



High Speed Two Phase 2a (West Midlands - Crewe)

Equality Impact Assessment Report



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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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1 Introduction

- 1.1.1 Consideration of equality issues has been, and will continue to be, an integral part of the planning, design, construction and operation of High Speed Two (HS2) Phase 2a, the Proposed Scheme. This Equality Impact Assessment (EQIA) Report describes the current understanding of the equality issues that will or may arise from construction and operation of the Proposed Scheme and the measures to be applied in future to reduce or offset them. In describing these issues, the report takes into account the measures that are already included in the scheme design and commitments made by HS2 Ltd regarding further mitigation and control processes.
- 1.1.2 This report is produced in accordance with the methodology set out in the EQIA Scope and Methodology Report (SMR)¹, published in September 2016. It also takes into account HS2 Phase 2a Information Paper H1: Equality, diversity and inclusion (EDI) policy², which outlines HS2 Ltd's approach to embedding inclusion in its workforce and in the planning, design, construction and operation of the Proposed Scheme. The report is informed by the feedback received on the working draft EQIA Report³ consultation, held between September and November 2016.
- 1.1.3 This EQIA report is intended primarily to inform decision-making about the Proposed Scheme. Equality issues will continue to be considered and addressed through the further design stages, the planning and delivery of construction, and the management and operation of the railway and its associated facilities.

1.2 Background overview of High Speed Two

- 1.2.1 High Speed Two (HS2) is a new high speed railway proposed by the Government to connect major cities in Britain. Stations in London, Birmingham, Leeds, Manchester and East Midlands will be served by high speed trains running at speeds of up to 225 miles per hour (mph) (360 kilometres per hour (kph)). Trains will also run beyond the HS2 network to serve destinations including South Yorkshire, Liverpool, Glasgow, Edinburgh, Newcastle and York.
- 1.2.2 In January 2012, following a consultation exercise, the Government announced its intention to develop a high speed rail network. The network will be brought forward in phases. The 2012 decision confirmed the Government's preferred route for a high speed line between London and the West Midlands, called Phase One. In November 2013, HS2 Ltd deposited a hybrid Bill in Parliament to seek powers for the construction and operation of Phase One. The High Speed Rail (London – West

¹ HS2 Ltd (2016), *HS2 Phase 2a: West Midlands to Crewe EQIA Scope and Methodology Report*. Available online at: <https://www.gov.uk/government/consultations/hs2-phase-two-west-midlands-to-crewe-draft-equality-impact-assessment-scope-and-methodology-report-consultation>.

² HS2 Ltd (2017), *High Speed Two (HS2) Phase 2a (West Midlands – Crewe), Information Paper H1: Equality, Diversity and Inclusion Policy*. Available online at: <https://www.gov.uk/government/organisations/high-speed-two-limited>.

³ HS2 Ltd (2016), *HS2 Phase 2a: West Midlands to Crewe Working Draft EQIA Report*. Available online at: <https://www.gov.uk/government/consultations/hs2-phase-2a-west-midlands-to-crewe-working-draft-equality-impact-assessment-eqia-report-consultation>.

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Midlands) Act received Royal Assent in February 2017 and initial works have commenced.

- 1.2.3 In January 2013, the Government announced its initially preferred route for Phase Two between the West Midlands, Leeds and Manchester. Following some minor amendments in July 2013, the proposed route was subject to a seven-month public consultation until January 2014.
- 1.2.4 In two reports, *HS2 Plus*⁴ and *Rebalancing Britain*⁵, Sir David Higgins recommended accelerating the section of the Phase Two route between the West Midlands and Crewe to deliver some of the benefits that HS2 will bring to the region sooner. In the November 2015 Command Paper⁶, the Government announced its intention to bring forward the route between the West Midlands and Crewe, with connections to the conventional rail network, and set out the preferred line of route for what is known as Phase 2a.
- 1.2.5 This EQIA Report covers Phase 2a (referred to as 'the Proposed Scheme'), the western section of Phase Two between the West Midlands and Crewe. Phase 2a comprises approximately 36 miles (58km) of HS2 main line (including the section which would connect with and form the first part of Phase 2b) and two spurs (approximately 4 miles (6km)) south of Crewe that will allow trains to transfer between the HS2 main line and the West Coast Main Line (WCML). This will enable high speed trains to call at Crewe Station and to provide onward services beyond the HS2 network, to the North West of England and to Scotland. The proposed HS2 route highlighting the Proposed Scheme is shown in Figure 1: The HS2 Core Network.
- 1.2.6 The powers for Phase 2a are being sought through a hybrid Bill, with the aim of receiving Royal Assent by the end of 2019. Construction of the Proposed Scheme will commence in 2020, ahead of the rest of Phase Two, with operation planned to start in 2027, six years earlier than originally planned.
- 1.2.7 Phase 2b comprises the remainder of Phase Two, between Crewe (where it would connect to the Proposed Scheme) and Manchester, and between the West Midlands and Leeds, completing what is known as the 'Y network'. The powers for Phase 2b will be sought through a separate hybrid Bill that is expected to be laid before Parliament in 2019. Construction of Phase 2b is anticipated to commence in approximately 2023, with operation planned to start by 2033.

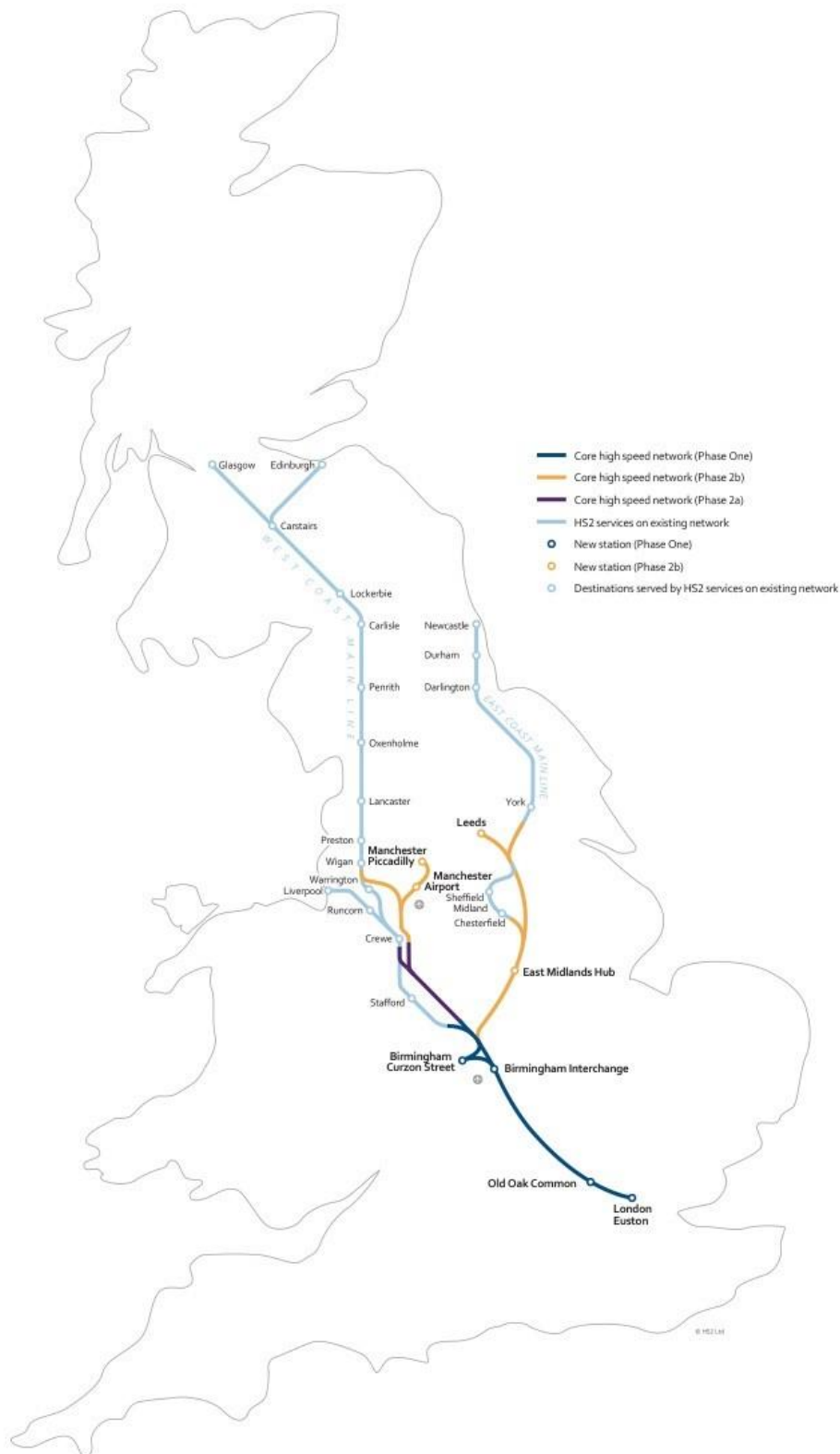
⁴ HS2 Ltd (2014), *HS2 Plus – A report by David Higgins*. Available online at: <https://www.gov.uk/government/publications/hs2-plus-a-report-by-david-higgins>.

⁵ HS2 Ltd (2014), *Rebalancing Britain – From HS2 towards a national transport strategy*. Available online at: <https://www.gov.uk/government/publications/rebalancing-britain-from-hs2-towards-a-national-transport-strategy>.

⁶ Department for Transport (DfT) (2015), *High Speed Two: East and West: The next steps to Crewe and beyond*. Available online at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/480712/hs2-east-and-west.pdf.

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Figure 1: The HS2 Core Network



1.3 HS2 Phase 2a route description

- 1.3.1 The Proposed Scheme will comprise a high speed railway line from the end of the Phase One route at Fradley, to Crewe. It will run north-east of Stafford and south-west of Stone, passing through a mainly rural area in Staffordshire and Cheshire East, where a number of small settlements are located.
- 1.3.2 The route of the Proposed Scheme will connect with the Manchester spur that forms part of Phase One at Fradley, to the north-east of Lichfield. It will continue northwards across the River Trent floodplain, over a series of embankments and viaducts, passing south-east of Kings Bromley over Bourne Brook, the A515 Lichfield Road and the A513 Rugeley Road on viaduct. The route will continue over the River Trent and will run 500m west of Blithbury through multiple cuttings. It will then pass between the villages of Stockwell Heath and Colton and over Moreton Brook on viaduct.
- 1.3.3 The route will continue in cutting with a retaining wall past Mayfield Children's Home, which occupies Moreton House (Grade II listed), and will emerge onto embankment. The route will cross the A51 Lichfield Road and will run on viaduct over the existing Macclesfield to Colwich Line, adjacent to the Great Haywood Marina, cross the Trent and Mersey Canal and then cross the River Trent, for a second time. The route will then continue on embankment, crossing Lionlodge Covert, an area of deciduous woodland and designated Local Wildlife Site (LWS).
- 1.3.4 The route will run adjacent to Ingestre Park and through Ingestre Park Golf Club in cutting, with Pasturefields Salt Marsh Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI) approximately 900m to the north of the route of the Proposed Scheme. The route will then run through an area used for car parking and camping in the southern part of Staffordshire County Showground in cutting, passing under the A518 Weston Road. It will then continue through Hopton passing through a landscaped retaining wall screened by a false cutting⁷ and will then continue in cutting. It will then pass Marston on embankment, and continue past Yarlet in cutting running beneath the A34 Stone Road.
- 1.3.5 The route will continue on a series of embankments and cuttings, broadly following the M6 and crossing Filly Brook and the Norton Bridge to Stone Railway on viaduct.
- 1.3.6 The route will then cross Yarnfield Lane, where an infrastructure maintenance facility referred to as the Stone Infrastructure Maintenance Base - Rail (IMB-R) will be located. Railway access tracks to connect the route with the IMB-R will run along the western side of the route, with a connection to the Norton Bridge to Stone Railway. The route will then cross the M6 on viaduct near Stone and Yarnfield.
- 1.3.7 The route will pass to the north of Swynnerton on an embankment. Continuing north, the route will pass Swynnerton Old Park in cutting, passing under the A519 Newcastle Road. It will continue into the Meece valley on embankment and then cross Meece Brook on viaduct, before passing through higher ground west of Whitmore.
- 1.3.8 The route will pass under the A53 Newcastle Road to the south-east of Whitmore Heath, where it will then enter a short section of cut-and-cover tunnel. This will be

⁷ A means of screening a linear feature (e.g. a railway) by forming embankments on both sides of the feature.

followed by a twin bore tunnel under the settlement of Whitmore Heath. The route will pass through Whitmore Wood Ancient Woodland in a cutting with a retaining wall on the north-east side to reduce the loss of ancient woodland. The route will enter the River Lea valley on an embankment, then cross the WCML, the Stoke to Market Drayton Railway (also known as the Silverdale line of the Stoke to Market Drayton Railway), the River Lea and the Madeley Chord Railway on viaduct. The route will then continue on embankment, passing several historical heritage assets, including Hey House (Grade II listed) and Old Madeley Manor Scheduled Monument.

- 1.3.9 The route will continue towards the village of Madeley passing under the A525 Bar Hill Road before entering a twin bore tunnel, at Bar Hill Ancient Woodland. North of Madeley the route will continue in a shallow cutting before crossing the River Lea and associated floodplain and Checkley Brook on a viaduct.
- 1.3.10 The route will then run on embankment before transitioning into a shallow cutting, passing under Checkley Lane and will then continue northwards crossing over the realigned Den Lane.
- 1.3.11 The route will then continue in cutting and will pass under the realigned Newcastle Road before terminating in a retained cutting at a headwall⁸ to the south of Crewe. This will form the boundary between the Proposed Scheme and Phase 2b.

HS2 spurs

- 1.3.12 As well as the main Phase 2a route, the Proposed Scheme will also include two spurs that will allow trains to transfer between the HS2 main line and the existing WCML northbound towards Crewe (northbound spur) and southbound towards London (southbound spur).
- 1.3.13 The spurs will diverge from the HS2 main line on both sides at the point where the HS2 main line passes into the Crewe South cutting, to the north-east of Grange Farm. The southbound spur will initially run along the east side of the HS2 main line and the northbound spur will initially run along the west side.
- 1.3.14 The northbound spur will then cross over the HS2 main line on viaduct and the two spurs will then converge on the east side of the HS2 main line, 500m north of the Blakenhall viaduct. The spurs will continue together for 3km before connecting into the existing WCML, 200m north of the Newcastle Road overbridge.
- 1.3.15 To facilitate the connection of the spurs to the WCML, modifications will be required to the existing WCML infrastructure in the South Cheshire area. This will include a new section of the WCML to incorporate the realignment of an existing northbound track along this line and an extension of the existing connection lines to the Basford Hall sidings.
- 1.3.16 A number of rail systems modifications will also be required along the WCML and to enable a new island platform at Crewe Station. This will include new track works, realignment of existing tracks, new switches and crossings, the relocation or addition

⁸ A headwall is the wall where the route of the Proposed Scheme terminates.

of overhead line equipment, and modifications to signalling, telecommunications, power and other related equipment.

New platform at Crewe Station

- 1.3.17 To accommodate the additional rail services, the existing Cardiff to Manchester Piccadilly services will be diverted via the Manchester Independent Lines tunnel at Crewe. A new island platform will be constructed at Crewe Station to accommodate this service. This will be constructed as part of the Proposed Scheme

Modifications to the West Coast Main Line to the north of Crewe

- 1.3.18 Additional modifications will be required to the WCML to the north of Crewe at Maw Green and Sandbach. This includes railway systems modifications and reconfiguration of track layouts.

1.4 Design development

- 1.4.1 A number of changes have been made to the design of the Proposed Scheme since the consultation on the working draft EQIA Report and the working draft Environmental Impact Assessment (EIA) Report⁹ in September 2016. The key changes include (all dimensions are approximate):

- the infrastructure maintenance depot (IMD) previously proposed at Crewe will now be located near Stone on the site of the construction railhead, in the form of the Stone IMB-R. Due to this change, the maintenance loops proposed at Pipe Ridware are no longer required¹⁰;
- the Crewe South portal will be located 340m south of the location previously proposed, 960m south of the A500 Shavington Bypass;
- revisions to the lengths and heights of viaducts and embankments on various sections of the route;
- revisions to the depths of cuttings at various points along the route;
- introduction of a retaining wall at the southern portal of Madeley tunnel, and associated modification to Madeley cutting;
- development of mitigation, including: noise barriers, landscape bunds¹¹, compensatory planting, replacement ponds, and green bridges along the route of the Proposed Scheme;

⁹ Hs2 Ltd (2016), *HS2 Phase 2a: West Midlands to Crewe Working Draft Environmental Impact Assessment Report*. Available online at: <https://www.gov.uk/government/collections/hs2-phase-2a-west-midlands-to-crewe-working-draft-environmental-impact-assessment-report>.

¹⁰ Maintenance loops were originally proposed as part of the scheme assessed in the working draft EIA Report. This was because an IMD was proposed towards the northern end of the route of the scheme at Crewe. Maintenance loops were therefore required at Pipe Ridware, to enable maintenance trains to be stabled temporarily during the day when maintenance activities would have been undertaken over a number of nights, without having to return to the IMD. However, the maintenance facility (the IMB-R) will now be located more centrally in the Stone to Swynnerton community area, meaning maintenance trains will be better positioned for efficient dispatch for maintenance works across the route in both directions, avoiding the need for maintenance loops.

