

TRANSPORT AND WORKS ACT 1992

Transport and Works (Applications and Objections Procedure) (England and Wales) Rules 2006

THE NETWORK RAIL (STALYBRIDGE TO DIGGLE (SADDLEWORTH) ENHANCEMENTS) ORDER

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1. INTRODUCTION

1.1 Terms of Reference

- 1.1.1 AtkinsRéalis (UK) Ltd has been appointed by Network Rail Infrastructure Ltd to provide a shadow Habitats Regulations Assessment (HRA) for the Transpennine Route Upgrade Project W2B - Stalybridge to Diggle (Saddleworth) Enhancements Order (hereafter referred to as the “Order Scheme”). A Transport and Works Act Order (TWAo) is required to authorise elements of the Transpennine Route Upgrade Project between Stalybridge to Eastern Portal of Standedge Tunnel which forms part of the wider Transpennine Route Upgrade (TRU)¹ W2 programme.
- 1.1.2 HRA is required by Regulation 63 of the Conservation of Habitats and Species Regulations 2017 (as amended) (the ‘Habitats Regulations’) for all plans and projects which may have a likely significant effect on and are not directly connected with or necessary to the management of a European Site².

1.2 The Order Scheme Site

- 1.2.1 The proposed W2B scheme is the section of TRU from Stalybridge Tunnel (at Ordnance Survey National Grid Reference (OSNGR) SJ96249876), through to the western portal of Standedge Tunnel (at OSGR SE00760814). The Order Scheme extends for approximately 16 km and crosses two local authority areas: Tameside Metropolitan Borough Council and Oldham Metropolitan Borough Council.
- 1.2.2 The topography of the area is characterised by the steep-sided River Tame valley, which the existing railway line follows. The route of the Order Scheme follows the western bank of the River Tame passing through wooded countryside, the town of Mossley and the villages of Greenfield and Uppermill. The villages in this area comprise predominantly residential areas with some light industrial use. Scattered sites of industrial use are also present across the area, with Huddersfield Narrow Canal, a Site of Special Scientific Interest (SSSI), located between Stalybridge and Tollemache Arms lock (approximately 1.5 km north of Mossley) running to

¹ TRU is a major, multi-billion pound programme of improvements to the railway line between York, Leeds and Manchester. The TRU programme is phased and involves a variety of works including the electrification of the railway (installation of overhead line equipment and associated infrastructure), bridge and structure works to accommodate the upgrades, and structural strengthening works.

² This is defined as a Special Area of Conservation (SAC) or Special Protection Area (SPA), which as a matter of government policy (Ministry of Housing, Communities and Local Government (2024) National Planning Policy Framework (NPPF). Paragraph 194) also includes possible SACs (pSAC), potential SPAs (pSPA), listed or proposed Ramsar sites (wetland sites of international importance, as designated under the Ramsar Convention 1971) and any site identified, or required, as compensatory measures for adverse effects on any of the above listed designations.

Following the changes made to the Conservation of Habitats and Species Regulations 2017 (as amended) by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, SACs and SPAs in the UK no longer form part of the EU’s Natura 2000 network but form the UK’s national site network. The term ‘Habitats Sites’ is sometimes now used instead of ‘European Sites’ following the UK’s departure from the EU.

the east of the existing railway line. The canal crosses under the existing railway line in the north of the Order Scheme at the Uppermill Viaduct.

- 1.2.3 Approximately 2 km north of Uppermill Viaduct is the village of Diggle on the urban-rural fringe. The western portal of Standedge Tunnel is the eastern extent of the Order Scheme at OSNGR SE0076081³.
- 1.2.4 Two European Site are located to the east of the Order Scheme and include the 'Peak District Moors Special Protection Area (SPA)' and the 'South Pennine Moors Special Area of Conservation (SAC)', located approximately 775 m east, at the nearest point. A third European Site 'the South Pennine Moors (Phase 2) SPA', is located approximately 965 m north at the nearest point.
- 1.2.5 The development proposals for the Order Scheme are largely located within the existing railway corridor and are focused on works required to be undertaken by Network Rail for the electrification of the existing railway. Accordingly, the development for the TRU programme of works will, in the main, be within Network Rail's operational boundaries and will be undertaken using permitted development rights pursuant to the Town and Country Planning (General Permitted Development) (England) Order 2015 (as amended) (GPDO). However, in order to facilitate the full package of upgrades to the existing railway required by the TRU programme of works, some of the works will need to be constructed on land outside of operational rail boundaries and cannot be constructed under PDR. Accordingly, it is these works that will require a TWAO and form the Order Scheme. Refer to section 1.2 Chapter 1 of this report [NR14] for a summary of the works required.
- 1.2.6 Certain works to be authorised by the TWAO comprise elements that will require planning permission and so, accordingly, a request for deemed planning permission under Section 90(2A) of the Town and Country Planning Act 1990 will also be made by Network Rail for the development proposed to be authorised by the TWAO.
- 1.2.7 The Order Scheme includes interventions situated at approximately 43 separate locations along the length of the route, which when combined total approximately 3 km.
- 1.2.8 The Order Scheme relevant to the works that are the focus of this Habitats Regulations Assessment (HRA) and subject to Rule 7 of the Transport Works Act Order Rules³.
- 1.2.9 Construction works at the western portal of Standedge Tunnel, near Diggle, represent the eastern extent of the Order Scheme and are the closest activities to the South Pennine Moors SAC located approximately 795 m east at the nearest location and South Pennine Moors SPA (Phase 2),

³ The Transport and Works (Applications and Objections Procedure) (England and Wales) Rules 2006. Available online at: <https://www.legislation.gov.uk/uksi/2006/1466/article/7> [Accessed January 2025].

located approximately 965 m north at the nearest location. All works are confined to the operational railway corridor and adjacent local highways, with no construction activity, access, or material storage proposed within or above the designated sites or on the intervening sheep-grazed farmland.

- 1.2.10 The details of the Order Scheme, as they are currently understood, are detailed in Volume 1, Chapter 1 and Volume 2 Figures 1.1.1 -1.1.6 of this report [NR14].
- 1.2.11 Timescales for the commencement and duration of construction works for the Order Scheme are to be confirmed. However, at present, the Order Scheme is expected to begin construction in 2027 before coming into operation in 2030.

1.3 Background to HRA

- 1.3.1 In accordance with Regulation 63 of the Conservation of Habitats and Species Regulations 2017 (as amended) (the ‘Habitats Regulations’), before deciding to undertake or give any consent for a plan or project, ‘..which is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects), and is not directly connected with or necessary to the management of that site,’ the Competent Authority must ‘make an appropriate assessment of the implications of the plan or project for that site in view of that site’s conservation objectives.’
- 1.3.2 The powers required to construct and operate the Order Scheme are to be gained under a Transport Works Act Order (TWAo) under the Transport and Works Act 1992. The TWAo will also comprise works which constitute development that will require planning permission and so accordingly a request for deemed planning permission under Section 90(2A) of the Town and Country Planning Act 1990 will be made by Network Rail for the development proposed to be authorised by the TWAo. Therefore, under the Habitats Regulations, the Secretary of State for Transport (SoS) is the Competent Authority for the proposed application and therefore has a duty to undertake a HRA prior to granting planning permission to ascertain if granting the permission is likely to give rise to a significant effect on any European Site(s).
- 1.3.3 This shadow HRA Stage 1 Screening report has been prepared to assist the SoS in their determination of whether the Order Scheme could significantly harm the designated features of the European Sites associated with the Order Scheme.
- 1.3.4 According to Regulation 75 of the Habitats Regulations, where planning is permitted under a ‘general development order’ and likely significant effects on any European Site cannot be discounted, project works can only be begun where the local planning authority have provided written approval (under Regulation 77). This document presents an assessment of whether

the project is likely to have significant effects on any European Site and, therefore, whether Regulation 77 approval is required.

