the western side of the city (near the SAC and SPA), is too environmentally sensitive to be suitable for development. Therefore, the impact on European sites from any future Green Belt development is likely to be limited.	
Report to the Secretary of State for Transport, 15 November 2016 The Network Rail (Hope Valley Capacity) Order 201[X][64] Request for a Direction under Section 90(2a) of the Town and Country Planning Act 1990	A very high level assessment was undertaken for the proposed scheme, which names the South Pennine Moors SPA and SAC. The key works under the proposal are: • Additional track, extension of the existing platform, a second platform and bridge at Dore & Totley station; • An extension to the single track which links the Hope Valley line with the Midland Mainline to the west of the Dore & Totley station; • A Bamford loop to the east of Bamford station; and • A new footbridge west of Hathersage station[65]. Natural England advised that the proposal would be unlikely to have a significant effect on any European site and no further assessment is required. This was justified by the following information: • There is sufficient distance from the application site to the European sites for there to be no LSE from construction impacts; • The scheme would only lead to a small increase in the number of trains during operational hours. The levels of pollutants indicated within the ES indicate this would be unlikely to lead to an LSE on either the SAC or SPA. It was concluded that there would be no LSE on any interest features either alone or in-combination.	No. The Hope Valley Capacity Transport and Works Act Order (TWAO) is not expected to result in significant air quality impacts on the SPA and the SAC. Given that the works under the TWAO will not be increasing road traffic that might contribute to air quality impacts, in-combination effects can be ruled out.

[63] https://www.sheffield.gov.uk/content/dam/sheffield/docs/planning-and-development/sheffield-plan/Issues%20&%20Options%20Sept%202020%20Integrated%20Impact%20Assessment%20SA%20SEA%20-%20Main%20Report.pdf
[64] http://www.fodats.net/hope-valley-inspectors-report.pdf
[65] http://www.fodats.net/html/hv_capacity.html

Document Details	Summary of risks to the European sites from the proposed project or plan	In-combination effect?
Barnsley, Rotherham and Doncaster Joint Waste Plan Development Plan Document Publication Habitats Regulations Assessment Screening Report[66]	The HRA covers the Joint Waste Plan for Barnsley, Doncaster and Rotherham Metropolitan Borough Councils. The Joint Waste Plan provides the detailed waste planning strategy and allocates suitable sites to accommodate large-scale municipal, commercial and industrial waste management facilities up to 2026. The screening assessment of the vision, aims and policies did not identify any LSE, but did identify that LSE was uncertain for a number of policies, the majority were found to have no LSE. The South Pennine Moors SAC and Peak District Moors (South Pennine Moors Phase 1) SPA were not specifically mentioned, but the European sites considered under the assessment are referred to in a general manner. The impacts are not known at this stage as the location of potential sites (arising from policies) are dependent on planning applications at non-allocated waste sites. The screening assessment of the potential waste sites also did not identify any LSE, but did identify that LSE was uncertain for a number of sites. This includes two sites that may affect the Peak District Moors (South Pennine Moors Phase 1) SPA, due to potential for damage to off-site habitats used by SPA birds. Again, the majority of proposed sites were found to have no LSE. As policy WCS6 requires appropriate assessment to be undertaken in relation to specific development proposals, it should help to mitigate the potential adverse impacts. Furthermore, owing to the changes that have been made to the supporting text to policies WCS2, WCS6 and policy WCS3, it is concluded the Joint Waste Plan does not require an appropriate assessment.	No. The potential impacts on the Peak District Moors (South Pennine Moors Phase 1) SPA discussed relate to impacts on off-site habitat used by SPA birds. As that is not a consideration of the Scheme HRA, there is no scope for an in-combination effect. Where impacts as a result of the policies within the plan are at this stage unknown, it is not possible to determine if there are likely to be any in-combination effects. In all likelihood, the development of waste sites is unlikely to result in significant additional traffic on the ARN of the Scheme due to the nature of the development.

[66] Land Use Consultants (2011) Barnsley, Rotherham and Doncaster Joint Waste Plan Development Plan Document Publication Habitats Regulations Assessment Screening Report. April 2011.

6. Conclusion

6.1.1 The DMRB screening matrices completed above and PINS screening matrices provided in Appendix B both conclude that there will be no LSE on either the Peak District Moors (South Pennine Moors Phase 1) SPA or the South Pennine Moors SAC by virtue of air quality impacts.