¹¹ A bund is an earthworks structure designed to provide either visual screening or noise attenuation to receptors in close proximity.

- removal of a 1.4km section of the WCML modifications located near Lower Den Farm;
- introduction of an additional platform (110m in length) at Crewe Station to accommodate rail services;
- revisions to roads and public rights of way (PRoW) works: including the realignment of some roads and provision of additional overbridges and underbridges;
- revisions to the size and locations of balancing ponds and provision of additional balancing ponds where required;
- a power connection from National Grid Rugeley substation to Newlands Lane auto-transformer feeder station¹² to provide power to the Proposed Scheme (4km in length, with 1.7km underground and 2.3km via overhead line);
- revisions to the location of some tunnel portal buildings; and
- revision to the number and locations of proposed auto-transformer¹³ and auto-transformer feeder stations.

1.4.2 The Proposed Scheme now includes six borrow pits: four in the Fradley to Colton community area (CA1), one in the Whitmore Heath to Madeley community area (CA4) and one in the South Cheshire community area (CA5), to provide sufficient material of an appropriate quality to construct railway embankments.

1.5 Equality Act 2010 and the Public Sector Equality Duty

1.5.1 Under the Equality Act 2010¹⁴, a public authority, in the exercise of its functions (and a person exercising public functions) is subject to the Public Sector Equality Duty (PSED). The PSED requires public bodies to have due regard to three aims, to:

- eliminate discrimination, harassment and victimisation and any other conduct that is prohibited by or under the Act;
- advance equality of opportunity between people who share a relevant protected characteristic and people who do not share it; and
- foster good relations between people who share a relevant protected characteristic and those who do not share it.

1.5.2 The Equality Act 2010 explains that the second aim (advancing equality of opportunity) involves, in particular, having due regard to the need to:

- remove or minimise disadvantages suffered by people due to their protected characteristics;

¹² The buildings, switchgear and transformers forming an auto-transformer feeder station will be up to 7.5m in height. Lighting protection masts will be up to 16m in height.

¹³ The buildings, switchgear and transformers forming an auto-transformer station will be up to 5m in height.

¹⁴ *Equality Act 2010*. London, Her Majesty's Stationery Office.

- take steps to meet the needs of people with certain protected characteristics where these are different from the needs of other people; and
- encourage people with certain protected characteristics to participate in public life or in other activities where their participation is disproportionately low.

1.5.3 In addition, section 20 of the Equality Act 2010 requires decision-makers to make reasonable adjustments in certain circumstances. Where a disabled person is at a substantial disadvantage in comparison with people who are not disabled, there is a duty to take reasonable steps to remove that disadvantage by (i) changing provisions, criteria or practices; (ii) altering, removing or providing a reasonable alternative means of avoiding physical features; and (iii) providing auxiliary aids¹⁵. The Act makes it lawful to treat a person with a protected characteristic more favourably than others. In the case of a disabled person, the Act requires service providers to anticipate their needs by considering who might use a service and making appropriate reasonable adjustments before a request is received. The EQIA enables HS2 Ltd to identify where such adjustments may be required, such as noise insulation or maintaining accessible routes, in order to meet its anticipatory duty.

1.5.4 Relevant guidance on fulfilling the PSED includes:

- Equality and Human Rights Commission (EHRC), *Equality Act 2010: Technical Guidance on the Public Sector Equality Duty England*¹⁶;
- EHRC, *Meeting the Equality Duty in Policy and Decision-Making England (and non-devolved public authorities in Scotland and Wales)*¹⁷; and
- Government Equalities Office, *Equality Act 2010: Public Sector Equality Duty What Do I Need To Know? A Quick Start Guide for Public Sector Organisations*¹⁸.

1.6 Protected characteristics and protected characteristic groups

1.6.1 The list below outlines each protected characteristic relevant to the PSED and provides a supporting definition based on EHRC Technical Guidance¹⁹:

- age: this refers to people defined by either a particular age or a range of ages;
- disability: a disabled person is defined as someone who has a physical or mental impairment that has a substantial and long-term adverse effect on his or her ability to carry out normal day-to-day activities;

¹⁵ Equality and Human Rights Commission (EHRC) (2014), *Technical Guidance on the Public Sector Equality Duty: England*. Available online at: <https://www.equalityhumanrights.com/en/publication-download/technical-guidance-public-sector-equality-duty-england>.

¹⁶ EHRC (2014), *Technical Guidance on the Public Sector Equality Duty: England*. Available online at: <https://www.equalityhumanrights.com/en/publication-download/technical-guidance-public-sector-equality-duty-england>.

¹⁷ EHRC (2014), *Meeting the Equality Duty in Policy and Decision-Making England (and non-devolved public authorities in Scotland and Wales)*. Available online at: <https://www.equalityhumanrights.com/en/publication-download/meeting-equality-duty-policy-and-decision-making-england-and-non-devolved>.

¹⁸ Government Equalities Office (2011), *Equality Act 2010: Public Sector Equality Duty What Do I Need To Know? A Quick Start Guide for Public Sector Organisations*. Available online at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/85043/equality-duty.pdf.

¹⁹ Definitions based on those provided in EHRC (2013), *Equality Act 2010: Technical Guidance on the Public Sector Equality Duty England*.

- gender reassignment: this refers to people who are proposing to undergo, are undergoing, or have undergone a process for the purpose of reassigning their gender identity;
- marriage and civil partnership: marriage can be between a man and a woman or between two people of the same sex. Same-sex couples can also have a civil partnership. Civil partners must not be treated less favourably than married couples;
- pregnancy and maternity: pregnancy is the condition of being pregnant or expecting a baby. Maternity refers to the period after the birth. In the non-work context, protection against maternity discrimination is for 26 weeks after giving birth;
- race: the Equality Act 2010 defines race as encompassing colour, nationality (including citizenship) and ethnic or national origins;
- religion or belief: religion means any religion a person follows. Belief means any religious or philosophical belief, and includes those people who have no formal religion or belief;
- sex: this refers to a man or to a woman or a group of people of the same sex, while gender refers to the wider social roles and relationships that structure men's and women's, boys' and girls' lives; and
- sexual orientation: a person's sexual orientation relates to their emotional, physical and/or sexual attraction and the expression of that attraction.

1.7 Aims of the Equality Impact Assessment

- 1.7.1 The EQIA contributes towards enabling HS2 Ltd's active fulfilment of its PSED obligations both during the design stage of the Proposed Scheme and during subsequent design development. The EQIA is a predictive assessment, considering in advance of implementation, the potential impacts arising from the construction and operation of the Proposed Scheme, and the potential effects of these for protected characteristic groups. The EQIA has also served to inform design, mitigation and other relevant project-related decisions.
- 1.7.2 The objectives underpinning the EQIA are to:
- identify the presence of protected characteristic groups along the route of the Proposed Scheme, in particular where such groups are disproportionately represented amongst those most likely to be affected by the Proposed Scheme;
 - draw on engagement with stakeholders and literature review to inform the understanding of likely needs of those groups, relevant to identified potential effects;
 - assess the potential effects of the Proposed Scheme's construction and operation for protected characteristic groups, including how the Proposed Scheme could affect relations between groups;

- identify measures, including reasonable adjustments, to avoid, minimise and/or mitigate potential negative equality effects on protected characteristic groups; and
- identify relevant measures, which as part of the Proposed Scheme design or mitigation, can further enhance equality, address existing disadvantage or support good relations between protected characteristic groups and other people.

1.8 Further steps to fulfil the Public Sector Equality Duty

- 1.8.1 The PSED is an ongoing duty requiring consideration of equality issues by public bodies. This report contributes to fulfilling that obligation, by reporting findings of potential effects on equality as a result of the Proposed Scheme, based on the available information about people with protected characteristics in affected communities. As the Proposed Scheme progresses, further equality issues may be identified and will require consideration in decision-making by HS2 Ltd and may have implications for other relevant public bodies, including the Department for Transport.
- 1.8.2 HS2 Ltd will ensure that potential effects identified in this EQIA Report are kept under review, and where appropriate, the baseline evidence will be updated and further stakeholder engagement undertaken. That further information and appraisal of potential effects will be used to inform future decisions.
- 1.8.3 HS2 Ltd has appointed an equality lead responsible for overseeing monitoring and reporting of equality effects during the construction of the Proposed Scheme. The equality lead will continue to bring equality issues to the attention of the project team and is responsible for reporting on the effectiveness of measures taken to mitigate potential or actual negative effects as well as positive actions to promote equality.

1.9 Relationship to the Environmental Statement (ES)

- 1.9.1 Under the Equality Act 2010, there is no requirement to undertake an EQIA, and such an exercise is neither necessary nor sufficient for compliance with the PSED. HS2 Ltd has taken the view that, in this instance, an EQIA will materially assist in the fulfilment of the PSED in highlighting the areas where particular attention should be paid to the needs of protected characteristic groups. The effects of the Proposed Scheme on protected characteristic groups will be monitored and assessed on an on-going basis.
- 1.9.2 This EQIA Report considers the equality effects of the Proposed Scheme based on the design that is reported in the High Speed Two (HS2) Phase 2a (West Midlands – Crewe) Environmental Statement (ES). It draws on information provided in the ES, however, it does not use the same assessment process or significance criteria to judge the significance of effects. The 'test' the EQIA uses is whether or not there is potential for a differential or disproportionate effect on protected characteristic groups (see Section 2.3).
- 1.9.3 The EQIA draws on the lessons learned from Phase One reports and public consultations. It has followed the approach set out in the Phase 2a EQIA SMR and used in the working draft EQIA Report. The EQIA and ES have shared data gathering across assessment topics, particularly with regard to the community baseline data.

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The EQIA has also drawn on baseline evidence and assessment from other ES topics, including the health assessment, where relevant. The EQIA assesses whether any of the effects identified in the health, sound, noise and vibration, air quality, landscape and visual, socio-economic and community assessment sections of the ES could have disproportionate or differential effects on groups with protected characteristics.

- 1.9.4 The approach to the EQIA also reflects the emphasis on integrated stakeholder engagement for Phase 2a. This approach is outlined in Section 3.

2 Scope and methodology

2.1 Introduction

2.1.1 This section of the report summarises the scope and methodology for the assessment of potential equality effects associated with the construction and operation of the Proposed Scheme. The methodology is set out in detail in the EQIA SMR, published in September 2016. The draft EQIA SMR²⁰ was issued for consultation from 8 March to 13 May 2016 and amended in response to consultation feedback.

2.2 Scope of the Equality Impact Assessment

2.2.1 The scope of the EQIA takes account of the requirements of the PSED: to eliminate discrimination, harassment and victimisation and any other conduct that is prohibited by or under the Act; advance equality of opportunity between people who share a relevant protected characteristic and people who do not; and foster good relations between people who share a relevant protected characteristic and those who do not.

2.2.2 This report considers potential equality effects on people sharing protected characteristics, grouped in relation to key equality concerns. Further information on potential equality effects is provided in Section 5.1 and in the EQIA SMR.

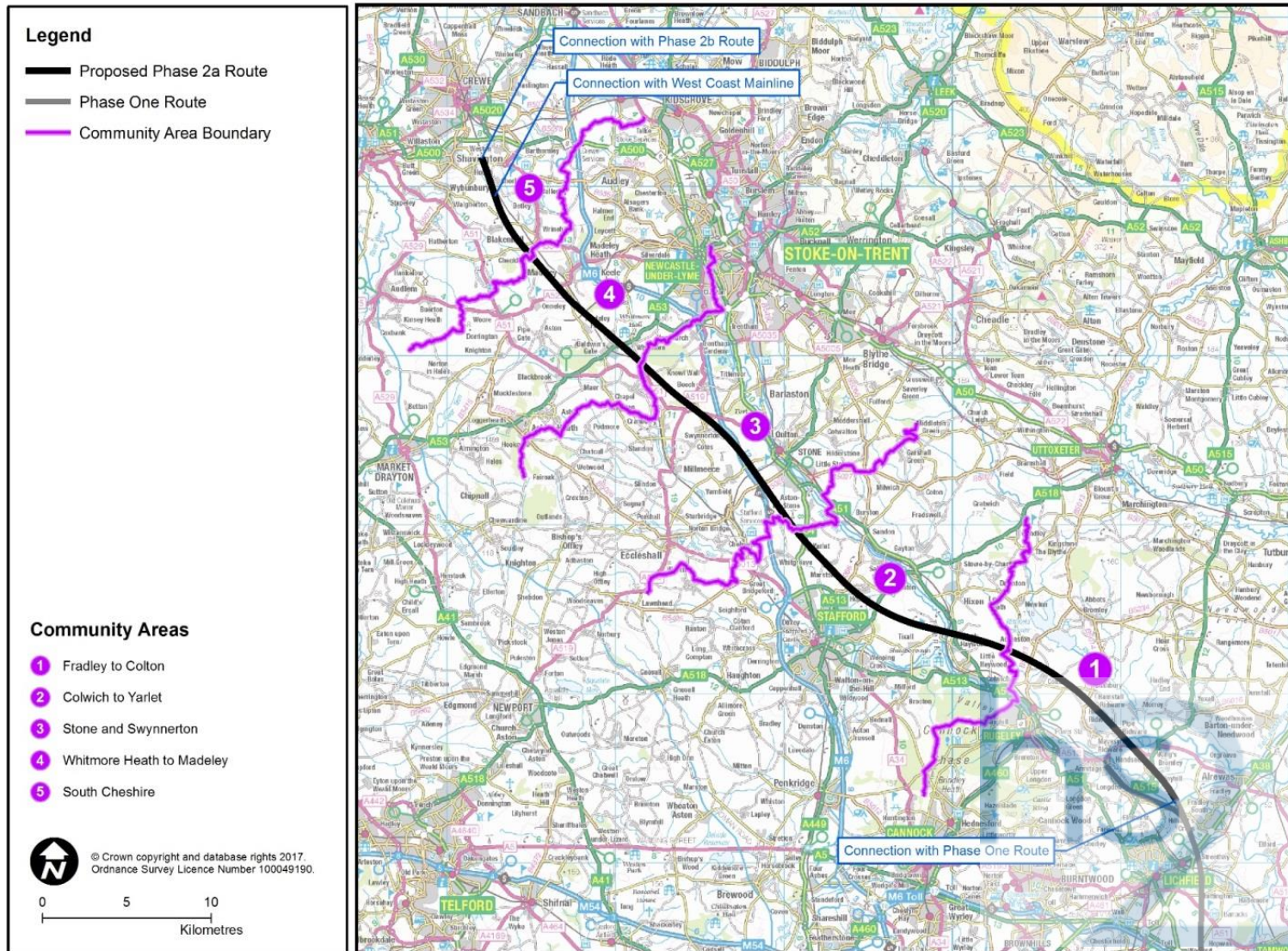
Spatial scope

2.2.3 The spatial scope of the EQIA is guided by the assessments within the ES and professional experience and judgement. An overarching spatial approach based around the following five community areas (shown in Figure 2: Community areas) is used across the ES and the EQIA, ensuring consistency between the assessments:

- community area 1: Fradley to Colton;
- community area 2: Colwich to Yarlet;
- community area 3: Stone and Swynnerton;
- community area 4: Whitmore Heath to Madeley; and
- community area 5: South Cheshire.

²⁰ HS2 Ltd (2016), *HS2 Phase 2a: West Midlands to Crewe EQIA Scope and Methodology Report – draft for consultation*, March 2016. Available online at: <https://www.gov.uk/government/consultations/hs2-phase-two-west-midlands-to-crewe-draft-equality-impact-assessment-scope-and-methodology-report-consultation>.

Figure 2: Community areas



- 2.2.4 Further information on the spatial scope of the assessment is provided in the EQIA SMR.

Temporal scope

- 2.2.5 The report considers potential equality effects arising during the construction period (2020 – 2026) and once the Proposed Scheme is operational (starting in 2027).

2.3 Assessment methodology

Guidance

- 2.3.1 There is a limited range of methodological guidance available. The methodology for this EQIA is set out in the EQIA SMR and draws on lessons learned from HS2 Phase One, as well as previous EQIAs undertaken for comparable major infrastructure projects. Further information on the guidance used to inform the assessment is provided in the EQIA SMR.

Evidence base

- 2.3.2 This EQIA considers relevant evidence, including baseline data, feedback from stakeholder engagement and published research on equality issues. Appendix A to this report provides a summary of published evidence obtained in order to understand the needs of protected characteristic groups and Appendix B provides relevant baseline evidence at the local, regional and national levels. A summary of baseline evidence is included in Section 4 of this report. Further information on the data used to build the evidence base for the assessment is provided in the EQIA SMR.

Stakeholder engagement

- 2.3.3 Engagement enables communities and specialist, expert and technical groups to comment on and inform the scope and methodology of the assessment, the enhancement of beneficial effects, and the mitigation of disproportionate or differential effects. The approach to stakeholder engagement to inform the EQIA is described in full in Section 3 and in the EQIA SMR. Section 3 also provides a summary of stakeholder engagement undertaken to date.