- 1.3.5 the Order Scheme is not directly connected with, or necessary to, the nature conservation management of any European Site.
- 1.3.6 UK Government policy: National Planning Policy Framework (NPPF)⁴, states that potential Special Protection Areas (pSPA) and possible Special Areas of Conservation (pSAC), listed or proposed Ramsar sites⁵ and sites identified, or required, as compensatory measures for adverse effects on habitats sites, pSPAs, pSACs, and listed or proposed Ramsar sites, on which the Government has initiated public consultation on the scientific case for their designation, should also be considered European Sites. Hereafter, all of the above designated nature conservation sites are referred to as 'European Sites'.
- 1.3.7 The stages of the HRA process are:
- **Stage 1 - Screening:** To assess whether a plan or project either alone or in combination with other plans and projects is likely to have a significant effect on a European Site.
 - **Stage 2 - Appropriate Assessment:** To determine whether, in view of a European Site's conservation objectives, the project or plan (either alone or in combination with other projects and plans) would have an adverse effect (or risk of this) on the integrity of the site with respect to the conservation objectives. If adverse impacts are anticipated, potential mitigation measures to alleviate impacts should be proposed and assessed.
 - **Stage 3⁶ – Derogations (allow exceptions):** Where a project or plan is assessed as having an adverse residual impact (or risk of this) on the integrity of a European Site, it may qualify for a derogation. Three legal tests according to Regulation 55 of the Habitats Regulations must be applied in the following order:
 1. There are no feasible alternative solutions that would be less damaging or avoid damage to the site.
 2. The proposal needs to be carried out for imperative reasons of overriding public interest.
 3. The necessary compensatory measures can be secured.

⁴ [National Planning Policy Framework - GOV.UK \(www.gov.uk\)](https://www.gov.uk) (December 2024)

⁵ Defined by the Convention on Wetlands of International Importance, especially as waterfowl habitat (otherwise known as the 'Ramsar Convention'). <https://www.ramsar.org/>

⁶ Derogations stages were previously described as two separate stages, but now commonly grouped together.

1.3.8 This report comprises Stage 1 - HRA Screening of the Order Scheme.

1.4 Legal Context to HRA

- 1.4.1 A critical part of the HRA Screening process is determining whether or not the proposals are likely to have a significant effect on European Sites, and therefore, if they will require an Appropriate Assessment. The concept of likely significant effects ('LSE') as embodied in Regulation 63(1) is central to their operation as it acts as the trigger for whether a project or plan requires further assessment under the HRA process. Its interpretation is well established in law and guidance and embraces the precautionary principle.
- 1.4.2 The European Court Waddenzee judgement⁷ provides clarification regarding the term 'likely'. It concludes that: "any plan or project not directly connected with or necessary to the management of the site is to be subject to an Appropriate Assessment of its implications for the site in view of the site's conservation objectives if it cannot be excluded, on the basis of objective information, that it will have a significant effect on that site, either individually or in combination with other plans or projects."
- 1.4.3 Clarification has also been provided through case law on the meaning of 'likely' in relation to Bagmoor Wind Ltd. v The Scottish Ministers⁸: "the word 'likely' in the regulation is not to be construed as an expression of probability, in a legal sense, but as a description of the existence of a risk (or possibility)." Consequently, if the possibility of a significant effect cannot be excluded based on objective information, an Appropriate Assessment will be required.
- 1.4.4 The European Court Waddenzee judgement also provides further clarification regarding the term 'significant': "...where a plan or project not directly connected with or necessary to the management of a site is likely to undermine the site's conservation objectives, it must be considered likely to have a significant effect on that site. The assessment of that risk must be made in the light inter alia of the characteristics and specific environmental conditions of the site concerned by such a plan or project."
- 1.4.5 The Bagmoor Wind case also provides guidance on the term 'objective'. It states: "...objective, in this context, means information based on clear verifiable fact rather than subjective opinion". The Habitats Regulations Assessment Handbook⁹ states: "...it will not normally be sufficient for an applicant merely to assert that the plan or project will not have an adverse effect on a site, nor will it be appropriate for a competent authority to rely on reassurances based on supposition or speculation. On the other hand, there should be credible evidence to show that there is a real rather than a

⁷ Case C – 127/02 Waddenzee, reference for a preliminary ruling from the Raad van State: Landelijke Vereniging tot Behoud van de Waddenzee, Nederlandse Vereniging tot Bescherming van Vogels v Staatssecretaris van Landbouw, Natuurbeheer en Visserij, 7th November 2004.

⁸ Bagmoor Wind Limited v The Scottish Ministers, Court of Sessions (2012) CSIH 93.

⁹ Tyldesley, D., and Chapman, C., (2013) *The Habitats Regulations Assessment Handbook 2017: DTA Publications Limited*. Available at: www.dtapublications.co.uk (Accessed October 2024).

hypothetical risk of effects that could undermine the site's conservation objectives. Any serious possibility of a risk that the conservation objectives could be undermined should trigger an 'appropriate assessment' ”.

- 1.4.6 The test for likelihood of significant effects requires that consideration is given to potential causes and potential effects (i.e. any potential impact pathways). To do this, information on the Order Scheme is needed to identify the potential causes of effects and information on the European Site is needed to identify any potential implications related to these effects. In the absence of a potential impact pathway, it can be concluded that no likely significant effect would arise. Relevant aspects (effects) of the Order Scheme have been checked against all features of the relevant European Sites (i.e. screened) to determine whether a likely significant effect may arise.
- 1.4.7 The judgement as to whether a significant effect is likely needs to be based on the best readily available information. Sources of information may include evidence from projects where similar operations have affected sites with similar qualifying features and conservation objectives and the judgement of relevant specialists that an effect is likely, as well as survey data collected to date for a particular project. In line with the precautionary principle, where there is uncertainty and/ or information is lacking in relation to the capacity of the effect to undermine the site's conservation objectives, it must be assumed that there will be an effect, unless further information can be made available to eliminate any areas of doubt.
- 1.4.8 The implication of the Court of Justice of the European Union (CJEU) judgement referred to as 'People Over Wind'¹⁰ 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.
- 1.4.9 Case law in 2017 referred to as the 'Wealden Judgement'¹¹ prompted Natural England to make their internal guidance on assessing the effects of road traffic emissions on European Sites public¹². The guidance provides

¹⁰ Peter Sweetman v Coillte Teoranta, Case C-323/17

¹¹ Case no: CO/3943/2016 – Between Wealden District Council and Secretary of State for Communities and Local Government, Lewes District Council and South Downs National Park Authority and Natural England.

¹² NE Internal Guidance – *Approach to advising Competent Authorities on Road Traffic Emissions and HRAs* V1.4 Final – June 2018.

further information on the in-combination assessment at screening stage with regard to air quality effects following the Wealden Judgement.