6.1.2 It was determined that construction related emissions are too distant from the European site to have an impact and traffic modelling has shown that operational increases in traffic, considering that new vehicles are cleaner and more efficient, will result in a negligible change in local air quality along the ARN.

6.1.3 Given the above conclusions at Stage 1 Screening, it is not necessary to progress to Stage 2 AA.

6.1.4 In accordance with LA 115, a 'Finding of no significant effects report matrix' has been provided for both the SPA and SAC in Tables 6.1 and 6.2 below.

Table 6.1: Finding of No Significant Effects Report Matrix (Screening) – Peak District Moors (South Pennine Moors Phase 1) SPA

Project:	A57 Link Road	
European Site under consideration:	Peak District Moors (South Pennine Moors Phase 1) SPA	
Date:	**Author (Name/Organisation):**	**Verified (Name/Organisation):**
07/12/2020	PW, Senior Ecologist, Atkins	AW, Associate Director, Atkins
Name and location of European Site: Peak District Moors (South Pennine Moors Phase 1) SPA Approximately 2.2 km north-east of the Scheme.		
Description of Project: A major infrastructure project (as outlined in Section 2 above) to provide a bypass of approximately 3.1 km along an existing A-road on the main trans-Pennine route between Manchester in the west and Sheffield and Leeds in the east.		
Is the project directly connected with or necessary to the management of the site (provide details)? No.		
Are there other projects or plans that together with the project being assessed could affect the site (provide details)? The in-combination assessment outlined in Section 5.3 above identified a number of plans that may have a combined air quality impact on the SPA. However, any potential impacts were not considered to be significant for various reasons, including the location of the roads potentially affected and the mitigation included in the plans to prevent adverse effects on the European site, either alone or in-combination. Furthermore, the lack of temporal scope means that the majority of development arising from plans is not reasonably foreseeable, although, this hasn't been a material consideration in justifying no LSE.		
The Assessment of Significance of Effects		
Describe how the project (alone or in combination) is likely to affect the European Site. Impacts of the Scheme alone:		

Project:	A57 Link Road	
European Site under consideration:	Peak District Moors (South Pennine Moors Phase 1) SPA	
Date:	**Author (Name/Organisation):**	**Verified (Name/Organisation):**

The only potential impact from the Scheme on the SPA is through an increase in atmospheric pollution/ nitrogen deposition during operation on the identified ARN. It is predicted that there will be an increase in traffic on the A57, which pass immediately adjacent to the SPA and, therefore, the European site lies within the 200 m buffer zone for potential air quality impacts from the ARN.

In-combination Impacts:

No likely significant in-combination effects have been identified.

Explain why these effects are not considered significant:

The air quality assessment has shown the predict change in nitrogen deposition on the SPA habitats as a result of Scheme operation is not significant and would not alter habitat composition, thereby affecting the potential habitat of prey species and indirectly SPA birds. Furthermore, the effect of the ARN would not extend beyond the existing roadside habitat, already affected by the road. Given this and the general trend of improving national fleet emissions, no LSE is concluded. It is considered that there would be no change to current disturbance or other direct impacts as the roads within the ARN are already heavily used. Refer to Table 5.1: Screening Matrix: Peak District Moors (South Pennine Moors Phase 1) SPA.

List of agencies consulted: provide contact name and telephone or email address.

Andy Stubbs

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Natural England

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Andrew.Stubbs@naturalengland.org.uk

Response of consultation:

Consultation has been undertaken with Natural England, with a letter response originally received 15 May 2019 (ref: 281183) in relation to an earlier draft of the HRA Screening Report. Natural England stated: *"if undertaken in strict accordance with the details submitted, and provided that the good practice listed below is applied, we are satisfied with the conclusion of no likely significant effect on these sites."*

Following design changes, further correspondence was undertaken with Natural England with a reply received via email from Andy Stubbs dated 29 June 2020. This email provided general advice and principles regarding the Ecological Aspects of an Environmental Statement, Internationally and Nationally Designated Sites, Sites of Special Scientific Interest (SSSIs) and sites of European or international importance (Special Areas of Conservation, Special Protection Areas and Ramsar sites). However, Natural England stated: *"If there have been no significant changes in the final design of the Mottram Bypass than our previous advice would still stand."* Whilst significant changes have occurred since the original consultation (May 2019), these changes have reduced the extent of the Scheme and subsequently lessened any impacts upon the European Sites arising from changes in air quality.

Natural England did not comment on the PEIR during the formal and statutory (S42) consultation period in November/December 2020.