Assessment criteria

- 2.3.4 The EQIA does not assign a level of significance to effects. Equality effects are defined as where an impact is identified as likely to have disproportionate or differential effects on groups of people with protected characteristics. The EQIA considers effects on groups of people rather than on individuals. Differential and disproportionate effects may impact on particular individuals but these are not reported, due to data protection considerations.
- 2.3.5 A disproportionate equality effect arises when an impact has a proportionately greater effect on protected characteristic groups than on other members of the general population at a particular location. For the purposes of this EQIA, a disproportionate effect can arise in two main ways, either:
- where an impact is predicted on a residential area, where protected characteristic groups are known to make up a greater proportion of the

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affected resident population than their representation in the wider local authority district and/or county/region; or

- where an impact is predicted on a community resource predominantly or heavily used by protected characteristic groups (e.g. primary schools attended by children; care homes catering for very elderly people).

- 2.3.6 A differential equality effect is one which affects members of a protected characteristic group differently from the rest of the general population because of specific needs, or a recognised sensitivity or vulnerability associated with their protected characteristic.
- 2.3.7 In some cases, protected characteristic groups could be subject to both disproportionate and differential equality effects.
- 2.3.8 Where the characteristic of affected individuals is not known, then the EQIA is unable to judge whether there is a disproportionate or differential effect. Should this information subsequently be made available to HS2 Ltd, the potential for further equality effects will be addressed.

3 Stakeholder engagement and public consultation

3.1 Introduction

3.1.1 The stakeholder engagement programme is designed to gather information on protected characteristic groups and local sensitivities, and to identify potential equality effects of the Proposed Scheme. Stakeholder engagement ensures that the needs and considerations of stakeholders are taken into account in an iterative process of design, assessment and mitigation. The aim is to identify issues early to enable the timely integration of any consequent changes into the design and assessment of the Proposed Scheme.

3.1.2 This section of the report describes the approach taken to stakeholder engagement.

3.2 Objectives

3.2.1 The EQIA stakeholder engagement process has not set out to solicit the views of large numbers of people, but rather to engage specifically with people with protected characteristics and other identified stakeholders about potential equality effects to begin to consider potential mitigation. The primary mechanism for this interaction is through face-to-face meetings.

3.2.2 The key objectives of the EQIA stakeholder engagement process have been to:

- identify protected characteristic groups within each local authority area;
- identify facilities and services potentially affected by the construction or operation of the Proposed Scheme that may be used by people with protected characteristics;
- engage with representatives of facilities and services so identified with a view to understanding their operation and use, including user profiles; and
- engage with identified individuals or representatives of protected characteristic groups to better understand how the construction and operation of the Proposed Scheme might impact differently on those members of the community.

3.3 Stakeholder engagement methodology

Identifying stakeholders

3.3.1 During the preparation of the EQIA, engagement with four main stakeholder groups was undertaken on the basis of their proximity to the route and their relevance to the assessment:

- local authority equality and diversity officers (titles may differ between local authorities) along the route of the Proposed Scheme;
- relevant public bodies and statutory organisations such as the Equality and Human Rights Commission (EHRC);

- parish councils along the route of the Proposed Scheme; and
- specific protected characteristic groups and organisations that support or represent people with protected characteristics.

Methods of engagement

3.3.2 Face-to-face meetings have been held with relevant members of staff at the following local authorities:

- Staffordshire County Council;
- Stafford Borough Council;
- Lichfield District Council;
- Newcastle-under-Lyme Borough Council; and
- Cheshire East Council.

3.3.3 These were preliminary meetings to introduce the Proposed Scheme and the approach to the EQIA.

3.3.4 Engagement with stakeholders has identified potentially sensitive resources and receptors²¹ along the route of the Proposed Scheme. Wherever possible, HS2 Ltd has endeavoured to hold face-to-face meetings in order to develop a full understanding of the impact of the Proposed Scheme, the potential for equality effects, and any suitable mitigation that may be required.

3.3.5 Meetings have so far been held with representatives from: Yarlet School; Rugeley School; Upper Moreton Farm; Mayfield Children's Home; and Conservation, Horticulture and Agriculture for the Disabled Society (CHADS).

3.3.6 Where the need arises, HS2 Ltd has taken and will continue to take specialist advice to explore and determine appropriate measures to mitigate effects on groups with specific sensitivities.

3.3.7 In addition, a meeting was held with the EHRC.

3.4 Consultation on the working draft EQIA Report and other consultations

3.4.1 The working draft EQIA Report was formally consulted on between 13 September and 7 November 2016. Parallel consultations on refinements to the design and the working draft EIA Report were also undertaken during this period. As part of the process of consultation, stakeholders were invited to comment on the scheme (as presented in

²¹ Resources are residential dwellings and community facilities and infrastructure such as education, health, emergency services, places of worship, sports and recreational facilities, open spaces, and public rights of way (PRoW). Receptors are the residents or tenants of residential properties, and users and beneficiaries of resources including for example local residents, community groups, pupils, patients, congregations, employees, owners, and organisations running the resources.

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the working draft EIA report), the proposed Design Refinements and the working draft EIA and EQIA reports.

- 3.4.2 Hs2 Ltd's response to issues raised through the working draft EQIA Report consultation are summarised in the EQIA Consultation Summary Report, published separately²².

²² HS2 Ltd (2017), *Phase 2a West Midlands - Crewe Working Draft Equality Impact Assessment Report: Consultation Summary Report*. Available online at: <https://www.gov.uk/government/organisations/high-speed-two-limited>.

4 Baseline

4.1 Introduction

4.1.1 This section of the report presents relevant baseline data. Its purpose is to establish the community profile along the route of the Proposed Scheme with information and data that is relevant for the EQIA.

4.2 Data collection

4.2.1 Data has been collected at ward²³ level within each of the five community areas, within approximately 1km either side of the centre line of the route of the Proposed Scheme. National and district/borough level data has been included for comparison purposes.

4.2.2 Baseline information that relates to the nine protected characteristic groups was collected where available. These comprise: age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion and belief, sex and sexual orientation. Additional data on employment, the economy and education has also been included to better understand the community profile. In addition, for each of the five community areas, potentially sensitive community resources and facilities have been identified, as these could be used by groups with protected characteristics.

4.2.3 Data sources for the baseline information include the: 2011 Office for National Statistics Census of Population, ('the Census') data; 2015 Index of Multiple Deprivation data; 2015 HMRC data on children in low income families and equality and diversity information from relevant local authorities.

4.2.4 Data from an Equality Analysis published as part of the HS2 Phase Two Sustainability Statement²⁴ was also used to identify potential effects on protected characteristic groups, and 'clusters' of protected characteristic groups along the Phase Two route. The analysis provided the context for the baseline data collection for the EQIA. The study was conducted on behalf of HS2 Ltd in July 2013, as part of an appraisal of sustainability of the proposed Phase Two route from the West Midlands to Manchester, Leeds and beyond, and the main alternatives.

4.2.5 A Department for Transport (DfT) EQIA screening report on High Speed Rail, published in 2011²⁵, also identified key aspects of the Proposed Scheme relevant to the assessment of equality effects. This screening report helped inform the scope of the EQIA.

4.2.6 Community facilities and resources, including schools and churches, in proximity to the Proposed Scheme were identified. The study area for this process was taken as

²³ Wards are used mainly for electoral and are local authority areas used by the Office for National Statistics. A detailed description of ward level statistic use is provided in Office for National Statistics (ONS), *Census geography*. Available online at: <https://www.ons.gov.uk/methodology/geography/ukgeographies/censusgeography>.

²⁴ HS2 Ltd (2013), *High Speed Rail. Consultation on the route from the West Midlands to Manchester, Leeds and beyond. Sustainability Statement, Appendix A – Equality Analysis*. London, HS2 Ltd.

²⁵ Department for Transport (DfT) (2011), *High Speed Rail: Investing in Britain's Future - Equality Impact Screening*. London, Her Majesty's Stationary Office (HMSO).

the area that encompasses the extent of the likely significant environmental effects of the Proposed Scheme. These facilities were cross-checked with any information held by other technical disciplines including the community team and the stakeholder engagement team. Further scoping work for community facilities and resources was conducted during engagement meetings with relevant local authorities along the route. A list of community facilities within the study area is provided in Appendix B, Community Profile.

- 4.2.7 The Census does not collect data on sexual orientation, and there is very little data available at the local level. A recent research review by Public Health England synthesised data from 15 national surveys and estimated that 2.5% of adults in England identify as lesbian, gay, bisexual or other²⁶. However, this is likely to be an underestimate, and conceals significant regional variation²⁷. In the absence of reliable local data, estimates have not been provided for community areas.
- 4.2.8 The Census does not collect data on gender reassignment. There is no official estimate of the transgender population²⁸.

Staffordshire Locality Profile

- 4.2.9 Staffordshire County Council produces a locality profile for each district and borough within the county, covering community areas 1 to 4. These provide information at ward level to enable a better understanding of community characteristics, and include a 'risk index', which can be used to identify priorities and support the effective targeting of resources²⁹.
- 4.2.10 The risk index looks at the following 12 indicators in order to identify areas with high levels of need: income deprivation; children in poverty; premature mortality; preventable mortality; emergency admissions; long-term adult social care users; out-of-work benefits; GCSE attainment; total recorded crime; anti-social behaviour; excess weight; and older people living alone. A ward is considered low need if none of these indicators is higher than the England average; medium need if one to three indicators are higher than the England average; and high need if more than three indicators are higher than the England average.

4.3 Community profile overview

- 4.3.1 The route passes through areas of Staffordshire and Cheshire East that are predominantly rural in nature. The grid connection to supply power to the Proposed Scheme will run through the ward of Brereton and Ravenhill, part of which is within the town of Rugeley. Other than in Rugeley and Crewe, the population is generally concentrated in villages and rural settlements, and population density is low. Deprivation is also generally relatively low, with some areas falling within the 20%

²⁶ Public Health England (PHE) (2017), *Producing modelled estimates of the size of the lesbian, gay and bisexual (LGB) population of England*. Available online at:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/585349/PHE_Final_report_FINAL_DRAFT_14.12.2016NB230117v2.pdf.

²⁷ This estimate does not capture those who respond to surveys with 'prefer not to say', 'don't know', or those who gave no answer. If all of these people are assumed to LGB, the upper limit increases to 5.9%.

²⁸ EHRC (2009), *Trans Research Review*. Available online at: <https://www.equalityhumanrights.com/en/trans-inequalities-reviewed>.

²⁹ Staffordshire County Council (SCC) Insight, Planning and Performance Team (2016), *Lichfield: Locality Profile*. Available online at: <http://www.staffordshireobservatory.org.uk/publications/thestaffordshirestory/LocalityProfiles.aspx#.V5lo6k32bhA>.

least deprived nationally. There are some areas of higher deprivation in Rugeley and in and around the other towns nearest to the route, including Crewe.

- 4.3.2 Levels of employment and economic activity vary along the length of the route, but tend to be broadly in line with local and national averages. The proportion of households that are owner-occupied is generally above the national average. There are lower than average proportions of social and private-rented households in most areas, although this tends to be higher in areas around Rugeley and Crewe than in the more rural sections of the route.
- 4.3.3 The population along the route generally comprises higher than average proportions of residents aged 65 and over and lower than average proportions of children and people aged 16-24, although again this varies in more urban areas. The proportion of residents who describe their religion as Christianity is also generally higher than the national average. The proportion of the population from white ethnic backgrounds is above average, and there are smaller than average proportions of residents from Black and Minority Ethnic (BAME) groups. The proportion of residents who experience a limiting long-term health problem or disability varies along the route, and in some areas exceeds the national average.

4.4 Community area 1 (Fradley to Colton)

Introduction

- 4.4.1 The Fradley to Colton area is within Staffordshire county, and Lichfield and Cannock Chase district councils. It includes the wards of Alrewas and Fradley, Armitage with Handsacre, Colton and Mavesyn Ridware, Kings Bromley, and Brereton and Ravenhill.
- 4.4.2 A more detailed description of this community and its characteristics can be found in Appendix B, Community Profile.

Population and people with protected characteristics

Population

- 4.4.3 Population density figures for Colton and Mavesyn Ridware, and Kings Bromley are both less than one person per hectare, with fewer than 2,000 residents in each of these wards. Alrewas and Fradley and Armitage with Handsacre have total populations that exceed 5,000, and have higher population density figures of 2.4 and 7.7 people per hectare respectively. Brereton and Ravenhill is more urban in nature, and has a population density of approximately 13 people per hectare.

Age

- 4.4.4 All five wards in this area have higher proportions of 65-84 year olds than the national average. The largest proportion of residents is in the 45-64 age band. Less than 10% of each ward's resident population is aged 16-24 years, with the exception of Brereton and Ravenhill where this age group accounts for 11% of the resident population.

Race

- 4.4.5 The wards in this area have larger proportions of white residents compared to the local and national average, with around 97% to 99% of residents in each ward being from this ethnic group. The proportion of white residents is lowest in Alrewas and Fradley, at 96.8%. In this ward, 1.3% of residents are from mixed/ multiple ethnic groups, 1.0% from Asian or Asian British ethnic groups, 0.7% from black or black British ethnic groups, and 0.2% from other ethnic groups.

Disability

- 4.4.6 In four of the wards, approximately 25% of households have one or more people with a long term health problem or disability, which is consistent with local and national averages. The other ward, Brereton and Ravenhill, has a slightly higher proportion of households (30%) in this group.

Sex

- 4.4.7 A higher proportion of females compared with males is recorded in each of the five wards, following the national trend of approximately 51% females and 49% males.

Marriage and civil partnership

- 4.4.8 In Lichfield district, 54.8% of people aged 16 and over are married. There are also 105 registered same-sex civil partnerships in the district, constituting 0.1% of the population. In Cannock Chase district, 49.4% of residents aged 16 and over are married, and there are 121 residents in a registered same-sex civil partnership.

Pregnancy and maternity

- 4.4.9 The birth rate in Lichfield district in 2015 was 8.9 per 1,000 population, equating to 910 live births. In Cannock Chase district, the birth rate in 2015 was 10.7 per 1,000 population, equating to 1,056 live births³⁰.

Religion or belief

- 4.4.10 The wards in this area have approximately 70% of their population stating Christianity as their religion, which is significantly higher than the national average of 59.4%. The proportion of people stating they do not have a religion is highest in Alrewas and Fradley (24.9%). The proportion of residents who chose not to state their religion varies between 4.2% in Kings Bromley and 7.1% in Alrewas and Fradley, and Colton and Mavesyn Ridware, compared to a national average of 7.2%.

Community context

Housing

- 4.4.11 In four of the wards in this area (Alrewas and Fradley, Armitage with Handsacre, Colton and Mavesyn Ridware, and Kings Bromley), approximately 80% of households are owner-occupied, while approximately 8-10% are rented privately and

³⁰ ONS (2016), *Live births by area of usual residence, England and Wales, 2015*. Available online at: <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/livebirths/datasets/birthsbyareaofusualresidenceofmotheruk>

approximately 8-11% are social rented. The proportion of households renting from the local authority is between 1-2%, which is below the national average of 9.4%. In Brereton and Ravenhill, the proportion of households that are owner-occupied is lower at 69.2%, with the proportion rented from the local authority being 13.1%, higher than the national average of 9.4%.

Employment and economy

- 4.4.12 The proportion of residents who are economically active ranges from 61.9% in Kings Bromley to 68.3% in Brereton and Ravenhill. The highest rates of economic activity are among males and people aged 25-49. The same pattern can be seen in the proportion of the labour force that is employed, with higher proportions of males being employed compared to females.
- 4.4.13 All five wards have lower proportions of Job Seekers Allowance (JSA) claimants than the national average (3.2%) for all age groups, indicating low levels of unemployment.
- 4.4.14 The proportion of children living in low income families in this area ranges from 5.4% in Kings Bromley to 22.0% in Brereton and Ravenhill, in comparison to the national average of 19.9%.

Education, skills and training

- 4.4.15 Alrewas and Fradley and Kings Bromley have high proportions of people with Level 4 qualifications³¹ and above (compared with the other wards in this area), with over 30% of their respective resident workforce falling into this category. This is higher than the national average (27.4%).
- 4.4.16 The proportion of the resident workforce in this area with Level 1-3 qualifications is approximately 45%, which is broadly consistent with local and national averages. The proportion of the resident workforce with apprenticeships and other qualifications is in line with local and national averages.
- 4.4.17 The proportion of people with no qualifications in Alrewas and Fradley and Kings Bromley is approximately 20%, in line with the national average. In Armitage with Handsacre and Colton and Mavesyn Ridware, the proportion of people with no qualifications is approximately 25% and is highest in Brereton and Ravenhill, at 32.3%.

Health

- 4.4.18 Life expectancy at birth in 2011-2013 in England for males was 79.4 years and 83.1 years for females. In Lichfield district, life expectancy for both males and females is higher than the national average, at 80.0 for males and 83.8 for females. In Cannock Chase district, life expectancy for both males (79.2) and females (83.2) is in line with the national averages. Levels of obesity and early deaths from heart disease and stroke are below the national average in Lichfield district, but above the national average in Cannock Chase district.