1.5 Consultation

1.5.1 Under Regulation 63(3) of the Habitats Regulations, the appropriate nature conservation body, in this case Natural England, must be consulted at Stage 2 Appropriate Assessment.

1.5.2 As this report only details the results of Stage 1 Screening, consultation with Natural England is not necessary.

2. METHODOLOGY

2.1 Overview

2.1.1 The Habitats Regulations Assessment Handbook¹³ outlines that screening for appropriate assessment requires gathering sufficient information to objectively conclude whether effects on a European Site will be significant or not. On this basis, screening to ascertain whether appropriate assessment is required covers four themes:

- Determining whether the plan (or project) is directly connected with or necessary to the management of the European Site;
- Identifying the potential effects on the European Site;
- Assessing the likely significant effect (LSE) on the European Site; and,
- Describing the plans (or projects) and characterising other plans (or projects) that in combination have the potential for having significant effects on the European Site.

2.1.2 The preliminary steps in the assessment have been based on these themes.

2.2 Preliminary steps

2.2.1 The first step was to consider the Order Scheme to determine whether it is directly connected with or necessary to the management of the European Site.

2.3 Identification of sites for consideration

2.3.1 The following selection criteria adapted from National Highways Design Manual for Roads and Bridges (DMRB) standard LA 115 Habitats Regulations Assessment¹⁴, (there is no equivalent standard for rail projects), based on the geographic extent of any impacts which could arise

¹³ Tyldesley, D., and Chapman, C., (2013) *The Habitats Regulations Assessment Handbook*, (2019) edition UK: DTA Publications Limited. Available at: www.dtapublications.co.uk (Accessed October 2024).

¹⁴ DMRB LA 115 - Habitats Regulations Assessment. Available at: [LA 115 - Habitats Regulations assessment - DMRB \(standardsforhighways.co.uk\)](http://LA115-HabitatsRegulationsassessment-DMRBstandardsforhighways.co.uk)

as a result of the Order Scheme and as explained below, have been used to determine what European Sites to consider in the HRA screening assessment:

- All European Sites within 2 km of the Order Scheme, or functionally linked land (see below);
- All European Sites up to 20 km from the Order Scheme where birds are a qualifying interest feature;
- All European Sites up to 30 km from the Order Scheme where bats are a qualifying interest feature;
- All European Sites within 10 km upstream or downstream of watercourses either within, adjoining or crossed by the Order Scheme ;
- All European Sites containing a groundwater dependent terrestrial ecosystem (GWDTE), which have a potential hydrological or hydrogeological linkage to the Order Scheme ; and
- All European Sites within 200 m of an affected road network (ARN), which triggers the criteria for assessment of European Sites under LA 105¹⁵.

2.3.2 The core range for many species for example breeding and non-breeding bird species, bats, otter and fish can extend beyond the boundaries of SAC, SPA and Ramsar site designations, meaning land beyond a designated site boundary having ‘functional linkage’ with the designated sites. Functional linkages include key flyways, foraging areas, breeding or roost sites.

2.3.3 The core range for Annex II bat species can extend beyond the boundaries of SAC designations, meaning land beyond a designated site boundary having functional linkage with the SAC. Functional linkages include key habitat resources surrounding a communal roost (e.g. maternity roost and/or hibernation site), which will have an important influence on the conservation status of colonies utilising the roost. Current BCT guidelines¹⁶ indicate that the Core Sustenance Zone (CSZ) for lesser horseshoe bat, greater horseshoe bat and Bechstein’s bat is typically a 3 km radius around communal roosts, and 6 km for barbastelle bat; however, this will vary according to the quality and accessibility of habitats. Dietz and Keifer (2016)¹⁷ states that whilst foraging, barbastelle bats typically utilise habitats at a distance of up to 7 km from nursery colonies, although individual barbastelle bats have been recorded travelling between 3.8 km

¹⁵ DMRB LA 105 – Air Quality. Available at: [10191621-07df-44a3-892e-c1d5c7a28d90 \(standardsforhighways.co.uk\)](https://standardsforhighways.co.uk/10191621-07df-44a3-892e-c1d5c7a28d90) Accessed October 2024).

¹⁶ Collins, J. (ed.) (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition)*. London: Bat Conservation Trust.

¹⁷ Dietz C., and Keifer A. (2016) *Bats of Britain and Europe*. Bloomsbury Naturalist, London.

and 20 km from nursery roosts in south west England (Greenway 2004¹⁸; Zeale 2009¹⁹).

2.4 Data gathering

2.4.1 Baseline information used to describe the location and characteristics of European Sites and Conservation Objectives was taken from following sources:

- Multi-Agency Geographic Information for the Countryside (MAGIC) Webmap²⁰;
- Joint Nature Conservation Committee (JNCC) Natura 2000 Standard Data Forms²¹;
- Natural England Designated Site Information²².

2.5 Effect pathways

2.5.1 Plans or projects can adversely affect a site by:

- Causing delays in progress towards achieving the Conservation Objectives of the European Site;
- Interrupting progress towards achieving the Conservation Objectives of the European Site;
- Disrupting those factors that help to maintain the favourable conditions of the European Site; and
- Interfering with the balance, distribution and density of key species that are the indicators of the favourable condition of the European Site.

2.5.2 Supplementary Advice²³ from Natural England describes the measures necessary to achieving the Conservation Objectives for a European Site,

¹⁸ Greenway, F (2004). *Advice for the management of flightlines and foraging habitats of the barbastelle bat Barbastella barbastellus*. Peterborough: English Nature.

¹⁹ Zeale, M.R.K. (2009). *Barbastelles in the Landscape: Ecological Research and Conservation in Dartmoor*. Research report to Dartmoor National Park Authority and SITA Trust. University of Bristol.

²⁰ Available from <http://magic.defra.gov.uk> (accessed October 2024).

²¹ Available from <http://jncc.defra.gov.uk> (accessed October 2024).

²² Available from <https://designatedsites.naturalengland.org.uk/SiteSearch.aspx> (accessed October 2024)

²³ Natural England. (2024) *Designated Sites View: South Pennine Moors (Phase 2) SPA* [online]. Available from: <<https://designatedsites.naturalengland.org.uk/TerrestrialAdvicePDFs/UK9007022.pdf>> > (accessed October 2024).

Peak District Moors (South Pennine Moors Phase 1) SPA [online]. Available from:

<<https://designatedsites.naturalengland.org.uk/TerrestrialAdvicePDFs/UK9007021.pdf>> (accessed October 2024).

South Pennine Moors SAC [online]. Available from:

<<https://designatedsites.naturalengland.org.uk/TerrestrialAdvicePDFs/UK0030280.pdf>> (accessed October 2024).

comprising a range of ecological attributes that are most likely to contribute to the overall integrity of a European Site.