Further consultation was undertaken with Natural England on the 28 May 2021 via phone conference regarding updates to the Scheme and the HRA Screening Report including the air quality assessment methodology and results. Headline results and methodology as outlined within this HRA Screening Report were sent to Natural England prior to the meeting. Natural England concurred with the headline methodology and results (No LSE concluded) and agreed that there was no requirement to go through to Stage 2 of the HRA process during the call.

Project:	A57 Link Road	
European Site under consideration:	Peak District Moors (South Pennine Moors Phase 1) SPA	
Date:	**Author (Name/Organisation):**	**Verified (Name/Organisation):**
Data Collected to carry out the assessment		
Who carried out the assessment: Balfour Beatty Atkins on behalf of Highways England		
Sources of data: • MAGIC (Multi-Agency Geographic Information for the Countryside) website for information on the location of the European sites • Joint Nature Conservation Committee (JNCC) website for data sheets and National Site Network Standard Data Forms • Natural England website for the citation, conservation objectives and supplementary advice on conservation objectives • Local authority websites for information about other plans and projects • Air quality and traffic modelling data from the Scheme ES[67].		
Level of assessment completed: Screening		
Where can the full results of the assessment be accessed and viewed? Within this report A57 Link Roads Habitats Regulations Assessment (Application document TR010034/APP/5.3)		

Table 6.2: Finding of No Significant Effects Report Matrix (Screening) - South Pennine Moor SAC

Project:	A57 Link Road	
European Site under consideration:	South Pennine Moor SAC	
Date:	**Author (Name/Organisation):**	**Verified (Name/Organisation):**
07/12/2020	PW, Senior Ecologist, Atkins	AW, Associate Director, Atkins
Name and location of European Site: South Pennine Moor SAC Approximately 2.2 km north-east of the Scheme.		
Description of Project: A major infrastructure project (as outlined in Section 1.2 above) to provide a bypass of approximately 3.1 km along an existing A-road on the main trans-Pennine route between Manchester in the west and Sheffield and Leeds in the east.		
Is the project directly connected with or necessary to the management of the site (provide details)? No.		
Are there other projects or plans that together with the project being assessed could affect the site (provide details)?		

[67] ES Chapter: Chapter 5 Air Quality (Application document TR010034/APP/XX).

Project:	A57 Link Road	
European Site under consideration:	South Pennine Moor SAC	
Date:	**Author (Name/Organisation):**	**Verified (Name/Organisation):**

The in-combination assessment outlined in Section 5.3 above identified a number of plans that may have a combined air quality impact on the SAC. However, any potential impacts were not considered to be significant for various reasons, including the location of the roads potentially affected and the mitigation included in the plans to prevent adverse effects on the European Site, either alone or in-combination. Furthermore, the lack of temporal scope means that the majority of development arising from plans is not reasonably foreseeable, although, this hasn't been a material consideration in justifying no LSE.

The Assessment of Significance of Effects

Describe how the project (alone or in combination) is likely to affect the European Site.

Impacts of the Scheme alone:

The only potential impact from the Scheme on the SAC is through an increase in atmospheric pollution/ nitrogen deposition during operation on the identified ARN. It is predicted that there will be an increase in traffic on the A57, which pass immediately adjacent to the SAC and, therefore, the European Site lies within the 200 m buffer zone for potential air quality impacts from the ARN.

In-combination Impacts:

No likely significant in-combination effects have been identified.

Explain why these effects are not considered significant:

The air quality assessment has shown the predict change in nitrogen deposition on the SAC habitats as a result of Scheme operation is not significant and would not alter habitat composition. Furthermore, the effect of the ARN would not extend beyond the existing roadside habitat, already affected by the road. Given this and the general trend of improving national fleet emissions, no LSE is concluded. Refer to Table 5.2: Screening Matrix: South Pennine Moors SAC.

List of agencies consulted: provide contact name and telephone or email address.