³¹ Levels of qualifications are defined in ONS (2014), *2011 Census: Glossary of Terms*. Available online at: <https://www.ons.gov.uk/census/2011census/2011censusdata/2011censususerguide/glossary>.

- 4.4.19 The residents of Lichfield and Cannock Chase districts display mental health characteristics that are broadly similar to the national average. The prevalence of depression (8.3% in Lichfield and 9.9% in Cannock Chase) and other mental health indicators in these areas are generally in line with the national average.

Locality profile

- 4.4.20 The Lichfield Locality Profile was published in April 2016³². Alrewas and Fradley, Colton and Mavesyn Ridware, and Kings Bromley are all identified as areas of low need, based on the 12 indicators outlined in Section 4.2. Armitage and Handsacre is classed as medium need, as the levels of long-term adult social care users and premature mortality are higher than the national average.
- 4.4.21 The Cannock Chase Locality Profile was also published in April 2016. The ward of Brereton and Ravenhill is identified as a high risk area, with higher than national average levels for the following indicators: child poverty, income deprivation, out-of-work benefits and emergency admissions.

4.5 Community area 2 (Colwich to Yarlet)

Introduction

- 4.5.1 The Colwich to Yarlet area is located within Staffordshire county and Stafford borough councils. It includes the wards of Haywood and Hixon, Milwich, Seighford, Church Eaton, and Milford.
- 4.5.2 A more detailed description of this community and its characteristics can be found in Appendix B, Community Profile.

Population and people with protected characteristics

Population

- 4.5.3 All five wards in this area have population density figures below the local and national averages, with no ward exceeding two people per hectare. The total population in each ward ranges from approximately 2,000 in Milwich to 6,500 in Haywood and Hixon.

Age

- 4.5.4 Within this area, the age band with the largest proportion of people in each ward is 45-64, approximately 30% of residents. In Milford, the population is generally younger compared to the other wards in this area. In Seighford, 24.1% of residents are aged 65-84, while the other wards have proportions of approximately 16-20% for this age band.

³² SCC Insight, Planning and Performance Team (2016), *Lichfield: Locality Profile*. Available online at: <https://www.staffordshireobservatory.org.uk/publications/thestaffordshirestory/LocalityProfiles.aspx#.WTKJNk1wWjs>.

Race

- 4.5.5 The majority of the wards in this area have proportions of white residents that exceed 98%, however, Milford has a slightly lower proportion at 93.3%. Other significant proportions include 4.5% of residents in Milford being Asian or Asian British, while a further 1.2% of residents in this ward are mixed / multiple ethnic groups.

Disability

- 4.5.6 The proportion of households in each ward in this area that have one or more people with a long term health problem or disability is approximately 25%, which is consistent with local and national averages, excluding Milford, which has a slightly lower proportion of households in this group.

Sex

- 4.5.7 The proportion of males and females in each ward in this area does not uniformly follow the local and national pattern of higher numbers of females. In Milwich there is a higher population of males (55.3%) compared to females and in Seighford and Church Eaton there is an equal proportion of male and female residents.

Marriage and civil partnership

- 4.5.8 In Stafford borough, 51.9% of residents aged 16 years and above are married. There are also 166 registered same-sex civil partnerships in the borough, constituting 0.2% of the resident population.

Pregnancy and maternity

- 4.5.9 The birth rate in Stafford borough in 2015 was 9.3 per 1,000 population, equating to 1,228 live births.

Religion or belief

- 4.5.10 The wards in this area all have 70% of their population stating Christianity as their religion, apart from Milford, which has 65.4% of its population. The proportion of people stating they do not have a religion is highest in Milford (23.6%) and Haywood and Hixon (18.0%). Approximately 6-7% of the population in each of the five wards chose not to state their religion, which is consistent with the national average.

Community context

Housing

- 4.5.11 Approximately 75-85% of households in each ward in this area are owner-occupiers, which is higher than the national average (63.3%). The proportion of households renting privately in Milwich is 14.8% and approximately 6-10% in the other wards in this area. The proportion of privately rented and social rented properties in the wards in this area is below the national averages (16.8% and 17.7% respectively).

Employment and economy

- 4.5.12 Economic activity exceeds 60% in all of the wards in this area, excluding Seighford where it is 58.9%. The highest rates of economic activity are among males and people aged 25-49. The same trend can be seen in employment rates, with approximately 70% of males and 90% of those aged 25-49 being employed. Milford has the lowest employment rates with 43.9% of those aged 16-24 being employed compared to approximately 60% in the other wards.
- 4.5.13 The proportion of people in this area who claim JSA is low, with no claimants aged 16-24, compared to 0.8% nationally. JSA claimants in the 50-64 age category comprise 0.3% of residents in Haywood and Hixon, but no residents in the other wards, compared with 1.2% nationally.
- 4.5.14 Each of the five wards in this area records a significantly lower than national average proportion of children in low income families. Rates are lowest in Milford, at 4.0%, compared with 11.7% in Stafford borough and 19.9% nationally.

Education, skills and training

- 4.5.15 All five wards in this area have 30% or more of their resident workforce with Level 4 qualifications and above, which is higher than the local (30.3%) and national (27.4%) averages. This is highest in Milford, where 36.0% of the resident workforce falls into this category.
- 4.5.16 The proportion of the resident workforce in this area with Level 1-3 qualifications, apprenticeships and other qualifications, are in line with local and national averages.
- 4.5.17 Milford has the lowest proportion of people with no qualifications at 13.2%, while in Milwich, 21.5% of the resident workforce fall in this group, which is close to the national average.

Health

- 4.5.18 Life expectancy at birth in 2011-2013 in England for males was 79.4 and 83.1 for females. In Stafford borough, life expectancy for both males and females is higher than this, at 80.4 for males and 83.5 for females. Levels of obesity and early deaths from heart disease and stroke in Stafford borough are either below or in line with the national averages.
- 4.5.19 The residents of Stafford borough have recorded mental health characteristics better than the national average. For example, the prevalence of a severe mental health problem in adults is 0.66% compared with the national average of 0.90%.

Locality profile

- 4.5.20 Stafford Locality Profile was published in April 2016³³. All five wards in this community area are classed as areas of low need, as the area performs better on all 12 indicators outlined in Section 4.2 than the national average.

³³ SCC Insight, Planning and Performance Team (2016), *Stafford: Locality Profile*. Available online at: <https://www.staffordshireobservatory.org.uk/publications/thestaffordshirestory/LocalityProfiles.aspx#.WTKJNk1wWjs>.

4.6 Community area 3 (Stone and Swynnerton)

Introduction

- 4.6.1 The Stone and Swynnerton community is located within Staffordshire county and Stafford borough councils. It includes the wards of Milwich (also included in the Colwich to Yarlet area), Walton, Eccleshall, Swynnerton, and Barlaston and Oulton.
- 4.6.2 A more detailed description of this community and its characteristics can be found in Appendix B, Community Profile.

Population and people with protected characteristics

Population

- 4.6.3 Each ward in this area has a resident population of approximately 4,000 to 6,000, excluding Milwich, which has a population of approximately 2,000. Population density figures for the wards in this area are generally between 0.5 and 1.5 people per hectare, however, Walton, close to the urban centre of Stone, has 16.7 people per hectare.

Age

- 4.6.4 The five wards in this area have lower than national average proportions of residents in the 0-15 and 16-24 age bands and higher than national average proportions of residents aged 65-84. Approximately 30% of each resident population is aged 45-64.

Race

- 4.6.5 In each of the five wards in this area, 97-98% of the resident population is white, which is higher than the national average. Approximately 1% of the resident population falls into the mixed/multiple ethnic group and a further 0.5-1% is Asian or Asian British.

Disability

- 4.6.6 In Walton and Barlaston and Oulton, nearly 30% of households have one or more people with a long term health problem or disability. In the other wards in this area, the proportion is lower at approximately 25%, which is consistent with local and national averages.

Sex

- 4.6.7 Swynnerton has a higher proportion of males compared with females, with 50.2% of the resident population being male. The other wards in this area follow the national trend of having a higher proportion of females compared to males.

Marriage and civil partnership

- 4.6.8 In Stafford borough, 51.9% of residents aged 16 years and above are married. There are also 166 registered same-sex civil partnerships in the borough, constituting 0.2% of the population.

Pregnancy and maternity

- 4.6.9 The birth rate in Stafford borough in 2015 was 9.3 per 1,000 population, equating to 1,228 live births.

Religion or belief

- 4.6.10 The wards in this area have approximately 72-78% of their population stating Christianity as their religion, which is significantly higher than the national average of 59.4%. The proportion of people stating they do not have a religion is highest in Walton (19.6%) and lowest in Milwich (14.5%). Approximately 7% of the population in each of the five wards chose not to state their religion, which is consistent with the national average.

Community context

Housing

- 4.6.11 In Swynnerton, 82.7% of households are owner-occupied, the highest proportion in this area, with the other wards having more than 70% of households in this category. The lowest proportion of owner-occupied households is in Barlaston and Oulton, at 72.4%, above the borough average of 71.6% and considerably above the national average of 63.3%. The proportion of privately rented and social rented properties provided by the local authority in the wards in this area is below the national averages (16.8% and 9.4% respectively).

Employment and economy

- 4.6.12 Approximately 60-65% of the labour force living in the wards in this area are economically active, excluding Barlaston and Oulton, where only 57.5% fall into this category. Males are more economically active than females in all wards, with 79.2% of males being economically active in Milwich compared with 67.1% of females. Only 36.5% of people aged 50 and over are economically active in Walton, compared with 49.4% in Milwich and 41.6% nationally.
- 4.6.13 In Walton, 0.9% of people aged 50-64 are JSA claimants, compared to the national average of 1.2%, while in the other wards there are no claimants. There are no JSA claimants aged 16-24, compared to 0.8% nationally.
- 4.6.14 Each of the five wards in this area records a significantly lower than national average proportion of children in low income families. Rates are lowest in Swynnerton, at 5.4%, compared with 11.7% in Stafford borough and 19.9% nationally.

Education, skills and training

- 4.6.15 In Walton, 26.6% of the resident workforce have Level 4 qualifications and above. This is lower than the national average of 27.4% and the rest of this area, where wards have approximately 30-37% of the resident workforce having Level 4 qualifications and above.
- 4.6.16 The proportions of the resident workforce in this area with Level 1-3 qualifications, apprenticeships and other qualifications are in line with local and national figures.
- 4.6.17 Swynnerton has 17.1% of its resident workforce with no qualifications while the other wards all have over 20%, which is in line with the national average of 22.5%.

Health

- 4.6.18 Life expectancy at birth in 2011-2013 in England for males was 79.4 and 83.1 for females. In Stafford borough, life expectancy for both males and females is higher than this, at 80.4 for males and 83.5 for females. Levels of obesity and early deaths from heart disease and stroke in Stafford borough are either below or in line with the national average.
- 4.6.19 The residents of Stafford borough have mental health characteristics better than the national average. For example, the prevalence of a severe mental health problem in Stafford borough is 0.66% compared with the national average of 0.90%.

Locality profile

- 4.6.20 The Stafford Locality Profile was published in April 2016³⁴. Swynnerton is identified as an area of low need, based on the 12 indicators outlined in Section 4.2. However, Eccleshall has levels of lone pensioners higher than the national average and is classified as medium need. Walton has levels of long-term adult social care users higher than the national average, and is also classified as an area of medium need³⁵.

4.7 Community area 4 (Whitmore Heath to Madeley)

Introduction

- 4.7.1 The Whitmore Heath to Madeley area is within Newcastle-under-Lyme borough and includes the three wards of Loggerheads and Whitmore, Madeley, and Halmerend.
- 4.7.2 A more detailed description of this community and its characteristics can be found in Appendix B, Community Profile.

Population and people with protected characteristics

Population

- 4.7.3 The population density figures for this area are relatively low, with all wards recording two people per hectare or below, excluding Madeley, where it is 2.1 persons per hectare. Loggerheads and Whitmore has the highest total population at approximately 7,000, while the other two wards each have populations of approximately 4,000.

Age

- 4.7.4 In each of the three wards in this area, residents aged 45-64 constitute the highest proportions of the population, with approximately 30-35% falling into this age band. All three wards have lower proportions of those aged 0-15 compared with the national average of 18.9%.

³⁴ SCC Insight, Planning and Performance Team (2016), *Stafford: Locality Profile*. Available online at: <https://www.staffordshireobservatory.org.uk/publications/thestaffordshirestory/LocalityProfiles.aspx#.WTKJNk1wWjs>.

³⁵ SCC Insight, Planning and Performance Team (2016), *Stafford: Locality Profile*. Available online at: <https://www.staffordshireobservatory.org.uk/publications/thestaffordshirestory/LocalityProfiles.aspx#.WTKJNk1wWjs>.

Race

- 4.7.5 The wards in this area have high proportions of white residents, with Halmerend having 98.5% of the resident population in this group compared to the national average of 85.4%. Loggerheads and Whitmore has a relatively high proportion of Asian or Asian British people compared with other wards in this area, with 1.4% of the resident population identifying as such. However, this is still significantly lower than the national average of 7.8%.

Disability

- 4.7.6 Within the wards in this area, approximately 25-30% of households have one or more people with a long-term health problem or disability, which is broadly consistent with the local average (28.8%) and the national average (25.6%).

Sex

- 4.7.7 The wards in this area have a higher proportion of women compared to men, which is consistent with the national average. However, Loggerheads and Whitmore has an equal number of males and females in the resident population.

Marriage and civil partnership

- 4.7.8 In Newcastle-under-Lyme borough, 47.3% of residents aged 16 or over are married. There were also 158 people registered in same-sex civil partnerships, which represents 0.2% of the population.

Pregnancy and maternity

- 4.7.9 The birth rate in Newcastle-under-Lyme in 2015 was 9.8 per 1,000 population, equating to 1,244 live births.

Religion or belief

- 4.7.10 The three wards in this area have higher than national average (59.4%) proportions of people stating Christianity as their religion, the highest being 75.7% of people in Loggerheads and Whitmore. The proportion of people stating they do not have a religion is highest in Halmerend (21.4%) and lowest in Loggerheads and Whitmore (16.2%). The proportion of the population choosing not to state their religion varies between 6.6% and 8.3%, which is broadly consistent with the national average.

Community context

Housing

- 4.7.11 The proportions of households that are owner-occupied in the wards in this area are significantly higher than the national average, with 84.4% of households in Loggerheads and Whitmore in this category, compared to the national average of 63.3%. The proportion of households that are rented privately in the Newcastle-under-Lyme borough is approximately 6 percentage points lower than the national average.

Employment and economy

- 4.7.12 The total level of economic activity across the three wards in this area is approximately 60%, which is lower than the national average (63.6%). Males have higher economic activity rates compared with females by approximately 10-12 percentage points. In Halmerend, only 38.7% of people aged 50 and over are economically active, which is lower than Loggerheads and Whitmore (45.0%), Madeley (40.5%) and the national average (40.1%). The overall level of employment recorded in all three wards is consistent with the national average. Amongst those aged 25-49, the level of employment is slightly above the national average for this age group in all three wards.
- 4.7.13 All of the wards have lower proportions of JSA claimants compared with the national average (3.2%), and in Loggerheads and Whitmore there are no JSA claimants. The proportion of claimants aged 50-64 in Madeley is 1.1%, which is higher than the local average of 0.9% but consistent with the national average of 1.2%.
- 4.7.14 The wards across this area record significantly lower than borough (16.5%) and national (19.9%) averages of children living in low income families, with Halmerend having the lowest rate of 7.7%.

Education, skills and training

- 4.7.15 All three of the wards in this area have higher proportions of residents with Level 4 and above qualifications, compared with the borough (22.5%) and national (27.4%) averages.
- 4.7.16 The proportions of residents with Level 2 and Level 3 qualifications are consistent with the national average. Loggerheads and Whitmore has a lower than average proportion of the population with Level 1 qualified workers compared with the other wards and the borough and national averages. The proportions of the resident workforce in this area with apprenticeships are in line with local and national figures.
- 4.7.17 Halmerend has 17.4% of its resident workforce with no qualifications while the other wards all have over 20%, which is in line with the national average of 22.5%.

Health

- 4.7.18 Life expectancy at birth 2011-2013 in England for males was 79.4 and 83.1 for females. In Newcastle-under-Lyme, life expectancy for both males and females is significantly lower than this, at 78.6 and 82.6 respectively. Early deaths from heart disease and stroke are above the national average while levels of obesity are lower than the national average in Newcastle-under-Lyme.
- 4.7.19 The residents of Newcastle-under-Lyme borough report mental health characteristics that are in line with the national average. Joint Strategic Needs Assessment (JSNA) profiles for the borough demonstrate above national average prevalence of depression and anxiety in adults in Newcastle-under-Lyme borough (14.2% in Newcastle-under-Lyme borough compared with 12.7% nationally), but a slightly lower prevalence of severe depression (0.78% in Newcastle-under-Lyme borough compared with 0.90% nationally).

Locality Profile

- 4.7.20 Newcastle-under-Lyme Locality Profile was published in 2016³⁶. Loggerheads and Whitmore is classed as an area of low need based on the 12 indicators outlined in Section 4.2. Madeley and Halmerend are identified as areas of medium need based on the 12 indicators. Both wards have levels of lone pensioners higher than the national average.

