

High Speed Rail (West Midlands - Crewe)

Environmental Statement

Volume 5: Technical appendices

Ecology and biodiversity

Habitats Regulations Assessment screening report for the Chartley Moss Site of Special Scientific Interest element of the Midlands Meres and Mosses Phase 1 Ramsar site and the West Midlands Mosses Special Area of Conservation (EC-017-005)



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Department for Transport

High Speed Two (HS2) Limited has been tasked by the Department for Transport (DfT) with managing the delivery of a new national high speed rail network. It is a non-departmental public body wholly owned by the DfT.

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A report prepared for High Speed Two (HS2) Limited:

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1 Introduction

- 1.1.1 As required by the Conservation of Habitats and Species Regulations (as amended)¹, this document considers the potential for the construction of the Proposed Scheme to have significant effects on the Chartley Moss component of the West Midlands Mosses Special Area of Conservation (SAC) and the Midland Meres and Mosses Phase 1 Ramsar site. Chartley Moss is also a Site of Special Scientific Interest (SSSI) and a National Nature Reserve (NNR).
- 1.1.2 At the Appraisal of Sustainability stage, HS2 Ltd prepared a Habitats Regulation Assessment (HRA) screening report for the Midland Meres and Mosses Phase 1 Ramsar site². This identified two SSSI components that were close enough to the proposed route to require further consideration. These were The Mere (Mere) and Betley Mere. It was concluded that Chartley Moss was more than 2km from the proposed route and therefore did not require further consideration. On the same basis there was no requirement to consider the effects on the SAC.
- 1.1.3 Further design development has shown the need to use the A518 Uttoxeter Road as a route for the Proposed Scheme construction traffic. At its closest point, the road is approximately 170m from Chartley Moss.
- 1.1.4 This HRA screening report therefore considers the potential for air quality and water quality effects from HS2 construction traffic on Chartley Moss.
- 1.1.5 Other potential effects have been screened out as not likely to cause any effect on the site and the conclusions in the original HRA screening report are still relevant.

¹ Conservation of Habitats and Species Regulations 2010 (as amended)

² HS2 Ltd (2012), *HS2 Phase 2: HRA Screening Report for Midland Meres and Mosses Phase 1 Ramsar Site*

2 West Midland Mosses SAC

- 2.1.1 The West Midland Meres and Mosses SAC incorporates a number of SSSIs in Cheshire, Shropshire and Staffordshire. The total area within the SAC is 184.6ha, of which the Chartley Moss SSSI/NNR forms the largest component at 107.1ha.
- 2.1.2 The SAC is selected on the basis of two Habitats Directive Annex 1 habitats³, these are natural dystrophic lakes and ponds, and transition mires and quaking bogs. Chartley Moss supports transition mires and quaking bogs habitat only.
- 2.1.3 The SAC citation states that transition mire and quaking bog in the West Midlands Mosses SAC represents Schwingmoor vegetation⁴. Floating rafts of *Sphagnum*-dominated vegetation have developed over semi-liquid substrates within basins. In the UK this type of *Sphagnum*-dominated vegetation with a scatter of sedges *Carex* species and cranberry *Vaccinium oxycoccos* is confined to this part of England and mid-Wales.
- 2.1.4 Chartley Moss is the largest area of 'Schwingmoor' in the UK. It shows an advanced stage of natural succession from open water to woodland formed on solid peat, and past drainage has accelerated this process. The condition of the whole of the site is unfavourable recovering.
- 2.1.5 Supplementary advice on the conservation objectives for the SAC⁵ state that the site is considered to be sensitive to changes in air quality. The relevant draft objective is to restore 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 Air Pollution Information System. It confirms that critical levels for atmospheric nitrogen and acidity are currently being exceeded.

³ Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora, 21 May 1992. Annex 1: Natural habitat types of community interest whose conservation requires the designation of special areas of conservation

⁴ Schwingmoor is defined in the West Midland Meres and Mosses SAC citation as an advancing floating raft of bog moss *Spahnum*, which grows from the edge of the pool and can completely cover over the pool.