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Andrew.Stubbs@naturalengland.org.uk

Response of consultation:

Consultation has been undertaken with Natural England, with a letter response originally received 15 May 2019 (ref: 281183) in relation to an earlier draft of the HRA Screening Report. Natural England stated: *"if undertaken in strict accordance with the details submitted, and provided that the good practice listed below is applied, we are satisfied with the conclusion of no likely significant effect on these sites."*

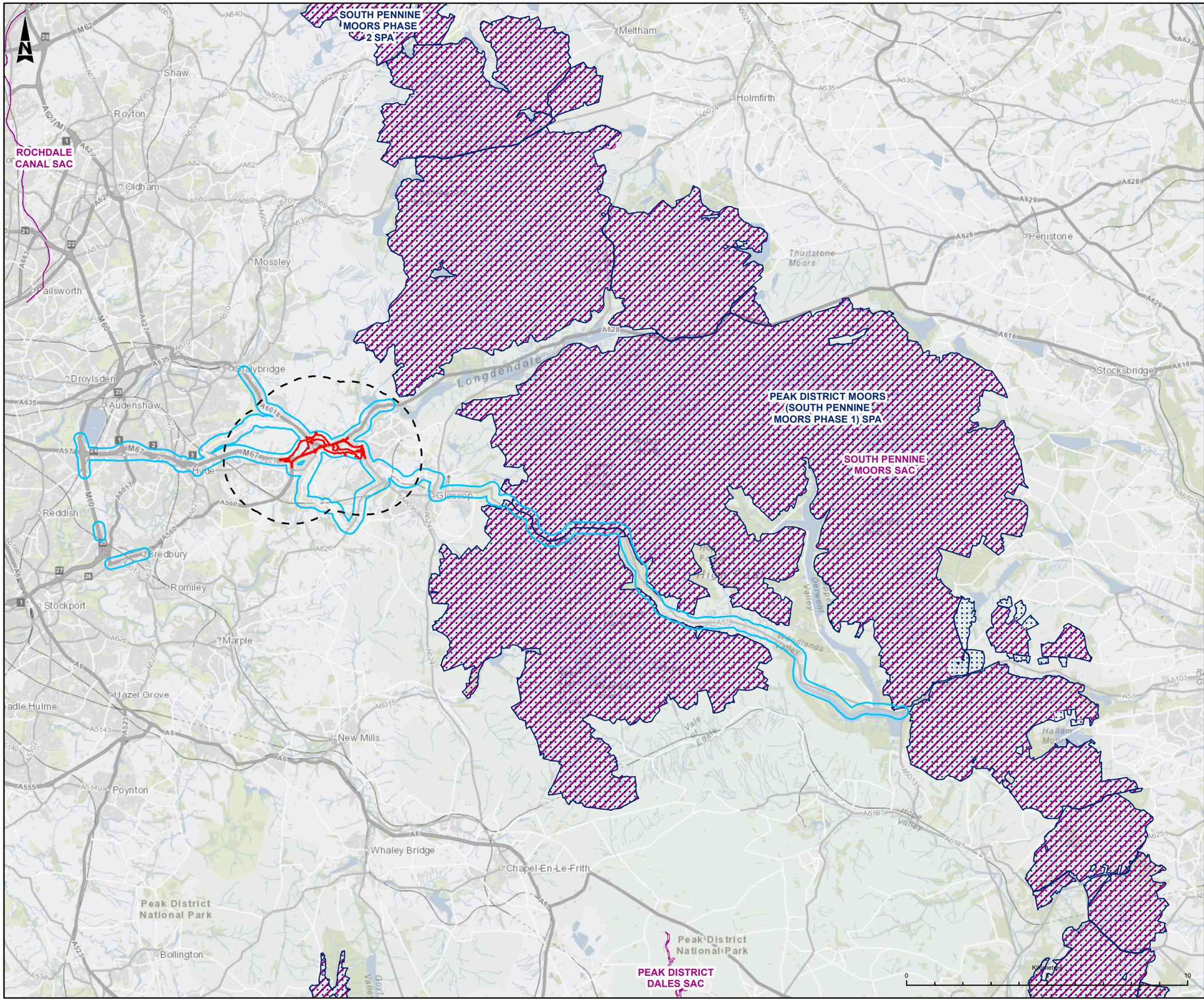
Following design changes, further correspondence was undertaken with Natural England with a reply received via email from Andy Stubbs dated 29 June 2020. This email provided general advice and principles regarding the Ecological Aspects of an Environmental Statement, Internationally and Nationally Designated Sites, Sites of Special Scientific Interest (SSSIs) and sites of European or international importance (Special Areas of Conservation, Special Protection Areas and Ramsar sites). However, Natural England stated: *"If there have been no significant changes in the final design of the Mottram Bypass than our previous advice would still stand."* Whilst significant changes have occurred since the original consultation (May 2019), these changes have reduced the extent of the Scheme and subsequently lessened any impacts upon the European Sites arising from changes in air quality.