4.8 Community area 5 (South Cheshire)

Introduction

- 4.8.1 The South Cheshire area is located within Cheshire East council and includes the wards of Wybunbury, Haslington and Shavington, which are located to the south of Crewe. The wards of Crewe South and Crewe East are also included, and are located within the town of Crewe.
- 4.8.2 A more detailed description of this community and its characteristics can be found in Appendix B, Community Profile.

Population and people with protected characteristics

Population

- 4.8.3 Wards in the north of this area have higher population densities compared with those in the south. Crewe East has the highest total population at 15,339, while Shavington has the lowest population at 3,781. Crewe South has a population density that is significantly higher than the other wards in the area and the local and national averages, reflecting the urban nature of this ward and its location to the immediate south of Crewe town centre.

Age

- 4.8.4 Wards in the north of this area, such as Crewe South and Crewe East, have higher proportions of 16-24 year olds (17%) compared with wards in the south of the area (9%). The age group making up the highest proportions of the resident populations for Crewe South and Crewe East are those aged 25-44, at around 25-30% of their population, whilst the other three wards in the south have over 30% of their population aged 45-64.

Race

- 4.8.5 All of the wards in this area have proportions of white residents that are higher than the national average. All wards exceed 96% of the resident population in this group, with the exception of Crewe South, which has a slightly lower proportion at 91.5%. Other significant ethnic groups include 4.3% of residents in Crewe South from an Asian or Asian British ethnic background, with a further 2.3% from the mixed/multiple ethnic group.

³⁶ SCC Insight, Planning and Performance Team (2016), *Newcastle-under-Lyme: Locality Profile*. Available online at: <https://www.staffordshireobservatory.org.uk/publications/thestaffordshirestory/LocalityProfiles.aspx#.WTkJNk1wWjs>.

Disability

- 4.8.6 The proportion of households in each ward in this area that contain one or more people with a long term health problem or disability is approximately 20-29%, which is consistent with local and national averages, excluding Crewe East, which has a slightly higher proportion of households in this group.

Sex

- 4.8.7 Higher proportions of females compared with males were recorded in three of the five wards in this area, which is consistent with the national trend. However, Wybunbury and Crewe South have higher proportions of males, with around 51% of the population in these areas.

Marriage and civil partnership

- 4.8.8 In Cheshire East, 52.1% of residents aged 16 years and above are married. There are also 563 registered same-sex civil partnerships in Cheshire East, constituting 0.2% of the total population.

Pregnancy and maternity

- 4.8.9 The birth rate in Cheshire East in 2015 was 10.3 per 1,000 population, equating to 3,848 live births.

Religion or belief

- 4.8.10 The wards in this area have a higher than national average (59.4%) proportion of Christians, with roughly 70% of the population in the southern wards stating this as their religion and 60-65% in the northern, more urban wards. Approximately 26% of people in Crewe South and Crewe East stated they do not have a religion, which is higher than the other wards. Approximately 7% of the population in each of the five wards chose not to state their religion, which is consistent with the national average.

Community context

Housing

- 4.8.11 The proportion of households that are owner-occupied in Wybunbury, Haslington and Shavington is over 80%, which is significantly higher than the national average and as much as 30 percentage points higher than that in Crewe South. In Crewe South, 28.8% of households are private rented. The proportion of residents who rent from the local authority and other social landlords is also higher in Crewe South and Crewe East compared with the other wards.

Employment and economy

- 4.8.12 In each of the five wards in this area, approximately 60-68% of the resident population is economically active, with the highest rates amongst males. Approximately 85-90% of people aged 25-49 across the study area are economically active, while only 36.8% of people in Shavington aged 50 and over are economically active. The total proportion of the labour force in the wards that are employed is approximately 65-73% for males compared to approximately 53-65% for females.

- 4.8.13 The proportion of people in this area who claim JSA is lower than the national average, with less than 1% of the population of any age claiming this benefit in Wybunbury and Haslington. The proportion of working age claimants is higher and in line with the national average in Crewe East, however, at approximately 0.5-1% for all age bands.
- 4.8.14 The proportion of children living in low income families varies considerably across the wards in this area. Wybunbury, Haslington and Shavington all record proportions that are considerably below the national average, whereas in Crewe South and Crewe East the proportions are above the local and national averages. The highest proportion is in Crewe East, where 23.0% of children live in low income families, compared with 12.2% across Cheshire East and 19.9% nationally.

Education, skills and training

- 4.8.15 Shavington and Crewe South have lower proportions of people with Level 4 qualifications and above compared to the other wards in this area and nationally. The proportions of the resident workforce with qualification Levels 1, 2 and 3 are consistent with the local and national averages.
- 4.8.16 Shavington has a significantly higher proportion of apprenticeships compared with the national average, while Wybunbury and Crewe East have the lowest proportions of the resident workforce with other qualifications that are below the national average (5.7%).
- 4.8.17 The proportion of people with no qualifications in Wybunbury and Crewe East is 18.9% and 18.8%, which is slightly below the national average. In Haslington and Crewe South the proportion of people with no qualifications is in line with the national average and is highest in Shavington with 32.5% compared to the national average of 22.5%.

Health

- 4.8.18 Life expectancy at birth 2011-2013 in England for males was 79.4 and 83.1 for females. In Cheshire East, life expectancy for both males and females is higher than this, at 80.4 and 83.6 respectively. Levels of obesity are not significantly different from the national average and early deaths from heart disease and stroke are below the national average in Cheshire East.
- 4.8.19 The population of Cheshire East has mental health characteristics that are better than the national average. For example, the prevalence of depression in Cheshire East is 8.5% of adults, which is considerably below the national average of 21.0%.

Locality profile

- 4.8.20 Cheshire East does not produce a locality profile.

5 Route-wide assessment

5.1 Introduction

5.1.1 This section of the report provides a summary of the potential route-wide effects of the Proposed Scheme on equality during construction and operation. It also sets out committed and proposed mitigation measures, which will serve to reduce negative equality effects or enhance potential positive equality effects. The assessment is based on the full and timely delivery of these measures as appropriate during construction and once the Proposed Scheme becomes operational.

5.2 General measures to mitigate potential equality effects

5.2.1 A range of general measures will be put in place, which will serve to reduce the potential negative equality effects and to enhance the potential positive effects of the Proposed Scheme during construction and operation, as summarised below.

Draft Code of Construction Practice

5.2.2 The draft Code of Construction Practice (CoCP) (see the ES, Volume 5, Appendix CT-003-000), sets out measures to provide effective planning, management and control of environmental issues and issues affecting people during construction. In addition, a Local Environmental Management Plan (LEMP) will be produced for each local authority area. The draft CoCP and LEMP will be the means of managing the construction works associated with the Proposed Scheme, and will set out monitoring requirements, with the objective of ensuring that the effects of the works on people and the natural environment are reduced as far as reasonably practicable.

5.2.3 The draft CoCP uses the term 'nominated undertaker' to describe the body or bodies that will be appointed, in due course, to construct and maintain the Proposed Scheme. As required in the draft CoCP, the nominated undertaker and its contractors will produce and implement a community engagement framework and provide appropriately experienced community relations personnel to implement it, to provide appropriate information and to be the first point of contact to resolve community issues.

5.2.4 The appointed community relations personnel will be aware of equality and diversity issues relevant to the local community. The community engagement framework will include a mechanism for community relations personnel to report on newly arising issues concerning equality, as part of the ongoing monitoring and implementation of measures relating to equality. HS2 Ltd and the nominated undertaker will take appropriate steps to engage with the community, particularly focusing on those who may be affected by construction impacts, including local residents, businesses, land owners and community resources, and the specific needs of protected characteristic groups.

5.2.5 The nominated undertaker will maintain a construction operations website and telephone helpline staffed 24 hours a day, 7 days a week, to handle enquiries from the general public and local businesses regarding construction activities. It will also act as a first point of contact for information in case of emergency or incident. It will also be possible to contact a helpdesk. The helpdesk details will be widely promoted and

displayed on site signboards and hoardings. Information for the public will also be provided using other methods such as social media, email alerts, local radio and newspapers as appropriate. Information will be made available in different languages and formats, on request.

- 5.2.6 The nominated undertaker will ensure that local residents, occupiers, businesses, local authorities and parish councils affected by the proposed construction works will be informed in advance of works taking place by methods identified in the community engagement framework.

Environmental Minimum Requirements

- 5.2.7 As with HS2 Phase One, the Secretary of State will establish a set of environmental controls known as the Environmental Minimum Requirements (EMRs), which will include the CoCP, as well as policies setting out the approach to managing specific aspects of the Proposed Scheme, such as land acquisition and disposal, noise mitigation and property compensation arrangements; and any undertakings and assurances given to petitioners and to Parliament during the passage of the hybrid Bill. The nominated undertaker will be responsible for implementing the EMR.

Residential property compensation

- 5.2.8 Individuals whose properties have to be acquired for construction of the Proposed Scheme will be eligible for compensation in line with the provisions of the Compensation Code ('the Code'). Compensation may also be available under the Code once the Proposed Scheme is in operation for people who have had no land acquired but who can demonstrate that their homes are physically affected by its operation.
- 5.2.9 In addition, for HS2 Phase One, the Government developed a package of property measures, which go above and beyond the Code. In May 2016, it was announced that the Government would implement long-term property compensation and assistance schemes for Phase 2a, based upon schemes already in place for Phase One. These include express purchase, a need to sell scheme, rent back, and an extended homeowner protection zone, safeguarding properties where changes to the route occur³⁷. Eligibility for these schemes depends on the location of the affected property.
- 5.2.10 The property compensation package includes provision for atypical properties and special circumstances. It was also announced, in May 2016, that a number of changes would be implemented, with immediate effect, to the property assistance schemes that apply to Phase One and Phase 2a. These include additional guidance on health and mobility, which allows wider consideration to be given to an applicant's health and mobility, and the suitability of their current property. In addition, the compensation and assistance schemes allow for the use of local valuers.
- 5.2.11 For Phase One, further measures have been implemented in rural areas where the line runs on the surface, in recognition that, in general, the effects on communities during construction and operation can reasonably be expected to be much more marked in these areas. The 'rural support zone' (RSZ) covers the area outside the safeguarding

³⁷ HS2 Ltd, *Financial help for property owners affected by HS2 extended route to Crewe*. Available online at: <https://www.gov.uk/government/news/financial-help-for-property-owners-affected-by-hs2-extended-route-to-crewe>.

zone up to 120m from the centre line of the railway. The RSZ for Phase 2a runs from the connection with Phase One at Fradley to the A500 south of Crewe. The two assistance schemes available to those who meet the location criterion for RSZ are a cash offer scheme and voluntary purchase.

- 5.2.12 When the hybrid Bill receives Royal Assent, a Home Owner Payment scheme will be implemented as is currently in place on Phase One. This will apply to properties within 120m and 300m from the centre line of the railway, and will operate as a cash payment scheme for owner-occupiers. The scheme will apply in three fixed payment bands, which will decrease in value as distance from the line increases. Eligibility criteria will be similar to the RSZ.
- 5.2.13 Further information about the property compensation schemes in place for HS2 Phase 2a can be found online at: <https://www.gov.uk/government/speeches/hs2-phase-2a-west-midlands-to-crewe-property-consultation>.
- 5.2.14 Households affected by noise during construction may also be eligible for noise insulation or temporary re-housing in accordance with the noise insulation and temporary rehousing policy set out in Hs2 Phase 2a Information Paper E13: Control of construction noise and vibration³⁸. There may be circumstances, however, in which the buildings and/or their occupants may not be adequately protected by the noise and vibration thresholds detailed in the policy. The nominated undertaker will consider, on a case-by-case basis, applicants who may have special circumstances supported by evidence for noise insulation or temporary rehousing as a result of construction noise (airborne or ground borne) or vibration. Examples of the types of building and/or their occupants that the nominated undertaker will consider as 'special cases' include residential buildings where noise insulation does not represent a viable option, such as houseboats or mobile homes; night works; people who regularly work from home needing a quiet environment to work in and those who have a medical condition that would be seriously aggravated by construction noise.

Community infrastructure and public open spaces

- 5.2.15 The nominated undertaker will be required to provide information on public open space changes, including closures, through community liaison officers and in accordance with the measures contained within the draft CoCP.
- 5.2.16 The nominated undertaker will be required to maintain, where reasonably practicable, PRoW, including diversions, for pedestrians, cyclists and equestrians affected by the Proposed Scheme. Where reasonably practicable, this will include reasonable adjustments to maintain existing inclusive access or achieve new inclusive access measures. The nominated undertaker will install appropriate signage to communicate all temporary and permanent diversions of PRoW to the local community.
- 5.2.17 On completion of construction works in a particular location, the nominated undertaker will be required to reinstate public open spaces used for construction. In cases where replacement facilities are to be provided, this will be done as soon as is reasonably practicable in the circumstances of the particular case. This will involve

³⁸ HS2 Ltd (2017), *HS2 Phase 2a (West Midlands – Crewe), Information Paper E13: Control of Construction Noise and Vibration*. Available online at: <https://www.gov.uk/government/organisations/high-speed-two-limited>.

working with third parties, including relevant local authorities and community groups, to facilitate delivery.

- 5.2.18 The draft CoCP includes additional provisions relating to construction activity near schools including, where reasonably practicable, the avoidance of heavy goods vehicles (HGVs) operating adjacent to schools during drop off and pick up periods.

Employment and businesses

- 5.2.19 HS2 Ltd has adopted a series of strategic aims, which include skills, employment and education (SEE)³⁹. These aims are intended to extend through the supply chain using procurement and contractual requirements. All major contracts will contain contractual requirements to provide SEE outputs, including apprenticeships, workless job starts and schools' engagement. These requirements have the potential to identify and provide opportunities to workless people and members of protected characteristic groups who are more likely to experience employment-related disadvantage.
- 5.2.20 For each relevant contract, HS2 Ltd sets EDI requirements. These requirements have the potential to be positive for equality. Contract bids are evaluated against a range of EDI criteria. Contractors are encouraged to adjust recruitment models and criteria where barriers to equality are identified. Contractors are required to monitor aspects of EDI, including recruitment and retention, to inform targeted efforts to address under-representation.
- 5.2.21 The SEE requirements and the procurement strategy will identify appropriate positive actions, to the extent permitted by the Equality Act 2010, to promote equal opportunities for protected characteristic groups who are under-represented in the construction sector. This will contribute to the promotion of equal opportunity for groups of people with protected characteristics, building on existing initiatives within the construction industry and lessons learned from comparable major schemes, including the London 2012 Olympic Park and Crossrail. Children in low-income households where adults benefit from new employment will also potentially benefit, as a result of increased household income.
- 5.2.22 HS2 Ltd has committed to providing a minimum of 2,000 apprenticeships over the lifetime of the entire project, (which includes Phase One and Phase Two). The vast majority of these apprenticeships will be delivered through the supply chain across a wide range of trades and professions from construction to accountancy, quantity surveying to business administration.

Crime, safety and personal security

- 5.2.23 General measures set out in the draft CoCP will contribute to addressing concerns about personal security and reducing risks of crime and anti-social behaviour associated with construction activities. These measures will reduce risk that members of protected characteristic groups would experience differential effects in terms of

³⁹ Further information is available online via the HS2 Ltd website: <https://www.gov.uk/government/organisations/high-speed-two-limited>.

heightened concern or actual vulnerability to greater risks of crime or anti-social behaviour associated with the presence of construction activities.

- 5.2.24 Footways of adequate width to facilitate pedestrian flows and safe access around the construction site boundary will be provided, including signage where appropriate. Lighting of construction site boundaries will be provided and illumination will be sufficient to provide a safe route for the public to use.
- 5.2.25 Communication initiatives for local schools will be introduced to warn of the dangers of construction sites. Consultation with neighbours and local crime prevention officers on site security matters will also be undertaken.
- 5.2.26 Fencing and hoardings will be maintained to prevent unwanted access to construction sites. Site information boards will be provided with out-of-hours contact details, 24-hour telephone numbers, community information, details of the works programme, and appropriate hazard warnings.
- 5.2.27 Where reasonably practicable, clear sight lines will be maintained around hoardings and fencing, avoiding the creation of hidden corners. This is in order to avoid creating opportunities for anti-social behaviour and crime.

Traffic, transport and accessibility

- 5.2.28 In the design and construction of the Proposed Scheme, the nominated undertaker will be required to comply with all relevant accessibility requirements set out in the Department for Transport's Design Standards, and the Design Manual for Roads and Bridges⁴⁰.
- 5.2.29 The draft CoCP sets out various mitigation measures to reduce the impact of construction traffic. These include:
- traffic management measures and plans, which will be prepared in consultation with the highway authorities and emergency services, where required;
 - an approach to reduce the impacts of temporary road and PRow closures or disruption to railways or navigable waterways;
 - use of internal haul routes for construction vehicles within the construction sites to reduce the need to use public roads;
 - workplace travel plans to reduce employee movements to/from construction sites and compounds;
 - various management procedures intended to reduce the impact of construction traffic; and
 - agreed routes for construction vehicles (HGVs), keeping to the main road network (e.g. motorways and strategic trunk roads and other 'A' roads).