⁵ Natural England (2016), *European Site Conservation Objectives: Draft supplementary advice on conserving and restoring site features*, 27 July 2016 West Midland Moss SAC, site code UK0013595

3 Midland Meres and Mosses Phase 1 Ramsar Site

- 3.1.1 The Midland Meres and Mosses Phase 1 Ramsar site has a total area of 510.9ha and is composed of a series of 16 discrete lowland open water (mere) and peatland (mosses) sites across the north-west Midlands. These sites, which include meres and their associated fringing habitats (e.g. reed swamps, fen, carr and damp pasture) and a smaller number of nutrient poor peat bogs, are individually designated as SSSIs for their flora and fauna. The main interest of the Ramsar site is the wide range of lowland wetland types and successional stages present within a distinct biogeographical area.
- 3.1.2 The Midland Meres and Mosses Phase 1 site is listed as a Ramsar site because it fulfils two criteria that identify it as a wetland of international importance. Under Ramsar Criterion 1, the site comprises a diverse range of habitats from open water to raised bog. Under Criterion 2 it supports a number of rare species of plants associated with wetlands (including five nationally rare species) and an assemblage of rare wetland invertebrates (three endangered insects and five other British Red Data Book species of invertebrates).
- 3.1.3 Chartley Moss supports the rare caddis flies *Neuronia clathrata* and *N. ruficrus*.

4 Potential effect on qualifying features of the SAC and Ramsar site

- 4.1.1 The A518 Uttoxeter Road in the vicinity of the Chartley Moss SSSI element of the West Midlands Mosses SAC and the Midland Meres and Mosses Phase 1 Ramsar site will be used by construction traffic accessing the construction area for the Proposed Scheme.
- 4.1.2 The land required for construction of the Proposed Scheme is more than 2km from the Chartley Moss SSSI element of the SAC and Ramsar site, and therefore the only activity that could cause any effects to the SSSI are those resulting from the use of the A518 Uttoxeter Road.
- 4.1.3 Heavy goods vehicles (HGVs) accessing the Proposed Scheme construction area to the west would use the A518 Uttoxeter Road for approximately four years between 2021 and 2025. Non-HGV traffic would also use the A518 Uttoxeter Road, prior and post its use as a HGV route, in 2021 (Quarter 4) and between 2025 (Quarter 1) and 2026 (Quarter 2). There is some additional general traffic between October 2020 and January 2021, and again from February 2025 to June 2026. It is not expected that construction traffic will need to use the A518 Uttoxeter Road after this time.
- 4.1.4 A traffic assessment shows that the annual average daily traffic (AADT) flows are below 200 for HGVs for each of the years during the construction period. The highest HGV AADT flow is 150 in 2021. In accordance with the Design Manual for Roads and Bridges⁶ guidance, the increase in construction traffic associated with the Proposed Scheme does not exceed the threshold which would trigger the need for an air quality assessment. On this basis there would be no likely significant effect on the SAC and Ramsar site due to air quality.
- 4.1.5 The A518 Uttoxeter Road crosses the Stony Brook close to Chartley Moss SSSI but this brook does not discharge to the SSSI, and there is rising ground between the A518 Uttoxeter Road and the SSSI where it passes 170m away. Any water quality issues arising from the slight increase in traffic are therefore considered not to be likely to give rise to significant effects.

⁶ Highway England (2007), *Design Manual for Roads and Bridges Volume 11, Section 3: Environmental Assessment Techniques*, Part 1 HA207/7 Chapter 3 section 3.12, <http://www.standardsforhighways.co.uk/ha/standards/dmrb/vol11/section3/ha20707.pdf>

5 In-combination effects

- 5.1.1 An in-combination assessment has been undertaken. No other proposed plans and projects have been identified that would have an in-combination effect and there are therefore no likely significant effects.

6 Conclusions

- 6.1.1 This HRA screening report considers the potential for the use of the A518 Uttoxeter Road for the Proposed Scheme construction traffic to have significant effects on the Chartey Moss SSSI element of the West Midlands Mosses SAC and the Midland Meres and Mosses Phase 1 Ramsar site.
- 6.1.2 The likely effects of increased traffic have been considered and the conclusion is that there are no likely significant effects either alone or in-combination.

7 References

Conservation of Habitats and Species Regulations 2010 (as amended).

Highways England (2007), Design Manual for Roads and Bridges Volume 11, Section 3: Environmental Assessment Techniques, Part 1 HA207/7 Chapter 3 section 3.12. Available online at: <http://www.standardsforhighways.co.uk/ha/standards/dmr/vol11/section3/ha20707.pdf>.

HS2 (2012), *HS2 Phase 2 HRA Screening Report for Midland Meres and Mosses Phase 1 Ramsar Site*.

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