Project:	A57 Link Road	
European Site under consideration:	South Pennine Moor SAC	
Date:	**Author (Name/Organisation):**	**Verified (Name/Organisation):**
Natural England did not comment on the PEIR during the formal and statutory (S42) consultation period in November/December 2020. Further consultation was undertaken with Natural England on the 28 May 2021 via phone conference regarding updates to the Scheme and the HRA Screening Report including the air quality assessment methodology and results. Headline results and methodology as outlined within this HRA Screening Report were sent to Natural England prior to the meeting. Natural England concurred with the headline methodology and results (No LSE concluded) and agreed that there was no requirement to go through to Stage 2 of the HRA process during the call.		
Data Collected to carry out the assessment		
Who carried out the assessment: Balfour Beatty Atkins on behalf of Highways England		
Sources of data: • MAGIC (Multi-Agency Geographic Information for the Countryside) website for information on the location of the European sites • Joint Nature Conservation Committee (JNCC) website for data sheets and National Site Network Standard Data Forms • Natural England website for the citation, conservation objectives and supplementary advice on conservation objectives • Local authority websites for information about other plans and projects • Air quality and traffic modelling data from the Scheme ES[68].		
Level of assessment completed: Screening		
Where can the full results of the assessment be accessed and viewed? Within this report A57 Link Roads Habitats Regulations Assessment (Application document TR010034/APP/6.3)		

[68] ES Chapter: Chapter 5 Air Quality (Application document TR010034/APP/XX).

Appendices

Appendix A. Location of European Designated Sites (Figure 1)



LEGEND

- DEVELOPMENT CONSENT ORDER (DCO) BOUNDARY
- 2KM STUDY AREA
- AFFECTED ROAD NETWORK STUDY AREA
- SPECIAL PROTECTION AREAS (SPA)
- SPECIAL AREAS OF CONSERVATION (SAC)

Description			
Status	Revision	Issue Date	
Description			
Status	Revision	Issue Date	
Description			
Status	Revision	Issue Date	
Description	DCO SUBMISSION		
Status: A4	Revision: P01	Issue Date: 11/06/21	
Drawn: LA	Checked: AW	Reviewed: LY	Authorised: MR
Drawing Suitability: DCO SUBMISSION			Status: A4

Client: highways england

Scheme Name: A57 LINK ROADS

Drawing Title: FIGURE 1
LOCATION OF EUROPEAN DESIGNATED SITES

PINS Ref. No: TR010034/APP/X.X

Drawing Number

Scheme	Originator	Volume	
HE551473	BBA	EGN	
A57_AL_SCHEME	DR	LE	XXXXXX
Location	Type	Role	Number

Scale	Original Size:	Rev:
1:125,000	A3	P01

Appendix B. PINS Screening Matrices

B.1 Planning Inspectorate Advice Note 10 Habitats Regulations Assessment Screening Matrices

Potential Effects

B.1.1 The potential effects upon the Europeans sites considered in this report are summarised in the table below.

Table B.3: Effects considered in the screening matrices

Designation	Effects described in submission information	Presented in screening matrices as
Peak District Moors (South Pennine Moors Phase 1) SPA	Habitat impacts, through adverse changes in air quality along the affected road network, effecting the presence of and subsequent availability of prey species for SPA birds	Reduction in species density
	Disturbance to qualifying features through increased noise along the affected road network	Disturbance
	Increased collision risk to qualifying features along the affected road network	Reduction in species density
South Pennine Moors SAC	Habitat degradation through adverse changes in air quality along the affected road network	Degradation

Table Source: Planning Inspectorate Advice Note 10

Stage 1: Screening Matrices

B.1.2 The European Sites included within the screening assessment are:

- Peak District Moors (South Pennine Moors Phase 1) SPA: UK9007021 (Matrix 1); and
- South Pennine Moors SAC: UK0030280 (Matrix 2).

B.1.3 Evidence for, or against, LSE on the European Site(s) and its qualifying feature(s) is detailed within the footnotes that follow the screening matrices.

B.1.4 Matrix Key:

✓ = LSE cannot be excluded
X = SLE can be excluded
C = Construction
O = Operation
D = Decommissioning[69]

[69] As the Scheme will be operational for the foreseeable future, no assessment of LSE has been made for decommissioning and the boxes greyed out.