⁴⁰ Highways Agency (2007), *Design Manual for Roads and Bridges*. Available online at: <http://www.standardsforhighways.co.uk/dmrb/>.

- 5.2.30 Traffic management mitigation to be used during construction and utility works may include temporary lane closures, junction signal retiming, temporary traffic signals, reduced lane widths and overnight/weekend (instead of daytime/weekday) road closures. Traffic diversions will be provided where temporary road closures are required. New highway crossings of the Proposed Scheme will be built offline, where reasonably practicable, so that they can be completed prior to closure of the existing road. This will avoid or substantially reduce disruption to road users. A diversionary route and temporary bus stops (where necessary) will be identified for bus routes affected by temporary road closures.
- 5.2.31 Where reasonably practicable, maintenance of PRow (including diversions) affected by the Proposed Scheme will be undertaken, including reasonable adjustments to maintain or achieve inclusive access. Inclusive access (including for people with reduced mobility) will also be maintained to services and buildings where they have been temporarily disrupted during the work, as far as is reasonably practicable. Where the normal means of access has to be diverted or blocked off, alternative safe routes for people with reduced mobility will be identified, taking into account existing hazards and obstructions such as pavement kerbs and street lighting standards.
- 5.2.32 Where a need is identified (e.g. through stakeholder engagement with relevant local organisations or community liaison processes), HS2 Ltd will review access and routes. These reviews will indicate where additional measures or reasonable adjustments may be required for the purposes of ensuring accessibility for disabled people or those with reduced mobility.
- 5.2.33 The contractors will be required to have full regard to the safety of other road users including pedestrians and cyclists. Specific measures will be included in the LEMP that outline steps to ensure the safety of other road users, including pedestrians and cyclists, giving particular attention to providing signage and identifying safe places to cross roads especially where the needs of protected groups require special attention, including those identified in this EQIA. A Route-Wide Traffic Management Plan will be produced, including measures such as contractor implementation of driver training programmes, and vehicle safety measures including signage, mirrors, prevention of under-running and use of technology to remove blind spots, according to vehicle size.
- 5.2.34 The draft CoCP includes measures that seek to reduce the impacts and effects of deliveries of construction materials and equipment, including reducing construction HGV trips during peak background traffic periods. The draft CoCP also includes clear controls on vehicle types, hours of site operation and routes for HGVs to reduce the impact of road based construction traffic. Generic and site specific traffic management measures will be implemented.
- 5.2.35 Where reasonably practicable, the number of private car trips to and from the site (both workforce and visitors) will be reduced by encouraging alternative modes of transport or vehicle sharing. Site haul routes will be provided through the land required for the Proposed Scheme, which will reduce the numbers of construction vehicles having to use public roads to access the works. In three locations along the route, some construction workers could live on-site during the week, arriving on Sunday evening/Monday morning and departing on Friday evening/Saturday

morning. This will reduce the level of construction employee traffic travelling to and from compounds during the week and will encourage off-peak travel.

Noise

- 5.2.36 The draft CoCP sets out principles and management processes to avoid or mitigate the impact of construction noise. Noise insulation will be offered for qualifying buildings as defined in the noise insulation and temporary re-housing policy set out in the draft CoCP and in Information Paper E13: Control of Construction Noise and Vibration. Qualifying buildings will be identified early enough so that noise insulation can be installed, or temporary re-housing provided, before the start of the works predicted to exceed noise insulation or temporary re-housing criteria. Noise insulation, where required, will be installed as early as reasonably practicable to reduce internal sound levels from construction activities and also when the Proposed Scheme comes into operation.
- 5.2.37 The development of the Proposed Scheme has sought to keep the route alignment as low as reasonably practicable and away from main communities. This has protected many communities from potential significant noise or vibration effects. Significant ground-borne noise or vibration effects will be avoided or reduced through the design of the track and track-bed. It is assumed that HS2 trains will be quieter than the relevant current European Union specifications, as reported in the Phase One ES⁴¹. In addition, the Proposed Scheme will incorporate noise barriers in the form of landscape earthworks and/or noise fence barriers to avoid or reduce significant airborne noise effects. Significant noise effects from the operational static sources, such as line-side equipment, will be avoided through their design and the specification of noise emission requirements.

Air quality

- 5.2.38 Emissions to the atmosphere will be controlled and managed during construction through the route-wide implementation of the CoCP. The draft CoCP includes a range of mitigation measures that are considered generally sufficient to avoid any significant effects from dust during construction. The measures outlined within the draft CoCP are considered effective at reducing dust and construction traffic emissions, and no significant residual air quality effects are considered likely. Therefore, no direct health and wellbeing effects are expected to arise as a result of air quality effects during construction.

5.3 Potential effects during construction and operation

- 5.3.1 This section reports on potential differential and disproportionate effects that may arise along the route of the Proposed Scheme, during construction and operation. Environmental effects reported in this section are drawn from the ES, and further information can be found in the Volume 2 community area reports⁴². Specific effects on individual receptors, where it is known that people with protected characteristics

⁴¹ HS2 Ltd (2013), *HS2 Phase One (London - West Midlands), Environmental Statement – Volume 1: Introduction to the Environmental Statement and the Proposed Scheme*. Available online at: <https://www.gov.uk/government/publications/hs2-phase-one-environmental-statement-volume-1-introduction-to-the-environmental-statement>.

⁴² HS2 Ltd (2017), *H2 Phase 2a (West Midlands – Crewe), Environmental Statement Volume 2, Community area reports*.

are likely to be affected, are discussed separately in the relevant community area assessments provided in Sections 6 to 10.

Housing and communities

Loss of housing

- 5.3.2 There will be some loss of housing in various locations along the route of the Proposed Scheme. Displaced residential occupiers will be eligible for compensation in accordance with the measures outlined above. At this stage, there is insufficient information to ascertain whether any, and if so which, affected properties are occupied by people with protected characteristics or if any of the occupants would be differentially affected.

Community cohesion

- 5.3.3 The potential for loss of housing, especially when combined with other effects, may affect community cohesion, which could in turn give rise to equality effects. For example, in Hopton (located in community area 2), the construction of the Hopton cutting, landscape mitigation earthworks and the diversion of Hopton Lane will require the demolition of nine residential properties, which could give rise to equality effects.

Noise

- 5.3.4 People living in various locations close to the Proposed Scheme may experience noise effects due to a change in the acoustic environment at residential receptors, including in shared community open areas near their homes, during construction and once the Proposed Scheme is operational.
- 5.3.5 It is not possible to determine whether there will be a disproportionate effect on any particular protected characteristic groups, because the representation of these groups within affected populations has not yet been established.
- 5.3.6 Within the population potentially affected, there will be individuals who are more or less sensitive to noise. However, there is limited evidence to suggest that any particular demographic group is likely to be differentially affected.

Businesses and employment

Loss of existing employment

- 5.3.7 Volume 3 of the ES states that an estimated 40 jobs will be lost and 140 relocated along the route of the Proposed Scheme from businesses directly and indirectly affected during the construction phase. Businesses displaced by the Proposed Scheme will be compensated in accordance with the Compensation Code. HS2 Ltd recognises the importance of displaced businesses being able to relocate to suitable alternative premises and will provide additional support over and above statutory requirements⁴³ to facilitate this process.

⁴³HS2 Ltd (2017), *HS2 Phase 2a (West Midlands – Crewe), Information Paper C8: Compensation code for compulsory purchase*. Available online at: <https://www.gov.uk/government/organisations/high-speed-two-limited>

Effects on existing businesses

- 5.3.8 Businesses along the route of the Proposed Scheme will be impacted directly and indirectly both during construction and operation. While the demographic profile of affected business owners and employees is not known, there may be the potential for business owners to experience differential or disproportionate equality effects, where they are owned by people with protected characteristics, or where they provide employment for, training opportunities for, or services specific to the needs of, people with protected characteristics.
- 5.3.9 Businesses that lie within land required for construction will be directly impacted upon by the Proposed Scheme. Among the businesses affected, there are a number that may experience differential equality effects as a result of the nature of the business. Land required for the construction of the Proposed Scheme has the potential to impact on the operation of the following businesses, which may experience equality effects as a result:
- Mayfield Children’s Home (community area 2);
 - Ingestre Park Golf Club (community area 2);
 - Staffordshire County Showground (community area 2); and
 - Great Haywood Marina (community area 2).
- 5.3.10 Businesses along the route of the Proposed Scheme may also experience air quality, noise and vibration, or traffic impacts that could, in combination, amount to a significant change in the environment experienced by these businesses. Mayfield Children’s Home (community area 2) will experience significant in-combination effects during the construction and operation of the Proposed Scheme, and may experience equality effects as a result of the nature of the business (see Section 7 of this report).
- 5.3.11 HS2 Ltd is continuing to engage with affected businesses to identify reasonably practicable measures to mitigate the effects associated with the construction and operation of the Proposed Scheme.

Construction employment

- 5.3.12 The Proposed Scheme will provide significant opportunities for employment, particularly in engineering and construction. It is estimated that the construction phase will generate the equivalent of approximately 2,240 full time construction jobs, of which 1,170 will be based at worksites along the Proposed Scheme. Depending on skill levels, and the skills of local people, these jobs will be accessible to local residents and to others living within the travel to work area or farther afield.
- 5.3.13 Phase 2a will also benefit from some of the 2,000 apprenticeships (minimum) in the construction workforce that will be provided by HS2 (across Phase One and Phase Two as a whole). These will include opportunities across a wide range of trades and professions from construction to accountancy, and quantity surveying to business administration.
- 5.3.14 The construction works will generate additional indirect demand for goods and services through the business supply chain and expenditure by workers on site, which

could deliver business opportunities and generate further employment. As a consequence, it is estimated that a further 840 full-time jobs could be generated.

- 5.3.15 Under the EDI requirements, contractors must monitor and report on supply chain spend with, and representation of, micro-organisations, social enterprises, SMEs and diverse suppliers (defined as being 51% owned or operated by people with protected characteristics). These requirements have the potential to be positive for equality.
- 5.3.16 Certain protected characteristic groups are more likely to experience low socio-economic status and poor standards of living due to employment disadvantage in terms of below-average rates of participation in economic activity; below-average skills and qualifications; under-representation in certain employment sectors and below-average rates of pay. Income poverty and deprivation particularly affect women, children, BAME groups, religious minority groups, disabled people and families with disabled members⁴⁴. Education, skills and employment gaps particularly affect disabled people and a number of BAME groups⁴⁵. Proactive measures in the construction sector have proved effective in addressing skills gaps and under-representation of protected characteristic groups, including women and disabled people^{46 47}.
- 5.3.17 HS2 Ltd has published HS2 Phase 2a Information Paper H2: Skills and employment⁴⁸, which outlines the proposed arrangements for training and employment during the construction and operation of HS2. This includes commitments to ensure equality of opportunity in order to encourage the recruitment of local, disadvantaged or underrepresented groups. HS2 Ltd will offer appropriate training to local, disadvantaged and underrepresented groups in order to promote fair and equal access to the employment opportunities generated by HS2.
- 5.3.18 During the procurement of any relevant contract, HS2 Ltd will require a range of SEE and EDI outputs based on the contract value. Tenderers' responses will be evaluated against SEE and EDI criteria, including their track record in these fields, as well as the proposed methods of meeting the required outputs. These outputs will include number of apprenticeships, workless job starts and work placements. Contractors will be asked to support local, disadvantaged and underrepresented groups to access the training and employment opportunities generated by HS2 Ltd by a variety of means as part of their recruitment, training, communicating, publicising and performance management process.
- 5.3.19 There is, therefore, the potential for the employment opportunities created during the construction phase to result in a positive equality effect on certain protected

⁴⁴ EHRC (2010), *How fair is Britain? Equality, human rights and good relations in 2010*. Available online at: <http://www.equalityhumanrights.com/en/our-work/how-fair-britain>.

⁴⁵ Joseph Rowntree Foundation (2015), *Ethnic minority disadvantage in the labour market*. Available online at: <https://www.jrf.org.uk/report/ethnic-minority-disadvantage-labour-market>.

⁴⁶ Olympic Delivery Authority (2011), *Learning Legacy: Lessons learned from the London 2012 Games construction project. Attracting historically underrepresented talent*. Available online at: <http://learninglegacy.independent.gov.uk/documents/pdfs/equality-inclusion-employment-and-skills/285-attracting-historically-underrepresented-talent-eies.pdf>

⁴⁷ T. Wright (2014), *The Women into Construction Project: an assessment of a model for increasing women's participation in construction*. Available online at: <http://www.busman.qmul.ac.uk/media/sbm/research/researchcentres/cred/docs/Women-into-Construction-Project-Evaluation-Report.pdf>

⁴⁸ HS2 Ltd (2017), *HS2 Phase 2a (West Midlands – Crewe), Information Paper H2: Skills and Employment*. Available online at: <https://www.gov.uk/government/organisations/high-speed-two-limited>.

characteristic groups who currently experience low socio-economic status and poor standards of living due to:

- employment disadvantage, in terms of below average rates of participation in economic activity;
- below-average skills and qualifications;
- under-representation in certain employment sectors; and
- below average rates of pay.

5.3.20 These include groups that are particularly affected by income poverty and deprivation, such as women, children, BAME groups, religious minority groups, disabled people and families with disabled members. Certain BAME groups and disabled people are also more likely to be affected by gaps in education, skills and employment⁴⁹.

Operational employment

5.3.21 Operational employment will be created at the Stone IMB-R maintenance facility, located in community area 3, for maintaining the Proposed Scheme. Present plans are that approximately 100 HS2 related jobs will be created at the IMB-R. Some of these employment opportunities will be accessible to local residents

5.3.22 There will also be indirect employment opportunities associated with the HS2 IMB-R, resulting from expenditure on supplies and services necessary for the operation of the Proposed Scheme. Indirect jobs may also result from expenditure by those directly employed at the IMB-R and by workers employed by suppliers contracted to the Proposed Scheme. It is estimated that 40 jobs will be created route-wide through indirect effects as a result of the operational phase. In total, 140 direct and indirect jobs are estimated to be created during the operational phase.

5.3.23 There may be the potential for direct and indirect employment opportunities, created during the operational phase of the Proposed Scheme, to result in a positive equality effect on certain protected characteristic groups who currently experience low socio-economic status and poor standards of living due to employment disadvantage. These groups include women, children, some BAME groups, religious minority groups, disabled people and families with disabled members.

Schools and educational facilities

5.3.24 Children, in particular younger children, are generally considered to be more sensitive than adults to the potential effects of noise on their concentration and ability to learn, with implications for educational attainment. Noise during construction and when the Proposed Scheme is operational therefore has the potential to differentially and disproportionately affect children engaging in indoor or outdoor learning at any affected schools. Any effects on journey times and the ease of reaching schools arising from impacts on the road network during construction and once the Proposed

⁴⁹ EHRC (2010), *How Fair is Britain? Equality, Human Rights and Good Relations in 2010*. Available online at: <https://www.equalityhumanrights.com/en/publication-download/how-fair-britain-report>.

Scheme is operational could also have the potential for differential or disproportionate effects on children.

- 5.3.25 The nominated undertaker will be required to seek reasonably practicable measures to reduce construction and operational noise effects, and to reduce or avoid effects on journey times, and the ease of reaching schools and educational facilities. In doing so, HS2 Ltd will continue to engage with stakeholders to fully understand affected receptors, their use and the benefit of mitigation measures.
- 5.3.26 While there are no predicted significant noise or access effects on schools during construction or operation reported in the ES, the requirements of the draft CoCP to reduce impacts, where reasonably practicable, will apply.
- 5.3.27 Potential disproportionate and differential effects on residents of Mayfield House Children's Home (community area 2) are discussed in Section 7 of this report.

Places of worship

- 5.3.28 Construction or operational noise affecting places of worship has the potential to result in disproportionate or differential effects on those using these facilities for worship, quiet prayer or contemplation, or for social and cultural uses.
- 5.3.29 St Leonard's Church in Marston (community area 2) is identified as being subject to a likely significant adverse noise effect once the Proposed Scheme is operational. This has the potential for disproportionate and differential effects on Christians using the church. This is discussed in more detail in Section 7 of this report.

Open space and community facilities

- 5.3.30 Children and young people, for whom public open space and play areas are important for play, health, fitness and social interaction, may be differentially and disproportionately affected by any temporary or permanent loss or severance of public open spaces, although this would vary for individual sites, according to the extent to which they are used by children and young people. Older people and disabled people may also be differentially and disproportionately affected by any loss of public open space, where this reduces their access to local outdoor recreation areas.
- 5.3.31 Trentside Meadows (community area 1) is identified as open space that would be required in part by the Proposed Scheme for construction related activities. This is discussed in more detail in Section 6 of this report.
- 5.3.32 There could also be the potential for differential or disproportionate effects as a result of impacts on community facilities, such as health, sports and recreational facilities, where these are used by, or provide services to, people with protected characteristics.
- 5.3.33 The Four Seasons Nature Study Centre (community area 1), Ingestre Park Golf Club (community area 2) and Upper Moreton Farm (community area 2) are identified as community facilities that could be affected by the construction and operation of the Proposed Scheme. The Four Seasons Nature Study Centre is discussed in more detail in Section 6 of this report, and Ingestre Park Golf Club and Upper Moreton Farm in Section 7.