2.5.3 With reference to the Supplementary Advice on Conservation Objectives (SACOs)²⁴, effect pathways on the Conservation Objectives for the European Site were considered against the following list:

- **Habitat loss and fragmentation** – includes direct loss of habitats under the footprint of temporary or permanent works. Indirect effects through the loss of functionally linked habitats, i.e. habitats that support species outside of the European Site boundary;
- **Species disturbance** - (visual, noise, vibration) – this refers to disturbance during construction, operation or decommissioning works on species that may cause behavioural effects, e.g. avoidance, change in foraging behaviour. Physical works, vehicle movements, light pollution and presence of staff/ workers are all considered;
- **Changes to water quality** – considers effects on species (and their prey) as a result of contamination, changes in pH, increased nutrient loads, salinity, turbidity, alterations in the thermal regime, discharges or changes in sedimentation levels;
- **Changes to air quality** – evaluates the risk of discharges to air, including fugitive dust and combustion emissions;
- **Changes to surface and groundwater hydrology** – changes to the flow, supply, availability and drainage of water, and increased risks associated with flooding;
- **Introduction of Invasive Non-Native Species (INNS)** – the risk of introducing or spreading INNS as a result of the Order Scheme ;

2.6 Obtaining information on other projects and plans

2.6.1 The Habitats Regulations requires assessment of the potential for LSE of the project ‘in combination’ with other projects and plans.

2.6.2 The effects of this project in combination with other projects are the cumulative effects which will, or might, result from the addition of the effects

²⁴ SACO information obtained from NE online resources [Site Search \(naturalengland.org.uk\)](https://naturalengland.org.uk)

of other relevant plans or projects, and making an assessment as to whether these could be significant.

2.6.3 The Habitats Regulations Assessment Handbook²⁵ advises that any plans or projects at the following stages may be relevant to an in-combination assessment:

- Planning applications submitted but not yet determined;
- Planning application refusals subject to appeal procedures and not yet determined;
- Projects authorised but not yet started;
- Projects started but not yet completed;
- Known projects that do not require external authorisation, e.g. permitted development;
- 'Projects' subject to periodic review e.g. annual licences, during the time that their renewal is under consideration;
- Proposals in adopted plans (e.g. land use plans, transport plans, minerals and waste plans, shoreline management plans etc.); and
- Proposals in finalised draft plans (see examples above) formally published or submitted for final consultation, examination or adoption.

2.6.4 The National Infrastructure Planning²⁶ website is searched for Nationally Significant Infrastructure Projects which could have effects 'in combination' with the Order Scheme.

2.6.5 A desktop review of local authority websites and planning portals is required to identify plans or projects that have undergone a HRA and could have an LSE in combination with the Order Scheme. Based on the scale, complexity and duration of the Order Scheme, a desktop review of projects and plans proposed or consented within the last five years is considered to be sufficient and precautionary in this instance. Only 'reasonably foreseeable' and 'committed' projects and plans have been included in this assessment.

2.7 Stage 1: Screening for Likely Significant Effects (LSE)

2.7.1 The precautionary principle (as enshrined in the Habitats Regulations) has been taken into account during this HRA. Whenever potential significant

²⁵ Tyldesley, D., and Chapman, C., (2013) *The Habitats Regulations Assessment Handbook*, (2019) edition UK: DTA Publications Limited. Available at: www.dtapublications.co.uk (Accessed October 2024).

effects are not able to be objectively discounted, the European Site is screened in.

- 2.7.2 Following the gathering of information on the Order Scheme and European Sites, and the identification of effect pathways, each European Site was screened against each potential pathway to identify whether LSE were possible or whether they could be discounted by the Order Scheme 'alone'.
- 2.7.3 LSE effects are assessed in reference to the Conservation Objectives of each qualifying interest feature of each European Site. The results are presented in Table 2-1, Table 2-2 and Table 2-3 in section 2.9.
- 2.7.4 Any plan or project that causes the interest features of a European Site to fall into unfavourable condition is considered to have an LSE on the site. Stage 1 of the HRA process does not assess effects on the integrity of European Sites, this forms Stage 2 of the HRA process.
- 2.7.5 Following the completion of the Stage 1 'alone' screening. Consideration was also given to the potential for the effects of the Order Scheme to combine with other plans and projects and result in additional LSEs that were discounted by the Order Scheme 'alone'.
- 2.7.6 Any European Sites with LSE pathways 'alone', that were already screened in and requiring Stage 2 Appropriate Assessment, are not subject to 'in-combination' assessment.
- 2.7.7 Effects or effect pathways which are wholly discounted or considered to be so unlikely or limited that they are in effect nugatory or de minimus and, therefore, not likely to combine with anything else are not subject to 'in-combination' assessment.

2.8 Stage 1 – screening European Sites Scoped out of Screening

- 2.8.1 Special Areas of Conservation (SACs) with bats as qualifying features are not included in this Habitats Regulations Assessment because no such SACs are located within 30 km of the Site. SACs designated for bats in England are generally located in areas that support specific bat species including greater and lesser horseshoe bats, barbastelle and Bechstein's bat, with a primary concentration in the south of England. These areas provide essential roosting and foraging habitats, making them critical to the conservation of specific bat populations. Since no SACs with bats as qualifying features are within the 30 km geographical extent of impact zone, SACs with bats as qualifying features are scoped out of the assessment.

2.9 European Sites Identified for Screening

- 2.9.1 The desk study identified three European Sites within the search areas defined in paragraph 1.1.36. These are as follows:
- South Pennine Moors SAC, located approximately 775 m east at the nearest point.
 - South Pennine Moors (Phase 2) SPA, located approximately 965 m north at the nearest point.
 - Peak District Moors (South Pennine Moors Phase 1) SPA, located approximately 775 m east at the nearest location.
- 2.9.2 The location of the European Sites identified in relation the Order Scheme are shown in Volume 2, Figure 6.1.1 of this Report [NR14].

Information of European Sites Identified for Screening

- 2.9.3 Relevant environmental information for each European Site taken from the designation citations is presented in Table 2-1, Table 2-2 and Table 2-3 below.

Table 2-1 – South Pennine Moors SAC

EU Site Code	UK0030280
Designation	SAC
Name	South Pennine Moors
Area (ha)	65024.32
Proximity	The SAC is approximately 780 m east of the Order Scheme from OSNGR: SE 01191 08461, (Boat Lane vehicle access).
Qualifying Interest Features	Annex I habitats that are a primary reason for selection of this site: <ul style="list-style-type: none"> • European dry heaths; • Blanket bog; • Old sessile oak woods with Ilex and Blechnum in the British Isles. Annex I habitats present as a qualifying feature, but not a primary

EU Site Code	UK0030280
	<p>reason for selection of this site:</p> <ul style="list-style-type: none"> • Northern Atlantic wet heaths with cross-leaved heath; • Transition mires and quaking bogs.
Conservation Objectives	<p>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:</p> <ul style="list-style-type: none"> • 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.
Vulnerabilities	<p>The site is vulnerable to:</p> <ul style="list-style-type: none"> • Air pollution, air-borne pollutants; • Agriculture activities; • Human induced changes in hydraulic conditions; • Fire and fire suppression; • Outdoor sports and leisure activities, recreational activities.