Table B.4: HRA Screening Matrix 1: Peak District Moors (South Pennine Moors Phase 1) SPA

Name of European Site and designation: Peak District Moors (South Pennine Moors Phase 1) SPA									
EU Code: UK9007021									
Distance to NSIP: 2.2 km									
European site features	**Disturbance**			**Reduction in species density**			**In-combination effects**		
Stage of development	C	O	D	C	O	D	C	O	D
Short-eared owl (breeding)	Xa	Xb		Xc	Xd		Xe	Xf	
Merlin (breeding)	Xa	Xb		Xc	Xd		Xe	Xf	
Golden plover (breeding)	Xa	Xb		Xc	Xd		Xe	Xf	

Table Source: Planning Inspectorate Advice Note 10

Evidence supporting conclusions:

a. The distance between the SPA and the Scheme is sufficiently far to rule out any potential impacts from construction related disturbance impacts.

b. The predicted noise levels originating from the affected road network in proximity of the SPA at the opening year have the potential to cause moderate to low behavioural changes on avifauna (such as alarm calls, heads up, change in feeding/ roosting activity), and these changes are possible with or without the Scheme. It should be noted that birds will generally habituate to regular ambient noise below 70dB and the resident populations will be habituated to the existing situation. Operational impacts of the Scheme from increased noise are therefore considered to be not significant in relation to SPA qualifying birds.

c. Construction works are situated sufficiently far from the SPA and, therefore, the roads immediately adjacent to the SPA will not be affected.

d. Golden plover typically breed on heather moorland, blanket bog, acidic grasslands and montane summits, where they prefer to nest on high, flat or gently sloping plateaux, away from the moorland edge and away from the existing road network. Merlin prefer undulating or folded landforms providing wide outlooks from ground perches or nest-sites, especially heads of upland stream valleys. Heather moorland (generally 30-70 cm in height) is a preferred breeding site, but they will breed in trees, copses and windbreaks in

open country where suitable passerine populations are present. They are likely to be restricted locally to the extensive heather moorlands situated away from the affected road network. Numbers of breeding short-eared owl in any location can vary greatly from year to year, linked to cyclical variation in populations of voles, their principal food source. However, the species requires extensive open land in which to breed and is thus unlikely to breed in close proximity to existing roads. Qualifying species mortality from vehicular collision is not recognised as a vulnerability of the European Site and it is anticipated that such species will be habituated to the existing roads that are already heavily used.

e. As the Scheme was determined not to have any construction impacts on the SPA, primarily from lack of impact pathways due to the distance between the Scheme and the SPA, there is no scope for in-combination effects during construction.

f. An in-combination assessment has been undertaken to identify plans and projects that may have combined operational air quality effects with the Scheme. No significant in-combination effects were identified, refer to Section 5.3.

Table B.5: HRA Screening Matrix 1: South Pennine Moors SAC

Name of European Site and designation: South Pennine Moors SAC						
EU Code: UK0030280						
Distance to NSIP: 2.2 km						
European Site features	**Degradation**			**In-combination effects**		
Stage of development	C	O	D	C	O	D
4030 European dry heaths	Xa	Xb		Xd	Xe	
7130 Blanket bogs (*if active bog) *Priority feature	Xa	Xb		Xd	Xe	
91A0 Old sessile oak woods with Ilex and Blechnum in the British Isles	Xa	Xc		Xd	Xe	
4010 Northern Atlantic wet heaths with Erica tetralix	Xa	Xb		Xd	Xe	
7140 Transition mires and quaking bogs	Xa	Xb		Xd	Xe	

Table Source: Planning Inspectorate Advice Note 10

Evidence supporting conclusions:

a. The distance between the SAC and the Scheme is sufficiently far to eliminate any construction related effects. The only pathway by which the SAC can be affected is via the ARN during operation.

b. The maximum change in nitrogen deposition as a result of the Scheme in the SAC is 0.21 kg N/ha/yr, which is below the threshold of 0.4 kg N/ha/yr for significant impacts (i.e. required to reduce measured species richness by 1). Refer to Appendix D.

c. This qualifying feature (old sessile oak woods with *Ilex* and *Blechnum* in the British Isles) is not situated within 200 m of the affected road network (i.e. the air quality study area).

d. As the Scheme was determined not to have any construction impacts on the SAC, primarily from lack of impact pathways due to the distance between the Scheme and the SAC, there is no scope for in-combination effects during construction.

e. An in-combination assessment has been undertaken to identify plans and projects that may have combined operational air quality effects with the Scheme. No significant in-combination effects were identified, refer to Section 5.3.