Transport

Construction traffic

- 5.3.34 Construction traffic using local roads to access compounds and worksites may increase congestion at some junctions, resulting in delays to road users and increased severance effects on non-motorised users (NMU), such as difficulties crossing some roads. The latter is deemed in the ES to be significant if the increase on the roads is more than 30%.
- 5.3.35 The traffic and transport assessment in the ES has identified significant adverse effects on road users and NMU at a number of locations along the route of the Proposed Scheme. There may be the potential for this to result in differential effects on children, older people and disabled people, who may be more likely to experience increased journey times as barriers to accessing services and engaging in social activities^{50 51}. Effects on NMU could also disproportionately affect people who are less likely to have access to private transport, including women, younger people, older people and disabled people⁵².
- 5.3.36 The composition of road users and NMU using affected routes has not been established at this stage. The draft CoCP contains a number of measures (including those described in Section 5.2) designed to ensure the safety of pedestrians and cyclists, and to avoid causing concern or anxiety about safety, particularly in the vicinity of schools and other facilities used by protected groups. The LEMP will take account of potential site specific issues.

Diversion, realignment and closure of roads and PRow

- 5.3.37 The traffic and transport assessment in the ES has identified significant effects as a result of temporary and permanent diversions and realignments of roads at various points along the route of the Proposed Scheme, and a limited number of permanent closures. In some cases, the diversion, realignment or closure of roads will increase journey distance and time, resulting in adverse effects on traffic and for NMU. Diversions, realignments and road closures could also result in changes in traffic flows, affecting traffic-related severance experienced by NMU. In some places, changes in traffic flows will result in an increase in severance, while in other cases there will be a reduction in traffic and a beneficial effect.
- 5.3.38 The traffic and transport assessment has also identified significant effects as a result of temporary and permanent diversion or realignment of PRow and footpaths at various points along the length of the Proposed Scheme, and a limited number of permanent closures. In some cases, the diversion, realignment or closure of PRow or other footpaths would increase journey distance and time for NMU, resulting in

⁵⁰ ACRE (2014), *Older people: policy position paper*. Available online at: <http://www.acre.org.uk/cms/resources/policy-papers/new-acre-older-people-ppp-rgb-2014.pdf>.

⁵¹ Scope (2012), *Over-looked communities, over-due change: how services can better support BME disabled people*. Available online at: <http://www.scope.org.uk/Scope/media/Images/Publication%20Directory/Over-looked-communities-over-due-change.pdf?ext=.pdf>.

⁵² DfT (2013), *Valuing the social impacts of public transport*. Available online at: <http://www.socialvalueuk.org/app/uploads/2016/07/DfT-final-report.pdf>

adverse severance effects, while in other cases there could be a reduction in journey distance and a beneficial effect.

- 5.3.39 Increased severance for road users and NMU may result in differential effects on people with protected characteristics. Children, older people and disabled people may be more likely to experience any increase in travel distance as a barrier to accessing services and social activities^{53 54}, and experience greater difficulties than other users when making use of longer and potentially more complex alternative routes. Effects on NMU could also result in disproportionate effects on people who are less likely to have access to private transport, including women, younger people, older people and disabled people⁵⁵.
- 5.3.40 The composition of road users and NMU using affected routes has not been established at this stage. The implementation of the measures set out in the draft CoCP, in combination with the construction workforce travel plan, will mitigate transport-related effects during construction of the Proposed Scheme.

⁵³ ACRE (2014), *Older people: policy position paper*. Available online at: <http://www.acre.org.uk/cms/resources/policy-papers/new-acre-older-people-ppp-rgb-2014.pdf>.

⁵⁴ Scope (2012), *Over-looked communities, over-due change: how services can better support BME disabled people*. Available online at: <http://www.scope.org.uk/Scope/media/Images/Publication%20Directory/Over-looked-communities-over-due-change.pdf?ext=.pdf>

⁵⁵ DfT (2013), *Valuing the social impacts of public transport*. Available online at: <http://www.socialvalueuk.org/app/uploads/2016/07/DfT-final-report.pdf>

6 Community area 1 (Fradley to Colton) assessment

6.1.1 Route-wide effects are discussed under the relevant headings in Section 5.3. This section provides a detailed discussion of specific equality effects on individual receptors, where it is known that people with protected characteristics are likely to be affected. Environmental effects reported in this section are drawn from the ES, and further information can be found in the Volume 2 community area report for the Fradley to Colton area⁵⁶.

6.2 The Four Seasons Nature Study Centre

6.2.1 The Four Seasons Nature Study Centre, located on the A513 between Handsacre and Kings Bromley, is operated by CHADS, a registered charity based in Handsacre. The society aims to support access to wildlife and the countryside for disabled people, and manages five sites in the Handsacre area. The centre is located to the south of the Proposed Scheme, and consists of a hall, which is used by the group and is also available for hire, and outside activity areas.

6.2.2 The whole site is fully wheelchair accessible, with the visitor centre acting as the focal point for many of the activities undertaken by the charity. The users of the Four Seasons Nature Study Centre include school groups (including The Croft, Hayes Meadows and Queens Cross special schools); groups of older people from local residential homes; people with conditions including arthritis, multiple sclerosis, stroke; and members of the public attending the site for various activities run on Wednesdays (the site is not open for general admittance at other times). Facilities at the nature study centre are available for hire for functions and are used by local groups for yoga and meditation.

Construction

6.2.3 The A513 Rugeley Road will be used as a construction traffic route to access the River Trent viaduct and Bourne embankment satellite compounds. The use of the A513 Rugeley Road as a construction traffic route will result in a noticeable increase in HGVs passing the Four Seasons Nature Study Centre site.

6.2.4 Both the main building and outdoor areas at the study centre have been assessed for potential noise and visual impacts. During construction, it is predicted that there will be noise impacts for users of the main hall and external activity areas. There will also be visual impacts from some areas of the site as a result of construction activities associated with the River Trent viaduct.

6.2.5 Noise and visual effects during construction have the potential to affect users taking part in the activities that take place here. Considering the profile of users of this site, noise effects during construction of the Proposed Scheme may give rise to differential and disproportionate equality effects on children, older people, and disabled people.

⁵⁶ HS2 Ltd (2017), *H2 Phase 2a (West Midlands – Crewe), Environmental Statement Volume 2, Community area report: Fradley to Colton*.

Operation

- 6.2.6 During operation, it is predicted that noise from trains will affect activities within the hall and external activity areas. There will be also be visual impacts during operation from some areas of the site of more elevated parts of the River Trent viaduct.
- 6.2.7 Noise and visual effects during operation have the potential to affect users taking part in the activities that take place here. Considering the profile of users of this site, noise effects during operation of the Proposed Scheme may give rise to differential and disproportionate equality effects on children, older people, and disabled people.

6.3 Trentside Meadows

- 6.3.1 Trentside Meadows is a LWS owned and managed by CHADS. Trentside Meadows is a 27.5ha site located between the River Trent and the A513 Rugeley Road, and was the first site to be acquired by CHADS. The ecological value of the site is intrinsically linked to the reason why people visit Trentside Meadows. Visits to Trentside Meadows are by appointment only, and generally only take place on average about once a month. Trentside Meadows is predominately used as grazing land.

Construction

- 6.3.2 Part of Trentside Meadows (approximately 4.1ha) is located within land required for the construction of the River Trent viaduct. An additional area (approximately 4.8ha) will also be isolated from the rest of Trentside Meadows during construction. Overall, approximately 32% of Trentside Meadows (including the area lost and the area isolated) will be temporarily inaccessible to the public and for agricultural grazing during the construction period of this section of the Proposed Scheme, approximately three years and six months.
- 6.3.3 The income generated from grazing is integral to providing funding for the activities undertaken by CHADS, and the temporary loss of land is likely to impact the charity's ability to raise this income and therefore its viability. This therefore has the potential to give rise to differential and disproportionate equality effects on children, older people and disabled people using Trentside Meadows and other CHADS sites. The Secretary of State will compensate the charity for this loss of income in accordance with the Compensation Code.
- 6.3.4 Within the remaining area of Trentside Meadows, the construction of the River Trent viaduct will also result in noise effects during the daytime, particularly in areas closest to the construction works. In addition, the presence of site haul routes alongside the River Trent viaduct will result in a significant increase in HGVs passing within Trentside Meadows. Disturbance to the sound environment and tranquillity may disproportionately and differentially affect children, older people and disabled people.
- 6.3.5 Visitors to Trentside Meadows will also experience visual effects due to the construction of the River Trent viaduct being highly prominent in views across the Trent valley. Noise and visual effects may reduce the value of the site for therapeutic outdoor activities during construction.

Operation

- 6.3.6 There are no equality effects identified at Trentside Meadows during operation.

7 Community area 2 (Colwich to Yarlet) assessment

7.1.1 Route-wide effects are discussed under the relevant headings in Section 5.3, including the following, which have been identified in the Colwich to Yarlet area:

- community cohesion at Hopton; and
- operation of Staffordshire Show Ground and Great Hayward Marina.

7.1.2 This section provides a detailed discussion of specific equality effects on individual receptors, where it is known that people with protected characteristics are likely to be affected. Environmental effects reported in this section are drawn from the ES, and further information can be found in the Volume 2 community area report for the Colwich to Yarlet area⁵⁷.

7.2 Ingestre Park Golf Club

7.2.1 Ingestre Park Golf Club is a private members club located in the village of Ingestre. It has approximately 650 members. In addition to an 18-hole course there is a club house that includes a bar, restaurant and pro-shop. The club house facilities are used for a variety of social and recreational events, including the local bridge club, and can cater for up to 200 people.

7.2.2 Construction of the Trent North embankment, Brancote South cutting and associated landscaping will require a total of approximately 25.2ha (approximately 49%) of the golf course to be either lost, or severed from the clubhouse during construction. This will result in the loss of seven holes of the course. The loss of land during construction will mean that the club will be unable to function in its current arrangement. There are alternative golf clubs in easy travelling distance, however, the club serves wider recreational functions, for which there are no alternative facilities within Ingestre. It is understood that membership includes non-playing members who use the facilities primarily for social purposes.

7.2.3 HS2 Ltd is continuing to engage with the operators of the Ingestre Park Golf Club to identify reasonably practicable measures to mitigate these effects. In the absence of mitigation, there is the potential for differential and disproportionate equality effects on members of the golf club with protected characteristics. The loss of long-standing social links and recreational functions could be particularly important for groups including older people who use the club and clubhouse facility, particularly as there are limited alternative social and recreational facilities in the immediate locality.

Operation

7.2.4 There are no equality effects identified at Ingestre Park Golf Club during operation. However, the impact on the golf course arising from the construction of the Proposed Scheme is expected to be permanent.

⁵⁷ HS2 Ltd (2017), *H2 Phase 2a (West Midlands – Crewe), Environmental Statement Volume 2, Community area report: Colwich to Yarlet*.

7.3 St Leonard's Church

7.3.1 St Leonard's Church is located to the south of Yarlet Lane in Marston. It is set within a churchyard, including a burial ground, and currently holds weekly services on Sunday mornings.

Construction

7.3.2 There are no equality effects identified at St Leonard's Church during construction.

Operation

7.3.3 St Leonard's Church will be located in proximity to the route of the Proposed Scheme at the Marston South embankment and Marston North embankment. The church is identified as being subject to a likely significant adverse noise effect once the Proposed Scheme is operational.

7.3.4 Visitors to the church will experience significant increases in noise levels due to the running of trains along the route of the Proposed Scheme, which will disturb their activities within the church. Effects may be lower than predicted as the number of trains running at weekends will be lower than weekdays. Noise effects have the potential to result in disproportionate or differential effects on Christians using the church for worship, quiet prayer or contemplation, or for social and cultural uses.

7.3.5 HS2 Ltd will continue to seek reasonably practicable measures to further reduce or avoid noise effects on users of the church once the Proposed Scheme is operational. In doing so, HS2 Ltd will engage with stakeholders at the church to understand further how it is used, and the benefit of mitigation measures.

7.4 Mayfield Children's Home

7.4.1 Mayfield Children's Home⁵⁸, located in the Grade II listed Moreton House on Bishton Lane, is a specialist residential children's home for young people with autism. It provides residential care for children and young people aged 8-19, with capacity for 21 residents and two respite facilities. The building is located approximately 40m from the edge of the land required for construction, with an access road and gardens located between the construction site boundary and the building.

7.4.2 Residents are referred to the home by their local authority or health service. The building is occupied 24 hours a day, throughout the year, with some residents staying only part of the year, and others living there all year round. Mayfield Children's Home is linked to Rugeley School (located in community area 1), an independent specialist school located on the outskirts of Blithbury, which is registered to provide residential and day care placements for up to 50 children and young people with autism and moderate to severe learning difficulties.

7.4.3 Bishton Lane provides the main access in and out of Mayfield Children's Home. All residents travel to Rugeley School during term time between the hours of 08:30 and 16:00 (school hours and travel times vary according to each individual's health and

⁵⁸ Priory Education and Children's Services, *Mayfield House*. Available online at: <https://www.priorychildrensservices.co.uk/find-a-location/mayfield-house-staffordshire/>.

development plan). Two routes are used, with both taking approximately 20 minutes, and minibuses make the trip at least four times each weekday. These routes are also used at weekends and during holidays, and residents use local roads for walks and for regular trips by minibus to access services and recreation facilities in nearby towns and villages.

- 7.4.4 The location of Mayfield Children's Home was selected due to its quiet, secure and rural environs. Outdoor activities are an important part of the curriculum, and the outside space is used throughout the year. Facilities include a small outdoor playground, a football pitch, a trampoline area, gardening areas and a sensory garden with driveways that the residents use to ride bikes. The front and back driveways are also used when individuals become distressed for 'timeout' and for 'lane walks' when they need quiet time. These can take place anytime during the day or night. The whole site is securely fenced, with the main entrance adjacent to Moreton House Farm and a gated staff car park to the west.

Construction

- 7.4.5 Mayfield Children's Home will be in proximity to the construction of the Proposed Scheme. Works will include the Moreton North cutting, with the cutting within 40m of the property at its closest point. Colwich Bridleway 23 accommodation green overbridge will also be located near to the home, impacting on access.
- 7.4.6 The noise assessment in the ES identifies a significant residual adverse impact on Mayfield Children's Home during construction, which may result in daytime disturbance to the residents of the home, both internally and within external spaces, for a period of approximately three years.
- 7.4.7 The landscape and visual assessment in the ES also identifies a significant adverse visual impact, as a result of close-range views of large scale construction works, including Moreton Brook viaduct and associated embankments, Moreton cutting and construction of Colwich Bridleway 23 accommodation green overbridge, which will be more easily visible due to the removal of mature vegetation at Moreton House. Temporary stockpiles and vehicles moving along the site haul roads will also be visible. While some of the construction works will be partially screened by local topography, there will be direct, close range views from the upper storeys across the construction of Moreton cutting. There will also be close range views from several nearby PRoW.
- 7.4.8 Children living at Mayfield Children's Home have severe autism and, therefore, have particular health and wellbeing requirements with respect to their living conditions and environment. People on the autistic spectrum can be very sensitive to change, particularly in the sensory environment, and changes to routines may cause distress⁵⁹. The health assessment in the ES identifies that, without mitigation, noise and visual impacts on the quality of the environment around Mayfield Children's Home during construction could result in adverse effects on the health and wellbeing of pupils living there.

⁵⁹ National Autistic Society, *Obsessions, repetitive behaviour and routines*. Available online at: <http://www.autism.org.uk/about/behaviour/obsessions-repetitive-routines.aspx>

- 7.4.9 It is likely that some residents will experience specific types of response to noise and a change in the landscape in proximity to the home. This could include distress and/or an inability to concentrate or communicate. Furthermore, noise during construction of the Proposed Scheme could be perceived as variable and unpredictable in character, which could make it more difficult for residents to become familiar with. Therefore, while each child will respond differently, there is the potential for construction noise and visual impacts to give rise to a differential effect on children with autism residing at Mayfield Children's Home.
- 7.4.10 Residents of Mayfield Children's Home also have particular requirements with regard to the travelling environment. The National Autistic Society highlights the need for many individuals with autism to have regular routines and activities, such as travelling the same way to and from school or work⁶⁰. While the ES does not identify any significant effects on access to the home, the presence of construction traffic on local roads, including routes used by residents to access Rugeley School, could constitute a change in the environment that could contribute to adverse differential effects on some children with autism residing at the home.
- 7.4.11 Construction noise and visual effects at external spaces at the home could reduce the usability of these areas for residents who experience distress or other symptoms in response to noise and/or changes in the landscape. Access to the natural environment⁶¹ and opportunities for physical activity can be particularly beneficial for young people with autism. The National Autistic Society also advises that some individuals with autism use physical exercise, such as running, as an effective way of relieving stress⁶². Therefore, any reduction in access to outdoor space, including nearby PRoW, for exercise and physical activity could have the potential for a further differential effect.
- 7.4.12 HS2 Ltd will continue to work with Mayfield Children's Home to fully understand the site and its use, and to seek to develop, with them, reasonable practicable measures to mitigate the potential impact of the construction of the Proposed Scheme on the home and its residents.