Table 2-2 – Peak District Moors (South Pennine Moors Phase 1) SPA

EU Site Code	UK9007021
Designation	SPA
Name	Peak District Moors (South Pennine Moors Phase 1)
Area (ha)	45300.54
Proximity	The SPA is located approximately 780m east of the Order Scheme from SE 01191 08461, (Boat Lane vehicle access).
Qualifying Interest Features	<p>ARTICLE 4.1 QUALIFICATION (79/409/EEC)</p> <p>During the breeding season the area regularly supports:</p> <ul style="list-style-type: none"> • Short eared owl at least 2.2% of the GB breeding population Count, as at 1990 and 1998; • Merlin at least 2.3% of the GB breeding population Count as at 1990 and 1998; • European Golden plover [North-western Europe - breeding] at least 1.9% of the GB breeding population Count, as at 1990 and 1998.
Conservation Objectives	<p>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:</p> <ul style="list-style-type: none"> • 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;

EU Site Code	UK9007021
	<ul style="list-style-type: none"> The population of each of the qualifying features; and, The distribution of the qualifying features within the site.
Vulnerabilities	<p>The site is vulnerable to:</p> <ul style="list-style-type: none"> Outdoor sports and leisure activities, recreational activities; Human induced changes in hydraulic conditions; Fire and fire suppression; Hunting and collection 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.); Reduced fecundity/ genetic depression.

Table 2-3 – South Pennine Moors (Phase 2) SPA

EU Site Code	UK9007022
Designation	SPA
Name	South Pennine Moors (Phase 2)
Area (ha)	20944.46
Proximity	The SPA is located approximately 980 m north of the Order Scheme at OSNGR: SE 01114 08528 (Boat Lane vehicle access).
Qualifying Interest Features	<p>ARTICLE 4.1 QUALIFICATION (79/409/EEC)</p> <p>During the breeding season the area regularly supports:</p> <ul style="list-style-type: none"> Short eared owl 0.3% of the GB breeding population Count as at 1990; Merlin 2.2% of the GB breeding population Count as at 1995; European Golden plover [North-western Europe - breeding] 1.3% of the GB breeding population No count period specified. <p>ARTICLE 4.2 QUALIFICATION (79/409/EEC):</p> <p>An internationally important assemblage of birds</p>
Conservation Objectives	<p>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:</p> <ul style="list-style-type: none"> 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.
Vulnerabilities	<p>The site is vulnerable to:</p> <ul style="list-style-type: none"> Hunting and collection of wild animals (terrestrial), including

EU Site Code	UK9007022
	<p>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.);</p> <ul style="list-style-type: none"> • Reduced fecundity/ genetic depression; • Fire and fire suppression; • Human induced changes in hydraulic conditions; • Outdoor sports and leisure activities, recreational activities.

2.10 Qualifying Species Desk Study

- 2.10.1 Records of birds within 2 km of the Order Scheme boundary were obtained from the Greater Manchester Biodiversity Record Centre in October 2024. A review was undertaken to identify records of qualifying birds of the South Pennine Moors (Phase 2) SPA and Peak District Moors (South Pennine Moors Phase 1) SPA; qualifying bird species including merlin, short eared owl, golden plover and the additional breeding assemblage of birds that are a feature of the South Pennine Moors (Phase 2) SPA. The objective of the review was to identify areas of land within the Order Scheme boundary that could be used by SPA birds and important to sustaining the population and, therefore, functionally linked to SPAs.
- 2.10.2 The review concluded no records of birds within the Order Scheme boundary or land within 50 m of the Order Scheme boundary, that are qualifying features, assemblages of the South Pennine Moors (Phase 2) SPA and Peak District Moors (South Pennine Moors Phase 1) SPA were identified.
- 2.10.3 The nearest records of SPA birds to the Order Scheme boundary include:
- Short eared owl, located approximately 1260 m north of the Order Scheme at OSGR; SE018094, and within the Peak District Moors (South Pennine Moors Phase 1) SPA;
 - Merlin, located approximately 185 m north of the Order Scheme at OSGR: SD951345. Also, approximately 770 m south from the South Pennine Moors (Phase 2) SPA and approximately 825 m south west of the Peak District Moors (South Pennine Moors Phase 1) SPA boundary;
 - Golden plover, located approximately 620 m east of the Order Scheme at OSGR: SD986050. Also approximately 3.12 km from the South Pennine Moors (Phase 2) SPA and approximately 3.07 km from the Peak District Moors (South Pennine Moors Phase 1) SPA boundary; and
 - The nearest breeding bird assemblage species is snipe located approximately 345 m east of the Order Scheme at OSGR: SD981028. Also 7.3 km from the South Pennine Moors (Phase 2) SPA and 3.6 km

from the Peak District Moors (South Pennine Moors Phase 1) SPA boundary.

2.11 Stage 1 Screening Results

Identified effect pathways

2.11.1 As outlined in paragraph 1.2.3, the following effect pathways have been identified. Each Conservation Objective has been considered against each pathway:

- Habitat loss and fragmentation;
- Species disturbance (visual, noise, vibration) - within the screening tables this pathway will only be considered for qualifying species and not qualifying habitats;
- Changes to water quality;
- Changes to air quality;
- Changes to surface and groundwater hydrology;
- Introduction of Invasive Non-Native Species (INNS).

Likely Significant Effect Screening - Alone

2.11.2 LSE screening for the identified European Sites is provided in Table 2-4, Table 2-5 and Table 2-6 below. The assessment considers the construction and operation of the Order Scheme. As the Order Scheme will be operational for the foreseeable future, decommissioning has not been considered within the assessment.

Table 2-4 – South Pennine Moors SAC Stage 1 Screening Results

South Pennine Moors SAC Qualifying features	Conservation Objective	Phase of Scheme which may cause and effects	LSE Risk Pathway	LSE conclusions	Potential LSE
Annex I habitats that are a primary reason for selection of this site European dry heaths; Blanket bog; Old sessile oak woods with Ilex and Blechnum in the British Isles.	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	Construction	Habitat loss and fragmentation	<p>The South Pennine Moor SAC is located approximately 780 m east of the Order Scheme (Boat Lane), where the following construction works are proposed:</p> <p>a temporary highway diversion route between Harrop Court Road and Boat Lane; and,</p> <p>works to the western portal of Standedge Tunnel.</p> <p>Construction activities at the western portal of Standedge tunnel including bridge deck replacement and tunnel works will use cranes and heavy machinery within the rail corridor and immediately adjacent roads to the portal.</p> <p>All construction is confined to areas outside of the SAC boundary and involves no encroachment on qualifying habitat features. Therefore, there will be no habitat loss or fragmentation from construction of the Order Scheme that would result in an LSE on the South Pennine Moor SAC qualifying habitat features.</p>	No
			Changes to water quality	Construction activities can result in changes to water quality in local watercourses as a result of, for example, from pollution incidents, run-off containing suspended solids or deposition of contaminants on surface waters. Diggle Brook originates from the South Pennine Moors and	No

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South Pennine Moors SAC Qualifying features	Conservation Objective	Phase of Scheme which may cause and effects	LSE Risk Pathway	LSE conclusions	Potential LSE
				flows through the South Pennine Moor SAC, upstream of the Order Scheme. The watercourse passes beneath the Order Scheme at Uppermill Viaduct at OSGR: SD99560627. As the Order Scheme is located downstream of the South Pennine Moor SAC, there is no impact pathway by which water quality impacts during construction could have LSEs on the qualifying habitat features of the SAC.	
			Changes to surface and groundwater hydrology	<p>The Order Scheme works will not result in the alteration of surface water drainage or watercourses such that SAC habitats might be affected, particularly given the location of the Order Scheme downstream of the SAC.</p> <p>No significant excavations or other activity that may result in hydrogeological impacts, e.g. by affecting the water table or local movement of groundwater, are required as part of the Order Scheme.</p> <p>Therefore, it is considered that there is no impact pathway by which changes to surface and groundwater hydrology could have an LSE on SAC habitats.</p>	No
			Changes to air quality	<p>There is no affected road network (ARN) associated with the Order Scheme as the works are largely within the railway corridor.</p> <p>Therefore, air quality changes are limited to those impacts that may occur during construction such as localised dust and vehicle</p>	No