Appendix C. Traffic Data for ARN within the European Sites

C.1 Extracted traffic data for the ARN within the European Sites

			Do Min 2025				Do Some 2025				Change			Do Min 2040				Do Some 2040				Change		
Road Name	Link_ID	1way_2way	24hr AADT	HDV	speed (kph)	speed band	DS_24hr AADT	HDV	speed (kph)	speed band	24hr AADT	HDV	speed	AADT	HDV	speed (kph)	speed band	AADT	HDV	speed (kph)	speed band	AADT	HDV	Speed
A624	40680_46008	Two_Way	12573.5	301.7	62.5	Free Flow	11277.1	244.0	62.4	Free Flow	-1296.4	-57.6	-0.1	15203.0	356.949058	59.4	Free Flow	13710.1	284.4	61.0	Free Flow	-1492.8	-72.6	1.6
A628	40689_70146	Two_Way	14017.9	1475.1	65.2	Free Flow	15024.9	1575.1	62.2	Free Flow	1007.0	100.0	-3.0	14543.2	1419.48781	65.8	Free Flow	15786.6	1502.9	64.3	Free Flow	1243.4	83.4	-1.5
A57	40684_47101	Two_Way	8679.7	124.0	78.8	Free Flow	10447.7	139.7	78.0	Free Flow	1768.0	15.7	-0.8	9789.3	136.089804	74.1	Free Flow	12007.3	153.2	72.5	Free Flow	2218.1	17.1	-1.6
A57	40684_78141	Two_Way	8336.1	70.5	73.0	Free Flow	9491.2	83.8	72.0	Free Flow	1155.1	13.2	-1.0	9263.7	72.0366477	71.9	Free Flow	10445.4	84.8	71.1	Free Flow	1181.7	12.7	-0.8
A57	40688_40689	Two_Way	14427.7	1475.3	54.7	Free Flow	15460.2	1575.3	50.9	Free Flow	1032.5	100.0	-3.8	15115.4	1420.14374	52.6	Free Flow	16321.0	1503.5	51.1	Free Flow	1205.6	83.3	-1.6
A57	46050_47101	Two_Way	4677.5	48.3	64.1	Free Flow	6466.2	85.7	63.9	Free Flow	1788.8	37.4	-0.2	5206.1	54.1248766	63.9	Free Flow	7447.3	93.1	63.5	Free Flow	2241.2	38.9	-0.4

		DM 2025				DS 2025				Change			DM 2040				DS 2040				Change		
Link_ID	1way_2way	AADT	HDV	speed (kph)	speed band	AADT	HDV	speed (kph)	speed band	AADT	HDV	speed	AADT	HDV	speed (kph)	speed band	AADT	HDV	speed (kph)	speed band	AADT	HDV	Speed
40684_47101	Two_Way	6780	121	75	Free Flow	7952	135	75	Free Flow	1172	15	-1	8142	134	75	Free Flow	9574	149	74	Free Flow	1432	15	-1
46050_47101	Two_Way	3044	45	64	Free Flow	4209	59	64	Free Flow	1165	15	0	3874	52	64	Free Flow	5293	66	64	Free Flow	1419	15	0

			Do Min 2025				Do Some 2025				Change			Do Min 2040				Do Some 2040				Change		
Road Name	Link_ID	1way_2way	24hr AADT	HDV	speed (kph	speed band	DS_24hr AADT	HDV	speed (kph)	speed band	24hr AADT	HDV	speed	AADT	HDV	speed (kp	speed ba	AADT	HDV	speed (kp	speed ba	AADT	HDV	Speed
A57	40684_47101	Two_Way	6779.9	120.5	75.5	Free Flow	7952.2	135.3	74.7	Free Flow	1172.3	14.8	-0.8	8142.0	134.1	74.5	Free Flow	9573.9	148.6	73.5	Free Flow	1431.9	14.5	-1.0
A57	46050_47101	Two_Way	3043.7	44.6	64.0	Free Flow	4208.7	59.4	63.9	Free Flow	1165.0	14.8	-0.2	3874.3	51.9	63.9	Free Flow	5292.8	66.5	63.7	Free Flow	1418.5	14.5	-0.2