Operation

- 7.4.13 Once the Proposed Scheme is operational, Mayfield Children's Home is identified as being subject to a likely significant adverse noise impact due to the running of trains along the route of the Proposed Scheme, which may result in daytime disturbance to the residents, both internally and within external spaces, and night-time sleep disturbance.
- 7.4.14 The landscape and visual assessment in the ES also identifies a significant adverse visual impact due to close up views of trains running along the route of the Proposed Scheme along the Moreton cutting, including overhead line equipment. The operation of the Proposed Scheme will be visible from both ground and upper floor windows. As

⁶⁰ National Autistic Society, *Obsessions, repetitive behaviour and routines*. Available online at: <http://www.autism.org.uk/about/behaviour/obsessions-repetitive-routines.aspx>

⁶¹ Natural England (2013), *Engaging children on the Autistic Spectrum with the Natural Environment: Teacher insight study and evidence review*. Available online at: <http://publications.naturalengland.org.uk/publication/11085017>.

⁶² National Autistic Society, *Guidance on Environment and Surroundings*. Available online at: <http://www.autism.org.uk/environment>.

planting matures it will partially screen views to the west, however the effect on views will remain significant due to the scale of changes in the view and the permanent loss of land.

- 7.4.15 The health assessment in the ES identifies that, without mitigation, noise and visual impacts on the quality of the environment around Mayfield Children's Home could result in adverse effects on pupils living there once the Proposed Scheme is in operation. While each child will respond differently, there is the potential for operational noise and visual impacts to give rise to a differential effect on children with autism residing at Mayfield Children's Home.
- 7.4.16 Noise and visual effects at external spaces at the Home during operation could also reduce the usability of these areas for residents who experience distress or other symptoms in response to noise and/or changes in the landscape. As established above, any reduction in access to outdoor space for exercise and physical activity could have the potential for a further differential effect.
- 7.4.17 HS2 Ltd will continue to work with Mayfield Children's Home to fully understand the site and its use, and to seek to develop, with them, reasonable practicable measures to mitigate the potential impact of the operation of the Proposed Scheme on the home and its residents.

7.5 Upper Moreton Farm

- 7.5.1 Upper Moreton Farm is run by Upper Moreton Farm Rural Activities Community Interest Company (CIC), which provides care services alongside being a working farm. It is part of the Care Farming UK initiative, and provides educational visits for local schools, and rural therapy and care farming for people with mental health problems, multiple learning difficulties, autism spectrum disorders, emotional difficulties, and people who have experienced abuse or neglect⁶³. Regular users of the site include local special needs schools and adult learning disability groups, and the site also has links with Derby College. A seven week Health and Wellbeing Project for people with enduring mental health needs is delivered on behalf of Staffordshire County Council. The farm has a strong focus on supporting people to secure jobs, and offers volunteering opportunities and work placements.
- 7.5.2 The farm includes a teaching space, a therapeutic garden and polytunnel, a barn used for woodwork projects, and more traditional farm buildings that house a variety of animals. Users of the facility also use local PRoW. Features of the farm include medieval ridge and furrow land and unimproved grassland. The vast majority of activities take place outside, and activities are also often undertaken at the nearby Lount Farm Meadows LWS, which are species rich. The site is accessed via Bishton Lane.

Construction

- 7.5.3 A balancing pond associated with the Moreton North embankment, its access route and associated mitigation planting will be located within the northern-most field at

⁶³ Upper Moreton Farm, *Care Farming at Upper Moreton Farm*. Available online at: <http://www.uppermoretonfarm.co.uk/what-we-offer/care-farming/>.

Upper Moreton Farm. In total, approximately 3.1ha of land (12% of the farm) will be required for the construction of the Proposed Scheme. Of this, 0.2ha will be required temporarily for construction for approximately one month and will be returned to Upper Moreton Farm, while the remaining 2.9ha (11% of the farm) will be removed permanently for the Proposed Scheme. This loss will limit the areas in which some activities can be undertaken, but will not impede the ability of the farm to undertake the majority of its activities. Access will be maintained to Upper Moreton Farm throughout construction works.

- 7.5.4 Some users of Upper Moreton Farm may experience difficulties in accessing and using other parts of the farm. In addition, an area of wildflower meadow at Lount Farm is located entirely within the land required for the Moreton Brook viaduct (located in community area 2). This area is used for nature walks and ecology training by Upper Moreton Farm and these activities will no longer be able to continue in situ. These are only a small proportion of the activities undertaken at the farm, but they are important for the training programmes as they are currently designed.
- 7.5.5 The loss of land at the farm and at neighbouring Lount Farm is likely to restrict the activities that can be undertaken on site, and in particular, will remove the opportunity for ecology training and wildlife walks using an area of wildflower meadow at Lount Farm. This could have differential and disproportionate effects on users of the facility who currently benefit from these activities, including children who attend on school trips and those attending the farm as part of a Health and Wellbeing Project, which caters for people who are recovering from mental health problems.
- 7.5.6 Upper Moreton Farm will be in proximity to the construction of the Proposed Scheme. During construction, Upper Moreton Farm is identified as being subject to a likely significant adverse noise effect, for a period of approximately one year and nine months. This may take the form of activity disturbance to individuals within the classroom. While views of construction activity will be partially screened by the local topography, there will also be a significant visual impact due to vegetation clearance, the presence of cranes and construction vehicles associated with the Moreton Brook viaduct and Moreton North embankment.
- 7.5.7 Many users of Upper Moreton Farm may be sensitive to change. The majority of activities take place outside and include nature walks and walking for health, mindfulness meditation and wellbeing counselling, animal care activities and farm work experience for young adults. The tranquillity of the site and its natural surroundings are important to the therapeutic aspect of these activities. There may be the potential for the noise and visual impacts at Upper Moreton Farm to restrict the activities in which some users of the facility feel able to participate. This could give rise to a differential equality effect, particularly for those with autism who may be particularly sensitive to changes in the sensory environment.
- 7.5.8 The health assessment in the ES identifies that the loss of land and impacts on the farm environment are likely adversely to affect the operation of the facility including in particular activities that currently take place outdoors. Without mitigation, the reduction in the range and quality of services available at the Farm may adversely affect the health and wellbeing of some users, by limiting the opportunities for therapeutic activities.

- 7.5.9 HS2 Ltd will continue to work with Upper Moreton Farm to fully understand the site and its use, and to seek to develop, with them, reasonable practicable measures to mitigate the potential impact of the construction of the Proposed Scheme on the farm and its users.

Operation

- 7.5.10 Upper Moreton Farm will be within approximately 300m of the route of the Proposed Scheme at the Moreton Brook viaduct and Moreton North embankment. When the Proposed Scheme is in operation, Upper Moreton Farm is identified as being subject to a likely significant adverse noise effect due to the running of the trains. This may take the form of activity disturbance to the pupils within the classroom, and in outdoor teaching areas.
- 7.5.11 There will also be a significant visual impact due to views of trains running along the route of the Proposed Scheme at the Moreton Brook viaduct and Moreton North embankment, introducing movement into the views. Views of Moreton Brook viaduct will be partially screened by intervening vegetation, and as the mitigation planting matures more of the view will be screened.
- 7.5.12 Changes in the noise and visual environment at the farm could have the potential to restrict the activities in which some users of the facility feel able to participate. This could give rise to a differential equality effect, particularly for those with autism who may be particularly sensitive to changes in the sensory environment. As established above, the loss of land and impacts on the farm environment could also affect the suitability of the farm for therapeutic activities and reduce the range and quality of services available, with potential adverse effects on the health and wellbeing of some users as a result.
- 7.5.13 HS2 Ltd will continue to work with Upper Moreton Farm to fully understand the site and its use, and to seek to develop, with them, reasonable practicable measures to mitigate the potential impact of the Proposed Scheme on the farm and its users.

8 Community area 3 (Stone and Swynnerton) assessment

- 8.1.1 Route-wide effects are discussed under the relevant headings in Section 5.3, including operational employment opportunities associated with the Stone IMB-R. There are no specific equality effects identified in the Stone and Swynnerton area.

9 Community area 4 (Whitmore Heath to Madeley) assessment

- 9.1.1 Route-wide effects are discussed under the relevant headings in Section 5.3. There are no specific equality effects identified in the Whitmore Heath to Madeley area.

10 Community area 5 (South Cheshire) assessment

- 10.1.1 Route-wide effects are discussed under the relevant headings in Section 5.3. There are no specific equality effects identified in the South Cheshire area.

11 Glossary of terms

Term	Definition
auto-transformer station	An installation that accommodates switchgear and associated equipment. Auto-transformer stations are located in the railway corridor at approximately 5km (3 mile) intervals. They allow the distance between auto-transformer feeder stations to be increased.
auto-transformer feeder station	Permanent compounds located next to railway lines. They contain equipment that enables electrical power to be transferred between the National Grid network and the rail line.
Baseline	Existing environmental conditions present on, or near a site, against which future changes can be measured or predicted.
bored tunnel	A tunnel constructed using a tunnel boring machine.
borrow pits	Areas excavated to provide material for construction purposes.
bund	An embankment that acts as a visual or noise screen, or as a barrier to control the spillage of fluids.
code of construction practice	A document setting out the measures and standards to which a developer or contractor must adhere in order to provide effective planning, management and control of potential impacts on individuals, communities and the environment during construction.
community area	Defined areas along the proposed HS2 Phase 2a route (e.g. South Cheshire community area). They are used as a geographical basis for reporting local community and environmental impacts and effects in the environmental statement.
Compensation Code	The collective term for the principles derived from both statute and case law, relating to compensation for compulsory acquisition. It ensures that when land is needed to build an infrastructure project, the owners receive compensation to help them to move house or to relocate a business. The code also ensures that those who experience physical effects from a scheme once it is in operation, for example vibration or noise, are entitled to compensation.
cut-and-cover tunnel	A tunnel constructed by: excavating a cutting; constructing a box-type structure; and reinstating the ground over the top to its original level.
cutting	A linear excavation of soil or rock to make way for a new railway or road. Cuttings help reduce the noise and/or visual impact of passing trains or road vehicles.
Department for Transport	Government department responsible for transport issues in the UK (where powers have not been devolved).
Directive	A legal act of the European Union. Legal obligations imposed on European member states by the European Commission following approval by the European Parliament and European Council.

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Term	Definition
diversion	Used to refer to a change to the route or direction of a road due to the location of the route of the Proposed Scheme. (See also: 'realignment'.)
economically active	People who are either in employment or unemployed but actively seeking employment.
effect	Used throughout this report to refer to the consequence of an impact to the receiving environment (see also: 'impact')
embankment	Artificially raised ground, commonly made of rock or compacted soil, on which a new railway or road is constructed.
employment rate	The proportion of 16-74 year-old residents in employment. Employment comprises the proportion of the total resident population who are 'in employment' and includes full-time students who are employed.
environmental impact assessment	A process of systematically assessing the likely environmental effects of proposed development projects. EIA is a legal requirement for certain public and private projects in EU countries under Directive 2014/52/EU.
environmental statement	A suite of documents produced as part of an environmental impact assessment. It must include all information that is reasonably required to assess the likely significant environmental effects of a proposed development.
false cutting	A means of screening a linear feature (e.g. a railway) by forming embankments on both sides of the feature.
headwall	A supporting, protecting or retaining wall built at the front or top of a structure or area.
High Speed One	High speed rail line from St. Pancras International Station in London to the Channel Tunnel. Formerly known as the Channel Tunnel Rail Link.
High Speed Two	Proposed high speed rail line between London and the West Midlands (Phase One) and on to Manchester and Leeds (Phase Two). Phase 2a is the section between the West Midlands and Crewe.
High Speed Two Limited	The company set up by the Government to develop proposals for a new high speed railway line between London and the West Midlands and to consider the case for new high speed rail services linking London, northern England and Scotland.
hybrid Bill	Hybrid Bills mix the characteristics of public and private bills. The provisions in a hybrid Bill would affect the general public, but would also have particular effects on specific individuals or groups.
infrastructure maintenance base - rail	A permanent maintenance facility near Stone, in the Stone and Swynnerton community area, at the site of the Stone railhead main compound. It will provide a central base to carry out maintenance activities on the route of the Proposed Scheme and will maintain Phase 2a infrastructure, as well as the full western section of Phase Two once operational.

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Term	Definition
infrastructure maintenance depot	A facility providing logistical support for the maintenance and repair of the HS2 railway track and associated infrastructure (excluding trains).
impact	Used throughout this report to refer to changes to the environment that have the potential to occur as a result of the construction and/or operation of the Proposed Scheme.
isolation (community and socio-economic)	Physical and psychological barriers faced by users in accessing socio-economic and community resources, which may affect their tendency to use them.
maintenance loop	<p>Additional track runs for a short distance alongside the main HS2 rail line, and can be used for the storage of maintenance trains during operation. They also provide a safe stopping location for any HS2 train that develops a fault.</p> <p>Maintenance loops were originally proposed at Pipe Ridware as part of the scheme assessed in the working draft EIA Report. As the infrastructure maintenance depot (IMD) previously proposed at Crewe is now proposed to be located near Stone on the site of the construction railhead, in the form of the Stone IMB-R, maintenance loops are no longer required.</p>
mitigation	The measures put forward to avoid, prevent, or reduce the likely effects on the environment, individuals and communities.
nominated undertaker	The body or bodies appointed to implement the powers of the hybrid Bill to construct and maintain the Proposed Scheme.
overbridge	A bridge crossing over a transport corridor such as a railway line.
Phase One	Phase One of the proposed HS2 network, a high speed railway between London and the West Midlands with a connection via the West Coast Main Line at conventional speeds to the North West and Scotland. Phase One includes stations at London Euston, Old Oak Common (West London), Birmingham Interchange (near the National Exhibition Centre and Birmingham Airport) and Curzon Street (Birmingham city centre).
Phase Two	Phase Two of the proposed HS2 network extends the high speed railway beyond the West Midlands to Manchester and Leeds with connections to conventional railway lines via the West Coast and East Coast main lines.
Phase 2a	The section of the Phase Two route between the West Midlands and Crewe. It will include a connection with Phase One at Fradley, to the north-east of Lichfield, and a connection with the West Coast Main Line (WCML) south of Crewe.
Phase 2b	The section of the Phase Two route between Crewe and Manchester and between the West Midlands and Leeds, with connections to the West Coast Main Line at Golborne and to the East Coast Main Line approaching York. This will complete what is known as the 'Y network'.
Proposed Scheme	Proposed high speed rail line and associated infrastructure between the West Midlands and Crewe (i.e. Phase 2a of HS2).

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Term	Definition
protected characteristic groups	Groups identified in the Equality Act 2010 as sharing a particular characteristic against whom it is illegal to discriminate. These groups are identified in section 1.5.
public right(s) of way	A highway where the public has the right to walk; and, depending on its class, use for other modes of travel. It can be a footpath (used for walking only), a bridleway (used for walking, riding a horse and cycling), a restricted byway (as a bridleway, but use by non-motorised vehicles also permitted) or a byway that is open to all traffic (include motor vehicles).
realignment	Used to refer to a slight change to the route or direction of a road due to the location of the route of the Proposed Scheme. (See also: 'diversion'.)
receptor	<p>A component of the natural or built environment (such as a human being, water, air, a building or a species) affected by an impact of the construction and/or operation of a proposed development.</p> <p>In the EQIA, this refers to the residents or tenants of residential properties, and users and beneficiaries of resources including for example local residents, community groups, pupils, patients, congregations, employees, owners, and organisations running the resources. (See also: 'resource'.)</p>
resource	Resources are residential dwellings and community facilities and infrastructure such as education, health, emergency services, places of worship, sports and recreational facilities, open spaces, and public rights of way (PRoW).
residual impacts	Those impacts of the development that cannot be mitigated following implementation of mitigation proposals.
Royal Assent	The final step required for any parliamentary Bill to become law.
site haul routes	Temporary roads provided within the area of land required for construction to allow for the movement of construction material, construction machinery and/or construction workers between the construction compounds and work sites.
tunnel portal	Tunnel entrances and exits.
underbridge	A bridge crossing under a transport corridor such as a railway line.
unemployment rate	The proportion of residents unemployed and actively seeking employment as a percentage of the economically active population.
viaduct	A type of bridge composed of a series of spans, used to carry roads and railways across valleys or other infrastructure.
West Coast Main Line (WCML)	Inter-urban rail line connecting London, Birmingham, Manchester, Liverpool and Glasgow.

12 List of abbreviations

BAME	Black, Asian, and minority ethnic
CHADS	Conservation, Horticulture and Agriculture for the Disabled Society
CoCP	Code of Construction Practice
CofE	Church of England
DfT	Department for Transport
EDI	Equality, diversity and inclusion
EHRC	Equality and Human Rights Commission
ES	Environmental Statement
EQIA	Equality Impact Assessment
EU	European Union
HGVs	Heavy Goods Vehicles
IMB-R	Infrastructure Maintenance Base - Rail
JSA	Job seekers allowance
LA	Local Authority
LEMP	Local Environmental Management Plan
LWS	Local Wildlife Site
MoD	Ministry of Defence
NMU	Non-motorised user
PRoW	Public rights of way
PSED	Public Sector Equality Duty
SEE	Skills, employment and education
WCML	West Coast Main Line

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