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South Pennine Moors SAC Qualifying features	Conservation Objective	Phase of Scheme which may cause and effects	LSE Risk Pathway	LSE conclusions	Potential LSE
				emissions. the Order Scheme is located approximately 780 m west of the South Pennine Moor SAC at its closest point. This is considered to be too distant for a feasible impact pathway to be present by which changes in air quality could affect habitat features of the SAC.	
			Introduction of INNS	As the Order Scheme works are outside of the SAC boundary by at least 780 m and are located downstream of Diggle Brook (i.e. a potential hydrological link), it is not considered possible that construction activities could introduce or spread INNS within the SAC.	No
		Operation	Habitat loss and fragmentation	Once the Order Scheme is operational, trains will remain confined to the existing Transpennine Railway Route and the route will function as before, i.e. there are no operational changes that could have an LSE on the SAC.	No
			Changes to water quality	During operation of the Order Scheme and the Transpennine Railway Route there still remains no pathway for water quality impacts on SAC habitat features.	No
			Changes to surface and groundwater hydrology	During operation of the Order Scheme and the Transpennine Railway Route there still remains no pathway by which changes to surface and groundwater hydrology could have an LSE on SAC habitat features.	No
			Changes to air quality	There is no impact pathway for air quality effects and , once operational, the Order	No

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South Pennine Moors SAC Qualifying features	Conservation Objective	Phase of Scheme which may cause and effects	LSE Risk Pathway	LSE conclusions	Potential LSE
				Scheme will allow the use of electric trains rather than diesel trains, thereby improving air quality along the route.	
			Introduction of INNS	There is no impact pathway by which the operational phase of the Order Scheme could result in the introduction of INNS that may result in an LSE on SAC habitats.	No
Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site North Atlantic wet heaths with cross-leaved heath; Transition mires and quaking bogs.	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	Construction	Habitat loss and fragmentation	As above for Annex I habitats that are a primary reason for selection of this site.	No
			Changes to water quality	As above for Annex I habitats that are a primary reason for selection of this site.	No
			Changes to surface and groundwater hydrology	As above for Annex I habitats that are a primary reason for selection of this site.	No
			Changes to air quality	As above for Annex I habitats that are a primary reason for selection of this site.	No
			Introduction of INNS	As above for Annex I habitats that are a primary reason for selection of this site.	No
		Operation	Habitat loss and fragmentation	As above for Annex I habitats that are a primary reason for selection of this site.	No
			Changes to water quality	As above for Annex I habitats that are a primary reason for selection of this site.	No
			Changes to surface and	As above for Annex I habitats that are a primary reason for selection of this site.	No

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			groundwater hydrology		
			Changes to air quality	As above for Annex I habitats that are a primary reason for selection of this site.	No
			Introduction of INNS	As above for Annex I habitats that are a primary reason for selection of this site.	No

Table 2-5 – Peak District Moors (South Pennine Moors (Phase 1) SPA Stage 1 Screening Results

Peak Moors (Phase 1) SPA Qualifying features	District (South Pennine Moors)	Conservation Objective	Phase of Scheme which may cause effects	LSE Risk Pathway	LSE conclusions	Potential LSE
<p>ARTICLE 4.1 QUALIFICATION (79/409/EEC)</p> <p>During the breeding season the area regularly supports:</p> <p>Merlin (Breeding);</p> <p>European golden plover (Breeding);</p> <p>Short-eared owl (Breeding birds)</p>		<p>The extent and distribution of the habitats of the qualifying features</p> <p>The structure and function of the habitats of the qualifying features</p> <p>The supporting processes on which the habitats of the qualifying features rely</p> <p>The population of each of the qualifying features, and,</p> <p>The distribution of the qualifying features within the site</p>	Construction	Habitat loss and fragmentation – including consideration of functionally linked land	<p>The Order Scheme will not directly affect the Peak District Moors (South Pennine Moors Phase 1) SPA. The SPA is located approximately 780 m east of the Order Scheme where the following construction works are proposed:</p> <p>a temporary highway diversion route between Harrop Court Road and Boat Lane; and,</p> <p>works to the western portal of Standedge Tunnel.</p> <p>Construction activities at the western portal of Standedge tunnel including bridge deck replacement and tunnel works will use cranes and heavy machinery within the rail corridor and immediately adjacent roads to the portal.</p> <p>These works along with all other works that form part of the Order Scheme will not indirectly result in any habitat loss or fragmentation within the SPA.</p> <p>The land adjacent to the existing railway line within the Order Scheme and up to 50 m from the boundary was assessed through a desk study undertaken in October 2024 and site surveys in June 2025 (refer to section 1.1).</p> <p>The intervening land within and adjacent to road access works located north/ north east of the Standedge Tunnel western portal and the nearest part of the Order Scheme to the SPA, comprises</p>	No

Peak Moors (Phase 1) SPA Qualifying features	District (South Pennine Moors)	Conservation Objective	Phase of Scheme which may cause and effects	LSE Risk Pathway	LSE conclusions	Potential LSE
					<p>improved, sheep-grazed farmland, which is not suitable for breeding European golden plover, short-eared owl, or merlin. These species require open upland habitats such as heather moorland, blanket bog, or rough grassland with structural vegetation and a rich prey base. The uniform, closely grazed sward of improved pasture lacks the cover, foraging conditions, and nesting substrates necessary to support these birds, and is subject to regular agricultural disturbance. As such, the land is not considered to be functionally linked to the SPA for breeding or foraging purposes.</p> <p>It is concluded that the Order Scheme is highly unlikely to result in an LSE on the SPA and qualifying features from habitat loss and fragmentation within the SPA and no functionally linked land was identified.</p>	
				Species disturbance (visual, noise, vibration)	<p>The Peak District Moors (South Pennine Moors Phase 1) SPA qualifying features includes ground nesting breeding birds that are likely to be sensitive to disturbance (visual, noise or vibration). However, the SPA is located approximately 780 m east of the Order Scheme and given the topography, with the land rising approximately 130 m within the SPA, noise from works at the western portal of Standedge tunnel would attenuate significantly over the distance and terrain and there is not considered to be an impact pathway for species disturbance.</p>	No

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Peak Moors Pennine Moors (Phase 1) SPA Qualifying features	District (South Moors	Conservation Objective	Phase of Scheme which may cause and effects	LSE Risk Pathway	LSE conclusions	Potential LSE
					<p>It was concluded above (see Habitat loss and fragmentation) that there is no potential for functionally linked land to be present and so there is also no potential for disturbing qualifying species on functionally linked land.</p> <p>It is concluded that there is no impact pathway for species disturbance and the Order Scheme does not present opportunity for an LSE on the qualifying features of the SPA.</p>	
				Changes to water quality	<p>Construction activities can result in changes to water quality in local watercourses as a result of, for example, from pollution incidents, run-off containing suspended solids or deposition of contaminants on surface waters. Diggle Brook originates from the South Pennine Moors and flows through the Peak District Moors (South Pennine Moors Phase 1) SPA, upstream of the Order Scheme. The watercourse passes beneath the Order Scheme at Upper Mill Viaduct at SD99560627. As the Order Scheme is located downstream of the Peak District Moors (South Pennine Moors Phase 1) SPA, there is no impact pathway by which water quality impacts during construction could affect the qualifying habitat features of the SPA.</p>	No
				Changes to surface and groundwater	<p>The Order Scheme works will not result in the alteration of surface water drainage or watercourses such that the habitats of qualifying species might be</p>	No