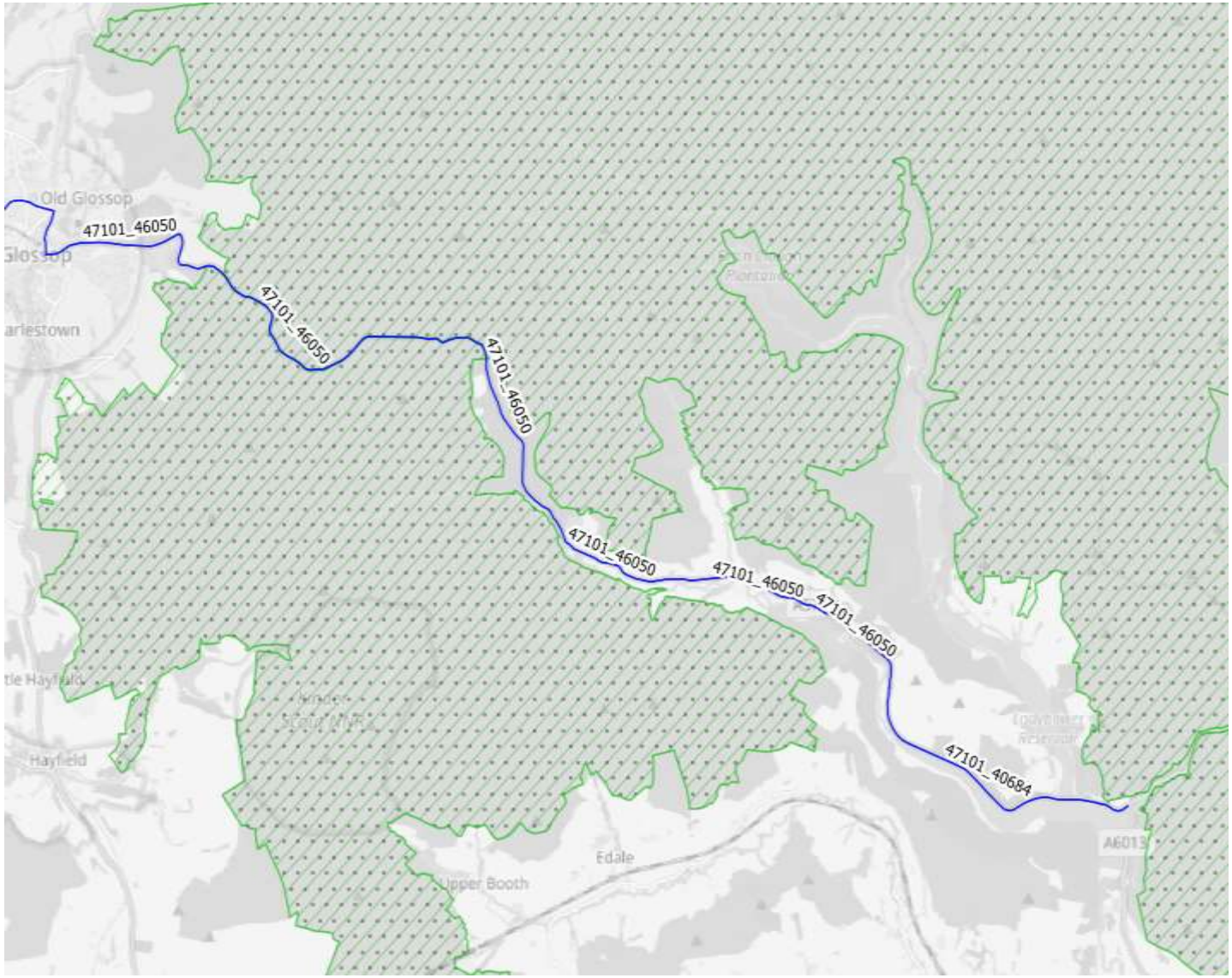


Figure C.1: Plan showing ARN Link_IDs (as referenced in extracted data above)

Appendix D. Air Quality Effects on Designated Habitats

Table D.1: Air Quality Effects on Designated Habitats

Transect/ ID Reference	Designated Habitat	Habitat	Lowest Critical Load (kg N/ha/yr)	Background nitrogen deposition (5 km average deposition from APIS (kg N/ha/yr)	Nitrogen deposition threshold (kg N/ha/yr) resulting in potential theoretical loss of 1 species threshold)	Maximum change in N deposition (kg N/ha/yr) between Do Minimum and Do Something experienced by the designated habitat	Distance along the transect the increase in N deposition (kg N/ha/yr) between Do Minimum and Do Something exceeds threshold	Significance of Effect
R335_0m_SAC	South Pennine Moors (SAC)	Raised and Blanket bog	5	32.5	0.4	0.21	-	Not significant
R335_0m_SPA	Peak District Moors (SPA)	Montane Habitats	5	31.9	0.4	0.21	-	Not significant
R335_0m_SSSI	Dark Peak SSSI	Raised and Blanket bog	5	31.9	0.4	0.21	-	Not significant

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