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Peak Moors Pennine (Phase 1) SPA Qualifying features	District (South Moors)	Conservation Objective	Phase of Scheme which may cause and effects	LSE Risk Pathway	LSE conclusions	Potential LSE
				hydrology	<p>affected, particularly given the location of the Order Scheme downstream of the SPA.</p> <p>No significant excavations or other activity that may result in hydrogeological impacts, e.g. by affecting the water table or local movement of groundwater, are required as part of the Order Scheme.</p> <p>Therefore, it is considered that there is no impact pathway by which changes to surface and groundwater hydrology could have an LSE on the habitats of qualifying species within the SPA.</p>	
				Changes to air quality	<p>There is no affect road network (ARN) associated with the Order Scheme as the works are on a railway route. Therefore, air quality changes are limited to those impacts that may occur during construction such as localised dust and vehicle emissions. the Order Scheme is located approximately 780 m west of the Peak District Moors (South Pennine Moors Phase 1) SPA at its closest point. This is considered to be too distant for a feasible impact pathway to be present by which changes in air quality could affect the habitats of qualifying species within the SPA.</p>	No
				Introduction of INNS	<p>As the Order Scheme works are outside of the SPA boundary by at least 780 m and are located downstream of Diggle Brook (i.e. a potential hydrological link), it is not considered possible that construction activities could introduce or spread</p>	No

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Peak Moors Pennine Moors (Phase 1) SPA Qualifying features	District (South Moors)	Conservation Objective	Phase of Scheme which may cause and effects	LSE Risk Pathway	LSE conclusions	Potential LSE
					INNS within the SPA.	
			Operation	Habitat loss and fragmentation – including consideration of functionally linked land	There is no means by which the operational phase of the Order Scheme could affect the extent and distribution of habitats of qualifying species within the SPA.	No
				Species disturbance (visual, noise, vibration)	The operational phase of the Order Scheme is confined to the existing TransPennine Railway Route and there will be no significant operational changes. As such, there is no pathway by which there could be any significant species disturbance impacts.	No
				Changes to water quality	During operation of the Order Scheme and the TransPennine Railway Route there still remains no pathway for water quality impacts on the habitats of qualifying species.	No
				Changes to surface and groundwater hydrology	During operation of the Order Scheme and the TransPennine Railway Route there still remains no pathway by which changes to surface and groundwater hydrology could have an LSE on the habitats of qualifying species within the SPA.	No
				Changes to air quality	There is considered to be no impact pathway for air quality once operational as the Order Scheme will allow the use of electric trains rather than diesel trains, thereby improving air quality along the route.	No

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Peak Moors Pennine (Phase 1) SPA Qualifying features	District (South Moors	Conservation Objective	Phase of Scheme which may cause and effects	LSE Risk Pathway	LSE conclusions	Potential LSE
				Introduction of INNS	There is no impact pathway by which the operational phase of the Order Scheme could result in the introduction of INNS that may result in an LSE on the habitats of qualifying species within the SPA.	No

Table 2-6 – South Pennine Moors (Phase 2) SPA Stage 1 Screening Results

South Pennine Moors (Phase 2) SPA Qualifying features	Conservation Objective	Phase of Scheme which may cause and effects	LSE Risk Pathway	LSE conclusions	Potential LSE
<p>ARTICLE 4.1 QUALIFICATION (79/409/EEC)</p> <p>During the breeding season the area regularly supports: Short-eared owl; Merlin; European golden plover.</p>	<p>The extent and distribution of the habitats of the qualifying features</p> <p>The structure and function of the habitats of the qualifying features</p> <p>The supporting processes on which the habitats of the qualifying features rely</p> <p>The population of each of the qualifying features, and,</p> <p>The distribution of the qualifying features within the site</p>	Construction	Habitat loss and fragmentation – including consideration of functionally linked land	<p>The Order Scheme will not directly affect the South Pennine Moors (Phase 2) SPA. The SPA is approximately 980 m north of the Order Scheme that comprises the following construction works:</p> <p>a temporary highway diversion route between Harrop Court Road and Boat Lane works to the western portal of Standedge Tunnel.</p> <p>These works along with all other works that form part of the Order Scheme will not indirectly result in any habitat loss or fragmentation within the SPA.</p> <p>The land adjacent to the existing railway line within the Order Scheme and up to 50 m from the boundary was assessed through a desk study undertaken in October 2024 and site surveys in June 2025 (refer to section 1.1).</p> <p>The intervening land adjacent to road access works located north-east of the Standedge tunnel western portal; and the nearest part of the Order Scheme to the SPA, comprises improved, sheep-grazed farmland, which is not suitable for breeding European golden plover, short-eared owl, or merlin. These species require open upland habitats such as heather moorland, blanket bog, or rough grassland with</p>	No

South Pennine Moors (Phase 2) SPA Qualifying features	Conservation Objective	Phase of Scheme which may cause and effects	LSE Risk Pathway	LSE conclusions	Potential LSE
				<p>structural vegetation and a rich prey base. The uniform, closely grazed sward of improved pasture lacks the cover, foraging conditions, and nesting substrates necessary to support these birds, and is subject to regular agricultural disturbance. As such, the land is not considered to be functionally linked to the SPA for breeding or foraging purposes</p> <p>It is concluded that the Order Scheme is highly unlikely to result in an LSE on the SPA and qualifying features from habitat loss and fragmentation within the SPA and no functionally linked land was identified.</p>	
			Species disturbance (visual, noise, vibration)	<p>The South Pennine Moor (Phase 2) SPA qualifying features includes ground nesting breeding birds that are likely to be sensitive to disturbance (visual, noise or vibration). However, the SPA is located approximately 980 m north of the Order Scheme and given the topography, with the land rising approximately 130 m within the SPA, noise from works at the western portal of Standedge tunnel would attenuate significantly over the distance and terrain and there is not considered to be an impact pathway for species disturbance.</p> <p>It was concluded above (see Habitat loss and fragmentation) that there is no potential for functionally linked land to be present and so</p>	No

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South Pennine Moors (Phase 2) SPA Qualifying features	Conservation Objective	Phase of Scheme which may cause and effects	LSE Risk Pathway	LSE conclusions	Potential LSE
				there is also no potential for disturbing qualifying species on functionally linked land. It is concluded that the Order Scheme is highly unlikely to result in an LSE on the qualifying features of the SPA as a result of disturbance.	
			Changes to water quality	Construction activities can result in changes to water quality in local watercourses as a result of, for example, pollution incidents, run-off containing suspended solids or deposition of contaminants on surface waters. The River Tame originates from the South Pennine Moors, upstream of the Order Scheme. The watercourse passes beneath the Order Scheme at Uppermill Viaduct at OSNGR SD99570631. As the Order Scheme is located downstream of the South Pennine Moors (Phase 2) SAC, there is no impact pathway by which water quality impacts during construction could affect the habitats of qualifying species within the SPA.	No
			Changes to surface and groundwater hydrology	The Order Scheme works will not result in the alteration of surface water drainage or watercourses such that the habitats of SPA species might be affected, particularly given the location of the Order Scheme downstream of the SPA. No significant excavations or other activity that may result in hydrogeological impacts, e.g. by affecting the water table or local movement of	No

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South Pennine Moors (Phase 2) SPA Qualifying features	Conservation Objective	Phase of Scheme which may cause and effects	LSE Risk Pathway	LSE conclusions	Potential LSE
				groundwater, are required as part of the Order Scheme. Therefore, it is considered that there is no impact pathway by which changes to surface and groundwater hydrology could have an LSE on the habitats of qualifying species within the SPA.	
			Changes to air quality	There is no affect road network (ARN) associated with the Order Scheme as they are works on a railway route. Therefore, air quality changes are limited to those impacts that may occur during construction such as localised dust and vehicle emissions. the Order Scheme is located approximately 980 m south of the South Pennine Moors (Phase 2) SPA at its closest point. This is considered to be too distant for a feasible impact pathway to be present by which changes in air quality could affect the habitats of qualifying species within the SPA.	No
			Introduction of INNS	As the Order Scheme works are outside of the SPA boundary by at least 965 m and are located downstream of the River Tame (i.e. a potential hydrological link), it is not considered possible that construction activities could introduce or spread INNS within the SPA.	No
		Operation	Habitat loss and fragmentation	There is no means by which the operational phase of the Order Scheme could affect the extent and distribution of habitats of qualifying	No

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South Pennine Moors (Phase 2) SPA Qualifying features	Conservation Objective	Phase of Scheme which may cause and effects	LSE Risk Pathway	LSE conclusions	Potential LSE
			– including consideration of functionally linked land	species within the SPA.	
			Species disturbance (visual, noise, vibration)	The operational phase of the Order Scheme is confined to the existing TransPennine Railway Route and there will be no significant operational changes. As such, there is no pathway by which there could be any significant species disturbance impacts.	No
			Changes to water quality	During operation of the Order Scheme and the TransPennine Railway Route there still remains no pathway for water quality impacts on habitats of qualifying species.	No
			Changes to surface and groundwater hydrology	During operation of the Order Scheme and the TransPennine Railway Route there a pathway by which changes to surface and groundwater hydrology could have an LSE on the habitats of qualifying species remains absent.	No
			Changes to air quality	There is considered to be no impact pathway for air quality effects; however, once operational, the Order Scheme will allow the use of electric trains rather than diesel trains, thereby improving air quality along the route.	No
			Introduction of INNS	There is no impact pathway by which the operational phase of the Order Scheme could result in the introduction of INNS that may result in an LSE on the habitats of qualifying species.	No

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South Pennine Moors (Phase 2) SPA Qualifying features	Conservation Objective	Phase of Scheme which may cause and effects	LSE Risk Pathway	LSE conclusions	Potential LSE
ARTICLE 4.2 QUALIFICATION (79/409/EEC): AN INTERNATIONALLY IMPORTANT ASSEMBLAGE OF BIRDS	<p>The extent and distribution of the habitats of the qualifying features</p> <p>The structure and function of the habitats of the qualifying features</p> <p>The supporting processes on which the habitats of the qualifying features rely</p> <p>The population of each of the qualifying features, and,</p> <p>The distribution of the qualifying features within the site</p>	Construction	Habitat loss and fragmentation – including consideration of functionally linked land	<p>The Order Scheme will not directly affect the South Pennine Moors (Phase 2) SPA. The SPA is approximately 980 m north of the Order Scheme that comprises the following construction works:</p> <p>a temporary highway diversion route between Harop Court Road and Boat Lane works to the western portal of Standedge Tunnel.</p> <p>These works along with all other works that form part of the Order Scheme will not indirectly result in any habitat loss or fragmentation within the SPA.</p> <p>The land adjacent to the existing railway line within the Order Scheme and up to 50 m from the boundary was assessed through a desk study and site surveys in November 2020²⁷. Land within these areas comprises grassland and woodland and were considered not to provide optimal habitat for ground nesting merlin, European golden plover and breeding birds within the qualifying assemblage, including red grouse, twite, ring ouzel, snipe, dunlin, curlew, common sandpiper and wheatear. These are predominantly migratory birds of moorland and moorland fringe habitat,</p>	No

²⁷ TransPennine Route Upgrade Work Package 2 – Stalybridge to Huddersfield – Ecological Constraints Report- Document ref: 151667-TSA-00-TRU-REP-W-EN-000924

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South Pennine Moors (Phase 2) SPA Qualifying features	Conservation Objective	Phase of Scheme which may cause and effects	LSE Risk Pathway	LSE conclusions	Potential LSE
				favouring young plantation woodland and rough grassland. Furthermore, many of these species are susceptible to disturbance, preferring more remote upland habitat away from human disturbance. Therefore, it is considered highly unlikely that any of these species would rely upon woodland and grassland in proximity to the Order Scheme. It is concluded that the Order Scheme is highly unlikely to result in an LSE on the SPA and qualifying features from habitat loss and fragmentation within the SPA and no functionally linked land was identified.	
			Species disturbance (visual, noise, vibration)	As above for ARTICLE 4.1 QUALIFICATION (79/409/EEC).	No
			Changes to water quality	As above for ARTICLE 4.1 QUALIFICATION (79/409/EEC).	No
			Changes to surface and groundwater hydrology	As above for ARTICLE 4.1 QUALIFICATION (79/409/EEC).	No
			Changes to air quality	As above for ARTICLE 4.1 QUALIFICATION (79/409/EEC).	No
			Introduction of INNS	As above for ARTICLE 4.1 QUALIFICATION (79/409/EEC).	No
		Operation	Habitat loss	As above for ARTICLE 4.1 QUALIFICATION	No

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South Pennine Moors (Phase 2) SPA Qualifying features	Conservation Objective	Phase of Scheme which may cause and effects	LSE Risk Pathway	LSE conclusions	Potential LSE
			and fragmentation – including consideration of functionally linked land	(79/409/EEC).	
			Species disturbance (visual, noise, vibration)	As above for ARTICLE 4.1 QUALIFICATION (79/409/EEC).	No
			Changes to water quality	As above for ARTICLE 4.1 QUALIFICATION (79/409/EEC).	No
			Changes to water quality Changes to surface and groundwater hydrology	As above for ARTICLE 4.1 QUALIFICATION (79/409/EEC).	No
			Changes to air quality	As above for ARTICLE 4.1 QUALIFICATION (79/409/EEC).	No

Likely Significant Effect Screening – In-combination

- 2.11.3 As the Screening assessment did not identify any LSEs and concluded ‘no effects’ due to an absence of impact pathways, there is no requirement for an in-combination assessment.

3. CONCLUSION

- 3.1.1 The following European Sites were considered at Screening:

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

- 3.1.2 Screening for LSEs identified that all effect pathways for the Order Scheme ‘alone’ could be screened out. As the presence of impact pathways was discounted, it was not necessary to undertake an in-combination assessment. Therefore, it can be concluded that the Order Scheme will not have any LSEs on any European Sites and there is no need to proceed to Stage 2 Appropriate Assessment.